

**Targeted Brownfield Assessment
Oklahoma Army National Guard
Pawnee Armory
Pawnee, Oklahoma**

**ASTM E 1527-05
Phase I Environmental Site Assessment
All Appropriate Inquiry**

December 11, 2006

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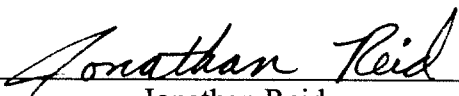
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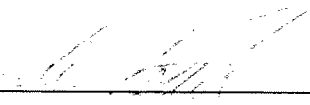
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I declare that to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of this part. I have specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all appropriate inquiry in conformance with the standards and practices set forth in 40 CFR Part 312.

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Background and Disclaimer: The purpose of an environmental site assessment is to identify actual or potential “recognized environmental conditions” that may result in liability or land use restrictions. The ASTM Phase I Environmental Site Assessment E 1527 – 05 is the minimum standard for environmental due diligence in the commercial real estate industry and currently meets the standard for All Appropriate Inquiry under the Small Business Liability Relief and Brownfields Revitalization Act of 2002. A diligent effort in accordance with generally accepted good commercial and customary standards and practices was undertaken to identify the “recognized environmental conditions” that might affect the revitalization project. However, the identification of old hazardous waste sites is an evolving process; therefore, DEQ cannot state with absolute certainty that no other potential hazardous waste sites are located in the area. In no event shall the DEQ or its employees be liable for any damages, injury, loss, cost or expense whatsoever arising in connection with the use or reliance on the information contained in this report, except as otherwise provided by law.

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1.0 Executive Summary

This Phase I Targeted Brownfield Assessment of the Pawnee Armory was performed in accordance with the ASTM E 1527-05, a guide for conducting Environmental Site Assessments. Jonathan Reid performed the site reconnaissance on September 26, 2006.

The site is located in the NW ¼ of Section 5, Township 21N, and Range 5E Indian Meridian in Pawnee County, Oklahoma. The site is off US Highway 64 and 1st Street in Pawnee.

A cursory summary of findings is provided below. However, details are not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

- The sand trap and dust residue within the Indoor Firing Range (IFR) was found to have lead contamination. The soil outside of the IFR vent area also has lead contamination. Past sampling of the sand trap and the rest of the IFR show results of lead concentrations in need of remediation. The IFR and the soils near the IFR vent constitutes a recognized environmental condition (REC) based on the lead concentrations and its leachability.
- An Underground Storage Tank (UST) was once located on the southeast side of the Pawnee Armory property. It was removed in 1995. During the removal, two soil samples were collected where the UST was buried. One sample had concentrations of toluene at 0.0017 mg/kg, xylene at 0.00075 mg/kg, and a Total Petroleum Hydrocarbon (TPH) Diesel Range Organics (DRO) concentration of 3.7 mg/kg. The concentrations are well below the DEQ screening levels. The ground surface has since been restored. However, during the site visit there was a brown metal pipe found above the ground surface where the UST was once located.
- Several 55-gallon drums of used oil were found inside the Drill Hall.
- Oil and grease spots were found on the floors throughout the Drill Hall, the south rooms of the west wing, and the south wing. These floors were fairly dusty as well. Floor drains nearby may be affected if past runoff has occurred from the stains and dust.
- There is a potential for asbestos containing materials (ACMs) in the armory due to the age of the facility. The following materials were found that may have ACM. Drop ceiling panels were found on the north, south, and west wings. 12" x 12" tile was found in the south wing of the armory. Some of the tile was friable. The insulation found on the piping in the south wing and the insulation found on the heating unit piping in the lobby area of the west wing appeared to be very old and suspect for ACM.
- Water damage and mold is apparent throughout the armory. The sandstone walls, ceilings, and floors in some areas have stains and mold growth from past water damage and weathering. Mold odor is apparent throughout the building especially inside the IFR.

- Peeling paint on the walls, the piping adjoining the light switch fixtures, and window panes were observed that may contain lead based-paint.
- Eight car batteries were found on a wooden pallet in the southwest corner room of the west wing. Two more car batteries were found as well. One battery is located outside the armory next to the wall of the west wing. The other battery was found on a wooden pallet in the Drill Hall. These batteries could contain heavy metals and acid. No corrosion or leakage is apparent. The battery outside of the armory could have a potential of releasing harmful contaminants into the environment due to weathering and rain damage.
- Approximately thirty-five 5-gallon buckets of tractor hydraulic fluid were found in the east side of the south wing of the armory. Two purple stains near these buckets were found still in liquid form. These stains are near a floor drain, which could allow entry-way into the drainage system. These stains could create harmful effects to the environment and therefore constitute a REC.
- Containers of different types of Chemicals were found in the Drill Hall, the west wing, and the south wing.
- Stressed vegetation was found in areas east of the Drill Hall and south of the west wing. Stained soils from vehicles were observed south of the west wing as well.

Recommendations

Based on the findings of this assessment, The DEQ recommends that additional investigation be conducted to evaluate areas of the property that may need future clean-up and remediation.

Additional evaluation and remediation of the IFR sand trap and dust residue is needed. The vent area of the IFR, which allows indoor air to escape to the outside air, should be investigated further for lead contaminated soils and possible remediation. Other suspected lead issues that should be further investigated include the testing of lead in the peeling paint found on the walls, piping adjoining the light switch fixtures, and windowpanes. If the paint is tested positive for lead, proper cleanup and remediation is recommended.

Suspect ACM potentially in the drop ceilings of several rooms located in the north, south, and west wings should be sampled for asbestos. The tiles and pipe wrapping located in the south wing and the heating unit insulation located in the lobby area of the west wing should be tested for ACM as well. If ACM is found, proper remediation should be conducted.

The purple liquid stains should be cleaned and remediated in the south wing and the floor drain nearby should be evaluated for potential contamination from the fluid. Areas where there is water damage should be investigated for possible mold growth. The drums of used oil found in the Drill Hall and the car battery found outside the west wing should be disposed of properly. Soils where the battery is located should be analyzed for heavy metals. Proper

cleanup and remediation of soils in the area is recommended if the soils tests positive for heavy metals.

2.0 Introduction

The State of Oklahoma Department of Environmental Quality (DEQ) under a Brownfield Assistance Agreement (No. VC98677601) (Ref. 1) with the U.S. Environmental Protection Agency (EPA) conducted a Targeted Brownfield Assessment of the Pawnee Armory.

2.1 Purpose

The purpose of this assessment is to look at the environmental conditions within the target area and provide this information to the City of Pawnee to assist in its future planning of the target area as well as meet the All Appropriate Inquiry requirement of the landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, better known as Superfund – Ref. 2), as provided in the Small Business Relief and Brownfields Revitalization Act of 2002 (Public Law 107-118, Subtitle B – Ref. 3). The purpose of a Phase I Environmental Site Assessment is to identify, to the extent feasible, recognized environmental conditions in connection with the target property through a systematic review of readily available information sources and a site reconnaissance.

The DEQ is providing technical assistance to the project by evaluating the environmental condition of the property prior to the City acquiring the property. Funding for this assessment has been provided by the U.S. Environmental Protection Agency (EPA).

2.2 Detailed Scope-of-Services

The DEQ examined the current use of the property and then identified the historical uses of the property to determine if recognized environmental conditions exist. The DEQ examined historical documents, governmental databases, deed records, aerial photographs, governmental environmental files, Sanborn Fire Insurance Maps, and conducted interviews and a site reconnaissance of the area. A good faith effort was made to identify possible environmental conditions that might affect the development of the property.

2.3 Significant Assumptions

Significant assumptions and past studies of the Oklahoma Army National Guard Armories suggest there is a possibility of lead and asbestos contamination at the Pawnee Armory. Most of the State armories, such as the Pawnee Armory, have indoor firing ranges. These ranges usually contain concentrations of lead from past shooting activity. Since the majority of the armories were built before the 1970s, there is a high potential of finding asbestos containing materials (ACMs) in the armory buildings. The U.S. began

banning the use of asbestos in most building products in the 1970s due to studies confirming the harmful health effects caused by exposure to airborne asbestos. ACMs may be found in the insulation wrapping of the heating pipes and/or heaters and nine-inch tiles, which were prevalent during the time the Pawnee Armory was built.

The Oklahoma Military Department verbally informed the DEQ that a significant asbestos abatement of the pipe was conducted in the 1990s, but that asbestos remains on the elbow joints. Visual inspection by the DEQ of the Pawnee Armory indicated that asbestos containing elbow joints and wrapping are still present on the south wing of the building.

2.4 Limitations and Exceptions

The purpose of an environmental site assessment is to identify actual or potential “recognized environmental conditions” that may result in liability, land use restrictions, or cause delays in revitalization. The ASTM Phase I Environmental Site Assessment E 1527 – 05 (Ref. 4) is the minimum standard for environmental due diligence in the commercial real estate industry and meets the standard for All Appropriate Inquiry under the Small Business Liability Relief and Brownfields Revitalization Act of 2002. A diligent effort in accordance with generally accepted good commercial and customary standards and practices was undertaken to identify the “recognized environmental conditions” that might affect the redevelopment project. However, the identification of old hazardous waste sites is an evolving process; therefore, DEQ cannot state with absolute certainty that no other potential hazardous waste sites are located in the area. This assessment was conducted under constraints of time, cost, and scope and reflects a limited investigation and evaluation. It reflects the normal degree of care and skill that is ordinarily exercised by environmental professionals conducting business in this or similar localities. In no event shall the DEQ or its employees be liable for any damages, injury, loss, cost or expense whatsoever arising in connection with the use or reliance on the information contained in this report, except as otherwise provided by law.

The information in this report is based on a review of governmental records, interviews with knowledgeable residents in the community, information provided by the City of Pawnee, the Oklahoma Military Department and observations of the environmental professional. The result of this assessment, as written in this report, is valid as of the date of report. The assessment does not include sampling of rock, groundwater, surface water, or air. However, surface soil samples from outside of the Indoor Firing Range (IFR) vent area and sand samples from the IFR sand trap were collected.

2.5 Special Terms and Conditions

This assessment report has been prepared for the City of Pawnee by the DEQ using EPA funding. Information about this report will be provided to the EPA for its files. This report and the working file are public record and subject to the Oklahoma Open Records Act and the federal Freedom of Information Act.

3.0 *Site Description*

3.1 *Location and Legal Description*

The subject property is located in the Northwest ¼ of Section 5, Township 21 North, and Range 5 East Indian Meridian in Pawnee County, Oklahoma (Appendix A). The site is off US Highway 64 and First Street in Pawnee and the junction of First and Cleveland Streets.

3.2 *Site and Vicinity General Characteristics*

Environmental Setting

The general topography of the area is shown in Figure 1 of Appendix C. Pawnee County is an undulating to rolling prairie area in north-central Oklahoma. The county has a land area of 591 square miles, or 378,240 acres. Pawnee, the county seat, is located in the northwestern part of the county. The extreme range in elevation is from 650 feet at Keystone to 1,120 feet at a point in Banner Township southeast of Pawnee. Most of the county is rolling, and the many escarpments and high bluffs along the rivers make parts of it hilly. The area west of Pawnee is smoother, has less pronounced ridges, and has less local relief (Ref. 5).

Pawnee County has a continental climate marked by fairly low humidity and pronounced changes in temperature and precipitation. The average yearly rainfall ranges from 35 inches in the west to 38 inches in the east. During the growing season, April 5 to October 24, the yearly rainfall averages between 24 and 30 inches and is fairly well distributed.

In summer, clear days, dry south winds, and temperatures averaging about 80° F rapidly remove soil moisture. Droughts lasting 2 or 3 weeks come often, and they reduce yields. Normally, the rainfall in fall, in winter, and early in spring is enough to replenish the subsoil moisture lost during the summer.

Winter precipitation is low. A little snow falls in December, January, and February; it seldom lies on the ground long. Temperatures fluctuate greatly in winter. Cold air from the north brings “northers”, periods of very cold weather. The alternate flow of cold and warm air brings sharp changes in temperature. Warm air from the Gulf coast raises temperatures. A 50° F temperature change is fairly common in midwinter (Ref. 5).

Groundwater

The Vanoss Group underlies the subject property. The Vanoss Group has alternating layers of limestone and shale to the north, grading southward into limestone, shale, and fine-grained arkosic sandstone. Locally, the group contains thin coal seams. Long Creek Limestone, 10 ft. thick, is prominent where the subject property lies.

The general yield of water underlying the subject property is 0-25 gallons per minute. One well, approximately 1 mile north of the property, produces a yield of 23 gallons per

minute at a total depth of 48 ft. below ground surface (bgs). Another well, approximately 1.5 miles east of the subject property, has a yield of 33 gallons per minute. This well's total depth is 65 ft. bgs.

Chemical quality of water is generally poor underlying the subject property. This area generally yields water concentrations of 1,000 mg/L or more dissolved solids. Water from bedrock aquifers contain variable amounts of dissolved solids. There are minor aquifers in the area that include shale, minor sandstone, thin alluvium and terrace deposits, and less productive areas of other aquifers (Ref. 6).

Soils

The general soil association underlying the subject property is the Port-Yahola-Dale-Brewer soil. This association has deep soils on the flood plains and low benches. The soil complex underlying the subject property is the Port silt loam. This is an extensive soil. It occurs on the flood plains of all the inland streams of the county. This reddish-brown, permeable soil normally occupies fairly level areas, but it has adequate drainage. Water seldom stands in pools. A few areas of this soil are slightly wavy, but they can be cultivated easily and yield about the same as the level areas.

The surface layer and the substratum vary in color from very dark brown to reddish brown. However, on the fringes of the high-lying flood plains along Camp and Coal Creeks, this soil has a very dark brown surface layer and a very dark grayish-brown substratum. This probably represents inclusions of slightly developed Mason soils that form in dark-colored alluvium on very low terraces.

Soils from the Port series have developed in noncalcareous reddish-brown sediments carried down by streams draining grassland soils. Port soils occur throughout the county but they are developed most typically in the western part. These are alluvial soils; they are typically silt loam or clay loam and have a clay loam substratum somewhat stratified with silt loam (Ref. 5).

Air

The winds are dominantly from the south, but during December, January, and February they come mostly from the north. Wind velocities are moderately high and are highest in March and April. Tornadoes occur occasionally in March, April, and May, but most of these affect only a small area and do limited damage (Ref. 5).

Surface water

Most of the streams in the county flow eastward and have fairly shallow, broadly U-shaped valleys. The county is drained by two main rivers. About 450 square miles is drained by the Arkansas River through Black Bear Creek, its tributaries, and a number of shorter streams. Red Rock, Greasy, Rock, Coal, Hellroaring, Ranch, Cedar, and Bear Creeks empty directly into the river. Camp, Panther, Pepper, Crystal, Skedd, and Turkey Creeks drain first into Black Bear Creek (Ref. 5).

The Arkansas and Cimarron Rivers flood small parts of the bottom lands every spring. Some water flows in them year round. The smaller streams flow intermittently and between rainy periods have water only in pools. The pools may go dry. Where these local streams cross resistant beds of limestone, they have narrow bottom lands and steeper gradients. Upstream from the channels cut in limestone, the streams may have very slight gradients and wide bottom lands (Ref. 5).

According to the Federal Emergency Management Association, the Pawnee Armory lies within the 100-year floodplain. The closest water body is the Black Bear Creek located approximately 0.05 mile east of the armory. Elevation is recorded at 827.05 ft. on the east side of the armory building (Ref. 7).

Utilities

Utility information was obtained from the Oklahoma Corporation Commission Utility Directory. The City of Pawnee natural gas is supplied by the Oklahoma Natural Gas Company and electricity is supplied by the Municipal (Grand River). Telephone service is supplied by Southwestern Bell.

