

FINAL

**ENVIRONMENTAL CONDITION OF
PROPERTY REPORT**

**U.S. ARMY RESERVE
EQUIPMENT CONCENTRATION SITE #15 (AR014)
11408 ROBERTS BOULEVARD
FORT SMITH, ARKANSAS 72903**

Prepared For:

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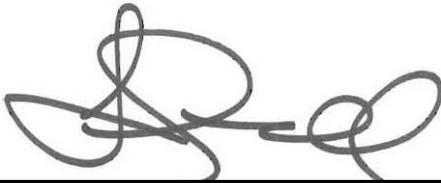
CERTIFICATION

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

JAMES WHEELER II
Chief, Environmental Division
90th 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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August 16, 2007
DATE

EXECUTIVE SUMMARY

The Terraine-EnSafe Joint Venture (TEJV), under contract to the U.S. Army Corps of Engineers, Louisville District, has prepared this Environmental Condition of Property (ECP) Report for the U.S. Army Reserve (USAR) Equipment Concentration Site (ECS) #15 (Facility ID AR014), hereafter referred to as the "Site" or "ECS #15." The Site is located at 11408 Roberts Boulevard in Fort Smith, Sebastian County, Arkansas.

This ECP Report was conducted in conformance with primary Department of Defense (DoD) and Army guidance, the DoD's Base Redevelopment and Realignment Manual, DoD 4165.66-M, Army regulations, and the American Society for Testing and Materials 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 Site, including the USAR and any prior uses of the Site and the resulting environmental condition of property.

The ECS #15 encompasses 39.32 acres of land and has five permanent structures: the 29,337-square-foot Building 470 with administrative offices and vehicle maintenance shops; the 38,934-square-foot Building 572, a warehouse for storage of parts and equipment; a roofed, concrete-floored vehicle wash rack (VWR), also known as Building 471; and two 126-square-foot concrete-floored and bermed chemical storage buildings. The Site is currently occupied by ECS #15 and is staffed by civilians employed by the USAR.

Based on a review of historical street maps, aerial photographs, and U.S. Geological Survey topographical maps dating back to 1951, along with other historical documents, the Site was part of Fort Chaffee which was developed in the early 1940s on former farmland. A 4.6-acre sanitary landfill was used from the 1940s until about 1954; the military equipment parking (MEP) area was constructed over a portion of the former sanitary landfill. Building 572, Building 470, and the VWR were constructed in 1982.

Areas of potential environmental concern were reviewed and the TEJV found the following concerns relating to the environmental condition of property. Part of the Site was constructed on a former landfill; stains observed on pavement and graveled areas, as well as memorandums documenting spills, indicate multiple small releases of oil products over multiple years; and adjacent/nearby properties have documented contaminants in soil and groundwater, including Sanitary Landfill #1 south of the MEP area, the incinerator disposal area west of the MEP area, and the pesticide handling center to the west-northwest.

In accordance with DoD policy defining the classifications (see S.W. Goodman Memorandum dated October 21, 1996), the Site has been classified as Category 3. 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 and Abbreviations

ACM	asbestos-containing material
ADEQ	Arkansas Department of Environmental Quality
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
bgs	below ground surface
BRAC	Base Realignment and Closure
BRRM	Base Redevelopment and Realignment Manual
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	CERCLA Information System
CESQG	conditionally exempt small-quantity generator
CFR	Code of Federal Regulations
CORRACTS	Corrective Action Sites
DDT	Dichlorodiphenyltrichloroethane
DoD	Department of Defense
EBS	Environmental Baseline Survey
ECCI	Engineering, Compliance & Construction, Inc.
ECP	Environmental Condition of Property
ECS	Equipment Concentration Site
EDR	Environmental Data Resources, Inc.
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
FOST	Finding of Suitability for Transfer
FRDS	Federal Reporting Data System
GIS	Geographical Information System
kg	kilogram
LBP	lead-based paint
LQG	large-quantity generator
LUST	leaking underground storage tank

MCL	Maximum Contaminant Level
MEK	methyl ethyl ketone
MEP	military equipment parking
MSSL	Medium-Specific Screening Level
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
OWS	oil-water separator
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PMT	pole-mounted transformer
POL	petroleum, oils, and lubricants
POTW	Publicly Owned Treatment Works
POV	privately owned vehicle
PWS	Public Water Supply
RCRA	Resource Conservation and Recovery Act
RCRAInfo	RCRA Information Database
ROD	Record of Decision
RQ	reportable quantity
RRC	Regional Readiness Command
SQG	small-quantity generator
SVOC	semi-volatile organic compound
SWPPP	Storm Water Pollution Prevention Plan
TEJV	Terraine-EnSafe Joint Venture
TPH	total petroleum hydrocarbons
TSD	treatment, storage, and disposal
USACE	U.S. Army Corps of Engineers
USAR	U.S. Army Reserve
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UST	underground storage tank
VOC	volatile organic compound
VWR	vehicle wash rack

1.0 INTRODUCTION

The Terraine-EnSafe Joint Venture (TEJV), under contract to the U.S. Army Corps of Engineers (USACE) Louisville District, was authorized to prepare an Environmental Condition of Property (ECP) Report for the U.S. Army Reserve (USAR) Equipment Concentration Site (ECS) #15 (Facility ID AR014) in response to the Base Realignment and Closure Act (BRAC) 2005 legislation. The work was performed under Contract No. W912QR-04-D-0044, Delivery Order No. 0008. The facility located at 11408 Roberts Boulevard, in Fort Smith, Sebastian County, Arkansas, is hereafter referred to as the "Site" or "ECS #15."

In support of the ECP process, a visual reconnaissance of the Site was conducted by TEJV personnel on May 3, 2007. The purpose of the reconnaissance was to obtain information indicating the likelihood of recognized environmental conditions in connection with the Site.

1.1 PURPOSE OF ENVIRONMENTAL CONDITION OF PROPERTY

The Military Department with real property accountability shall assess, determine and document the environmental condition of all transferable property in an ECP Report. This ECP Report is based on readily available information. Pursuant to the Department of Defense's (DoD'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 BRAC property.
- Assist federal agencies during the property screening process.
- Provide information for prospective buyers.
- Assist prospective new owners in meeting the requirements under U.S. Environmental Protection Agency's (USEPA) "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 (kg) or the reportable quantity (RQ), whichever is greater, of the substances specified in 40 CFR 302.4 or one kg 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 RQ. Army Regulation 200-1 requires that the ECP Report address asbestos, lead-based paint (LBP), 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 approximately 40-acre ECS #15 at 11408 Roberts Boulevard in Fort Smith, Arkansas. A general Site location map, Site maps, historical topographic maps and aerial photographs, a wetlands map, and a floodplain map are provided in Appendix A. Appendix B provides photographs taken during the May 2007 Site reconnaissance. Appendix C provides chain-of-title information for the Site. Historical environmental documents and reports are provided in Appendix D. The environmental database report is provided in Appendix E.

This ECP Report classifies the property into one of seven DoD Environmental ECP categories as defined by the S.W. Goodman Memorandum dated October 21, 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 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 underway, 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.

1.3 ASSUMPTIONS AND LIMITATIONS

This report was prepared to permit formulation of an opinion of the environmental condition of the Site. Opinions on the environmental conditions at the Site are based on information from the visual reconnaissance, interviews, and collection and review of readily available information. New information or changes in Site use could require a review and possible modification of the findings and conclusions contained in this report.

The information obtained from the USAR, the USAR's representatives, individuals interviewed, and prior environmental reports was considered to be accurate unless reasonable inquiries indicated otherwise. Conditions observed were considered representative of areas that were not accessible unless otherwise indicated.

This ECP Report presents a summary of readily available information on the environmental conditions of, and concerns relative to, the land, facilities, and real property assets at the ECS #15. Its findings are based on a record search of readily available documents, a thorough review of the applicable and relevant documents, a visual Site reconnaissance conducted on May 3, 2007, and interviews with personnel knowledgeable about the Site and its history. Extensive environmental investigations and reports and Site historical documents were reviewed in support of this ECP. Information obtained from these other studies is reflected within this report by reference. A complete list of references is provided as Section 9.0.

All Site buildings were visually inspected during the Site reconnaissance. However, a 100% visual reconnaissance of each building (e.g., attics, crawl spaces, etc.) was not practical due to accessibility limitations. The interiors of some portable storage containers were locked and inaccessible during the Site reconnaissance. No sampling or analysis of any media was conducted during this survey.

2.0 SITE LOCATION AND PHYSICAL DESCRIPTION

The Site reconnaissance included a walking assessment of the developed area of the Site and buildings and a driving tour of the surrounding area. The visual reconnaissance was conducted by TEJV personnel on May 3, 2007 to field-verify information produced in the document review and to identify recognized environmental conditions of property.

A reconnaissance of the Site perimeter was conducted to evaluate adjacent property uses that could cause environmental contamination on the Site. TEJV personnel walked the Site perimeter and drove on roads in the surrounding area to visually identify any contiguous properties that appear, in TEJV's professional judgment, to have contamination that could migrate to the Site. The findings of the perimeter survey are presented in Section 4.0.

2.1 SITE LOCATION

The Site address is 11408 Roberts Boulevard in Fort Smith, Sebastian County, Arkansas. The Site has historically been addressed as 1900 Roberts Boulevard in Barling, Arkansas, but the address was modified in the past few years during redevelopment of the former Fort Chaffee property. As shown on Figure 1 in Appendix A, the Site is near the intersection of Roberts Boulevard and Terry Road, in an area that was formerly Fort Chaffee property. When Fort Chaffee was officially closed in 1997, the Site area was designated "Excess Area" land to be redeveloped. A U.S. Army National Guard facility is southeast of the Site. To the northeast, beyond Roberts Boulevard, is property (a former fuel distribution center) that has been acquired by a construction company as well as property that has not yet been redeveloped. To the northwest is former Fort Chaffee property (former pesticide handling center, two former incinerators, and undeveloped land) that has not been redeveloped. To the southwest are undeveloped fields. A portion of the Site was constructed on former Sanitary Landfill #2, associated with Fort Chaffee, and the landfill footprint extends beyond the Site to the west.

2.2 ASSET INFORMATION

Facility Name and Address: Equipment Concentration Site #15
11408 Roberts Boulevard
Fort Smith, Arkansas 72903

Property Owner: United States of America

Date of Ownership: June 14, 1943

Current Occupant: ECS #15

Zoning: Not zoned, according to the City of Fort Smith Geological Information System (GIS) zoning map. According to Fort Chaffee Redevelopment Authority information, the Site

is within an area being developed by the Fort Chaffee Redevelopment Authority as Chaffee Crossing, and is central to the portion of Chaffee Crossing designated as *The Valley*, a planned industrialized area.

County, State: Sebastian County, Arkansas

USGS Quadrangle: Barling, Arkansas

Section/Township/Range: Section 9, Township 7 North, Range 31 West

Latitude/Longitude: 35° 18' 24.5" N; 94° 18' 26.3" W

Legal Description: All that certain piece or parcel of land situated and lying in Section 9, Township 7 North, Range 31 West, of the 5th Principal Meridian, Sebastian County, State of Arkansas.

2.3 PHYSICAL DESCRIPTION

A Site map of the ECS #15 is provided as Figure 2 in Appendix A. The ECS #15 is on 39.32 acres of land and has five permanent structures: Building 470, which includes administrative offices and vehicle maintenance shops; Building 572, a warehouse for the storage of parts and equipment; a roofed, concrete-floored vehicle wash rack (VWR), also known as Building 471; and two concrete-floored and bermed chemical storage buildings. A floor plan of Buildings 470 and 572 are provided as Figures 3 and 4, respectively, in Appendix A. Photographs of the Site and adjacent properties and specific environmental conditions or other Site-specific features are in Appendix B.