The Pawnee Armory does not use the City's natural gas supplier. An oil burning furnace is used instead to heat the building. Potable water, sanitary sewage, and solid waste removal are provided by the City of Pawnee. No septic tanks are on the property (Ref. 8).

Underground features

There was once a 1,000-gallon underground storage tank (UST), containing gasoline, located at the southeast corner of the facility. According to the Oklahoma Military Department, the UST was removed on September 27, 1995. A grass covered concrete slab with a 2-inch diameter pipe coming out of it was discovered during the Site reconnaissance, which is believed to be a remnant of where the UST was located (Appendix B, Photo #25).

No record of the 1,000-gallon UST removed in 1995 was found in the Oklahoma Corporation Commission (OCC) UST Notification Database. However, there was a record in the OCC database of a 5,000-gallon gasoline UST southeast of the armory. The database showed that the Oklahoma Military Department owned this UST as well. Records show this UST as permanently out of use and status of closure unknown.

Several floor drains were noticed throughout the armory building. Three drains were found in the north wing north of the Stage area. Three drains were found in the south wing and one drain was found in the west wing. No drains were found in the Drill Floor or the Indoor Firing Range. However, throughout the armory there were equipment and storage items cluttered in the majority of the rooms that would make it easy to miss a drain in some areas. The drains found are marked on the floor plan provided in Appendix C. All of the drains are connected to the City of Pawnee wastewater system. According to the City of Pawnee Street Department staff, there are no septic tanks on the property. No cisterns were noticed during the site visit either (Ref. 8).

Structures

There are no industrial structures in the surrounding area. South of Cleveland Street, south of the armory, there is a fenced-in compound that has four aboveground storage tanks containing fuel, a fuel truck, a tractor, pile of gravel, and several 55-gallon drums. This area is part of the armory property and is maintained by the Street Department. South of this area lies three homes. The Pawnee Veterinary Hospital is southwest of the armory. West of the armory lies two homes on the other side of 1st Street. North of the armory lies an open field followed by an abandoned gas station approximately 0.12 mile. East of the armory lies US Highway 64. No schools or churches are located in the vicinity of the armory.

The Pawnee Armory is constructed of light brown brick. The 109' x 84' Drill Hall is the center of the building facing east towards US Highway 64. The Drill Hall is the center of operations for the City of Pawnee Street Department. Vehicles are parked and worked on in this area. A 13' x 114'10" stage area is located north of the Drill Hall. The 77'10" x 68'8" North Administrative area (north wing) extends north of the stage. This part of the building contains several rooms and a restroom. This administrative area is controlled by the Alcoholics Anonymous organization. Directly south of the Drill Hall is where the 94'6" x 53'6" South Administrative (south wing) area lies. This area contains several rooms full of equipment owned by the County of Pawnee. Directly west of the Drill Hall there is a 94'6" x 53'6" area (west wing) containing several rooms used for storage and painting activities by the City of Pawnee Street Department. The IFR underneath the stage in the Drill Hall completes the structure of the armory building. This room is vacant and blocked off from the rest of the building.

It is difficult to decipher what rooms were used for when the Army National Guard occupied the facility. The Drill Hall, IFR in the basement, vaults, and restrooms throughout the building are the only identifiable rooms. A floor plan of the Pawnee Armory is in Appendix C that shows each room of the armory. The IFR is not shown on the floor plan.

Aboveground Storage Tanks (ASTs)

Four small ASTs are located south of the armory building in a fenced-in compound next to Cleveland Street. The ASTs contain gasoline and appear to be in good condition. These ASTs are owned by the City of Pawnee Street Department for fueling purposes. A propane tank is also located inside the compound. Photos #23 and #24 of Appendix B show the fenced-in compound with the ASTs and propane tank.

Landfills, Dumping, Disturbed Soil

There are no landfills at the subject property or adjoining properties. Several piles of blacktop gravel were found approximately 30 feet southeast of the armory (See Appendix B, Photo #26). Several piles of grayish gravel were found as well inside the fenced-in compound where the ASTs are stored. No other kinds of dumping were found on the subject property.

One area outside of the armory building had some disturbed soil. Located on the south end of the west wing of the building, there were several stained areas of soils near two overhead doors of the building. These soils appeared to have past oil and grease stains. During the site visit, this part of the building was used as the Street Department's painting area. Some spots in front of the Drill Hall had stressed vegetation, but the soil did not look disturbed. Physical stresses on the soil may be the cause of this stressed vegetation.

Impoundments

No impoundments were observed at the subject property.

Air Emissions, Wastewater Discharge

There are no air emissions coming from the subject property. However, there is a strong mold odor in the basement where the IFR is located. Mold odor is also noticeable throughout the rest of the armory. Oil and grease odors are apparent in the Drill Hall where the vehicles are located and in the south wing occupied by the County. Paint odor was noticed at the south end of the west wing of the armory. The City of Pawnee Street Department uses this area for painting.

There were no noticeable wastewater discharges coming from the building during the site visit. All wastewater from inside of the building is drained into the City of Pawnee wastewater treatment system (Ref. 8).

Industrial Activities

The daily operations of the City of Pawnee Street Department are the only kind of industrial activity in the area. Servicing and cleaning of vehicles and storage of equipment mainly occur on the subject property. A veterinary hospital and several residences are the only structures adjacent to the armory.

Monitoring Wells

No monitoring wells were present on the property. The Oklahoma Water Resources Board (OWRB) well record database was searched for water wells close by. There were no wells in the same section as the subject property. The closest well in the OWRB database to the subject property is approximately two miles east in the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 3, Township 21N, and Range 5E Indian Meridian. This well has a total depth of 100 ft. and the first water zone is at 20 ft. below ground surface (bgs). Estimated yield of the well is 30 gallons per minute. The well is for domestic use (Ref. 9).

Stained Soils

Stained soils were found south of the west wing of the building. Soils in several areas appeared to have oil and grease stains from vehicle usage in the area. The south part of the west wing is where painting operations occur for the City of Pawnee Street Department.

Seeps

No seeps of any kind were observed at the subject property.

Chemical Spills

Two small puddles of a purple-like substance were found in a room located on the east half of the South Administration section (south wing) of the armory building. This fluid was found near several buckets containing tractor hydraulic fluid. No other chemical spill was found other than oil and grease stains found throughout the armory building. No spills were reported on the property from the Emergency Response Notification System (ERNS) database (Ref 10).

Oil and Gas Exploration

No oil and gas exploration was observed on the subject property during the site visit. A gas meter was found on the west side of the armory building. This meter is part of the City's natural gas system, which is not used by the armory.

Known Groundwater or Surface Water contamination

There is no known groundwater contamination. However, samples have not been collected to verify if there is groundwater contamination. There is no surface water on the property or the adjoining properties to have contamination. All wastewater from the armory directly goes through the City of Pawnee wastewater treatment system where it is treated.

Farm Waste

No farm waste was observed at the subject property.

Known Pesticide Misapplication

No known pesticide misapplications were observed at the site.

Discharges and Runoff from Adjacent Property Affecting the Site

No discharges and/or runoff were observed from any of the adjacent properties that would affect the subject property.

Other known or Suspected Environmental Concerns On the Site

The Indoor Firing Range sand trap and dust residue is contaminated by lead. Past sampling has been conducted to characterize the lead concentration of this room. A statewide sampling event for lead was conducted by C.H. Guernsey & Company for the Oklahoma Army National Guard on all armories containing indoor firing ranges. This report is called the "Indoor Firing Range Lead Issues Report" (Ref. 11). Five samples were collected inside the Indoor Firing Range. The following are the locations and concentrations of lead found inside and next to the room.

- 2,775.0 ug/ft² of lead was found in the bullet trap area.

- 106.00 ug/ft² of lead was found at the entry of the staircase on the opposite side of the bullet trap.
- 287.05 ug/ft² of lead was found south of the IFR on the Drill Floor.

A copy of the Pawnee Armory section of the Indoor Firing Range Lead Issues Report can be found in Appendix F.

On September 26, 2006, the DEQ pulled two sand samples from the IFR bullet trap in the basement. One sample was collected from the right side and the other sample was collected from the left side of the sand trap. The DEQ laboratory performed a total lead and TCLP (toxicity characteristic leaching procedure) analysis of the sand samples. The total lead concentration on the left side sample was 809 mg/kg. The TCLP of the left side sample had a concentration of 112,000 mg/kg. The total lead concentration on the right side sample was 7030 mg/kg and the TCLP concentration was 721000 ug/L. These concentrations exceed the DEQ lead screening level for sand/soil of 500 mg/kg and the DEQ lead TCLP value of 5 mg/L.

Two composite surface soil samples were collected outside of the IFR vent area for lead analysis. These samples were collected on September 26, 2006 as well. Five separate aliquot samples were collected in a bowl for each soil sample and mixed together with a spoon to collect a composite sample. One sample had a lead concentration of 479 mg/kg. The other sample had a lead concentration of 535 mg/kg. One of these samples exceeds the DEQ lead screening level for soil of 500 mg/kg. Analytical results for the sand and soil samples can be found in Appendix F.

Peeling paint on the walls, piping adjoining the light switch fixtures, and windowpanes was found, which may contain lead. No samples were collected from the paint, but it is recommended that the paint be analyzed for lead. Based on the age of the facility and the nature of the paint there is a possibility that it could contain lead.

12" x 12" square tile was found in the south wing of the armory where Pawnee County stores its equipment and miscellaneous items. This tile has deteriorated and may contain friable asbestos. The suspect asbestos material will be sampled and analyzed by Marshall Environmental at a latter date. Asbestos containing materials (ACMs) were found to be suspect in the piping insulation found in a room on the south wing of the building and the drop ceiling panels found in the west wing, north wing, and south wing of the building. The heating units in the armory may also have insulation with suspect ACM.

The odor of mold was apparent throughout the armory building, especially in the IFR. Noticeable growth of Mold was found on the wall in the west wing and on the floors in the Drill Hall. The water damage and lack of upkeep in the facility may have caused the presence of mold.

Historical Recognized Environmental Conditions on the Site

There is a historical finding on the subject property, but it is not considered a historical recognized environmental condition (HREC). The Oklahoma Army National Guard once had a 1000-gallon gasoline contained UST (ID Number: 5-905777). This UST was closed on May 30, 1988 and removed on September 27, 1995. Soil samples were collected after the removal at the center and side of the pit where the UST was buried.

Soils were tested for Benzene/toluene/ethylbenzene/xylenes (BTEX) and TPH Gasoline Range Organics (GRO)/Diesel Range Organics (DRO). Concentrations were all below the detection limits for BTEX and TPH GRO/DRO for the sample collected from the side of the pit. However, the sample collected from the center had concentrations of toluene at 0.0017 mg/kg, xylene at 0.00075 mg/kg, and a TPH DRO concentration of 3.7 mg/kg. The concentrations are well below the DEQ screening levels. The ground surface has since been restored. However, during the site visit there was a brown metal pipe found above the ground surface where the UST was once located.

The Oklahoma Corporation Commission (OCC) does not have record of an Oklahoma Military Department (OMD) owned 1,000-gallon UST. The OCC does have records of an OMD owned 5,000-gallon gasoline contained UST near the armory. However, closure status is not listed on this particular UST in the OCC UST Notification Database.

Pipelines

The only pipeline found on the subject property was an outdoor natural gas meter connected to the northwest side of the armory building's west wing. This meter, however, is not used in the armory. The City of Pawnee Street Department uses an oil burning furnace to heat parts of the armory building.

All water supplies come directly from the City of Pawnee. Sewage and wastewater drain into the City of Pawnee wastewater treatment system. Open roof drains can be found on the west side of the south wing, the east side of the south wing, the east side of the north wing, and the west side of the north wing of the armory. All floor drains and roof drains of the armory building can be found in the floor plan map located in Appendix C.

Transformers/PCB Equipment

No pole-mounted transformers were found on the subject property. However, several car batteries were found at the property that may contain acid or heavy metals. One car battery was found outside of the armory building on the west side of the west wing (Appendix B, Photo #13). Another lone car battery was found on a wooden pallet in the Drill Hall in good condition. Eight more car batteries were found inside the southwest corner of the west wing of the building on top of a wooden pallet (Appendix B, Photo #16). No corrosion or leakage of acid, lead, or other heavy metals were evident.

3.3 *Operational History*

The Pawnee Armory was built in 1936 and was managed and maintained by the Oklahoma Military Department to support the military mission of the Oklahoma Army National Guard (OKARNG). The OKARNG is a component of the United States Army and fulfills the military mission of national security (Ref. 12).

The subject property served as an armory to further the mission of the OKARNG. The 45th Infantry Division of the Pawnee Armory operated as a center of operations for a military component of the OKARNG. It served as a training site for the component and stored those materials required by the component (Ref. 12).

The Pawnee armory discontinued its operations in 1992 and in 1994 the facility was listed on the National Register of Historic Places. Currently, the armory is being used by the City of Pawnee Street Department. The City currently leases the facility from the OMD. Since 1995, the Street Department has managed and maintained the facility. The armory is used for storing its equipment and carrying out its daily operations. Other public entities maintain portions of the building as well. The County of Pawnee manages the south wing of the armory located south of the Drill Hall. Alcoholics Anonymous manages the North Administration portion (north wing) of the armory located north of the Drill Hall stage. Both portions of the building are used for storage.

3.4 *Current Use of the Property*

The City of Pawnee Street Department currently uses the facility for its daily operations. The Street Department occupies the west wing and the Drill Floor. The south wing is occupied by the County of Pawnee for storage and the north wing is used as storage by Alcoholics Anonymous.

The building has degraded from lack of upkeep and years of weathering. No renovations to the armory appear to have been made from observations made during the site visit. Water leaks from the past are evident throughout the building. Mold is present on the floors of the Drill Floor, the IFR, and the west wing of the armory. In a room west of the stage, there is moss growing on the sandstone walls (see photo #10 of Appendix B). Deterioration of the sandstone walls is apparent as well. Drop ceilings of various rooms are in poor condition with missing panels and floors are dusty with areas of oil and grease stains. Numerous windowpanes are broken or missing throughout the armory. There are no working lights in the basement where the IFR is located.

3.5 *Adjacent Properties*

Adjacent property to the north of the armory is an open field followed by an abandoned gasoline station located on the corner of 1st Street and US Highway 64. US Highway 64 runs along the east side of the property followed by dense trees and Black Bear Creek. South of the armory building there lies a fenced-in compound that is part of the armory

property. Three private homes lie south of this fenced-in compound. Located in the adjacent southwest corner of the armory, lies the Pawnee Veterinary Hospital. Two private homes are adjacent of the armory to the west.

3.6 Site Inspection

A Site reconnaissance was performed on September 26, 2006. The site reconnaissance was performed by Jonathan Reid, Heather Mallory, Dustin Davidson, and Subi John of the DEQ. Chris McCray of the City of Pawnee Street Department was present for the walk-around of the Pawnee Armory. The site visit is explained in detail in Section 6.0.

4.0 User Provided Information

4.1 Title and Judicial Records

The Oklahoma National Guard purchased 2.5 acres of property from J. A. Rogers and Nannie Rogers, husband and wife of Pawnee County, on October 24, 1935. A sum of one thousand two hundred fifty dollars was presented for the exchange of property over to the State of Oklahoma. Since then, the Oklahoma Military Department has owned the property.

4.2 Environmental Liens or Activity and Use Limitations (AULs)

There are no environmental liens or activity and use limitations that are known on the subject property.

4.3 Specialized Knowledge or Experience of User

The users of the armory, the City of Pawnee, were not aware of any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property.