Buildings 470, 572, and the VWR were constructed in 1982, and the chemical storage buildings in approximately 1997. Building 470 is a 29,337-square-foot chevron-shaped structure with an administration section in the center and vehicle maintenance shops on the north and south ends of the building. The building was constructed with a concrete slab floor and cinder block and metal walls, with a partial brick veneer. The administration section has an asphalt and gravel roof, and the maintenance shops are roofed with metal. The administration portion of the building has offices on either side of a central hallway, a parts supply room and tool room, an electronics work room, a break room, a weapons storage area, and a mechanical room. The mechanical room houses a natural gas-fired boiler and water heater, and has two floor drains. The south maintenance shop has six bays, with the southernmost bay used as a tire room and storage area. A battery storage room and a welding area are in the south maintenance shop. The north maintenance shop has five bays. Each of the shops has a central grated floor drain that is piped to an oil-water separator (OWS) immediately north of the building.

Building 572 is a 38,934-square-foot warehouse used to store vehicle parts and supplies needed to equip the reserve troops. The warehouse has a concrete slab floor, metal walls, and a metal roof. Inside the warehouse are a small office, metal shelves for storage, a sprinkler system, and a caged storage area for selected equipment, including chemical monitors, which have radioactive elements. A diesel-powered forklift and two floor sweepers are stored in the warehouse. The warehouse is not heated or cooled and has no sewer system connections. The fire suppression (sprinkler) equipment is the only connection to a municipal potable water source, the Fort Smith water supply system. The sprinkler system equipment, including piping and an air compressor, is housed in a closet on the north side of the building. The piping for the system is dry (air-filled) to prevent the pipes from freezing in the winter. If fire water is needed, the system is designed to pump water into the sprinkler pipes for distribution.

The VWR has undergone several modifications since construction in 1982, including the 2003 addition of a metal roof and a concrete berm to reduce storm water runoff from entering the attached OWS. Use of the VWR was discontinued in 2005 when it was discovered that a baffle wall in the OWS was defective, preventing the OWS from operating properly.

One permanent waste-petroleum, oils, and lubricants (POL) storage building is west of both maintenance shops. The two one-room 126-square-foot buildings have metal walls and roofs and concrete floors with a 12-inch concrete berm. Both contain a 600-gallon tank for storage of used oil, and drums for storage of used antifreeze and other non-hazardous oily wastes.

Adjacent to both of the permanent waste POL storage buildings are three portable storage buildings for hazardous materials and shop wastes, and a portable storage unit for shop equipment such as jacks and fans. West of the central portion of Building 470 are three hazardous material storage buildings, a covered area with picnic tables and a barbeque grill, and a solid waste container under cover.

An asphalt-paved privately owned vehicle (POV) parking area is east of Building 470 and a fenced, gravel-covered military equipment parking (MEP) area is west of Building 470. Military vehicles and equipment such as portable bridge units are in the MEP area. Two portable buildings just east of the MEP area store compressed gas cylinders. A fenced, asphalt-paved storage area is southwest of Building 572 and large items such as tires are stored on the pavement. A flammable materials storage cabinet on the west side of the paved area is used for diesel fuel storage.

Approximately 20% of the Site is considered impervious (asphalt parking areas, driveways, concrete aprons near the maintenance bay doorways, building footprints, pavement south of Building 572, etc.). Most of the remainder of the Site, including the MEP area, is graveled. A strip of lawn and trees line Roberts Boulevard on the north side of the Site. Vehicle access is from entrances on Roberts Boulevard.

The ECS #15 is staffed by approximately 48 civilians employed by the USAR. The Site is used for the storage and maintenance of USAR military vehicles and heavy mobile equipment.

2.4 SITE HYDROLOGY AND GEOLOGY

2.4.1 Surface Water Characteristics

Figure 1 in Appendix A provides a topographic map of the Site and surrounding area. As shown on the map, the Site elevation ranges from approximately 445 to 495 feet above mean sea level and slopes downward to the northeast. Storm water runoff at the Site flows generally northeastward via swales, overland flow, and grated storm drains. Most of the storm water enters ditches along Roberts Boulevard, but a component of the storm water flows onto the adjacent Arkansas Army National Guard site to the southeast. The storm water draining from the Site eventually flows into Little Vache Grasse Creek, and then into the Arkansas River. No surface water bodies are on the Site or adjacent properties. Review of the topographic map of the Site area indicates that the nearest surface water body is Little Vache Grasse Creek, approximately one-quarter mile southeast of the Site.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for unincorporated areas of Sebastian County, Arkansas (Community Panel Number 0504620011B, May 7, 2001), the Site is in "Zone X." Zone X is defined by FEMA as "Areas of moderate to minimal hazard subject to flooding from severe storm activity or local drainage problems." The Site is outside the 100-year and 500-year flood zones.

2.4.2 Hydrogeological Characteristics

The Site is in the Arkansas Valley Section of the Ouachita Province, in an area of rolling, flat-topped hills, long narrow ridges, and broad valleys. The hilltops and ridges are capped by sandstone, while the valleys are mostly underlain by shale. Based on the soil survey obtained from the U. S. Department of Agriculture Natural Resources Conservation Service (NRCS), the predominant soil types originally on the Site are:

- Leadvale silt loam, 3 to 8% slopes. This soil formed in loamy sediment washed from uplands of weathered sandstone and shale, on the toes slopes of hills and old stream terraces in broad valleys. Runoff is medium, and erosion is a severe hazard. Native vegetation consists chiefly of hardwood trees and pines. This soil type is mapped near Roberts Boulevard and under the buildings.
- Enders-Mountainburg association, rolling. This soil type formed on hillsides and mountainsides and has slopes of 8% to 20%. It is a combination of 50% to 65% Enders silt loam that is gravelly or stony, and 25% to 40% Mountainburg gravelly or stony sandy loam, with the remainder small areas of other soil types or rock outcrops. Enders soil formed in thin layers of loamy material and underlying

clayey material that weathered from shale. Native vegetation is hardwood trees or mixed pines and hardwoods. Mountainburg soil formed from loamy material weathered from sandstone. Native vegetation is a mixture of pines, hardwood trees, and understory tall grasses. This soil type is mapped under the MEP portion of the site.

None of the soils identified is listed as hydric by the NRCS. The soils originally on the Site may have been disturbed or replaced by landfilling, excavation of landfilled material, and capping of the landfilled or excavated areas.

According to the *Ground Water Atlas of the United States, Arkansas, Louisiana, and Mississippi, HA 730-F*, the Arkansas Valley Section of the Ouachita Province is a low-lying plain with low ridges oriented east to west composed of a thick sequence of fractured, faulted, and folded shale and sandstone. These sedimentary rocks are Pennsylvanian in age, and were deposited within an elongated subsiding trough.

The surficial aquifer in the Site vicinity is the Arkansas River alluvial aquifer. The aquifer is comprised of terraced alluvial deposits of Pleistocene age and floodplain alluvial deposits of Holocene age. The Arkansas River alluvial aquifer is usually less than 100 feet thick. The groundwater is generally under artesian conditions except near the river, where water table conditions predominate.

Three groundwater monitoring wells were observed on the Site, but no water production wells or springs. The monitoring wells are associated with investigation of the sanitary landfill previously at the Site. According to the *Site Investigation Report, Sanitary Landfill #2* (U.S. Army Fort Chaffee Base Transition Team, 2000), the subsurface was characterized during well installation as fill and alluvium or clay (over landfill areas), underlain by fractured shale and then 0 to 6 feet of sandstone. The fill and shale layer together were 1 to 12 feet thick. The shale and sandstone were described as the Pennsylvanian age Savanna Formation. The investigation also indicated that the groundwater flow direction in the near-surface aquifer generally follows the surface topography, flowing northeasterly to easterly.

The Site and surrounding area are served with public water by the City of Fort Smith, which uses surface water from Lake Fort Smith as its water supply source. A database search was conducted for federal U.S. Geological Survey (USGS) wells, federal Public Water Supply (PWS) System wells, and state-registered wells within one mile of the Site (see the Environmental Data Resources, Inc. [EDR] Report in Appendix E).

One PWS system, Fort Chaffee Waterworks, ID AR0000514, was listed between one-quarter and one-half mile north-northeast of the Site at 1389 Fort Smith Boulevard, Fort Chaffee. The Fort Chaffee Waterworks was described as a PWS system serving approximately 250 people that purchased surface water and treated it with gaseous chlorination for disinfection. The database information was from the

Federal Reporting Data System (FRDS). The FRDS was active prior to August 1995, when it was replaced by the PWS Violation and Enforcement Data system, implying that the Fort Chaffee Waterworks discontinued operations before August 1995. No other listings or wells were identified on databases for properties within one mile of the Site.

2.5 SITE UTILITIES

The Site's water service is provided by the City of Fort Smith. The City of Barling provides sanitary sewer services for the Site. The Site has no storm water permits or industrial sewer use agreement with either city. Solid waste is placed in a Dumpster west of Building 470 and picked up by Waste Management under a private contract administered by the 90th Regional Readiness Command (RRC).

The Site does not have a separate sewer system for industrial wastewater. The only process water generated is from the OWS north of Building 470, which discharges into the sanitary sewer. The OWS at the VWR does not generate process water since its use was discontinued in 2005. Storm water from the Site flows into grated storm drains or via overland flow to five outfalls: one west of Building 572, two north of Building 470 adjacent to the POV parking area, and two on the southeast side of the Site near the VWR.

Electricity is provided by Oklahoma Gas and Electric Company. Natural gas is supplied to the Site by Arkansas Oklahoma Gas Company. The Site has a central heat and air system for the administration section of Building 470, and a boiler that provides heat for the maintenance shops. Building 572 is not heated and has electric fans for cooling.

2.6 WATER SUPPLY WELLS AND SEPTIC SYSTEMS

As described in Section 2.4.2, there is a PWS system but no PWS wells within one mile of the Site (the PWS identified used surface water). Because the Site is served by a public sanitary sewer system, there are no septic systems on the Site, and no known systems were identified on the Site.

3.0 SITE HISTORY

3.1 HISTORY OF OWNERSHIP

A *Historical Chain-of-Title Report* for the Site was reviewed and is provided in Appendix C. The Sebastian County Tax Assessor's Office did not have a property record card available for the Site, but a property record (parcel 40001-0000-00706-00) was available online from the Sebastian County Assessor Office Web site. A copy of the property record card is in Appendix D. A quitclaim deed for the subject property reviewed at the Sebastian County Clerk's office indicated that when a portion of Fort Chaffee land was transferred from the United States of America to the Fort Chaffee Redevelopment Trust in 2000, the ECS #15 land and buildings were an exception to the deed. The United States of America retained ownership of the subject property. A copy of the pertinent section of the quitclaim deed reviewed at the Sebastian County Clerk's office is in Appendix C.

The property record indicates that the Site is a 39.32-acre parcel. Key historical deed transfers within the last 60 years as listed on the chain-of-title are as follows:

- June 14, 1943 — A declaration of taking from the County of Sebastian, Arkansas, to the United States of America.

The chain-of-title report did not identify any leases or environmental liens against the ECS #15 property. Two lease documents in the Environmental Baseline Survey (EBS) report in Appendix D were reviewed during this ECP process. Neither lease document pertains to the Site buildings.

3.2 PAST USES AND OPERATIONS

According to USAR personnel and Fort Chaffee historical information, Fort Chaffee was established in the early 1940s on land that had previously been farmland. According to USAR personnel, historical topographic maps, and the *Site Investigation Report, Sanitary Landfill #2* (U.S. Army Fort Chaffee Base Transition Team, 2000), a portion of the Site was used as a sanitary landfill prior to development of the ECS #15. The sanitary landfill was comprised of 4.6 acres that underlie the present-day MEP area, and it was in operation from the 1940s to approximately 1954.

Important events in the facility's development, administration, and mission are summarized in Table 1.

Table 1 Historical Summary for ECS #15	
Year	Description
Early 1940s	Fort Chaffee is established. Sanitary Landfill #2 in use in the 1940s.
1954	Sanitary Landfill #2 is closed.
1978 to 1982	Geotechnical borings of ECS #15 property revealed landfill debris in some of the borings.
1982	Construction of Building 470, Building 572, VWR, and two OWSs; the beginning of ECS #15 operations at the Site.
1989 (estimated)	Drain in battery storage room sealed.
Early to mid 1990s	Addition of three acres to the west side of the MEP area. Conversion of POL storage room in Building 470 administration wing to arms storage room.
1995	The BRAC Commission recommended the permanent closure of Fort Chaffee.
1997	Fort Chaffee closed and Fort Chaffee Redevelopment Authority was formed.
1997	Permanent waste POL buildings constructed.
1999 — 2000	Environmental investigation of Sanitary Landfill #2 area.
2005	Conversion of painting bay on south end of Building 470 to storage bay. The OWS at the VWR was found to be defective, and use of the VWR was discontinued.

According to USAR personnel, Building 470 originally had a POL storage room inside the building where an arms vault is currently. The POL storage was moved outside into portable flammable materials storage units in the early 1990s. Also in the early 1990s, an additional three acres of land were added to the west side of the MEP area. The addition is the triangular-shaped portion of the MEP area west of the storm water drainage ditch and that extends north and south in the MEP area. The hazardous waste storage buildings were constructed in approximately 1997.

A portion of the southernmost shop bay in Building 470 had been used for spray painting. In 2005, this bay was converted to a storage area. Part of the conversion included placement of a raised concrete floor over the former concrete floor.

USAR personnel stated the Site has not had an operational indoor firing range.

Historical topographic maps and aerial photographs provide information about the Site and surrounding area. Figures 5, 6, and 7 present historical topographic maps dated 1951, 1971, and 1987, respectively. Figures 8, 9, 10, and 11 are aerial photographs of the Site and surrounding areas dated 1967, 1983, 1994, and 2007, respectively.

Pertinent observations on the USGS topographic maps are summarized below.

- **1951 (Figure 5).** This figure depicts a road on the Site that extends from Roberts Boulevard to the approximate location of Sanitary Landfill #2. Indications of trenches can be seen at the terminus of the road. The map also shows a small building on the Site, in the approximate location of Building 572. A circular road is near Roberts Boulevard.
- **1971 (Figure 6).** No road extends across the Site, but the trench locations are indicated. The circular road near Roberts Boulevard is present.
- **1987 (Figure 7).** In this figure, Buildings 470 and 572 are visible. No roads are shown on the Site.

Pertinent observations on the historical aerial photographs are summarized below.

- **1967 (Figure 8).** The portion of the Site adjacent to Roberts Boulevard is a cleared rectangular area with no structures. The present-day MEP area is also cleared and has no structures, but some vegetation is visible on this portion of the Site. Fort Chaffee buildings to the north-northeast across Roberts Boulevard, the pesticide handling center, incinerator stacks, and Arkansas Army National Guard facilities are present on adjacent properties.
- **1983, 1994, and 2007 (Figures 9 through 11).** On each of these figures, Buildings 470 and 572, and the VWR are visible (the VWR is outside the Site boundary drawn in on Figures 9 and 10). The 1983 photograph shows the MEP area as rectangular, without the additional land to the west. The 1994 and 2007 photographs indicate that the MEP area has been expanded to include the triangular portion of land on the west side. Fort Chaffee buildings on surrounding properties were similar to those present in 1967.

Available business directories including *Polk's City Directory* were reviewed by EDR. EDR's research included directories dated 1964, 1971, 1978, 1985, 1992, 2000, and 2007. In addition, the TEJV reviewed available Polk's city directories dated 1996, 2000, and 2004 at the Fort Smith Public Library. The Site's current address was not listed for any years reviewed. Neither Terry Street addresses nor Roberts Boulevard addresses beyond 720 were listed until 2000. In 2000, Building 470 was listed on Roberts Boulevard as occupied by U.S. Department of Army. In 2004, Building 470 was listed as occupied by U.S. Army Reserve. The only nearby listing on Roberts Boulevard was Fort Chaffee Canteen MWR at 1589 Roberts Boulevard in 2000 and 2004.

No historical Sanborn fire insurance maps were available for this Site.

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 USAR personnel.

Chemicals used and stored at the Site are associated primarily with vehicle and facility maintenance activities and janitorial services. Hazardous substances storage and use are associated with the shops, as well as other vehicle maintenance products, welding gases, batteries, and paints. Janitorial chemicals and building maintenance-related products are stored in the janitorial closet.

A 1997 chemical list for the Site indicated the following types of hazardous substances were present: adhesives, acids, cleaners, paint sealers, solvent for the parts washers, epoxy thinner, toluene, toluene-methyl isobutyl ketone mixture, acetylene, Freon, insect repellent, oxygen, nitrogen, wax, corrosion preventative compound, and welding rods.

Discussion with USAR personnel indicated that the storage locations of vehicle maintenance materials have generally been consistent with only a few changes over the years. The storage bay west of the tire bay was formerly used for painting, but was converted to a storage area after modification of the floor. Previously, the acid in batteries in the battery room was changed or topped off by USAR personnel, resulting in acid releases to the wood storage shelves and concrete floor. That practice has been discontinued and the spent batteries are now exchanged for new batteries.

A hazardous materials inventory of products at the Site in 2006 was being revised for 2007; a copy of the draft inventory is in Appendix D. USAR personnel indicated that the hazardous materials used in the past were similar to those currently at the Site.

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 USAR personnel. According to USAR personnel and Site records, hazardous wastes have been disposed of occasionally and several spills of oil-related materials are known to have occurred at the Site. This section discusses releases related to the ECS #15 operations at the Site. Information pertaining to possible releases from historical use of a portion of the Site as a sanitary landfill is in Section 3.7.9.

According to USAR personnel and records, the Site is a Resource Conservation and Recovery Act (RCRA) conditionally exempt small-quantity generator (CESQG) of hazardous waste; that is, one that generates less than 100 kg of hazardous waste or 1 kg of acutely hazardous waste in a calendar month. The Site's USEPA identification number is ARR000005009.

The following list, compiled from records reviewed at the Site, provides examples of the types of wastes generated at the Site, but does not necessarily include all wastes generated for a particular year.

- 1998 waste records list the disposal of waste paint, non-friable asbestos, naphtha, coating, antifreeze, and paint-related wastes.
- 2001 waste records list the disposal of methyl ethyl ketone (MEK) and mineral spirits.
- 2004 waste records list the disposal of 5 pounds of cadmium and lead waste, 45 pounds of waste asbestos, empty and punctured gas cylinders, 6,800 pounds of oil, 5 pounds of waste aerosols, 80 pounds of waste flammable liquid (epoxy), 20 pounds of sealing compound, and 900 pounds of empty acetylene bottles containing asbestos.
- 2005 waste records list the disposal of 60 pounds of lead-containing waste, 55 pounds of chromium-containing waste, and 1,200 pounds of waste asbestos.

USAR personnel stated that current waste streams generated on the Site include 12 to 13 55-gallon drums of waste antifreeze per year, and two 55-gallon drums of used brake shoes (asbestos) per year.

Fluorescent bulbs and cardboard generated on the Site are recycled. Spent batteries are picked up by Exide when replacement batteries are obtained.

3.4 PAST USE, STORAGE, DISPOSAL, AND RELEASE OF PETROLEUM, OILS AND LUBRICANTS

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

POL storage and use are associated with the shops. Discussion with USAR personnel indicated that POL storage locations have generally been consistent with only a few changes over the years. POL were once stored in a room that is now used as an arms vault. The POL were moved to the flammable materials storage buildings west of the maintenance shops.

Used oil and transmission fluid are stored in 600-gallon tanks in the POL waste storage buildings west of the maintenance shops. Safety-Kleen is the waste hauler that pumps out the used oil and recycles it offsite. Currently, two 55-gallon drums of crushed oil filters are generated at the Site per year.

3.5 PAST PETROLEUM RELEASES

According to USAR personnel and Site records, several spills of oil-related materials are known to have occurred at the Site.

- A February 3, 1998, memorandum described two oil spill areas in the MEP area, one on the north (warehouse) side and one on the south (loading dock) side. The analytical data indicated the soil could not be landfilled, but had to be disposed of due to high concentrations of total petroleum hydrocarbons (TPH).
- A July 19, 2000, memorandum indicated that 55 gallons of used diesel was released inside one of the two waste POL storage buildings, and that the building had a cracked floor and side walls.
- A September 7, 2005, memorandum indicated that 2 gallons of hydraulic fluid were released onto the asphalt-paved area south of Building 572.
- A September 19, 2005, memorandum indicated that a pint of diesel fuel was released from a vehicle in the MEP area.

During the Site reconnaissance, an open excavation was present in the MEP area. The soil had been excavated because of a diesel fuel release from a vehicle. The released volume was unknown, but estimated at slightly greater than 5 gallons. The excavation was approximately 15 feet by 20 feet, and extended to a depth of about 2.5 feet. At slightly deeper than two feet, clay was encountered, possibly the cap for the former landfill. The excavated soil was being temporarily stored on plastic and was scheduled to be disposed offsite. Documentation obtained since the Site reconnaissance stated that approximately 27 cubic yards of contaminated soil had been disposed of in the Fort Smith landfill (Terracon Consulting, Inc., 2007). The documentation also contained laboratory analytical data that indicated that a composite soil sample from the sidewalls of the pit contained no detectable benzene, toluene, ethylbenzene, or xylenes, and had less than 100 parts per million of TPH. The excavation was backfilled with clean soil.

USAR personnel reported that for small oil stains in the gravel-covered MEP area, the soil is typically turned and mixed with enzymes to degrade the oil. For stains on pavement, an oil-dry absorbent material is used to pick up as much oil as possible, and then placed with other oil-related wastes, such as shop rags, for offsite disposal as a non-hazardous waste. For large stains not on paved areas, the 90th RRC is notified and the spill response actions follow their guidelines, which typically includes excavation of the affected area. USAR personnel indicated that the number of releases since 1982 requiring remediation is estimated at two, which includes the recent excavation.

During the Site reconnaissance, small oil stains were noted on the concrete floors of the warehouse and maintenance shops. An oil stain was observed on the asphalt by the entrance to the south POL waste storage building, in the area where used oil is transferred into the bulk used oil storage tank. Old (weathered) oil stains were observed on the asphalt paved area southwest of the warehouse and inside the berm of one of the POL waste storage buildings. No staining was observed on the ground around either POL waste storage building, or around the portable flammable storage buildings. No cracks in the floors or sidewalls of the POL waste storage buildings were visible.

During the Site reconnaissance, small oil stains were noted in the MEP area and many of the vehicles parked in the area had containers under them to catch drips. Staining of the concrete floor in the battery room in Building 470 and on the wood storage shelves appeared to have resulted from battery acid releases.

All of the stains noted during the Site reconnaissance are considered *de minimis*, based on their size and because most were on pavement. The stains southwest of Building 572 were on cracked asphalt and the stains in the MEP area were on gravel; however, the small quantity of oil that appeared to have been released each time is not expected to have impacted more than surface soil.

3.6 PAST BULK PETROLEUM STORAGE TANKS

Based on a review of available Site records, a search of federal and state environmental databases, and interviews with USAR personnel, it does not appear that bulk petroleum underground storage tanks (USTs) have been used on the Site. Two 600-gallon aboveground storage tanks (ASTs) are on the Site. Both tanks are used for used oil storage and are inside permanent waste POL storage buildings constructed with concrete floors, 12-inch high curbs, metal walls, and metal roofs.