4.4 Actual Knowledge of User

The current use of the property is for storage and the daily operations by the City of Pawnee Street Department. The County of Pawnee and Alcoholics Anonymous have storage in this building. Future use of the building is planned to continue as the current use. OMD plans to transfer ownership once the environmental issues have been resolved.

4.5 Commonly Known or Reasonably Ascertainable Information

The subject property is owned by the Oklahoma Military Department. The property is currently occupied by the City of Pawnee Street Department, Pawnee County, and Alcoholics Anonymous. Lack of upkeep and weathering is shown throughout the armory.

Remedial activities and remodeling of the armory may need to be performed before continued operations and storage can occur by the City of Pawnee, Pawnee County, and Alcoholics Anonymous.

4.6 Valuation Reduction for Environmental Issues

Valuation of the property is outside the scope of this assessment. A professional appraiser should be consulted to place a value on the property.

4.7 Owner, Property Manager, and Occupant Information

The subject property is occupied by the City of Pawnee Street Department, Pawnee County, and Alcoholics Anonymous. The City of Pawnee Street Department conducts its daily operations at the armory site. The Oklahoma Military Department owns the property.

4.8 Reason for Performing Phase I

The DEQ performed a Phase I Targeted Brownfield Assessment (TBA) to analyze if there are any recognized environmental conditions. The DEQ will resolve the environmental issues, which will allow the City to acquire the facility. The City of Pawnee would like to continue its current operations at the armory. Currently, its street department is headquartered there, and its equipment is housed onsite.

5.0 Records Review

5.1 Standard Environmental Record Sources

A regulatory database search was conducted by the DEQ. This search included, at a minimum, those records and distances from the site dictated as appropriate in the ASTM standard. The DEQ performed a review of available federal and state databases to assess whether the subject property or proximate properties were listed as having environmental concerns, which could have an adverse impact on the subject property. The following provides a summary of the databases reviewed.

Federal National Priorities List (NPL) Sites within one Mile

The subject property does not have any listed NPL sites. There are no NPL sites reported within a one-mile radius of the subject property (Ref. 13).

Federal Delisted NPL site list within one-half mile

The subject property does not have any Delisted NPL sites within one-half mile (Ref. 13).

Federal Active Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Sites within one-half mile

The subject property does not have any listed CERCLIS sites. There are no CERCLIS sites reported within a 0.50-mile radius of the subject property (Ref. 14).

Federal Archived CERCLIS (NFRAP) Sites within one-half mile

The subject property does not have any listed Archived CERCLIS sites. There are no Archived CERCLIS sites reported within a 0.50-mile radius of the subject property (Ref. 14).

Federal RCRA CORRACTS Facilities List within one mile

The subject property does not have any federal RCRA CORRACTS facilities within one mile (Ref. 15).

RCRA non-CORRACTS TSD Facilities List within one-half mile

The subject property does not have any RCRA non-CORRACTS TSD facilities within one-half mile (Ref. 15).

Federal RCRA Generators List (property and adjoining properties)

The subject property does not have any listed RCRIS-Large Quantity Generator (LQG) or RCRIS-Small Quantity Generator (SQG) sites. There is no RCRIS LQG or SQG sites reported at the adjoining properties either (Ref. 16).

Federal Institutional Control/Engineering control registries (property only)

A search of the Pawnee County Land Records show no institutional control/engineering controls on the property. The DEQ is currently developing an Institutional Control Registry. This site is not listed in the data collected for the registry.

Federal ERNS list (property only)

The subject property and adjoining properties are not listed as ERNS sites (Ref. 10).

State lists of hazardous waste sites identified for investigation or Remediation (property only)

The subject property is listed on the DEQ's Site Cleanup Assistance Program list. The property has been identified for remediation by the DEQ Site Cleanup Assistance Program

State Landfill and/or Solid Waste Disposal Sites within one-half mile

The subject property does not have any listed state landfills within one-half mile (Ref. 17).

State Leaking Underground Storage Tank (LUST) List within one-half Mile

The UST Notification Database maintained by the Oklahoma Corporation Commission (OCC) has one LUST site that is listed within a one-half mile of the Pawnee Armory. BJ's Quik Stop, located on 400 4th Street, became a LUST site on June 16, 2006. The

Lust site was closed on August 7, 2006 and is now archived. The LUST site is not an adjoining property of the armory.

State Registered Storage Tank Lists (property and adjoining properties)

One UST site was found within the subject property from the OCC UST Notification Database. The UST is southeast of the armory building and was owned by the Oklahoma Military Department. The UST was a 5,000 gallon gasoline tank. It was installed on April 14, 1974 and was last used on May 1, 1986. It is permanently out of use and the closure status is not listed. The table below list the facility's name and address of the UST site. No UST sites were found on the adjoining properties from the OCC UST Notification Database.

Facility Name	Address
DET 2 CBT SPT CO 1/179 INF	1 st and US Highway 64

State Institutional Control/Engineering control Registries (property only)

A search of the Pawnee County Land Records show no Institutional/Engineering Controls at the site. Data collected for DEQ's Institutional Control Registry do not indicate controls on this property.

State Voluntary Cleanup Sites and Brownfield Sites within one-half mile

The subject property does not have any State Voluntary Cleanup Sites or Brownfield Sites listed in the DEQ database within one-half mile. However, there is an active Voluntary Cleanup (VCP) Site within a mile northwest of the subject property. The BNSF/(Burk Bales)/Phillips Petroleum VCP site is located in the NE ¼ of the SW ¼ of Section 31, Township 22N, and Range 5E. The main issues at this site are hydrocarbons.

5.2 Additional Environmental Record Sources

No additional environmental record sources were searched for this Phase I Targeted Brownfield Assessment.

5.3 Physical Setting Sources

Physical Setting sources were obtained from the U.S. Geological Survey, Federal Emergency Management Association, United States Department of Agriculture Soil Conservation Service Soil Survey of Pawnee County, Oklahoma, and a site visit conducted on September 26, 2006.

5.4 Historical Use Information on the Property

The Pawnee Armory was built in 1936 by the Works Progress Administration (WPA). From 1936 to 1992 the subject property served as an armory to further the mission of the OKARNG. The Pawnee Armory operated as a center of operations for a military component of the OKARNG. It served as a training site for the component and stored those materials required by the component (Ref.12). The facility was placed on the National Register of Historic Places in 1994.

In 1995, according to Chris McCray, the City of Pawnee Street Department moved into the building and began its in-house operations. Since then, the City of Pawnee Street Department has maintained its occupancy at the armory on the first floor. Additionally, the facility is being used as storage by the County of Pawnee and Alcoholics Anonymous on the south and north wings of the facility.

5.5 Historical Use Information on Adjoining Properties

Aerial Photo Review

Aerial photographs taken in 1938, 1995, and 2003 were reviewed. The earliest aerial photograph of the subject property was taken on July 13, 1938. This particular photograph was obtained from the Oklahoma Department of Libraries. The armory is visibly seen as it is today in the 1938 photograph. However, there is no fenced-in compound south of the building. No building structure is adjacent to the armory building. Farmland and roads surround the subject property. US HWY 64 borders the property to the east and First Street borders the property to the west. The 1995 and 2003 aerial photographs obtained from the DEQ Dataviewer are very similar. A neighborhood of private homes is located south of the armory's fenced-in compound. West of the property there are a few private homes with a large building structure to the southwest. This building is where the veterinary hospital is located. An open field lies north of the armory building. These maps can be found in Appendix C.

Zoning/Land Use Records Review

No zoning/land use records were reviewed while conducting this Phase I Targeted Brownfield Assessment of the Pawnee Armory.

Fire Insurance Maps

Fire Insurance Sanborn Maps were reviewed from the University of Oklahoma library. In a January 1931 Pawnee map, the subject property appears to be vacant with an open lot on US Highway 64 and 1st Street. The Adjoining property directly east of the armory site at the time was known as the Pawnee Indian Agency Reserve, which was outside the Pawnee City limits. As discussed earlier the armory was built in 1936, five years after this Sanborn map was made. This map can be viewed in Appendix C (Ref. 18).

Property Tax files

Due to the public ownership of the property, no property tax files were reviewed while conducting this Phase I Targeted Brownfield Assessment of the Pawnee Armory.

City Directories

Due to the public ownership of the property, no city directories were reviewed while conducting this Phase I Targeted Brownfield Assessment of the Pawnee Armory.

Building Department Records

No building department records were reviewed while conducting this Phase I Targeted Brownfield Assessment of the Pawnee Armory.

Interviews

An employee of the City of Pawnee Street Department, Chris McCray, was interviewed at the armory during the site reconnaissance conducted on September 26, 2006. Information on the interview is located in Section 7.3, "Interviews with Operators and Occupants of the property."

6.0 Site Reconnaissance

6.1 Methodology and Limiting Conditions

A site meeting at the Pawnee Armory was performed on September 26, 2006. Jonathan Reid, Heather Mallory, Dustin Davidson, and Subi John of the DEQ met at the armory with Chris McCray, an employee of the City of Pawnee Street Department. The site reconnaissance consisted of an inspection of the armory building and its surrounding property. The Indoor Firing Range area in the basement, the Drill Hall, and the rest of the rooms north, south, and west of the Drill Hall were inspected. Surrounding properties including a fenced-in compound that is part of the armory property was also identified. The following observations were made from the site visit (Ref. 8).

6.2 General Site conditions

The general condition of the subject property is in poor condition. The City of Pawnee Street Department has operational control of the facility. Storage of Street maintenance vehicles, street signs, street lights, and public recreational materials are present at the property. Other items stored in the building include: files, old office equipment, furniture, Christmas decorations, toys, clothing, riding lawnmower, tractor hydraulic fluid, drums of used oil, old heating units, and various chemicals.

Environmental findings left behind by the Army National Guard include the IFR lead-contaminated sand trap and residue, suspect ACM pipe wrapping, suspect ACM tile, and suspect ACM drop ceiling panels. Most of the properties surrounding the armory are

private homes with a veterinary hospital southwest of the armory. No recognizable conditions were found linked to these properties.

The general topographic gradient of the area is towards the east. All water comes directly from the City of Pawnee water supply. Wastewater and sewage from the armory is drained into the City of Pawnee wastewater treatment system (Ref. 8).

6.3 *External observations*

The sandstone structure of the armory appeared to have green algae stains and black stains due to water damage and weathering. The majority of windowpanes throughout the facility were either broken or missing entirely. Some of the windowpanes that were either broken or still intact were found to have peeling chips of paint that could possibly be lead-based paint. This weathered paint was also found peeling off the open roof drains and overhead doors of the facility.

A car battery was lying on the ground next to the west outside wall of the armory. The battery was intact and did not look like there was any corrosion or leakage from it. In the same area to the north of the battery, there was a natural gas meter connected to the building. This meter was in good condition. However, the City of Pawnee does not use the gas for heating purposes. A remnant of the UST that was removed in September of 1995 was observed in front of the armory on the east side. Piping was found above the ground surface indicating that it was part of a UST at one time (see Photo #25 of Appendix B). Several areas around the armory building had stressed vegetation. A few spots east of the central overhead door on the east side had stressed vegetation. However, no stained soils were noticed on the east side. The areas with the most noticeable stressed vegetation were found on the south end of the armory's west wing. The soils in this area appeared to have stains from vehicle traffic and used oil.

A fenced-in compound south of the armory contained four ASTs, several gravel piles, a propane tank, fuel truck, and a backhoe. The ASTs contain gasoline for refueling purposes. These tanks appeared to be in good condition. Next to the fenced-in compound there was a pile of blacktop gravel (Ref. 8).

6.4 *Internal observations*

A walk-through was conducted in each room of the armory. No renovations to the armory appeared to have been made. The Drill Hall floor has some mold growth and is heavily stained with oil and grease from the servicing of street maintenance vehicles. The south rooms of the west wing and south wing were found to have oil and grease stains as well. All floors throughout the armory appeared to be very dusty. Lack of upkeep in the facility is apparent. Drums of used oil are located in the Drill Hall along with the Street Department's vehicles. A car battery was noticed on a pallet near the stage area in the Drill Hall. In a room in the west wing there is mold growth (Photo #10, Appendix B). This is apparent in other areas of the armory as well. Sandstone walls

have deteriorated and ceilings throughout the facility have water damage. Drop ceiling panels in the north, south, and west wings are suspect of containing ACM. It was noticed that several rooms were missing drop ceiling panels in areas. The sandstone walls have become stained from water damage and past weathering.

Used tires are stored in several locations within the armory including the stage area. In a room directly east of the stage area, there is an opening inside where birds have congregated. Bird feces were found on the floor along with loose soil and dust. Old furniture was found in the north, south, and west wings. These wings had several areas where peeling paint has occurred on the walls, the windowpanes, and the piping above the light switch fixtures (see Photo #4, Appendix B). This paint may be suspect for lead. Peeling paint and suspect ACM on the drop ceiling panels was all that was found in the north wing other than storage items. Storage items included: Christmas decorations, old furniture, clothing, car seats, and other miscellaneous things.

The west wing contained a heating unit with some insulation suspect of containing ACM. This unit can be found in the northwest room where the Street Department's lobby is located. Street signs and old furniture were found in the west wing. A storage room, located on the south section of the west wing, contained firework tubes and buckets of paint. The south end of the west wing is used as the painting area. Tires, grease, and oil stains are apparent along with 8 car batteries on a wooden pallet found in the northwest corner of the building. These batteries appear to be in good condition with no leaks. Next to these batteries were several paint cans.

The south wing had the most apparent environmental findings. 12" x 12" tile was found on the southwest section of this wing (see Photo #17, Appendix B). Some of the tile was broken and may contain friable asbestos. This room and the rest of the rooms on the west side of the south wing contained boxes of files, old heating units, computers, desks, street signs, and other miscellaneous items. The east side of the south wing contained equipment such as a riding lawn mower, tires, and approximately 35 5-gallon buckets of tractor hydraulic fluid. Two purple stains, still in liquid form, were found near these buckets (see Photos #20 and #21, Appendix B). Cardboard was laid on the floor in different areas where there appeared to be several more stains. Old insulation wrapping was discovered on some piping located in the same vicinity as the stains. This piping is near the ceiling and the insulation is suspect for containing ACM (see Photo #22, Appendix B). A small room north of the room with the purple stains contained several containers with different kinds of chemicals. These containers were shelved.

The IFR has had some water damage and has a very strong odor of mold. No lighting is set up in the IFR. Flashlights were used during the site visit to inspect the IFR. The bullet trap was found on the west side of the range. Two sand samples were collected from the bullet trap for analysis of lead. The soil outside the vent area of the IFR was also sampled for lead (Ref. 8).

7.0 *Interviews*

7.1 *Interviews with Past and Present Owners of the property*

Interviews are required by the All Appropriate Inquiry standard. The property is currently leased out to the City of Pawnee Street Department by the Oklahoma Military Department (OMD) who owns the property. The DEQ has had several conversations/interviews regarding environmental and safety issues at the armories, with various employees of the OMD. Major Merkle, Colonel Jim Peck, and Richard Brooks were among the individuals that the DEQ has interviewed regarding conditions at the armory. The Oklahoma Military Department provided a Baseline Assessment of the property to the DEQ, and the DEQ was able to review the OMD files on the IFR.

7.2 *Interviews with Key Site Manager*

No key site managers were interviewed at the subject property; however, knowledgeable personnel were interviewed.

7.3 *Interviews with Operators and Occupants of the property*

An interview, on September 26, 2006, was conducted at the subject property with a current operator of the armory. Chris McCray, employee for the City of Pawnee Street Department, was interviewed by Jon Reid of the DEQ. Mr. McCray walked the DEQ through each room, including the IFR, and provided what he knew about them. The following information was attained by Chris McCray during the walk-through of the property.