3.7 REVIEW OF PREVIOUS ENVIRONMENTAL REPORTS

A review of Site records produced several applicable reports pertaining to the Site. The following subsections provide a brief summary of these reports. Copies of the reports, unless otherwise specified, are provided in Appendix D. Only pertinent sections of reports that addressed multiple sites are presented in Appendix D.

3.7.1 Environmental Baseline Survey Report

Engineering, Compliance & Construction, Inc. (ECCI) issued an *Environmental Baseline Survey* for the ECS #15 in March 2005. The EBS provides summary and general information about the Site. "In accordance with the ASTM Standard D 5746-98 for *Standard Classification of Environmental Condition of Property Area Types for Defense Base Closure and Realignment Facilities*," ECCI classified the Site as an ECP Area Type 3 Property. An ECP Area Type 3 Property is an area or parcel of real property where

release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.

3.7.2 Asbestos Report

An *Asbestos Building Survey* report dated January 1997 was prepared for the ECS #15 by the USAR. The report detailed the findings of an asbestos inspection and sampling event. One of the eight samples collected, a non-friable floor tile adhesive (mastic) from the library hallway, indicated it was asbestos-containing material (ACM) (defined as materials containing more than 1% asbestos by weight).

3.7.3 Oil-Water Separator Evaluation

EnSafe Inc. performed an evaluation and issued an *Oil-Water Separator Evaluation* for the 90th RRC on May 5, 2000. The report stated that two OWSs were in use at ECS #15. A 15,000-gallon OWS was installed in 1982 to service an adjacent VWR that had no canopy or curbing to reduce storm water infiltration. A 5,000-gallon OWS was installed in 1982 to service the mechanic shop floor drains.

Each OWS was described as a concrete, two-chamber, rectangular vessel. Concrete weirs and baffles divided each OWS into a settlement chamber and a separation chamber. Each OWS discharged effluent to the Fort Chaffee sanitary sewer, which had been recently taken over by the City of Barling sanitary sewer system, which did not have a pretreatment ordinance at the time. No permit, monitoring, or reporting to the publicly owned treatment works (POTW) was required.

During the 2000 inspection, the VWR OWS settlement chamber contained approximately four feet of sediment. The mechanic shop floor drain OWS settlement chamber contained approximately three feet of sediment and four inches of sludge. EnSafe's report recommended the following: installing a valve on the floor drain system to prevent unauthorized discharges to the OWS and subsequently to the POTW; removing sediment from both settlement chambers; redesigning the wash rack by installing speed reducers/curbing; removing all liquid and sludge from both OWS and having the systems inspected and cleaned, if necessary; following up with the Barling Sanitary Sewer Department to ensure compliance with the sewer use ordinance, when written; establishing a schedule for routine sludge and oil removal; inspecting the OWS annually; and developing a site-specific written program that describes procedures and management practices to ensure compliance with the Clean Water Act.

Memorandums in the ECS #15 files by USAR personnel indicated that both OWS systems had been tested with dye and oil on July 7, 2004, and on May 16, 2005. The 2004 test did not indicate any problems, but the 2005 test showed that the VWR OWS was not functioning properly; a crack between the OWS wall and a baffle allowed oil to seep out without going through the normal separation process. The VWR and its OWS were shut down and have not been in use since, according to USAR personnel.

3.7.4 Engineering and Environmental Assessment

A *USAR Facility Engineering and Environmental Assessment* report by the U.S. Army Facility Engineering Group, Little Rock Facilities Engineer Team #13 for the Site was conducted in April 2001. The report summary stated that all Site buildings were in good condition. The summary also stated that the Site did not have a spill prevention plan, but was required to have one.

3.7.5 Lead-Based Paint Report

A *Lead-Based Paint and Ozone-Depleting Chemical Assessment and Management* report for the Site was prepared in 1994 by ETC Engineers, Inc. for the USAR. LBP was identified in three locations within Building 470: a pipe bollard in Room 118, a garbage can in Room 118, and the service center counter in Room 114. The report included diagrams of sampled areas, but no diagram specifically identifying the locations of the positive LBP samples.

3.7.6 Storm Water Pollution Prevention Plan

A Storm Water Pollution Prevention Plan (SWPPP) developed by the U.S. Army Fort Chaffee Base Transition Team for Fort Chaffee, Arkansas, dated May 16, 1997, included the Site. The Plan identified five storm water outfalls from the Site: one west of Building 572, two north of Building 470 adjacent to the POV parking area, and two on the southeast side of the Site near the VWR. These locations were consistent with storm water outfalls observed during the Site reconnaissance.

The SWPPP stated that a 2.5-acre inactive and closed asbestos landfill is southwest of Building 542, shown on a plan figure as southwest of the intersection of Roberts Boulevard and Terry Avenue (where Building 572 is located). A second figure identified the ECS #15 structures as Buildings 470 and 542, but does not show the asbestos landfill location. The asbestos landfill was reported to be capped with two feet of clay.

3.7.7 Radon Report

A *Radon Building Survey* report dated December 1998 was prepared for the ECS #15 by the USAR. The report stated that a radon survey was performed in Building 470 on December 16, 1998, and that radon levels greater than 4.0 picocuries per liter (pCi/L) were not measured during the survey.

3.7.8 Geophysical Survey, Landfill #2

A *Draft Geophysical Survey, Landfill No. 2, Fort Chaffee, Arkansas* report, dated December 11, 1998 was prepared by IT Corporation; this report was also included as an appendix in the Site Investigation Report for the landfill (discussed in Section 3.7.9). The geophysical survey was conducted to provide insight into the likely presence and orientation of former burial trenches for a sanitary landfill in use in the 1940s and

early 1950s. A portion of the landfill underlies a portion of the ECS #15 property. Magnetic and electromagnetic terrain conductivity geophysical survey techniques were used. The data indicated the presence of buried ferrometallic debris and nonferrometallic conductive material. Three large anomalies and several small localized anomalies were identified from the survey data. The survey concluded that the typical trenching and backfilling operations evidenced at other Fort Chaffee landfill sites were not used here; instead, pit and backfill operations appeared to be the method of disposal.

3.7.9 Site Investigation, Sanitary Landfill #2

A Site Investigation Report, Sanitary Landfill #2 — Site FTCH-002, Volumes I and II, dated May 2000, was prepared for the ECS #15 property by the U.S. Army Fort Chaffee Base Transition Team. The report described an investigation of the 4.6 acres formerly used as a sanitary landfill, from the 1940s until 1954. A portion of the landfill underlies the area now occupied by the ECS #15 MEP area.

The sanitary landfill reportedly contained eight 900-foot by 20-foot trenches oriented east-west. The trenches were excavated and backfilled with municipal waste in the 1940s and early 1950s. The total landfill width was approximately 225 feet. The depth of the landfill reportedly extends from approximately three to five feet below ground surface (bgs) to at least 16 feet bgs. The document stated that geotechnical borings drilled in 1979 and 1980 to obtain information for ECS #15 building construction indicated the presence of glass, lumber, paper, and incinerator residue wastes.

The document stated that the landfill contents had reportedly been excavated and relocated to an offsite landfill during construction of ECS #15. Borings drilled in the 1980s under Building 470 did not uncover any wastes under the building footprint. The site investigation focused on the areas adjacent to the footprint of the landfill to avoid disturbing potentially buried waste material which might still be present.

Nine surface and 17 subsurface soil samples were collected and analyzed, and 12 groundwater samples were collected from monitoring wells surrounding the landfill footprint. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, organophosphate pesticides, herbicides, cyanide, sulfides, and 25 metals. Detected concentrations in soil were compared to then-current medium-specific screening levels (MSSLs) for residential and industrial soil, which are risk-based screening criteria. Detected concentrations in groundwater were compared to USEPA Safe Drinking Water Act Maximum Contaminant Levels (MCLs).

Detections in surface soil samples included 4,4-dichlorodiphenyldichloroethylene at concentrations below the applicable residential MSSL; acetone, 2-butanone, and toluene below the applicable MSSLs; methylene chloride slightly above the applicable residential MSSL but below the industrial MSSL; and metals. The metals concentrations were consistent with background levels, except copper, lead, mercury, and

sodium concentrations. Concentrations of metal constituents above background levels did not exceed residential MSSLS.

Detections in subsurface soil samples included acetone, benzene, methylene chloride, toluene, and xylenes, all at concentrations below the applicable residential MSSLS, and metals concentrations, except for sodium, consistent with background levels. Sodium was detected in two samples above the maximum background concentration. An MSSL has not been established for sodium.

Detections in groundwater samples included cyanide below the MCL, and 2-butanone slightly above the sample quantitation limit (no MCL had been established for this parameter). Thirteen metals were detected but all concentrations were below applicable MCLs.

The report concluded that impacts to surface soil, subsurface soil, and groundwater in the area surrounding Landfill #2 were negligible. The concentrations of metals and VOCs detected were at levels that do not pose an unacceptable risk to human health and the environment. No further action was recommended.

3.7.10 USEPA Superfund Record of Decision

As part of the transition of Fort Chaffee property to other uses, the U.S. Army was identified as the lead agency for CERCLA response actions. The U.S. Army Fort Chaffee Base Transition Team was the onsite agency responsible for response actions. The ECS #15 property was one of multiple Fort Chaffee sites that at some point had been included in lists of sites with a potential to require a response action under CERCLA, and was therefore included in further investigation by the U.S. Army Fort Chaffee Base Transition Team.

A Record of Decision for 19 No Further Action Group III Environmental Sites, Fort Chaffee, Arkansas, dated December 13, 1999, included Site Building 470 as FTCH 21F, one of six building locations in the Group III investigation area of Fort Chaffee identified as a hazardous waste accumulation point for aboveground storage of vehicle maintenance fluids or paint wastes. The Superfund Record of Decision (ROD) stated that surface soil, subsurface soil, and groundwater samples were collected from each of the six building locations in September 1997. The samples were analyzed for VOCs, SVOCs, and metals. The ROD indicated that no VOCs or SVOCs were detected in the soil samples collected from the Building 470 location, that the metal concentrations detected were consistent with background concentrations or below residential screening levels and that groundwater was not impacted.

Based on the investigation findings, the ROD concluded that the Site did not present unacceptable risk to human health and the environment, and no CERCLA-related restriction on land use was required.

4.0 ADJACENT PROPERTIES

Figure 11 in Appendix A provides an aerial photograph of the Site and adjacent properties. To the north and northeast, the Site is bounded by Roberts Boulevard and then former Fort Chaffee property. Some of the Fort Chaffee property is unoccupied, but a portion of the property is now occupied by Blake Construction. To the southeast is an Arkansas Army National Guard vehicle maintenance facility, which includes Buildings 458 and 460 as well as a VWR. To the south and west of the Site and northwest of the MEP area are woods and fields. North of the MEP area and west of Building 572 are an unoccupied building which once housed a pesticide handling center, and two inactive incinerator structures; these structures were previously part of Fort Chaffee and are in the Excess Area, land which has been transferred to the Fort Chaffee Redevelopment Authority. Further north-northwest of the Site, across Roberts Boulevard, is St. Mary's Cemetery (listed on some historical maps as Roberts Cemetery).

Appendix A provides historical aerial photographs and topographic maps and Appendix E presents an environmental data report that was used to evaluate potential environmental impacts from adjacent and nearby properties that may have also impacted the environmental conditions at the Site. Fort Chaffee is listed in the environmental database search report as a DoD facility. Additional information associated with specific Fort Chaffee facilities near the Site with potential environmental issues is presented in Section 5.

Land use at some of the properties adjacent to the Site has changed significantly over the years. The former pesticide handling center and the former incinerators are no longer in operation. The former motor pool and the fuel depot to the northeast across Roberts Boulevard are no longer in service. Tanks for the fuel depot were not observed on the property and are believed to have been removed. The cemetery to the north-northwest across Roberts Boulevard once also had a swimming pool, as shown in the 1951 topographic map. The 1951 topographic map also depicts the symbol for mining or a quarry west of the Site.

The Arkansas Army National Guard facility to the southeast, the cemetery to the north-northwest across Roberts Boulevard, and the woods and fields to the south and west appear to have been unchanged since at least 1951.

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 petroleum product and that are likely to cause a release or threatened release of any hazardous substance or petroleum product on the federal real property. An environmental database summary was obtained from EDR on May 4, 2007. The environmental database summary consolidates standard federal, state, local, and tribal environmental record sources based on ASTM D 6008-recommended minimum search distances from the Site. A copy of the complete EDR report is included in Appendix E.

There were no environmental permits issued for the Site.

Available information on potential impacts to the Site was assessed. TEJV personnel interviewed local authorities and reviewed reasonably accessible USAR environmental documents, Arkansas Department of Environmental Quality (ADEQ) files, and historical aerial photographs and maps to investigate environmental conditions at the Site and surrounding area. TEJV personnel also reviewed several documents pertaining to environmental investigations of portions of Fort Chaffee, because the Site is surrounded by former Fort Chaffee properties. These documents are in Appendix D and include:

- *Record of Decision for 15 Sites (No Further Action Group II Sites), Fort Chaffee, Arkansas, and Record of Decision for Three Sites (No Further Action Group I Sites), Fort Chaffee, Arkansas, dated May 13, 1999*
- *Record of Decision for 19 No Further Action Group III Environmental Sites, Fort Chaffee, Arkansas, dated December 13, 1999*
- *Record of Decision for Five No Further Action Group III-D Environmental Sites, Fort Chaffee, Arkansas, dated February 8, 2000*
- *Record of Decision for Two No Further Action Group V Environmental Sites, Fort Chaffee, Arkansas, dated September 9, 2002*
- *Record of Decision for Two No Further Action Group VI Environmental Sites, Fort Chaffee, Arkansas, dated April 2003*
- Letter dated February 25, 2004, from the USEPA to the Fort Chaffee Redevelopment Authority regarding a Ready for Reuse Determination for portions of the former Fort Chaffee property.

The TEJV conducted interviews with USAR personnel to discuss general environmental interest and specific areas of interest identified during the records review and visual reconnaissance. Copies of the interview reports are included in Appendix D.

Section 9.0 of this report identifies the individuals interviewed with respect to conditions and operations at the Site. The interviews included topics of general environmental interest and specific areas of interest identified during the records review and visual Site reconnaissance. Pertinent information from these interviews is incorporated into this report.

5.1 FEDERAL ENVIRONMENTAL RECORDS

5.1.1 Federal National Priorities List Sites within One Mile

The National Priorities List (NPL) is a subset of the CERCLA Information System (CERCLIS) and identifies more than 1,200 sites for priority cleanup under the Superfund Program. NPL sites are targeted for long-term remedial action under CERCLA. According to the environmental database report, the ECS #15 is not an NPL site and there are no such sites within one mile of the Site.

5.1.2 Federal CERCLIS Sites within One-Half Mile

CERCLIS contains data on hazardous waste sites and potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and persons, pursuant to Section 103 of CERCLA. CERCLIS contains sites that are either proposed to be or are on the NPL and sites that are in the screening and assessment phase for possible inclusion on the NPL.

CERCLIS No Further Remedial Action Planned (NFRAP) sites have been removed and archived from CERCLIS. NFRAP status indicates that, to the best of USEPA's knowledge, assessment at a site has been completed and that no further steps will be taken to list this site on the NPL, unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with the site; it means that, based on available information, the location is not judged to be a potential NPL site.

According to the environmental database report, the ECS #15 is not a CERCLIS or CERCLIS NFRAP site and there are no CERCLIS or CERCLIS NFRAP sites within one-half mile of the Site. However, multiple locations at Fort Chaffee have been investigated for their potential to require a response under CERCLA, including several locations within one-half mile of ECS #15. When Fort Chaffee was closed, portions of the Fort Chaffee property surrounding the Site were designated to be transferred for reuse. In preparation for transfer, the U.S. Army Fort Chaffee Base Transition Team investigated properties that had, at some point, been included in lists of sites with a potential to require a response under CERCLA. The properties were placed into Groups I through VI for the purposes of the investigation. The findings of the investigations were summarized in several ROD documents. TEJV personnel reviewed as many of the ROD documents as were readily available.

Properties within one-half mile of the Site that were in ROD documents include the following:

- FTCH-002, landfill portion of the Site, discussed in Sections 3.7.8 and 3.7.9
- FTCH-021F, the Site, discussed in Section 3.7.10

Groups I and II

- FTCH-010, Former Electrical Transformer Storage Area, Building 460. The property was a paved area along the railroad tracks east of Building 460 (which is one of the Arkansas Army National Guard buildings on the adjacent property southeast of the Site). Electrical transformers and miscellaneous drums were stored under temporary cover while awaiting disposal. No spills or releases from the area are known. Several soil sampling events were conducted from 1988 through 1998. The sampling results indicated the presence of coal tar constituents, believed to be associated with the asphalt pavement and treated railroad ties. No PCBs were detected.
- FTCH-014, Used Oil Storage Tank on the north side of Roberts Boulevard east of Terry Avenue (north of the Site across Roberts Boulevard). A 10,000-gallon AST was in use from 1987 until 1995 for storage of used oil from maintenance activities. The tank was on an asphalt-lined concrete slab inside a concrete containment curb. One spill of approximately 80 gallons of oil outside the containment area was reported in October 1989 and addressed with absorbents and temporary berms. Soil sampling in 1997 from two locations indicated the presence of naphthalene and 2-methylnaphthalene in one sample, at concentrations below the residential screening level for naphthalene. The AST was removed on April 22, 1999.
- FTCH-015, PCB Storage Facility, in the former Building 426 on the southwest corner of Ellis and Pritchard Avenue (approximately 1,500 feet northeast of the Site). This building was used for electrical transformer storage prior to disposal from 1987 to 1988, after storage at the FTCH-010 area was discontinued. Transformers suspected of containing PCBs were stored in drip pans in a bermed area. Drums and lithium batteries were also stored temporarily. No spills or releases from this area are known. Five soil samples were collected in 1997 from drainage areas surrounding the slab and from under the lab. PCBs were not detected.
- FTCH-024, Paint Shop Waste Storage Area, in Building 416, east of the intersection of Roberts Boulevard and Terry Street (north of the Site across Roberts Boulevard). A 55-gallon drum was used to collect waste paint and thinner from the early 1980s until 1988. When the drum was full, it was removed for disposal and replaced with a new drum. Visibly contaminated soil was removed in 1988, when waste collection was discontinued. Soil samples were collected in 1997 and 1998, and analyzed for VOCs, SVOCs, and metals. Lead and cadmium were present at concentrations higher than background but below residential screening levels. Benzo(a)pyrene was detected slightly above the quantitation limit in 1997 but not in 1998.

- FTCH-025, Troop Medical Clinic Silver Recovery Unit, in Building 130 (approximately one-half mile northeast of the Site). Silver was recovered from photochemical solutions from 1985 to 1990, then the solutions were discharged to a sanitary sewer. The sewage lagoon sludge was sampled to assess whether the silver had been released to the sewer system. Elevated concentrations of silver were not detected in the sludge.
- FTCH-037, USTs at Buildings B260 and B263, 500 feet southwest of the intersection of Fort Smith Boulevard and Taylor Avenue (approximately one-half mile northeast of the Site). Building B260 housed four 1,130-gallon USTs and Building B263 housed one 600-gallon UST and three 3,000-gallon USTs. UST contents that could be determined were a mixture of water and petroleum. In 1991, all USTs were removed. Soil and groundwater samples collected in 1997 were analyzed for VOCs and SVOCs. No constituents were detected in excess of screening or ADEQ closure criteria.

Group III

- FTCH-009, DDT (dichlorodiphenyltrichloroethane) Storage Area, Building 314 and surrounding lot, north of Roberts Boulevard and 70 feet west of Chaffee Boulevard (northeast of the Site across Roberts Boulevard). Excess DDT was stored in 55-gallon drums stacked on wood pallets from 1966 through 1979. Over time, the drums corroded and leaked, and DDT-contaminated surface soil and the drainage ditch behind Building 314. Cleanup actions included removal of the building, excavation and offsite disposal of contaminated soils, groundwater monitoring, confirmation sampling, and site restoration. The site was remediated to below the USEPA residential screening level for DDT-contaminated soil. Post-remediation groundwater samples indicated concentrations below detection limits for pesticides except for one sample that contained DDT at the detection limit.
- FTCH-012, Hazardous Waste Satellite Accumulation Point, Building 262, east of the intersection of Taylor and Darby Avenues (approximately one-half mile northeast of the Site). Materials including waste solvents, oils, and used lead-acid batteries were stored here from 1942 to 1989. Subsurface and surface soil and groundwater samples were collected in 1997. Soil samples were analyzed for VOCs, SVOCs, pesticides, PCBs, petroleum hydrocarbons, and metals. Lead, zinc, and cadmium were detected at higher than background concentrations, but lower than residential screening levels. Chlorinated pesticides detected in surface soil samples were attributed to past pest control practices rather than a release. SVOCs detected in soil samples from the drainage ditch along the southern boundary were attributed to drainage from other areas or asphalt runoff; the SVOCs were below industrial screening levels. Analysis of groundwater samples for VOCs, SVOCs, petroleum hydrocarbons, and metals indicated no releases to the groundwater.

- FTCH-017, VWR Ditches, various ditches near the Site associated with multiple vehicle wash racks. OWSs installed at 18 VWRs in 1975 treated and discharged wash water into the installation sanitary sewer. The OWSs were removed in 1997 and 1998. The ditches were investigated in 1997 to assess the impact of possible wash water discharges on the ditches and the creeks into which they discharge. Soil and sediment samples collected were analyzed for VOCs, SVOCs, and 25 metals. No VOCs were detected; the sole SVOC detected was considered a laboratory artifact. Cadmium, lead, mercury, copper, and zinc in soil samples were elevated compared to background levels, but below residential screening levels. Arsenic, chromium, and nickel concentrations in sediment samples were above the screening criteria for probable effects levels for freshwater sediment. The presence of metals above the conservative screening levels for freshwater sediment was attributed to natural sources (such as metals in the shale formation underlying much of the area), Fort Chaffee activities, or other anthropogenic sources unrelated to Fort Chaffee activities. The metals concentrations in the creek sediments were not considered to pose an unacceptable risk to human health or the environment.
- FTCH-021A, Waste Oil Accumulation Point, Building 262 (approximately one-half mile northeast of the Site). A 600-gallon AST was used to store waste soil in this former vehicle maintenance shop. In 1997, surface soil, subsurface soil, and groundwater samples were collected and analyzed for VOCs, SVOCs, and metals. No VOCs or SVOCs were detected. Metals concentrations were consistent with background levels or below residential screening levels. Groundwater was not found to be impacted.
- FTCH-021B, Waste Oil Accumulation Point, Building 423 (approximately 500 feet north-northeast of the Site, across Roberts Boulevard). This maintenance shop had a drum storage area outside the building. In 1997, surface soil, subsurface soil, and groundwater samples were collected and analyzed for VOCs, SVOCs, and metals. No VOCs or SVOCs were detected. Metals concentrations were consistent with background levels or below residential screening levels. Groundwater was not found to be impacted.
- FTCH-021C, Waste Oil Accumulation Point, Building 421 (approximately 750 feet north-northeast of the Site). A waste oil and drum storage accumulation point, with drums stored inside and outside the building. In 1997, surface soil, subsurface soil, and groundwater samples were collected and analyzed for VOCs, SVOCs, and metals. No VOCs or SVOCs were detected. Metals concentrations were consistent with background levels or below residential screening levels. Groundwater was not found to be impacted.
- FTCH-023, Defense Reutilization and Marketing Service, Hazardous Waste Storage Area, Building 339 near the intersection of Taylor and Darby Avenues (approximately 1,500 feet northeast of the Site). This building contained a

temporary storage area for hazardous waste prior to disposal until 1994. No spills or releases were known for the area. In 1995 and 1998, surface soil samples were analyzed for VOCs, SVOCs, metals, pesticides, herbicides, and PCBs. VOCs, SVOCs, pesticides, and herbicides were detected in the 1995 surface soil samples, and attributed to routine application of pesticides and herbicides (with VOCs and SVOCs serving as carrier compounds), not a release from site-related activities. One 1998 surface soil sample contained lead above background levels; the source of the lead was believed to have been weathered lead-based paint from an exterior wall. SVOCs detected in 1998 samples are believed to be caused by remnants of asphalt from the parking lot. The 1998 soil samples also contained low levels of pesticides, believed to be related to routine pest control.