- Around 1995, the City of Pawnee Street Department moved into the facility and began its in-house operations. McCray did not know when the Army National Guard discontinued their operations at the armory. He thought it might have been 30 years ago.
- All sewage and wastewater from the facility leads into the City of Pawnee wastewater treatment system. Water comes from the City of Pawnee as well. No wells or septic tanks are on the property. There is propane found in the outside fenced-in compound.
- No natural gas is used. An oil-burning unit is used for heating purposes.
- The drums found in the Drill Hall contain used motor oil from the Street Department vehicles.
- The City of Pawnee Street Department occupies the Drill Hall and the west wing of the building. The north wing is used as a storage area by Alcoholics Anonymous. The south wing is used as a storage area by the County of Pawnee.

- Mr. McCray did not have any information on the armory in regards to the Army National Guard activities prior to the City of Pawnee's operational control of the facility.

7.4 Interviews with State and/or Local Government Officials

The DEQ met with the Honorable Tom Briggs, the current Mayor at the City Hall. He introduced the DEQ to the site and Chris McCray, an employee for the City of Pawnee Street Department. The Mayor did not have much information on the building, but he did mention that the Drill Hall was used as a skating rink at one time.

7.5 Interviews with Others

No other interviews were conducted.

8.0 Findings

This Phase I Targeted Brownfield Assessment of the Pawnee Armory was performed in accordance with the ASTM E 1527-05, a guide for conducting Environmental Site Assessments. Jonathan Reid, Heather Mallory, Subi John, and Dustin Davidson performed the site reconnaissance on September 26, 2006.

The site is located in the NW ¼ of Section 5, Township 21N, and Range 5E Indian Meridian in Pawnee County, Oklahoma. The site is off US Highway 64 and First Street in Pawnee.

A cursory summary of findings is provided below. However, details are not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

- The sand trap and dust residue within the Indoor Firing Range (IFR) was found to have lead contamination. The soil outside of the IFR vent area also has lead contamination. Past sampling of the sand trap and the rest of the IFR show results of lead concentrations in need of remediation. The IFR and the soils near the IFR vent constitutes a recognized environmental condition (REC) based on the lead concentrations and its leachability.
- An Underground Storage Tank (UST) was once located on the southeast side of the Pawnee Armory property. It was removed in 1995. During the removal, two soil samples were collected where the UST was buried. One sample had concentrations of toluene at 0.0017 mg/kg, xylene at 0.00075 mg/kg, and a Total Petroleum Hydrocarbon (TPH) Diesel Range Organics (DRO) concentration of 3.7 mg/kg. The concentrations are well below the DEQ screening levels. The ground surface has since been restored. However, during the site visit there was a brown metal pipe found above the ground surface where the UST was once located.
- Several 55-gallon drums of used oil were found inside the Drill Hall.

- Oil and grease spots were found on the floors throughout the Drill Hall, the south rooms of the west wing, and the south wing. These floors were fairly dusty as well. Floor drains nearby may be affected if past runoff has occurred from the stains and dust.
- There is a potential for asbestos containing materials (ACMs) in the armory due to the age of the facility. The following materials were found that may have ACM. Drop ceiling panels were found on the north, south, and west wings. 12" x 12" tile was found in the south wing of the armory. Some of the tile was friable. The insulation found on the piping in the south wing and the insulation found on the heating unit piping in the lobby area of the west wing appeared to be very old and suspect for ACM.
- Water damage and mold is apparent throughout the armory. The sandstone walls, ceilings, and floors in some areas have stains and mold growth from past water damage and weathering. Mold odor is apparent throughout the building especially inside the IFR.
- Peeling paint on the walls, the piping adjoining the light switch fixtures, and window panes were observed that may contain lead based-paint.
- Eight car batteries were found on a wooden pallet in the southwest corner room of the west wing. Two more car batteries were found as well. One battery is located outside the armory next to the wall of the west wing. The other battery was found on a wooden pallet in the Drill Hall. These batteries could contain PCBs. No corrosion or leakage is apparent. The battery outside of the armory could have a potential of releasing harmful contaminants into the environment due to weathering and rain damage.
- Approximately thirty-five 5-gallon buckets of tractor hydraulic fluid were found in the east side of the south wing of the armory. Two purple stains near these buckets were found still in liquid form. These stains are near a floor drain, which could allow entry-way into the drainage system. These stains could create harmful effects to the environment and therefore constitute a REC.
- Containers of different types of Chemicals were found in the Drill Hall, the west wing, and the south wing.
- Stressed vegetation was found in areas east of the Drill Hall and south of the west wing. Stained soils from vehicles were observed south of the west wing as well.

9.0 Opinion

Based on the findings of this assessment, The DEQ recommends that additional investigation be conducted to evaluate areas of the property that may need future clean-up and remediation.

Areas of additional evaluation consist of the following:

- The IFR needs additional evaluation and remediation efforts on the sand trap and dust residue for lead. The vent area of the IFR, which allows indoor air to escape to the outside air, should be investigated further for lead contaminated soils and remediate if necessary.
- Suspected ACM potentially in the drop ceilings of several rooms located in the north, south, and west wings should be sampled for asbestos. If ACM is found, proper abatement should be conducted.
- Areas where there is water damage should be investigated for possible mold growth. However, mold is not regulated and there are no regulatory requirements to remediate it. It could have negative health affects for people working within the building.
- Peeling paint on the walls, piping adjoining the light switch fixtures, and windowpanes should be tested for lead and abated or encapsulated if the paint is positive for lead.
- Drums of used oil found in the Drill Hall should be disposed of properly.
- The battery located outside the armory on the west side should be disposed of properly. Soils should be tested for heavy metals where the battery is situated. All other batteries found in the armory are properly stored. Disposal of these batteries is not necessary.
- The purple tractor hydraulic fluid stains should be cleaned and remediated in the south wing. The floor drain in this room should be evaluated for potential entry of the contaminant.
- The tiles and pipe wrapping located in the south wing and the heating unit insulation located in the lobby area of the west wing should be tested for ACM. If ACM is found, proper abatement should be conducted.

10.0 Data Gaps

According to the Oklahoma Military Department (OMD) records, a 1,000-gallon gasoline UST was removed on September of 1995. Based on the Oklahoma Corporation Commission (OCC) UST Notification Database there were no 1,000-gallon USTs near the property that were listed as owned by the OMD. The OCC database does list a 5,000-gallon gasoline UST as being owned by the OMD near the Pawnee Armory. However, closure status of this particular UST is not listed. During the site visit, a brown metal pipe was found approximately six inches above ground surface in front of the armory building on the east side. This pipe is believed to be a part of the UST that was removed.

11.0 Conclusions

A Phase I Targeted Brownfield Assessment in conformance with the scope of work and ASTM Practice E 1527-2005 was performed on the subject property. This assessment revealed recognized environmental conditions that may need additional investigation and remediation of the subject property before the property can be transferred to the City. The information provided in this assessment is to assist the Oklahoma Military Department and the City of Pawnee in the transfer of property as well as meet the All Appropriate Inquiry requirement of the landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, better known as Superfund – Ref. 2), as provided in the Small Business Relief and Brownfields Revitalization Act of 2002 (Public Law 107-118, Subtitle B – Ref. 3).

12.0 Additional Services

No additional services were provided in this Phase I Targeted Brownfield Assessment other than the lead results of the IFR given in Section 3.2, “Other known or Suspected Environmental Concerns on the Site.” In addition to the Phase I Targeted Brownfield Assessment, the DEQ will assist the City with removal of the environmental contaminants and ensure that the property is ready for revitalization.

13.0 Deviations

No deviations and deletions from E 1527-05 were made for this Phase I site investigation.

14.0 References

1. U.S. Environmental Protection Agency. (2001). *Oklahoma Brownfields Assistance Agreement (No #VC98677601)*. July 19, 2001. Unpublished Document. State of Oklahoma: Oklahoma City, Oklahoma.
2. U.S. Environmental Protection Agency. (1980). *Comprehensive Environmental Response, Compensation, and Liability Act*. (Public Law 96-510). Washington, DC: U.S. Government Printing Office.
3. U.S. Environmental Protection Agency. (2002). *Small Business Liability Relief and Brownfields Revitalization Act*. (Public Law 107-118, Subtitle B). Washington, DC: U.S. Government Printing Office.
4. ASTM International. (2005). *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment E 1527 – 05*. West Conshohocken, PA.

5. United States Department of Agriculture, Soil Conservation Service (1959). Galloway H.M. *Soil Survey of Pawnee County, Oklahoma. March 1959*. U.S. Government Printing Office: Washington, D.C.
6. U.S. Geological Survey. *Reconnaissance of the Water Resources of the Enid Quadrangle, North-Central Oklahoma*, Hydrological Atlas 7. The University of Oklahoma, Norman, OK. (1980).
7. Federal Emergency Management Association (FEMA). <https://msc.fema.gov>.
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9. Oklahoma Water Resources Board. <http://www.owrb.state.ok.us/wd/search/search.php>.
10. Emergency Response Notification System: <http://www.nrc.uscg.mil/foia.html>.
11. Oklahoma Army National Guard. *Indoor Firing Range Lead Issues Report*. C.H. Guernsey & Company. (2004).
12. Oklahoma Military Department Environmental Office (OKDE-ENV). Limited Environmental Baseline Assessment, Pawnee Armory. April 6, 2004.
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14. CERCLIS current and archived sites: <http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm>.
15. RCRA database: http://www.epa.gov/enviro/html/rcris/rcris_query_java.html.
16. RCRA NOTIFIERS sorted by county and then city:
<http://www.deq.state.ok.us/LPDnew/HW/Notifiers/notifiersbycountycity.pdf>.
17. State Landfill site list: <http://www.deq.state.ok.us/LpDnew/swindex.html>.
18. The University of Oklahoma Libraries. Digital Sanborn Maps. Last accessed (September 18, 2006). (Pawnee Sanborn Map, January 1931).
<http://www.libraries.ou.edu/eresources/LORA/LORA.asp?type=index&list=0&value=S>
19. DEQ Dataviewer: <http://maps.scigis.com/deq%5Fwq/>.

15.0 Signature(s) of Environmental Professional(s)

See page two for signatures of environmental professionals.

16.0 Environmental Professional(s) Statement

I declare that to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of this part. I have specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

17.0 Appendices

- Appendix A Site (Vicinity) Maps
- Appendix B Site Photographs
- Appendix C Historical Research Documentations
 - Aerial Photographs
 - Topographical Map
 - Fire Insurance Sanborn Map
 - Floor Plan
- Appendix D Log Book and Interview Documentation
- Appendix E Qualifications of Environmental Professionals
- Appendix F DEQ Analytical Results of Indoor Firing Range and Chain of Custody
C.H. Guernsey & Company Indoor Firing Range Lead Issues Report
- Appendix G Notification for Underground Storage Tanks
- Appendix H City of Pawnee Letter (March 7, 2006)
- Appendix I County Records of the Pawnee Armory

Appendix A

Site (Vicinity) Maps

Figure 1: Site (Vicinity) Map (Ref. 19)

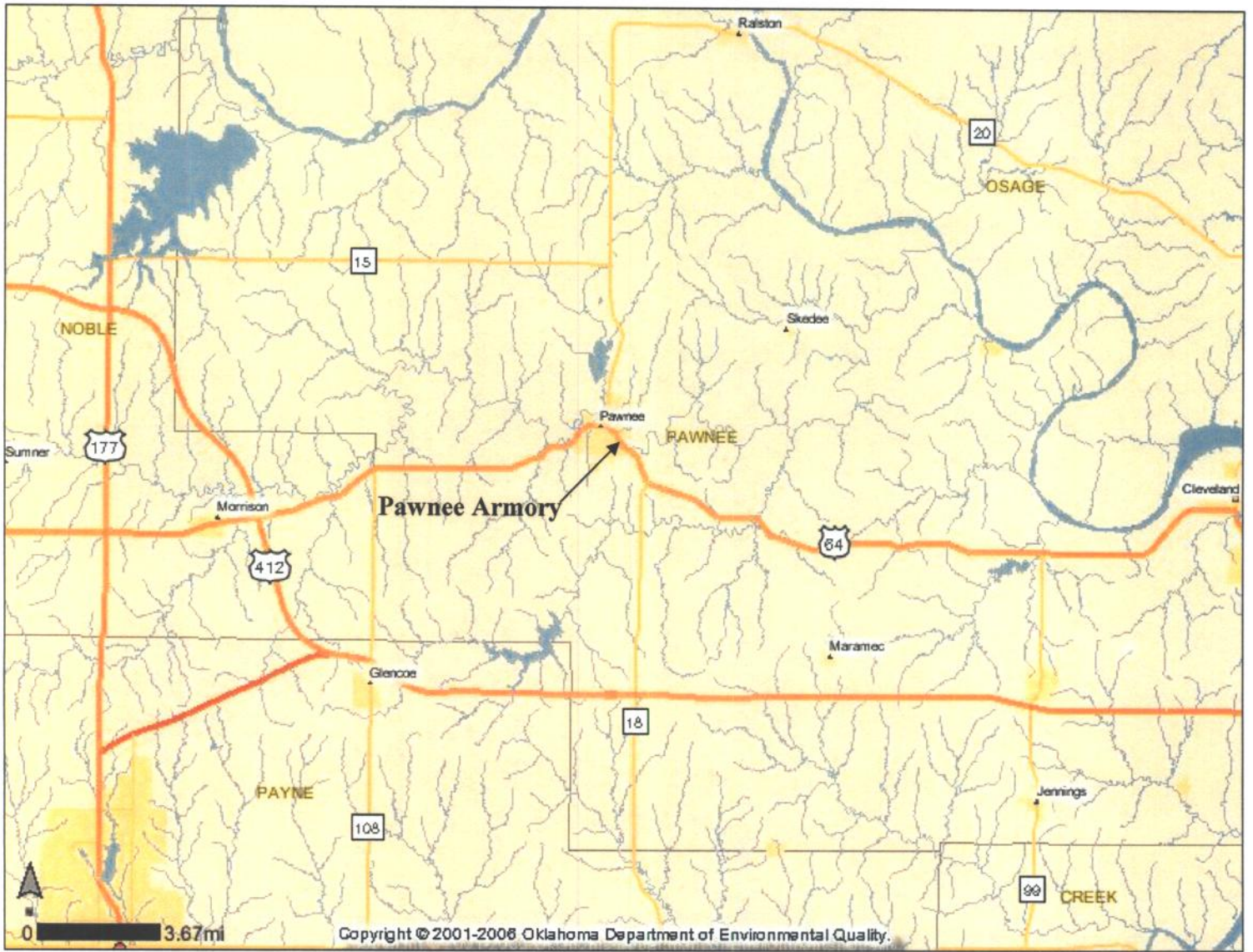


Figure 2: Site (Vicinity) Map (Ref. 19)



Appendix B

Site Photographs

Date Photos Taken: September 26, 2006



Photo #1: Peeling paint on one of the windows of the building.



Photo #2: Room in the west wing of the armory full of street signs and street lights.



Photo #3: Missing ceiling panels in one of the rooms.

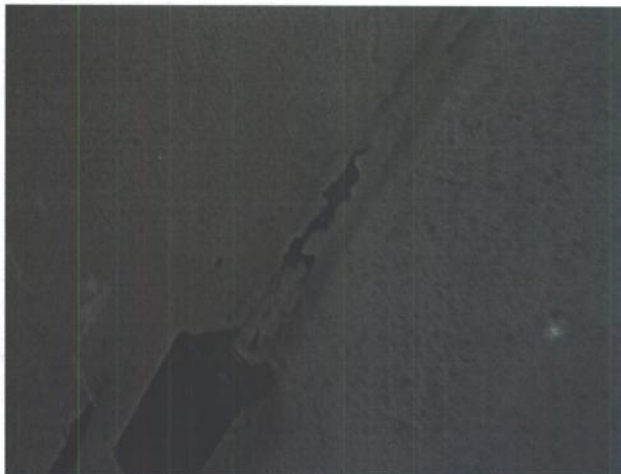


Photo #4: Peeling paint on one of the light switch fixture piping.