- FTCH-035, Buildings 145, 402 and 403, USTs. Building 145 is near the intersection of Chaffee Boulevard and Fort Smith Boulevard (approximately one-half mile northeast of the Site). This location was formerly the Post Exchange Service Station, and three fuel USTs were present. Buildings 402 and 403 were east of Terry Street between Roberts Boulevard and Darby Avenue, approximately 500 feet north-northeast of the Site. Building 402 had a diesel UST, and Building 403 had a gasoline UST. Both tanks were installed in 1955. Tanks at all locations were removed and soil excavation samples were collected and analyzed for VOCs, SVOCs, and gasoline and diesel constituents. Soil concentrations were below ADEQ screening criteria for petroleum. Groundwater samples were collected at Buildings 402 and 403. The sample results indicated that the groundwater petroleum concentrations were below ADEQ criteria for petroleum. ADEQ files indicated that a "No Further Action" (NFA) letter for those tanks was issued on December 7, 1998.
- FTCH-038B, Building 428 on the north corner of Roberts Boulevard and Ellis Street (northeast of the Site across Roberts Boulevard). A 12,000-gallon fuel UST was installed in 1945 and removed in 1991. In 1998, soil samples were collected and analyzed for VOCs, SVOCs, and gasoline and diesel constituents. Diesel constituents and five SVOCs were detected in one borehole near Ellis Street, at a depth of 7.5 to 9 feet bgs. The diesel hydrocarbons were below ADEQ screening levels for petroleum and the SVOCs were below residential screening levels, except for benzo(a)anthracene, which was slightly above the screening level. Based on the depth and concentration, this constituent was not considered to pose a risk for future residential use. ADEQ issued an NFA letter on August 13, 1998, for this facility.
- FTCH-042A, Pesticide Handling Area, Building 540 (west of Building 572 and adjacent to the Site). Pesticide storage and mixing was performed at this property since the late 1970s. Drums were stored in a secondary containment area and mixing occurred on concrete pads. No releases were reported. In 1998, surface and subsurface soil samples were collected near outside storage areas and drainage pathways. Groundwater samples were collected from monitoring wells.

No VOCs, SVOCs, PCBs, metals, or pesticides were detected in the samples above USEPA soil screening limits for residential exposure or above MCLs in groundwater. Metals concentrations were consistent with background concentrations. Chlorinated pesticides detected in soil samples were not detected in groundwater samples, indicating that these compounds have not migrated into groundwater. One groundwater sample contained the chlorinated herbicide dicamba, but this detection was not considered representative of a release.

Group V

- FTCH-001, Sanitary Landfill #1, 31 acres between Roberts and Custer boulevards and east of Hari Cari Road (approximately 300 feet south of the Site). The landfill is comprised of a permitted trench area and four unpermitted trench areas (the unpermitted trench areas are west and southwest of the Site). The landfill consists of a series of parallel unlined trenches, approximately 20 feet wide, 10 feet deep, and up to 800 feet long. The trenches were used to dispose of sanitary and household solid wastes generated at Fort Chaffee from before 1954 until 1994. The permitted trench area was designated as a Class 4 landfill in 1990 to accept ACM from demolition of Fort Chaffee facilities. In 1998 and 1999, the landfill cap was inspected and repaired to meet ADEQ Solid Waste Division requirements. Groundwater samples collected indicated that only one SVOC was present above its MCL; the SVOC, bis(2-ethylhexyl)phthalate, which is a common plasticizer used in sampling equipment and is often a laboratory contaminant, and was attributed to laboratory contamination in this case. Metals detected in the groundwater above their MCLs were cadmium, nickel, and thallium; these metals were found in both upgradient and downgradient wells, so they were believed to not be released from the landfill. A soil-gas survey indicated that methane is present, but only within the boundaries of the landfill. Only the source area was identified as having the potential to present a risk to human health and the environment, and the risk is mitigated by the landfill cap. A CERCLA land use restriction is applied to this area to ensure protection of the landfill cover system.

Group VI

- FTCH-013, Solid Waste Incinerator Slag Piles, 11 acres approximately 1,500 feet east of the intersection of Roberts Boulevard and Hari Cari Road (west of and adjacent to the ECS #15 MEP area). This area was used for the disposal of incinerator residue from the two nearby coal-fired incinerators, which operated from 1942 until approximately 1960. The area was investigated in 1999 and 2000. Constituents detected in the incinerator residue included arsenic, trichloroethylene, dioxin, benzo(a)pyrene, chromium, thallium, antimony, cadmium, and others. The concentrations associated with the constituents detected were evaluated based on an industrial land use scenario. The cumulative cancer risk for all chemicals detected was within the USEPA's acceptable risk range. The cumulative non-cancer risk for all chemicals under an industrial use scenario was below the USEPA's acceptable risk range. In contrast, both the cancer and non-cancer risk evaluations exceeded the residential use ranges. Groundwater samples contained

high levels of manganese (above a USEPA secondary guideline; there is no MCL for this constituent). This metal is believed to be naturally occurring based on the levels of manganese found in other wells across Fort Chaffee. Land use restrictions for industrial use only have been placed on this area.

- FTCH-045, Wood Dump Area, a 3.2-acre parcel southeast of the intersection of Roberts Boulevard and Hari Cari Road (adjacent to and west-southwest of the Site). This was a collection point for wood debris and a burn site for the wood until 1998. The area is co-located with FTCH-001 and overlaps FTCH-013. A portion of the area is covered with the FTCH-001 landfill cap. No adverse environmental impact was noted with respect to the wood dump.

As stated in the February 25, 2004, letter from the USEPA to the Fort Chaffee Redevelopment Authority, ADEQ, and USEPA Region 6 agreed that investigation and remediation of those portions of the Fort Chaffee property covered by Findings of Suitability to Transfer (FOSTs) I through IV have successfully been completed. The Ready for Reuse determination acknowledged that the environmental conditions on areas covered by FOSTs 1 through IV are protective of human health and the environment, subject to the specific environmental restrictions described in the letter.

TEJV personnel contacted USEPA Region 6 to discuss the status of the Ready for Reuse Determination for other FOST areas. USEPA personnel stated that the USEPA did not receive enough supporting documentation to allow this determination to be made for additional areas, as reflected in the USEPA's comments on the documents received. Additionally, the lack of determination did not mean that there are environmental issues remaining in the other areas, nor did it mean that the properties are not ready to reuse, only that the USEPA did not have sufficient documentation to support a Ready for Reuse determination. USEPA personnel also stated that such a determination by the USEPA is not required before transfer of the properties.

Based on the NFA determinations for all of the above properties and the concurrence of the USEPA and ADEQ with the majority of the determinations, these facilities do not appear to pose a potential environmental risk to the Site, provided the land use restrictions for FTCH-001 and FTCH-013 are maintained.

5.1.3 RCRA Corrective Action Sites within One Mile

RCRA Corrective Action Sites (CORRACTS) represent facilities that have generated or managed hazardous wastes and require corrective action. According to the environmental database report, the ECS #15 is not a CORRACTS. No CORRACTS were identified within one mile of the Site.

5.1.4 RCRA Transport, Treatment, Storage, and/or Disposal Facilities within One-Half Mile

The RCRA Information Database (RCRAInfo), a national information system that supports the RCRA program through tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose (TSD) of hazardous waste, includes selective information on such sites. According to the environmental database report, the ECS #15 is not a RCRA TSD site and there are no such sites within one-half mile of the ECS #15.

5.1.5 Federal RCRA Small- and Large-Quantity Generators List within One-Quarter Mile

RCRA small-quantity generators (SQGs) are defined as facilities generating between 100 kg and 1,000 kg of hazardous waste per month, while a large-quantity generator (LQG) is defined as a facility generating more than 1,000 kg of hazardous waste, or over 1 kg of acutely hazardous waste, per month.

As discussed in Section 3.3.2, the ECS #15 is a CESQG that was once a SQG. The environmental database search report did not list the Site as a RCRA SQG but did identify it on the Facility Index System/Facility Registry System (FINDS) database. The FINDS database contains both facility information and 'pointers' to other sources that contain more detail. The Site is in the FINDS database because it is listed on RCRAInfo.

ADEQ file records (Appendix D) for the Site's USEPA ID number, ARR000005009 were reviewed. The records indicate that the Site was a SQG in 1998, then a CESQG from 1999 to present. Hazardous wastes disposed in 1998 included naphtha, coatings, ethylene glycol and monomethyl ether, and waste paint related material. No hazardous wastes were generated in 1999 or 2000, according to the ADEQ file records. Wastes generated in 2001 included MEK, paint, and aerosols.

No RCRA LQGs are within one-quarter mile of the Site, according to the EDR report. However, some of the Fort Chaffee properties identified in 5.1.2 may have been RCRA LQGs when active.

5.1.6 Federal Emergency Response Notification System List

The federal Emergency Response Notification System (ERNS) provides information on reported releases of oil and hazardous substances. According to the environmental database report, the ECS #15 is not listed on the ERNS List.

5.2 STATE AND LOCAL ENVIRONMENTAL RECORDS

The regulatory information presented below was obtained from the environmental database report. Supplemental information was also provided from research at the ADEQ.

5.2.1 State-Registered Landfills or Solid Waste Disposal Sites within One-Half Mile

According to the environmental database report, no solid waste landfills, incinerators, or transfer stations are within one-half mile of the ECS #15. However, as discussed in Section 3.7.9, there was formerly a solid waste landfill on a portion of the Site, and an incinerator facility to the northwest of the Site. As discussed in 5.1.2, the area designated as FTCH-001, approximately 300 feet south of the Site, was a sanitary landfill, and the area designated as FTCH-013, adjacent to the site on the west-southwest, was used to dispose of incinerator residue.

5.2.2 State-Registered Leaking UST Sites within One-Half Mile

The Site is not listed in the state leaking UST (LUST) database. The environmental database report identified no LUST sites within one-half mile of ECS #15.

5.2.3 State-Registered UST Sites within One-Quarter Mile

The environmental database report identified no state-registered UST sites within one-quarter mile of ECS #15. However, the ROD documents identified FTCH-035 and FTCH-037 as UST facilities within one-quarter mile of the Site, as discussed in Section 5.1.2.

5.2.4 State Hazardous Waste Sites within One Mile

According to the environmental database report, no hazardous waste sites are within one mile of the ECS #15. The Site is not classified as a hazardous waste site.

5.2.5 State Closed Landfills within One-Half Mile

According to the environmental database report, no closed or abandoned landfills have been identified within one-half mile of the ECS #15. However, a portion of the Site is on a former sanitary landfill, as discussed in Section 3.7.9. Also, FTCH-001, on adjacent property south and west of the Site, is a former sanitary landfill, as discussed in Section 5.1.2.

5.2.6 State AST Sites within One-Quarter Mile

The environmental database report did not list ASTs at the Site or within one-quarter mile of the Site. However, as discussed in Section 5.1.2, two former AST sites are within one-quarter mile of the ECS #15, both near the corner of Roberts Boulevard and Terry Avenue. The AST facilities are designated FTCH-014 and FTCH-038B.