Photo #5: Outside wall of the west wing.



Photo #6: Natural gas line connected to the building on the northwest corner of the west wing.

Date Photos Taken: September 26, 2006



Photo #7: Missing ceiling panels in one of the rooms in the west wing of the armory.



Photo #8: North view of the Drill Hall showing the stage area.



Photo #9: West view of the Drill Hall showing the Street Department vehicles.

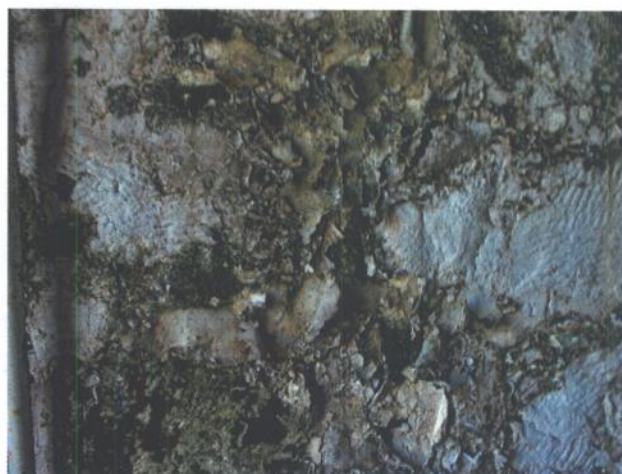


Photo #10: Mold growth on one of many walls in the armory.



Photo #11: Room in the North Administration section of the armory controlled by Alcoholics Anonymous.



Photo #12: Vent window from the indoor firing range located in the basement. Soil samples were collected here.

Date Photos Taken: September 26, 2006



Photo #13: Car battery located on the west end of the armory building.



Photo #14: Motor Pool located in the west wing of the armory. Center of painting activity and area of disturbed soils.



Photo #15: Drain in Drill Hall

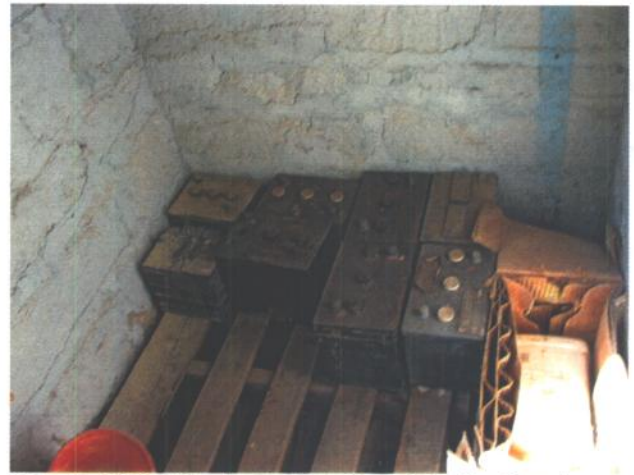


Photo #16: Car batteries found in the South Administration section.



Photo #17: 12" x 12" tile found in the South Administration section.



Photo #18: More missing ceiling panels located in the South Administration section.

Date Photos Taken: September 26, 2006



Photo #19: Floor drain inside one of the rooms in the South Administration section.



Photo #20: Purple fluid on ground next to buckets full of tractor hydraulic fluid in the South Administration section.



Photo #21: Another puddle of purple fluid on the ground several feet northeast of the puddle found in Photo #20.



Photo #22: Possible ACM on some of the piping above a room in the in the northeast part of the South Administration section.



Photo #23: Fenced-in area owned by the Street Department showing two ASTs, a propane tank, and a fuel truck.

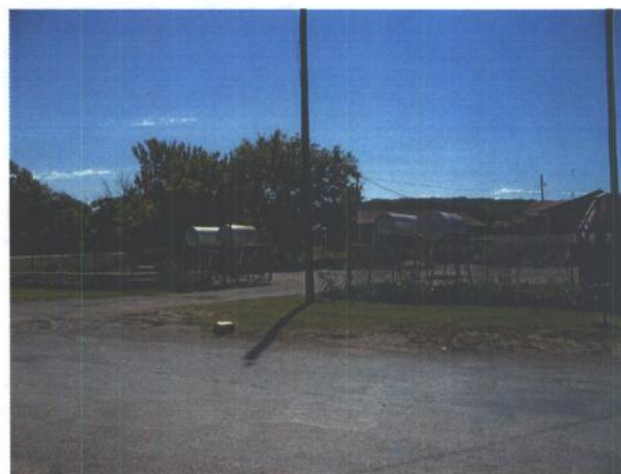


Photo #24: Fenced-in area showing all four of the ASTs.

Date Photos Taken: September 26, 2006

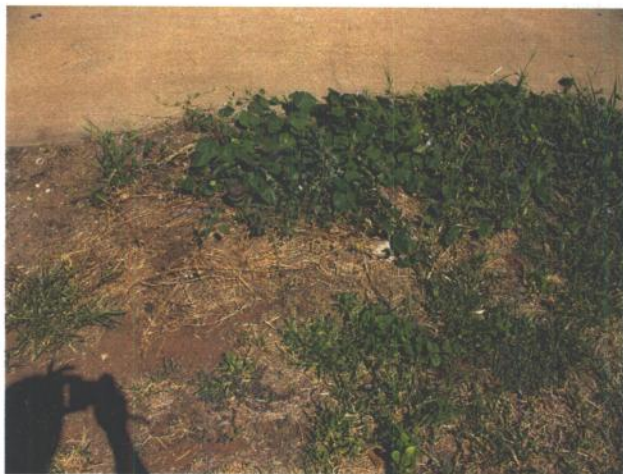


Photo #25: Area where 1,000 gallon UST may have been. Rusted metal pipe sticking out of the ground.



Photo #26: Piles of black tarrish gravel located on the southeast corner of the property.



Photo #27: Oil and grease stains found in the Drill Hall.



Photo #28: Cleaning supplies in the northeast room of the South Administration section.

Appendix C

Historical Research Documentations

Aerial Photographs

Figure 1: 2003 Aerial Photograph (Ref. 19)



Figure 2: 1995 Aerial Photograph (Ref. 19)

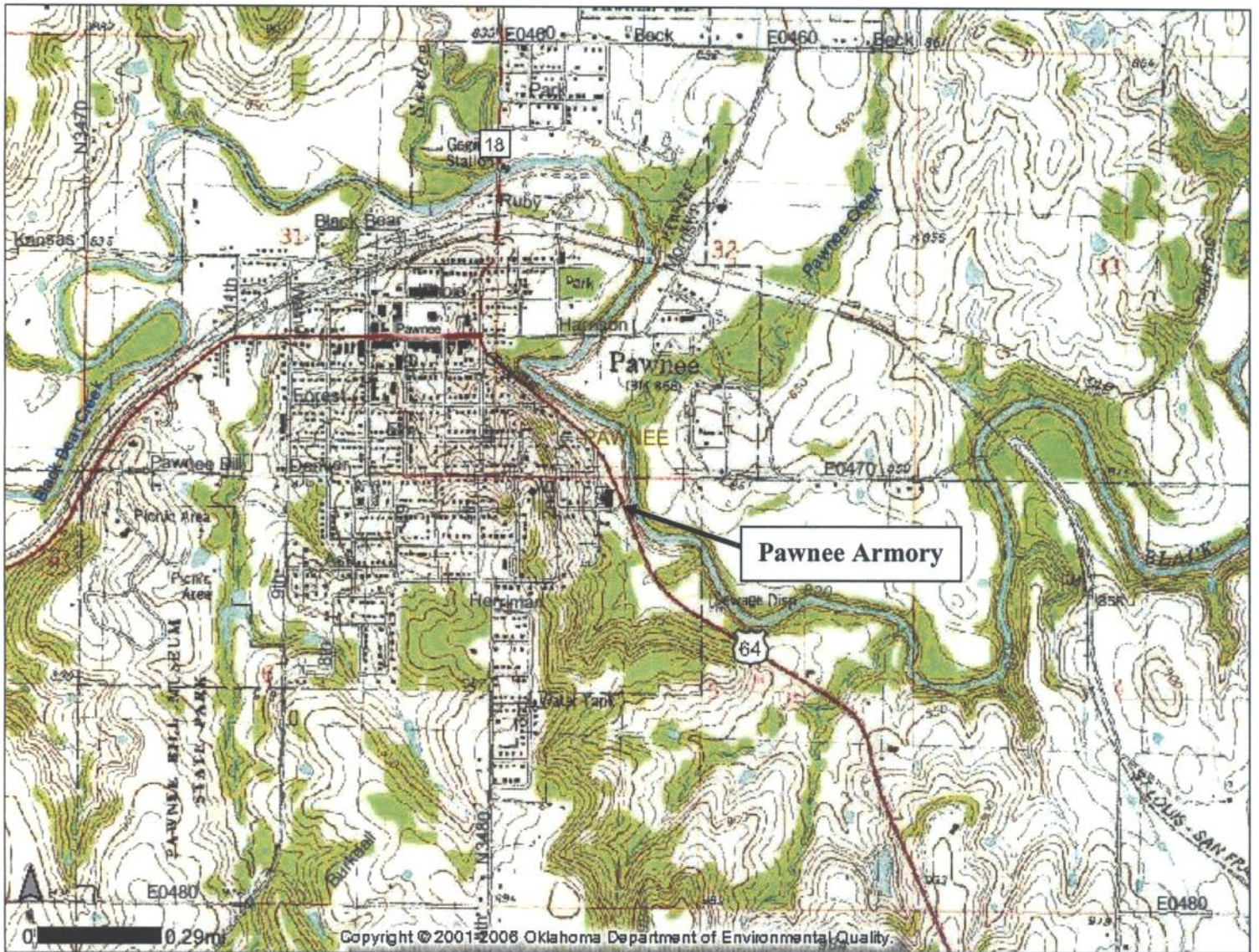




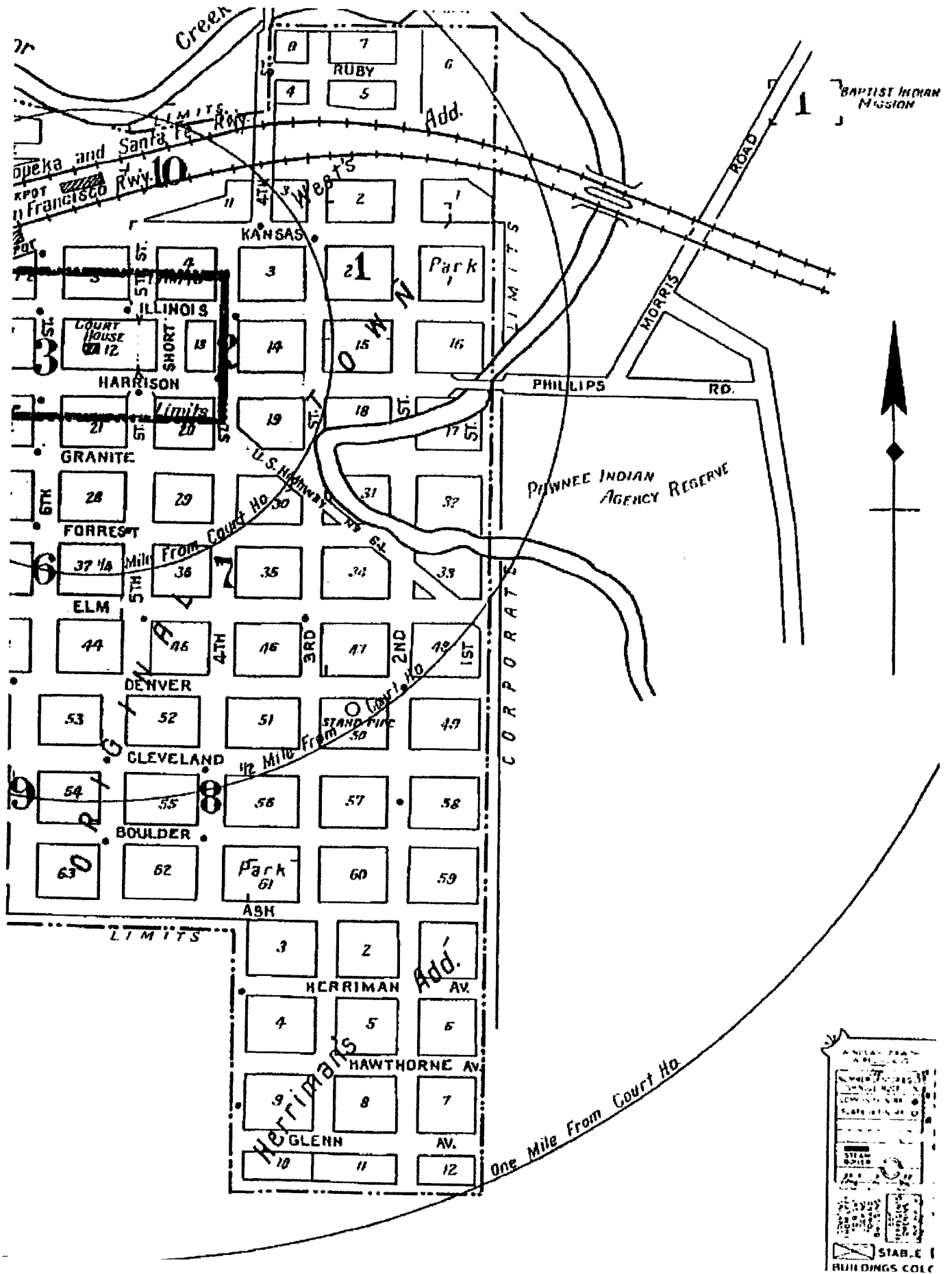
Figure 3: 1938 Aerial Photograph

Topographical Map

Figure 1: Topographical Map (Ref. 19)