5.2.7 State Spills Incidents

According to the environmental database report, the ECS #15 is not listed on the Arkansas spills database.

5.2.8 State Sites with Institutional and Engineering Controls within One-Half Mile

Institutional controls include administrative procedures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post-remediation care requirements intended to prevent exposure to contaminants remaining onsite. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

According to the environmental database report, no state-registered sites with institutional or engineering controls are within one-half mile of the ECS #15. However, as discussed in Section 5.1.2, the Fort Chaffee property designated as FTCH-001 (Sanitary Landfill #1) was closed in accordance with ADEQ Solid Waste Division guidelines and does have a CERCLA land-use restriction applied to ensure the continued protection of the landfill cover system. The Fort Chaffee property designated as FTCH-013 (Solid Waste Incinerator Slag Piles) has been restricted to industrial use only (no residential use allowed).

5.2.9 State Voluntary Cleanup Program Sites within One-Half Mile

There are no State Voluntary Cleanup Program sites with one-half mile of the ECS #15. According to the environmental database report, the ECS #15 is not listed on the Voluntary Cleanup Program list.

5.2.10 State Brownfields Program Sites within One-Half Mile

Included in the listing are brownfields properties addressed by Cooperative Agreement Recipients and brownfields properties targeted by Targeted Brownfields Assessments. According to the environmental database report, no state-registered Brownfield Program Sites are within one-half mile of the ECS #15. According to the environmental database report, the ECS #15 is not listed on the brownfields list.

5.2.11 State Enforcement Sites

According to the environmental database report, the ECS #15 is not listed on the enforcement list of permit violations.

5.2.12 State Poultry Sludge Permit Sites within One-Half Mile

According to the environmental database report, there are no poultry sludge permit (Sludge) sites within one-half mile of the Site. According to the environmental database report, the ECS #15 is not listed on the Sludge list.

5.2.13 State Permit Data System

According to the environmental database report, the ECS #15 is not listed on the state permit data system.

5.2.14 State Facility Emission and Stack Data Sites

According to the environmental database report, the ECS #15 is not listed on the facility emission and stack list.

5.2.15 State Asbestos Notification of Intent Database Sites

According to the environmental database report, the ECS #15 is not listed on the asbestos database.

5.3 TRIBAL ENVIRONMENTAL RECORDS

According to the environmental database report, no designated Indian Reservations are within one mile of the ECS #15.

5.4 UNMAPPED SITES

The environmental database search yielded three unmapped sites. Unmapped sites are those with address information sufficient only to identify as within the zip code of the target Site. Every effort was made to locate these sites while in the field, and to assess their relevance to this ECP Report. Further research was conducted by contacting ADEQ personnel, reviewing ADEQ files, and reviewing the ROD documents for information on Fort Chaffee properties. The three unmapped sites were estimated to be within the corresponding ASTM D 6008-recommended minimum search distance for the databases on which the sites are listed.

Building 145, with "Fort Chaffee" reported as the site address, is listed as a leaking storage tank facility. An EDR Site Report obtained for this facility stated that an apparent release from piping or a coupling from an UST to a pump was discovered on April 21, 1989, when free product was noted seeping through cracks in the concrete. The pump was turned off and 30 square feet of concrete removed. An excavation was performed to determine the source of the leak. The soil was excavated and removed to the post landfill for aeration, and the piping replaced. An assessment was performed that indicated minor levels of contamination remaining in the soil. Based on the data, the State of Arkansas issued an NFA letter on January 6, 1997. This facility corresponds to FTCH-035, discussed in

Section 5.1.2. Building 145 was plotted near the intersection of Chaffee Boulevard and Fort Smith Boulevard, approximately one-half mile from the Site. The ROD described the facility as the former Post Exchange Service Station, stated that three fuel tanks had been present there, and reported the NFA letter of January 6, 1997.

Fort Chaffee — Site #14, Tank M43, and Fort Chaffee, Tanks M433, M434, M43 were both listed in the unmapped sites section as AST sites with Roberts Boulevard/Terry Avenue Corner as the addresses. The EDR Site Report obtained for Site #14 stated that one 10,000-gallon tank was permanently out of service, with a last-used date of April 22, 1999. This tank may correspond to the one described in FTCH-014, Section 5.1.2. The EDR Site report for tanks M433, M434, and M43 listed three 10,000-gallon tanks, all permanently out of service, with a last-used date of April 22, 1999. The site reports did not specify what the contents of the tanks had been.

Based on the sampling data, no further action rulings by ADEQ, and lack of further potential for environmental impact due to closure of the tanks, these facilities do not appear to pose a potential environmental risk to the Site.

5.5 SUMMARY OF PROPERTIES EVALUATED TO DETERMINE RISK TO SITE

During review of environmental information summarized in this section, multiple databases and sites were reviewed to evaluate potential risks to the Site. Facilities identified as potential risks to the Site are detailed in Sections 5.1.2, 5.2.8, and 5.4. Based on an evaluation of available information and details concerning these facilities, they are considered “Low Risk” sites. No “High Risk” sites were identified. “High Risk” properties are those that exhibit significant environmental conditions that have the probability of adversely affecting the environmental conditions at the Site.

6.0 SITE INVESTIGATION AND REVIEW OF HAZARDS

Findings documented in the following subsections are based on the May 3, 2007, Site and area reconnaissance, review of available Site records, and information obtained from USAR personnel.

6.1 USTs AND ASTs

No USTs were noted on the Site. Behind each of the two shops is a permanent storage building, each of which houses a 600-gallon used oil AST. The buildings each have a 12-inch concrete berm, concrete slab floor, and metal sides. Used oil is transferred from the shops into the ASTs and stored until the tanks are pumped out.

6.2 INVENTORY OF CHEMICALS/HAZARDOUS SUBSTANCES

At the time of the Site reconnaissance, hazardous materials, POL, and wastes were stored in the following locations:

- Three hazardous materials containers west of the Building 470 parts room store unopened one- and five-gallon containers of materials including glass cleaner, motor oil, grease, corrosion inhibitor, methanol, deicers, cleaning compounds, hydraulic fluid, high temperature oil, brake fluid, weapons cleaning fluid, antifreeze, coolant, lube oil, compressed gas (ether) for starting engine assemblies, and one container each of Freon 12, Freon 22, Freon 134, and Freon 502.
- Two flammable materials storage cabinets inside the supply room store one-gallon or smaller size containers of oils and vehicle maintenance products as well as charcoal lighter fluid.
- Three portable flammable storage buildings west of each maintenance shop stored: one had five-gallon containers of diesel; one had 55-gallon drums of used grease and hydraulic oil; and one had 55-gallon drums of new oil, antifreeze, and parts washer solvent.
- One waste POL storage building west of each maintenance shop; each POL waste storage building contains a 300-gallon tank for used oil, a tote for waste antifreeze, and a 55-gallon drum for waste brake fluid.
- Two flammable storage cabinets inside the Building 470 south maintenance shop, one for containers (one-gallon or smaller) of oil and vehicle maintenance materials and the other for spray paints and liquid touch-up paints in containers of one gallon or smaller.
- One flammable materials storage cabinet inside the north maintenance shop of Building 470 for oil and vehicle maintenance materials.

- POL drums, waste POL drums, and a parts washer inside each maintenance shop in Building 470; the POL and waste POL drums were in secondary containment.
- An oil filter crusher inside the south maintenance shop in Building 470.
- Battery acid in batteries in the battery storage room in Building 470.
- Compressed gases in the welding bay in Building 470.
- Two flammable materials storage cabinets inside Building 572, one for cleaning products and small (one gallon or less) containers of oil, the other for spray paints and paints in containers of one gallon or smaller.
- Unopened 55-gallon and 35-gallon drums of oil on pallets inside Building 572.
- A flammable storage building southwest of Building 572 on the asphalt pavement stores 5-gallon containers of diesel fuel.
- Two portable buildings near the MEP area store cylinders of compressed gases.
- Waste POL and waste antifreeze in 55-gallon drums under roof at the VWR.
- Bleach, soap, disinfectants, floor wax, isopropyl alcohol, and glass cleaner in the janitor's closet in Building 470, in containers of five gallons or smaller.

Discussion with USAR personnel indicated that POL and vehicle maintenance materials storage locations have generally been consistent with only a few changes over the years.

The hazardous materials inventory from third quarter 2006 was being updated at the time of the Site Reconnaissance. A copy of the 2006 inventory, with penciled notations of quantities stored on the Site in May 2007, is in Appendix D.

USAR personnel stated that pest control services are contracted as needed, and has only done so twice in the past 18 years. No termite treatment of the buildings has been performed, according to USAR personnel. Grounds maintenance is contracted to an outside vendor. As part of the grounds maintenance, herbicides are sprayed along the fence line of the property to mitigate the need for weed-eating. No other stressed vegetation was observed during the Site reconnaissance. No evidence of the storage or mixing of pesticides at the Site was noted during the Site reconnaissance.

During the Site reconnaissance, no noxious or foul odors were noted on the Site.

6.3 WASTE DISPOSAL SITES

Wastes have been removed to offsite locations for disposal throughout the history of ECS #15. No evidence of illegal waste disposal activities was discovered or reported by USAR personnel during this ECP survey.

The SWPPP reviewed, which included multiple areas of the Fort Chaffee property, identified an ACM landfill southwest of what appeared to be Building 572 near the intersection of Roberts Boulevard and Terry Street. However, the building number provided did not correspond to Building 572. USAR personnel stated the ACM landfill was not at the Site, but located at some distance from Building 572 and the Site. The ROD document that described FTCH-001, Sanitary Landfill #1, indicated that the permitted trench area of this landfill had been designated a Class 4 landfill in 1990 to accept ACM from demolition of base facilities. The permitted trench area of Sanitary Landfill #1 is south of the MEP area, and is likely the ACM landfill mentioned in the SWPPP.

6.4 PITS, SUMPS, DRY WELLS, AND CATCH BASINS

The sump under the VWR directs wash water to the OWS when the wash rack is functioning (it has been shut down since 2005 because the OWS requires repair). At the time of the Site reconnaissance, the VWR had been outfitted with a canopy and a curbing system to direct storm water runoff away from the OWS system.

Each maintenance shop in Building 470 has a grated central floor drain to collect oil and other fluids that may leak from vehicles. The floor drains are piped to the OWS north of Building 470. The grated drain in the tire bay is connected to the floor drain piping.

The sludge and liquid content of the chambers in either OWS were not gauged during the Site reconnaissance.

Floor drains are in the mechanical room, the janitor closet, and the restrooms. USAR personnel stated that the round floor drain in the south maintenance shop is piped into the OWS. The battery room floor drain was filled with concrete at least by 1989 and possibly earlier, according to USAR personnel.

No evidence of a spill or release associated with the Site's sumps or drains was identified during the Site reconnaissance.

6.5 ASBESTOS-CONTAINING MATERIAL

An asbestos building survey of the Site identified nonfriable floor tile adhesive (mastic) from the library hallway in Building 470 as ACM (USAR, 1997). USAR personnel that participated in the asbestos survey stated the mastic was representative of the adhesive present on floor tile throughout the building, not confined to the library hallway only. During

the Site reconnaissance, it was noted that floor tile has been replaced in several locations throughout Building 470.

6.6 PCB-CONTAINING EQUIPMENT

Three pole-mounted transformers (PMTs) are east of Building 470, outside the mechanical room. No record of the PMTs having been tested for PCB content was reviewed during this investigation. The EBS report (ECCI, 2005) stated that the PMTs were owned by Oklahoma Gas and Electric and they did not contain PCBs, based on verbal information provided by the owner. USAR personnel stated that one of the transformers had been replaced during the past few years. The transformers were observed to be in good condition during the Site reconnaissance.

6.7 LEAD-BASED PAINT

A LBP survey of the Site identified LBP in Building 470 in the following areas: a pipe bollard in Room 118, a garbage can in Room 118, and the service center counter in Room 114 (ETC Engineers, Inc., 1994). Report documents included diagrams of sampled areas, but no diagram specifically identifying the locations of the positive LBP samples. USAR personnel stated that the service center counter had been replaced. The pipe bollard and garbage can in Room 118 that tested positive for LBP could not be identified during the Site reconnaissance.

6.8 RADON

According to the USEPA, Sebastian County is in an area with low propensity for radon. The USEPA classifies Sebastian County as Radon Zone 3, which has average radon levels less than 2 pCi/L. The USEPA tested 63 sites in this county. The sites averaged 0.668 pCi/L in first floor living areas and 1.767 pCi/L in basement areas.

A radon survey performed in 1998 indicated no radon levels greater than 4.0 pCi/L were measured at the Site (USAR, 1998). The USEPA-recommended action level for radon is 4.0 pCi/L.

6.9 UNEXPLODED ORDNANCE

The arms vault in Building 470 contains ammunition. No firing ranges have been on the Site and no ordnance is stored in other locations. The *Site Investigation Report, Sanitary Landfill #2 — Site FTCH-002, Volume 1* mentioned that blank ammunition had been unearthed during excavation for installation of a “dead man” post near the western edge of the MEP area (U.S. Army Fort Chaffee Base Transition Team, 2000). No record was found of unexploded ordnance in the landfill investigations. No indications were found during the Site reconnaissance or during the review of records to indicate the presence of munitions and explosives of concern at the Site.

6.10 RADIOACTIVE MATERIALS

The ECS #15 stores equipment with sealed radioactive sources in a cabinet inside a locked caged area in Building 572. The equipment includes tritium compasses and chemical detection meters with Nickel-63 or Americium-241 sources. Signs and placards are posted near the caged area entrance. The radioactive materials contained in the meters are shielded and low-level sources.

Some of the chemical agent monitoring equipment with a low-level radioactive source is calibrated, maintained, and repaired in the electronics shop. According to USAR personnel, wipe testing has been traditionally employed in that shop to assess levels of radioactivity remaining after maintenance of equipment with Americium-241. USAR personnel stated that the Nickel-63 sources have such a low dosage of radioactivity that wipe sampling has not been required.

There is no evidence of the release of radiological materials at the Site and no radioactive waste is generated at the Site.

7.0 REVIEW OF SPECIAL RESOURCES

7.1 LAND USE

According to the City of Fort Smith zoning district map, the Site is in an area that is not zoned. The former Fort Chaffee property that was deeded to the Fort Chaffee Redevelopment Trust and is being developed as part of Chaffee Crossing is designated for Light Business/ Industrial use.

According to the Chaffee Crossing Land Use Map, land to the north, south, east, and west of the ECS #15 is also designated for Light Business/Industrial use, except a small portion of land to the northwest is designated for Parks/Open Space including wetlands and floodplain.

7.2 COASTAL ZONE MANAGEMENT

There is no coastal zone management plan for Arkansas.

7.3 WETLANDS

The Site is upland and well drained. According to the U.S. Fish and Wildlife Service National Wetlands Inventory map, no jurisdictional wetland areas are on the Site or adjacent properties. The nearest wetland is an area located approximately 2,500 feet to the south of the Site, associated with Little Vache Grasse Creek.

7.4 100-YEAR FLOODPLAIN

The FEMA Flood Insurance Rate Map for the Site area, dated May 7, 2001, indicates that the Site lies outside the 500-year and 100-year flood plains.

7.5 NATURAL RESOURCES

No survey for threatened and endangered species at this Site was reviewed during the course of this investigation. Information obtained from the Arkansas Heritage Program lists the following species in Sebastian County as endangered: the American burying beetle and the interior least tern. In addition, the Arkansas Heritage Program lists the bald eagle in Sebastian County as threatened but proposed for delisting, and the maple-leaved oak as a state threatened species (this designation is applied to native plant taxa believed likely to become endangered within the state of Arkansas in the foreseeable future). Due to its development, threatened and endangered species are not expected to be present on the Site.

7.6 CULTURAL RESOURCES

No cultural resource assessment for the Site was reviewed during the course of this investigation.

7.7 OTHER SPECIAL RESOURCES

There are no other known resources that could affect the Site.

8.0 CONCLUSIONS

The TEJV, under contract to the USACE Louisville District has prepared this ECP Report for the USAR ECS #15 (Facility ID AR014), at 11408 Roberts Boulevard in Fort Smith, Sebastian County, Arkansas. The ECS #15 encompasses 39.32 acres of land and has five permanent structures: Building 470, which includes administrative offices and vehicle maintenance shops; Building 572, a warehouse for storage of parts and equipment; a roofed, concrete-floored VWR (also known as Building 471); and two concrete-floored and bermed chemical storage buildings. The ECS #15 is staffed by civilians employed by the USAR, and is used for storage and maintenance of military vehicles and equipment.

Findings of this ECP are based on existing environmental information, including visual observations, Site records, and 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 Site. The following present the findings related to areas evaluated during the ECP process.

- **Hazardous Substances.** Chemicals containing CERCLA hazardous substances have been and are used and stored at the Site in amounts necessary to support vehicle maintenance activities. There is no evidence that the chemicals used or stored were improperly handled or disposed at the Site.

A portion of the MEP area was constructed over a former sanitary landfill. The materials reportedly placed in the landfill included municipal and solid waste, but not hazardous waste.

- **Past Petroleum Release.** Evidence of POL releases were noted in the form of staining on pavement and gravel-covered areas, and in memorandums documenting the current and previous releases of oils.
- **USTs/ASTs.** No evidence was found indicating USTs have been on the Site. Two 600-gallon ASTs are used for storing used oil. Each AST is on concrete pad inside a roofed and bermed POL storage building.
- **Non-UST/AST Petroleum Storage.** Petroleum storage areas include diesel inside flammable storage buildings west of the Building 470 maintenance shops and southwest of Building 572; in the waste POL storage buildings and flammable materials storage buildings west of the Building 470 maintenance shops; flammable storage cabinets inside each of the Building 470 maintenance shops; and in Building 572.
- **PCBs.** There are three PMTs on the east side of Building 470. The status of the transformers has been reported as non-PCB-containing (ECCI, 2005).

- **ACM.** An asbestos survey of the Site identified non-friable floor tile adhesive from the library hallway in Building 470 as ACM (USAR, 1997). According to USAR personnel, the floor tile adhesive was representative of the adhesive present on similar floor tile throughout Building 470.
- **Lead and LBP.** A LBP survey of the Site indicated three locations in Building 470 had LBP: a pipe bollard in Room 118, a garbage can in Room 118, and the service center counter in Room 114 (ETC Engineers, Inc., 1994). USAR personnel stated the service center counter in Room 114 had been removed.
- **Radiological Materials.** Radiological materials identified during the Site reconnaissance were limited to items stored in a locker in a caged area of Building 572, with placards and signs. Equipment with low-level radioactive sources are serviced in the electronics shop. Wipe tests are used as necessary to verify that no radioactivity remains in the shop after completion of servicing. There is no evidence of any release of radiological materials at the Site.
- **Radon.** A radon survey performed at the Site indicated all levels detected were less than 4 pCi/L (USAR, 1998). The USEPA-recommended action level is 4.0 pCi/L.
- **Munitions and Explosives.** No evidence was found during the Site reconnaissance or records review process of the past presence of munitions and explosives of concern.
- **Surrounding Properties.** Potential environmental sites of concern located within corresponding ASTM D 6008-recommended minimum search distances from the Site were evaluated. No "High Risk" sites were identified surrounding ECS #15. High Risk" properties are those that exhibit significant environmental conditions that have the probability of adversely affecting the environmental conditions at the Site. Land use at the adjacent properties does not appear to have impacted the environmental conditions of the ECS #15.

Areas of potential environmental concern were reviewed and the TEJV found the following concerns relating to the environmental condition of property. Part of the Site was constructed on a former landfill (Sanitary Landfill #2); stains observed on pavement and gravel covered areas, as well as memorandums documenting spills, indicate multiple small releases of oil products over multiple years; and adjacent/nearby properties have documented contaminants in soil and groundwater, including Sanitary Landfill #1 south of the MEP area, the incinerator disposal area west of the MEP area, and the pesticide handling center to the west-northwest of the Site.

In accordance with DoD policy defining the classifications (see S.W. Goodman Memorandum dated October 21, 1996), the Site has been classified as Category 3. 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.

9.0 REFERENCES

PERSONS CONTACTED

- Noel Bennett, USEPA Region 6, (214) 665-8514.
- Robert Dahlem, Maintenance Supervisor, ECS #15, (479) 484-2414. Meeting on May 3, 2007 and followup phone call.
- Chris Kinslow, USAR, 90th RRC, (501) 771-7303.
- Mikel Shinn, PG, ADEQ RST Technical Division, (501) 682-0989.
- Scott Woodland, Reference Section, Fort Smith Public Library, (479) 783-0229.

RESOURCES CONSULTED

- Arkansas Department of Environmental Quality, Little Rock, Arkansas, file review records.
- Arkansas Department of Environmental Quality Web page for regulated storage tank records at Web site <http://www.adeq.state.ar.us>.
- Arkansas Heritage Program Web page for rare species in Sebastian County, Arkansas at Web site www.naturalheritage.com/program/element-search/default.asp.
- Chaffee Crossing Land use Map. Web site www.chaffeecrossing.com.
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 - Sebastian County Tax Assessor, Urban Property Record Card — 2006 for the Site. Fort Smith Courthouse, 35 South 6th, Room 105, Fort Smith, Arkansas 72901, (479) 783-8943. Web site <http://www.sebastiancountyonline.com>.
 - Terracon Consulting, Inc. *Removal and Disposal of Petroleum Contaminated Soils at Fort Chaffee Building 470 Facility Located in Barling, Arkansas.* June 6, 2007.
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 - *Record of Decision for Five No Further Action Group III-D Environmental Sites, Fort Chaffee, Arkansas.* February 8, 2000.
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 - *Record of Decision for Two No Further Action Group VI Environmental Sites, Fort Chaffee, Arkansas.* April 2003.
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Agencies Contacted

- Arkansas Department of Environmental Quality, Little Rock, Arkansas
- Fort Smith Public Library, Fort Smith, Arkansas
- Sebastian County Clerk, Fort Smith Courthouse, Fort Smith, Arkansas
- Sebastian County Tax Appraiser's Office, Fort Smith, Arkansas
- U.S. Department of Agriculture, National Resources Conservation Service
- U.S. Department of Agriculture, Farm Services Agency
- U.S. Environmental Protection Agency, Region 6

Appendix A
Figures

FIGURES

Figure 1	General Site Location Map
Figure 2	Site Layout Plan
Figure 3	Building 470 Floor Plan
Figure 4	Building 572 Floor Plan
Figure 5	1951 Topographic Map
Figure 6	1971 Topographic Map
Figure 7	1987 Topographic Map
Figure 8	1967 Aerial Photograph
Figure 9	1983 Aerial Photograph
Figure 10	1994 Aerial Photograph
Figure 11	2007 Aerial Photograph
Figure 12	FEMA Flood Plain Map
Figure 13	Wetland Map

Appendix B
Site Reconnaissance Photographs

Appendix C
Chain-of-Title Report and Deed Information

Appendix D
Previous Environmental Reports

PREVIOUS ENVIRONMENTAL REPORTS

1. Arkansas Department of Environmental Quality, file review records.
2. Arkansas Department of Environmental Quality, regulated storage tank information.
3. Arkansas Heritage Program, information on rare species in Sebastian County.
4. Chaffee Crossing Land use Map. Web site www.chaffeecrossing.com.
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Appendix E
Regulatory Database Search Report and Site Reports