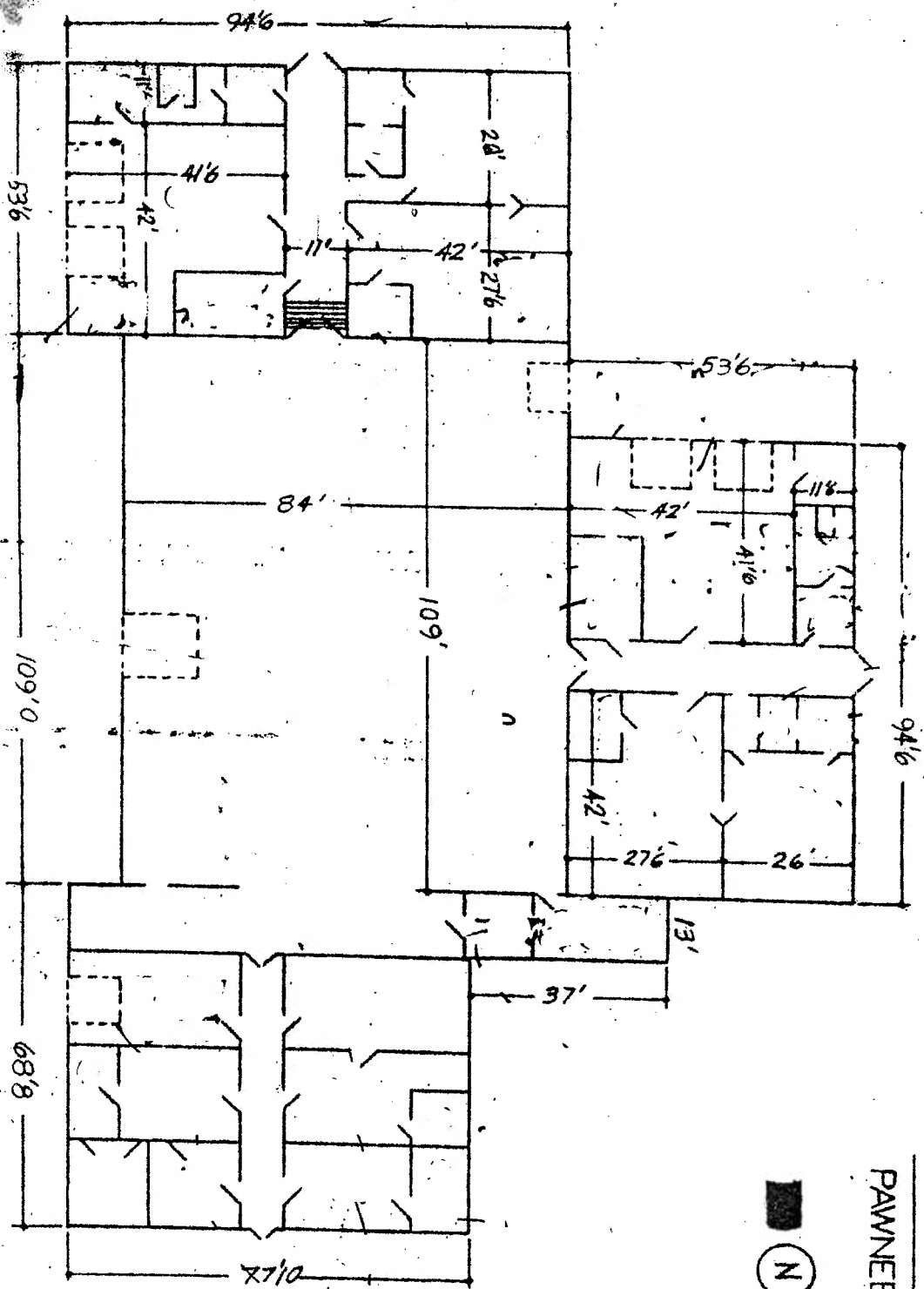


Fire Insurance Sanborn Map



Floor Plan

FLOOR PLAN
1" = 30'



PAWNEE



STATE OF OKLAHOMA
MILITARY DEPARTMENT

PAWNEE ARMORY

3-23-73

1" = 30'



Appendix D

Log Book and Interview Documentation

Code: 233-151-238

Location Pawnee, OK Date 9-26-06

Project / Client Pawnee National Guard Armory
US HWY 64 & 1st Street / sunny, no rain

10:30 AM - Jon Reid, Heather Mallory, Subi John, & Dustin Davidson of DEQ arrived at Pawnee, OK & met Tom Briggs, the current Mayor for City of Pawnee, @ the City Hall. Tom led us to the Pawnee Armory where the DEQ was introduced to Chris McCray, ~~an~~ an employee of the street Department for the City of Pawnee.

- The site reconnaissance consisted of an inspection of the armory & its surrounding property, including a fenced-in compound that is part of the armory property.
- The general condition of the property is in poor condition.
- The City ~~has~~ has operational control of the facility, street maintenance vehicles, street signs, street lights, & public rec. materials are present. Files, old office equipment, furniture,

Code: 233-151-238

Location Pawnee, OK Date 9-26-06

Project / Client Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

Christmas decorations, toys, clothing, riding lawnmower, tractor hydraulic fluid, drums of used oil, old heating units, & various chemicals were also stored there. - Green algae stains & black stains due to water damage on sandstone structure.

- Majority of windowpanes throughout facility were either broken or missing entirely. Some were either broken or still intact with peeling chips of paint that could possibly be lead-based paint. This's weathered paint was found peeling off of the open roof drains & overhead doors of the facility.
- Car battery lying on ground next to west outside wall of facility. No corrosion or leakage.
- Natural gas meter in good condition, connected to building on

code: 232-157-238

Pawnee, OK

9-26-06

Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

- A remnant of the UT was observed in front of the armory on the east side. Piping found aboveground.
- A few spots east of the central overhead door on the east side had stressed vegetation ~~were~~ ~~for~~ No stained soils there.
- The armory's west wing had stress vegetation & stained soils (oil & grease stains from vehicles).
- On the south end of west wing, 4 ASTs inside fence in compound south of armory building. Several gravel piles, a propane tank fire truck, & a backhoe also found inside compound. The ASTs contained gasoline for refueling purposes.
- ASTs in good condition.
- A pile of blacktop gravel next to compound.

- No renovations appeared to have been made @ the armory.
- Drill hall floor has mold growth.

code: 232-157-238

Pawnee, OK

9-26-06

Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

- and is heavily stained with oil & grease from the servicing of vehicles.
- South rooms of the west wing & south wing were found to have oil & grease stains as well.
- All floors throughout armory appeared to be very dusty.
- Lack of upkeep in facility is apparent.
- Drums of used oil are located in the Drill Hall along with the Army Dept's vehicles.
- A car battery was noticed on a pallet near the stage area in the Drill Hall.
- A room in the west wing there is mold growth. This appears in other areas as well.
- The sandstone walls have deteriorated & ceilings throughout the facility have water damage.
- Drop ceiling panels in hallways

code: 233-151-238

24 Location Pawnee, OK

Date 9-26-06

Project / Client Pawnee National Guard Armory
U.S. 64 & 1st Street

- South, & west wing are suspect of containing ACM.
- Drop ceiling panels missing in areas in several rooms.
 - Sandstone walls inside have become stained from water damage & past weathering.
 - Used tires are stored in several locations within the armory including the stage area.
 - A room directly east of the stage area there is an opening inside where birds have congregated. Bird feces were found on the floor along with loose soil & dust.
 - Old furniture was found in the north, south, & west wings. These wings had several areas where peeling paint has occurred on the walls, the windowpanes, & the piping above the light switch fixtures. May be suspect for lead.
 - The west wing contained a heating unit with some insulation

code: 233-151-238

Location Pawnee, OK

Date 9-26-06

Project / Client Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

- suspect of ACM. Found in the NW room where the Street Dept's lobby is located.
- Street signs & old furniture was found in the west wing.
 - A storage room, located on the south section of the west wing, contained firework tubes & buckets of paint.
 - The south end of the west wing is used as the painting area. Tires, grease, oil stains are apparent along with 8 car batteries on a wooden pallet found in the NW corner of the building. These batteries appear to be in good condition with no leaks. Next to these batteries there are several paint cans.
 - The south wing had the most apparent recognizable environmental conditions.
 - 12" x 12" tile was found on the

code: 233-151-238

Location Pawnee, OK

Date 9-26-06

26

Project / Client Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

southwest section of this wing, some of the tile was friable.

This room & the rest of the rooms on the west side of the south wing contained boxes of files, old heating units, computers, desks, street signs, & other miscellaneous items.

- The east side of the south wing contained equipment such as a riding lawn mower, tires, & approx. 35 5-gallon buckets of tractor hydraulic fluid.

- Two purple liquid stains were found near these buckets.

Cardboard was laid on the floor in different areas where there

appeared to be several more stains, - old insulation wrapping was discovered on some piping

located in the same vicinity as the stains. This piping is near the ceiling & the insulation is suspect of containing ACM.

- A small room north of the

code: 233-151-238

Location Pawnee, OK

Date 9-26-06

27

Project / Client Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

room with the purple stains contained several containers with different kinds of chemicals. These containers were shelved.

- The IFR has had some water leakage & a very strong odor of mold.

- No lighting is set up in the IFR.

- Bullet trap found on the west side of the range.

- Two sand samples were collected from the bullet

trap for analysis of lead.

- The soil outside the vent area of the IFR was also sampled for lead.

Interviews - September 26, 2006
Chris McCray - Employee for the City of Pawnee Street Dept.

- Around 1995 the City of

code: 233-157-238

Location Pawnee, OK

Date 9-26-06

Project / Client Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

Pawnee Street Dept. moved into the facility & began their in-house operations there.

- McCray did not know when the Army National Guard discontinued their operations @ the armory. He thought it might have been 30

years ago.
- All sewage & wastewater from the facility leads into the City of Pawnee wastewater treatment system.
- Water comes from the City of Pawnee as well.

- No wells or septic tanks are on the property. There is propane tank found in the outside fencing compound.
- No natural gas used. An oil burning unit is used for heating purposes.

- The drums found in the Drill Hall contain used motor oil from the Street Dept. vehicles.

- The City of Pawnee Street Dept. occupies the Drill Hall & the

code: 233-151-238

Location Pawnee, OK

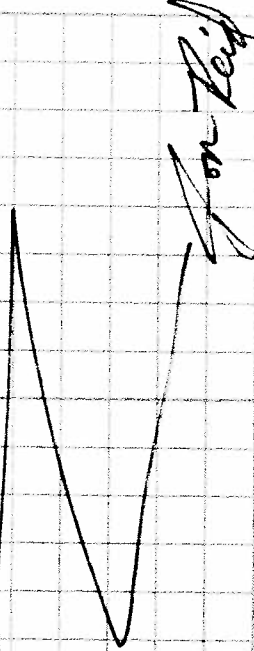
Date 9-26-06

Project / Client Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

west wing of the building. The north wing is used as a storage area by Alcoholics Anonymous. The south wing is used as a storage area by the County of Pawnee.

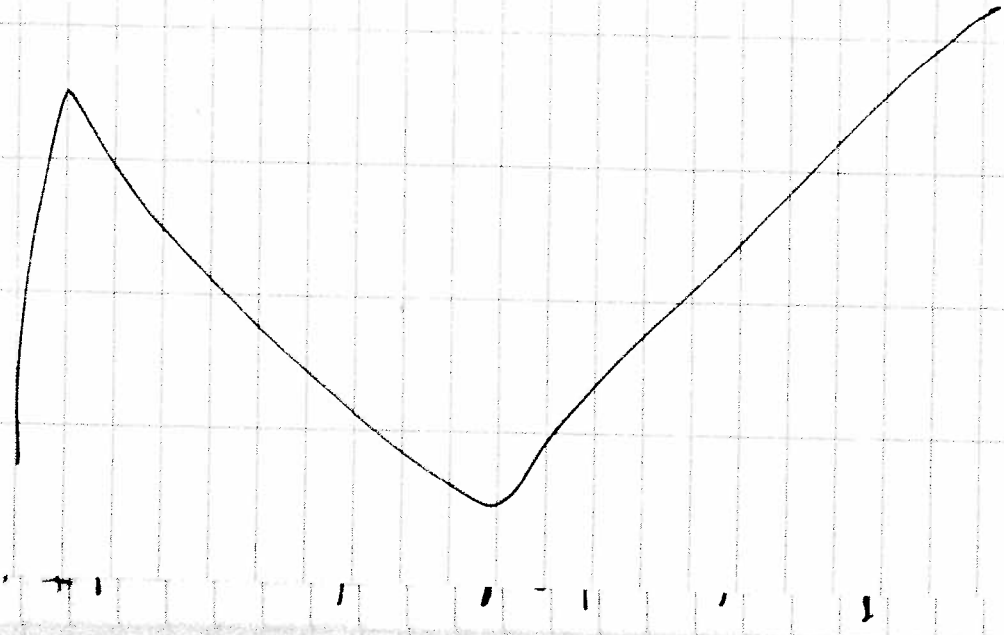
- Mr. McCray did not have any information on the armory in regards to the Army National Guard activities prior to the City of Pawnee's operational control of the facility.

Tom Briggs - Current Mayor @ the City Hall. He did not have much information on the building but he did mention that the Drill Hall ~~has~~ was used as a skating ring @ one time.



Location Pawnee, OK Date 9-26-06
Project / Client Pawnee National Guard Armory
U.S. HWY 64 & 1st Street

F - Pictures taken on 9-26-06



For
Reid

Appendix E

Qualifications of Environmental Professionals

Environmental Professional Qualifications

Jonathan Reid holds a Bachelor Degree in Environmental Science with an emphasis in Natural Resources and a Minor in Soil Science from Oklahoma State University. Mr. Reid has 3 years experience in environmental sampling and technical studies. He is an Environmental Programs Specialist with the Land Protection Division of the Oklahoma Department of Environmental Quality. His responsibilities include: project management of Brownfield/Voluntary Cleanup Project (VCP) sites, conducting Targeted Brownfield Assessments, and assisting other project managers on technical activities at other Brownfield/VCP and National Priorities List sites as needed.

Rita R. Kottke, Ph.D., holds a Doctorate in Environmental Science from Oklahoma State University. She is an Environmental Programs Manager with the Land Protection Division of the Oklahoma Department of Environmental Quality. She functions as the DEQ's Brownfield Coordinator, Brownfield Cleanup Revolving Loan Fund Contact, Superfund Site Redevelopment Contact, Superfund Emergency Response Contact, Land Revitalization/Reuse Contact, and as a liaison between the state, EPA, and local communities. Her responsibilities also include acting as technical project manager at various Voluntary Cleanup and Superfund sites within the state. She has been with the agency for thirteen years, working in the Superfund and Brownfields Programs. She has 13 years experience performing site assessments of real property. She was heavily involved in the formulation of the Brownfields Program's implementing rules, the negotiation of DEQ's Brownfields Memorandum of Agreement (MOA) with EPA, and the development of the Brownfield Cleanup Revolving Loan Fund Grant Proposal.

Hal Cantwell holds a Bachelor Degree in Geography with emphasis in Physical Geography and ecological from the University of Oklahoma, and a Masters Degree in Geography with emphasis in Biogeography and Remote Sensing from the University of Oklahoma. Mr. Cantwell has 20 years experience working in the Superfund program including directing the investigation and remediation of National Priority List (NPL) sites. He has 20 years experience in performing site assessments and ten years experience in directing and supervising CERCLA Preliminary Assessments and Site Investigations with the Oklahoma Department of Environmental Quality Land Protection Site Assessment Unit. He also has six years experience performing and supervising Targeted Brownfield Assessments under the DEQ Brownfields Program.

Appendix F

**DEQ Analytical Results of Indoor Firing Range
and Chain of Custody**

**C.H. Guernsey & Company
Indoor Firing Range Lead Issues Report**

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE ENVIRONMENTAL LABORATORY

707 N. ROBINSON

OKLAHOMA CITY

OKLAHOMA, 73102-6010

General Inquiries: 1-800-869-1400

Sample Receiving: (405) 702-1113

Report of Analysis by Metals

Sample Number: 406390
Project Code: LP-ARM
Agency Number:
Date Collected: 09/26/2006
Time Collected: 1123
Date Received: 09/27/2006
Date Completed: 11/22/2006
Collected By: HM
PWS Id:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

LAND PROTECTION DIVISION
HEATHER MALLORY

CC:FILE COPY

Table with 6 columns: PARAMETER NAME, QUALIFIER, VALUE, UNITS, ANALYZED, METHOD

Lead, Sediment 479. MG/KG 10/13/06 6010
% Solids 82.71 % 11/20/06 CLP 05.3

SOURCE: PAWNEE ARMORY
PROGRAM:
COUNTY: PAWNEE CITY: PAWNEE

LEGAL DESCRIPTION:
/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
IFR FAN-4; SOIL FROM OUTSIDE OF IFR FAN

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

*

ANALYST

Handwritten signature of analyst

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY**STATE ENVIRONMENTAL LABORATORY**

707 N. ROBINSON

OKLAHOMA CITY

OKLAHOMA, 73102-6010

General Inquiries: 1-800-869-1400

Sample Receiving: (405) 702-1113

Report of Analysis by Metals

Sample Number: 406391
Project Code: LP-ARM
Agency Number:
Date Collected: 09/26/2006
Time Collected: 1122
Date Received: 09/27/2006
Date Completed: 11/22/2006
Collected By: HM
PWS Id:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

LAND PROTECTION DIVISION
HEATHER MALLORY

CC:FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		535.	MG/KG	10/13/06	6010
% Solids		83.62	%	11/20/06	CLP 05.3

SOURCE: PAWNEE ARMORY

PROGRAM:

COUNTY: PAWNEE CITY: PAWNEE

LEGAL DESCRIPTION:

/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:

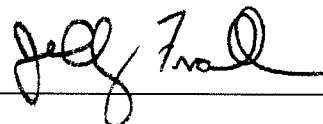
IFR FAN-3; SOIL FROM OUTSIDE OF IFR FAN

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

*

ANALYST



OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE ENVIRONMENTAL LABORATORY

707 N. ROBINSON

OKLAHOMA CITY

OKLAHOMA, 73102-6010

General Inquiries: 1-800-869-1400

Sample Receiving: (405) 702-1113

Report of Analysis by Metals

Sample Number: 406392
 Project Code: LP-ARM
 Agency Number:
 Date Collected: 09/26/2006
 Time Collected: 1015
 Date Received: 09/27/2006
 Date Completed: 11/22/2006
 Collected By: HM
 PWS Id:
 Location Code:
 Station:
 Facility:
 Report Date: 11/22/2006

LAND PROTECTION DIVISION
 HEATHER MALLORY

CC:FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		809.	MG/KG	10/13/06	6010
Lead (TCLP)		112000.	UG/L	11/06/06	6010
% Solids		85.73	%	11/20/06	CLP 05.3

SOURCE: PAWNEE ARMORY
 PROGRAM:
 COUNTY: PAWNEE CITY: PAWNEE

LEGAL DESCRIPTION:
 /4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:
 IFR-1; IFR SAND LEFTSIDE

SAMPLE RECEIVING COMMENTS:

ANALYST`S COMMENTS:

*

ANALYST

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY**STATE ENVIRONMENTAL LABORATORY**

707 N. ROBINSON

OKLAHOMA CITY

OKLAHOMA, 73102-6010

General Inquiries: 1-800-869-1400

Sample Receiving: (405) 702-1113

Report of Analysis by Metals

Sample Number: 406393
Project Code: LP-ARM
Agency Number:
Date Collected: 09/26/2006
Time Collected: 1017
Date Received: 09/27/2006
Date Completed: 11/22/2006
Collected By: HM
PWS Id:
Location Code:
Station:
Facility:
Report Date: 11/22/2006

LAND PROTECTION DIVISION
HEATHER MALLORY

CC:FILE COPY

PARAMETER NAME	QUALIFIER	VALUE	UNITS	ANALYZED	METHOD
Lead, Sediment		7030.	MG/KG	10/13/06	6010
Lead (TCLP)		721000.	UG/L	11/06/06	6010
% Solids		96.08	%	11/20/06	CLP 05.3

SOURCE: PAWNEE ARMORY

PROGRAM:

COUNTY: PAWNEE CITY: PAWNEE

LEGAL DESCRIPTION:

/4 /4 /4 SEC: T: R: M:

SAMPLERS COMMENTS:

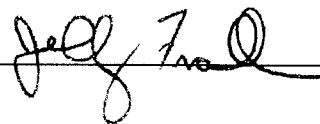
IFR-2; IFR SAND RIGHTSIDE

SAMPLE RECEIVING COMMENTS:

ANALYST'S COMMENTS:

*

ANALYST



41.0 PAWNEE ARMORY

C.H. Guernsey & Company (GUERNSEY) surveyed the indoor firing range (IFR) at the Pawnee Armory on February 25, 2005 (Photographs 41-1 through 41-29). The IFR is approximately 110 feet long, approximately 20 feet wide, and the ceiling is approximately 15 feet high. There is a bullet trap and backstop at the far end of the IFR. An approximately 10 foot by 10 foot target room is adjacent to the IFR. The ventilation in the IFR consists of a fan vent in the exterior wall that discharges directly outside. The IFR is situated subgrade. Portions of the IFR were flooded whenever GUERNSEY performed the site visit.

Based upon information supplied to GUERNSEY, Oklahoma Military Department (OMD) personnel collected wipe samples from the IFR on April 28, 2004. Lead concentrations within the IFR ranged from 2,775 $\mu\text{g}/\text{ft}^2$ at the bullet trap to 106 $\mu\text{g}/\text{ft}^2$ at the entry to the IFR were determined. The drill floor sample indicated a lead concentration of 287 $\mu\text{g}/\text{ft}^2$. The City of Pawnee's Street Department occupies the drill floor area. As such, remedial activities related to lead contamination will not be conducted on the drill floor. Table 41-1 summarizes the laboratory results for the wipe samples.

**Table 41-1
Laboratory Analysis**

Sample ID #	Sample Date	Result ($\mu\text{g}/\text{sq. ft.}$)	Lab Report ID #
320	4/28/2004	2,775.0	Quantem 111990
321	4/28/2004	2,757.0	Quantem 111990
322	4/28/2004	106.00	Quantem 111990
323	4/28/2004	287.05	Quantem 111990
324	4/28/2004	<16	Quantem 111990

No equipment was identified for cleaning by OMD and armory personnel:

Table 41-2 provides a preliminary cost estimate to clean the equipment and/or remediate the lead contamination in the IFR. Figure 41-1 shows the approximate locations of the OMD samples.

41.1 OTHER ENVIRONMENTAL CONSIDERATIONS

Beyond the issues related to the IFR, the following environmental related issues potentially exist at the Armory:

- Asbestos containing material (ACM) is material that contains 1% or more asbestos fibers. Because of the Armory's age, there is a potential for ACM in building materials (roofing materials, floor tiles, mastic, ceiling tiles, window putty, natural gas-fired heating systems, etc);
- Lead has been used as a color carrier in paints for hundreds of years. In 1978, its use in residential paints was restricted in the United States. Because of its age, there is a potential for lead containing paints at the Armory;

- Polychlorinated biphenyls (PCB) are oils that were used in electrical equipment until their regulation in 1977. There is a potential for PCB in fluorescent lighting ballasts, capacitors, transformers and other dielectric fluid filled electrical equipment at the Armory;
- The potential for mold exists within the Armory due to a compromise of the building envelope and the presence of standing water and visible water damage;
- Chlorofluorocarbons (CFCs) are compounds used in heating, ventilation, and cooling (HVAC) systems and in fire suppression (i.e., halon) systems. The use, release and recycling of these compounds are regulated by EPA. There is a potential for CFCs to be present in the HVAC equipment and fire suppression system of the Armory;
- Mercury is a heavy metal used in thermostats, pressure gauges, and other building and process related equipment. There is a potential for mercury containing thermostats at the Armory;
- Lead, nickel, and cadmium are heavy metals used in batteries. There is a potential for heavy metal containing batteries in the emergency lighting and exit signage at the Armory; and
- Other issues may be present that were not visually evident to GUERNSEY.

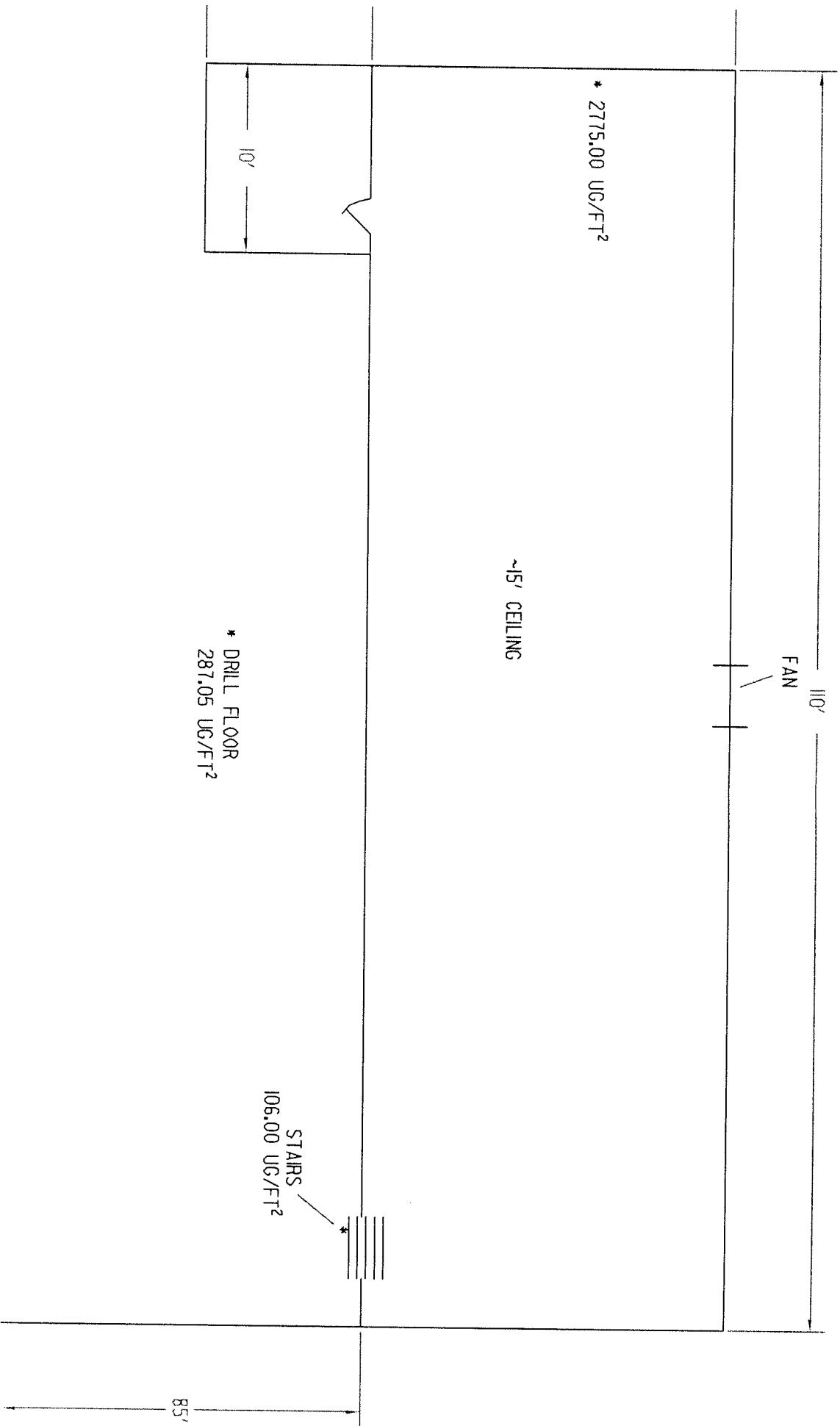
**Table 41-2
Preliminary Cost Estimate**

Equipment Cleaning Costs (a)				
Item Description	Number	Unit	Cost Per Unit	Total Cost
Total				\$0

Remediation Costs (b)				
Item Description	Number	Unit	Cost Per Unit	Total Cost
Mob/DeMob	1	Each	\$1,500	\$1,500
Stage/Clean Equipment/Components for Disposal	1	Each	\$2,500	\$2,500
Cleaning of Army Equipment (a)	N/A	N/A	N/A	\$0
Clean/Seal Firing Range surfaces	8300	ft ²	\$5	\$37,350
Clean Drill Floor	0	ft ²	\$0.10	\$0
Solidify/Stabilize Material in Bullet Trap	300	ft ³	\$15	\$4,500
Waste Disposal (non-hazardous)	4	Ton	\$1,000	\$4,000
Total (+/- 25%)				\$49,850

Notes:

- (a) Includes the cleaning of equipment identified by OMD personnel during site visit. Please reference photographs for each item.
- (b) Includes cleaning of firing range space, drill floor, and other surfaces to <40 ug/ft².



Appendix G

Notification for Underground Storage Tanks

Notification for Underground Storage Tanks	STATE USE ONLY
State Agency Name and Address: <u>OKLAHOMA Military Department</u> <u>3501 Military Circle, Okc, Ok 73111</u>	ID NUMBER <u>5-905777</u>
TYPE OF NOTIFICATION	DATE RECEIVED
<input type="checkbox"/> A. NEW FACILITY <input type="checkbox"/> B. AMENDED <input type="checkbox"/> C. CLOSURE _____ No. of tanks at facility _____ No. of continuation sheets attached	A. Date Entered into Computer: _____ B. Data Entry Clerk Initials: _____ C. Owner Was Contacted to Clarify Responses, Comments: _____ _____ _____ _____
INSTRUCTIONS Please type or print in ink all items except "signature" in section V. This form must be completed for each location containing underground storage tanks. If more than five (5) tanks are owned at this location, photocopy the following sheets, and staple continuation sheets to the form.	

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1984, or that are brought into use after May 8, 1984. The information requested is required by Section 3002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 3002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

- a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and
- b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.
- c) if the State agency so requires, any facility that has undergone any changes to facility information or tank system status (only amended tank information needs to be included).

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. Gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fungicides.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are—

- 1. Above or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes.
- 2. Tanks used for storing heating oil for consumer use on the premises where stored.

- 3. Septic tanks.
- 4. Pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an interstate pipeline facility regulated under State laws.
- 5. Surface impoundments, pits, ponds, or lagoons.
- 6. Storm water or waste water collection systems.
- 7. Flow-through process tanks.
- 8. Liquid traps or excessed gathering lines directly related to oil or gas production and gathering operations.
- 9. Storage tanks situated in an underground area (such as basements, cellars, mine workings, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (50 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Send completed forms to:

Oklahoma Corporation Commission
Underground Storage Tank Program
Jim Thorpe Building
Room 240
Oklahoma City, OK 73105

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1984. 2. Owners who bring underground storage tanks into use after May 8, 1984, must notify within 30 days of bringing the tanks into use. If the State requires notification of any amendments to facility information, State agency immediately.

Penalties: Any owner who knowingly fails to notify or submit false information shall be subject to a civil penalty not to exceed \$10,000 for each violation, which notification is not given or for which false information is submitted.

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)
OKLAHOMA MILITARY DEPARTMENT

Street Address
3501 MILITARY CIRCLE

OKLAHOMA CITY, OK 73111-4304
City State ZIP Code

OKLAHOMA
County

405/425-8334
Phone Number (Include Area Code)

II. LOCATION OF TANK(S)

If required by State, give the geographic location of tanks by designating the intersection of
Example: Lat. 42, 34, 12 N Long. 64, 34, 17W

Latitude _____ Longitude _____

(If same as Section I, mark one here)

Facility Name or Company Site Identifier, as applicable
National Guard Armory

Street Address (P.O. Box not acceptable)
1st E HWY 64

Lawrence, Ok
City State ZIP Code

County _____ Municipality _____

III. TYPE OF OWNER	IV. INDIAN LANDS	
<input type="checkbox"/> Federal Government <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> State Government <input type="checkbox"/> Private <input type="checkbox"/> Local Government	<input type="checkbox"/> Tanks are located on land within an Indian Reservation or on other trust lands. <input type="checkbox"/> Tanks are owned by native American nation, tribe, or individual.	Tribe or Nation: <hr/>

V. TYPE OF FACILITY

Select the Appropriate Facility Description:

<input type="checkbox"/> Gas Station	<input type="checkbox"/> Railroad	<input type="checkbox"/> Trucking/Transport
<input type="checkbox"/> Petroleum Distributor	<input type="checkbox"/> Federal - Non-Military	<input type="checkbox"/> Utilities
<input type="checkbox"/> Air Taxi (Airline)	<input type="checkbox"/> Federal - Military	<input type="checkbox"/> Residential
<input type="checkbox"/> Aircraft Owner	<input type="checkbox"/> Industrial	<input type="checkbox"/> Farm
<input type="checkbox"/> Auto Dealership	<input type="checkbox"/> Contractor	<input checked="" type="checkbox"/> Other (Explain) <u>NATIONAL GUARD ARMORY</u>

VI. CONTACT PERSON IN CHARGE OF TANKS

Name	Job Title	Address	Phone Number (Include Area Code)
ALTON ENGBRETSON	Deputy Dir of Engineering	ATTN O&DE-D 3501 Military Circle, Dec	73111-4328 (405) 425-8334

VII. FINANCIAL RESPONSIBILITY

I have met the financial responsibility requirements in accordance with 40 CFR Subpart H

Check All that Apply

<input type="checkbox"/> Self Insurance	<input type="checkbox"/> Guarantee	<input type="checkbox"/> State Funds
<input type="checkbox"/> Commercial Insurance	<input type="checkbox"/> Surety Bond	<input type="checkbox"/> Trust Fund
<input type="checkbox"/> Risk Retention Group	<input type="checkbox"/> Letter of Credit	<input type="checkbox"/> Other Method Allowed Specify

VIII. CERTIFICATION (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative (Print) ALTON L. ENGBRETSON Deputy Dir of Engineering Oklahoma Military Department	Signature 	Date Signed 9-27-95
---	---------------	------------------------

EPA estimates public reporting burden for this form to average 30 minutes per response including time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding this burden estimate to Chief, Information Policy Branch PM-223, U.S. Environmental Protection Agency, 401 M Street, Washington D.C. 20460, marked "Attention Desk Officer for EPA." This form amends the previous notification form as printed in 40 CFR Part 263, Appendix I. Previous editions of this notification form may be used when supplies last.

IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification Number 5905777 Tank No. 1 Tank No. Tank No. Tank No. Tank No.

1. Status of Tank (mark only one)	Currently in Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Temporarily Out of Use <small>(Remove to Section A.)</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Permanently Out of Use <small>(Remove to Section A.)</small>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Amendment of Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Date of Installation (mo./year) 1957

3. Estimated Total Capacity (gallons) 1,000

4. Material of Construction. (Mark all that apply)	Asphalt Coated or Bare Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cathodically Protected Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Epoxy Coated Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Composite (Steel with Fiberglass)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fiberglass Reinforced Plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Lined Interior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Double Walled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Polyethylene Tank Jacket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Concrete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Excavation Liner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other, Please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Has tank been repaired?	<u>NO</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

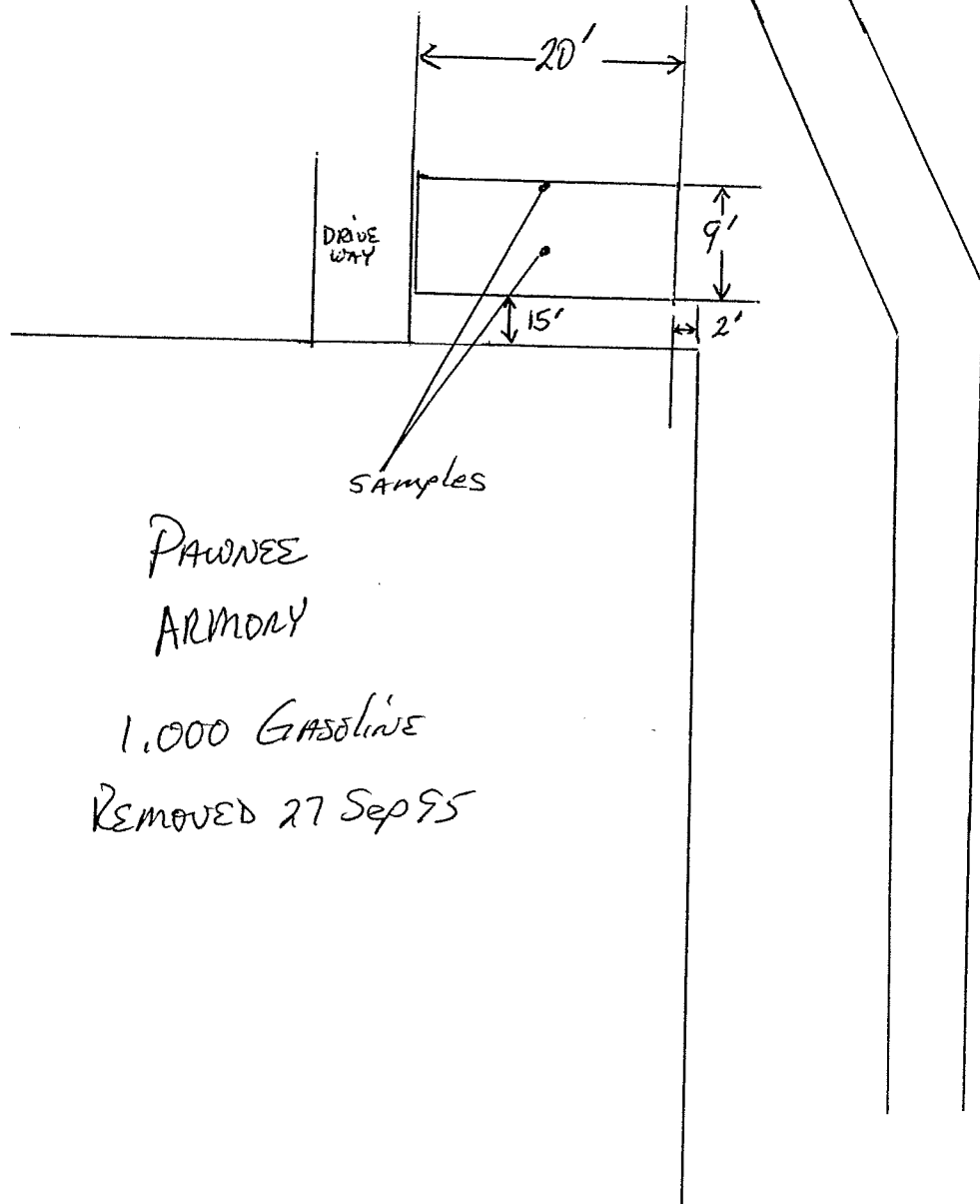
5. Piping (Material) (Mark all that apply)	Bare Steel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Galvanized Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fiberglass Reinforced Plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Copper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cathodically Protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Double Walled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Secondary Containment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, Please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6. Piping (Type) (Mark all that apply)	Suction: no valve at tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Suction: valve at tank	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Gravity Feed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Has piping been repaired?	<u>NO</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tank Identification Number <u>5-905777</u>	Tank No. <u>1</u>	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____
7. Substance Currently or Last Stored In Greatest Quantity by Volume. Gasoline _____ Diesel _____ Gasohol _____ Kerosene _____ Heating Oil _____ Used Oil _____ Other, Please specify _____ _____ _____	_____	_____	_____	_____	_____
Hazardous Substance CERCLA name and/or CAS number _____ _____ _____	_____	_____	_____	_____	_____
Mixture of Substances Please specify _____ _____ _____	_____	_____	_____	_____	_____
X. TANKS OUT OF USE. OR CHANGE IN SERVICE					
1. Closing of Tank A. Estimated date last used (mo./day/year) _____ _____	_____	_____	_____	_____	_____
B. Estimate date tank closed. (mo./day/year) <u>5/30/88</u> _____	<u>5/30/88</u>	_____	_____	_____	_____
C. Tank was removed from ground <u>9/27/95</u> D. Tank was closed in ground _____ E. Tank filled with inert material _____ Describe... _____ _____ _____ _____ F. Change in service-- _____	<u>9/27/95</u>	_____	_____	_____	_____
2. Site Assessment Completed _____ <u>X</u> _____	<u>X</u>	_____	_____	_____	_____
Evidence of a leak detected _____	_____	_____	_____	_____	_____

U.S. 64 WEST

U.S. 64 EAST



PAWNEE
ARMORY
1,000 GALLONS
REMOVED 27 Sep 95

ALPHA ANALYTICAL LABORATORIES
 2700 N.W. 39TH STREET
 OKLAHOMA CITY, OK 73112

CHAIN OF CUSTODY RECORD

Package Shipped From: Oklahoma Military Dept Date: 27 Sep 95

Address: ATTN: OKDE-D
3501 Military Circle
Oklahoma City, OK 73111-4398

Phone # 425-8334 Fax # 425-8571 Contact: LTC Englebretson

Condition of Package Upon Receipt: _____ P.O. # _____
 Number of Samples Received: 2 Person Sampling: LTC Englebretson
 Project I.D.: Pawnee Sample Type: Soil

NUMBER	RECEIVING SAMPLE #	DESCRIPTION	AAL LOG NUMBER
1	Center	BTEX & TPH	952276
2	Side	BTEX & TPH	952277
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

* Use additional sheets as needed.

Comments: _____

Relinquished by: Alton [Signature] Date: 27 Sep Time: 1700 Received by: P. Schmitt
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____

ALPHA ANALYTICAL LABORATORIES
 2700 N.W. 39TH STREET
 OKLAHOMA CITY, OK 73112

CHAIN OF CUSTODY RECORD

Package Shipped From: Oklahoma Military Dept Date: 27 Sep 95
 ATTN: OKDE-D

Address: 3501 Military Circle
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3			
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5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

* Use additional sheets as needed.

Comments: _____

Relinquished by: [Signature] Date: 27 Sep Time: 1700 Received by: P. Schmidt
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____
 Relinquished by: _____ Date: _____ Time: _____ Received by: _____

Sheet _____ of _____

Job No. _____

Date 27 Sep 95

Completed By _____

CERTIFICATE OF DESTRUCTION

Scrapping/Disposal Company:

Northern Okla METALS

Site of Destruction:

SAME

PERKY, OH

Tank Removal Contractor:

Okla Mil Dept
3501 Military Circle
Okla, OH

Tank Identification:

Tank No.: _____

Size: 1,000

Location: Company PAWNEE Armory

Address _____

City/State PAWNEE, OH

Destruction Date: 27 Sep 95

I certify that the above described tank has been rendered unusable for the storage of any fluids, and all removed fluids, sludges and the tanks were disposed of in accordance with all applicable local, state, and federal regulations.

By [Signature]

Title _____

Subscribed and Sworn to before me this _____ day of _____
ion the year _____.

Notary Public _____ My Commission Expires: _____

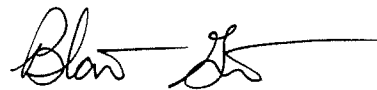
Stanley Engineering, Inc.
Alpha Analytical Laboratories Division
 2700 NW 39th Street
 Oklahoma City, Oklahoma 73112
 (405) 948-1979 (405) 948-1964 (FAX)

Dr. Keith L. Stanley, P.E., C.I.H., Director of Field and Analytical Services

Client: Oklahoma Military Department
Address: 3501 Military Circle
 Oklahoma City, OK 73111-4398
Project: Pawnee
Req. By: LTC Englebretson

Date Collected: 9-27-95
Date Analyzed: 10-3-95
Analyst: Tony LaValle
Received by: Penny Schmidt
Lab ID: 952276, 952277

Sample ID	Parameter	Media	Method	Detection Limit	Result	Units
#1 Center 952276	Benzene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	Toluene	Soil	EPA 8020	0.0005	0.0017	mg/kg
	Ethylbenzene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	Xylene	Soil	EPA 8020	0.0005	0.00075	mg/kg
	GRO	Soil	EPA 8015(m)	0.1	<0.1	mg/kg
	DRO	Soil	EPA 8100	1.0	3.7	mg/kg
#2 Side 952277	Benzene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	Toluene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	Ethylbenzene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	Xylene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	GRO	Soil	EPA 8015(m)	0.1	<0.1	mg/kg
	DRO	Soil	EPA 8100	1.0	<1.0	mg/kg



Media: W = Water, WW = Wastewater, DW= Drinking Water, S = Solid, SL = Sludge, A = Air

CERTIFICATIONS: OWRB # 8417' ; NVLAP # 1568; PROFICIENCY ANALYTICAL TESTING PROGRAM (PAT) 73112001

SEI/AAL is not responsible for any errors resulting from improper or incorrect sampling procedures; errors resulting from atmospheric conditions at the time of sampling or during shipment; or errors resulting from shipping conditions

INVOICE

STANLEY ENGINEERING, INC.
ENVIRONMENTAL MEASUREMENTS DIVISION
ALPHA ANALYTICAL LABORATORIES DIVISION
CEDARS DIVISION
2700 N.W. 39
OKLAHOMA CITY, OK 73112
F.I.D.# 73-1102-137

INVOICE NUMBER: 2362
INVOICE DATE: 10/4/95
PAGE: 1

Voice:
Fax:

SOLD TO: Ship To:
Oklahoma Military Department
3511 Military Circle
Oklahoma City, OK 73111-4398

CUSTOMER ID	CUSTOMER PO	PAYMENT TERMS		
Oklahoma Military De	Englebretson	Net Due		
SALES REP ID	SHIPPING METHOD	SHIP DATE	DUE DATE	
	Mail	10/4/95	10/4/95	
QUANTITY	ITEM NUMBER	DESCRIPTION	UNIT PRICE	EXTENSION
2.00	BTEX	BTEX Analysis	40.00	80.00
4.00	TPH	TPH Analysis, GRO and DRO Log# 952276-7, Pawnee Location	40.00	160.00

*Money to Pay
10 OCT 95
BE*

RECEIVED
OKFAC

10 OCT 95 11 04



Subtotal 240.00
Sales Tax
Total Invoice Amount \$240.00
Payment Received 0.00
Check No: TOTAL DUE \$240.00

BIG J TANK TRUCK SERVICE

Route 1 - 405-336-3501
PERRY, OKLAHOMA 73077

Date 9-27-95

CHARGE TO: Okla Military Dept

LEASE: Pawnee Armory WELL NO. _____

PRODUCT	BBLs.	HOURS	RATE	AMOUNT
		2	44.50	89.00
Gasoline	25			
DISPOSAL CHARGE				
		TOTAL		

DESCRIPTION

Empty Underground tank, Haul 1 to
Waste Oil Tank

Dispatch 12:15 Loc 12:50 Unload 2:00
Finish 2:20

ORDER NO. _____

AUTHORIZED BY Alvin R. [Signature]

TRUCK #6-80BB

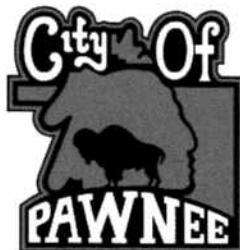
DRIVER Lamin Rice

ATTN: Okbe-D
3501 Military Circle
Okc 73111-4398

6 Hillcrest
Perry Okla

Appendix H

City of Pawnee Letter (March 7, 2006)



Where The West Remains

Received By

MAR 09 2006

Department of
Central Services

March 7, 2006

John Richard, Director
Department of Central Services
P.O. Box 53448
Oklahoma City, OK

Dear Mr. Richard:

This letter is in response to your offer to obtain possession of the armory located in Pawnee. The City of Pawnee would be interested in obtaining the property. We presently lease the facility from the Oklahoma Military Department. It is used to house our street department, and is an ideal facility allowing us to store our equipment indoors.

We will await further instruction and disclosure of environmental issues.

Respectfully,

Elzie Smith, Mayor

Appendix I

County Records of the Pawnee Armory

STATE OF OKLAHOMA, PAWNEE COUNTY, SS:

Before me, J. J. Smith, a Notary Public

in and for said County and State on this 25th day of October, 1935,

personally appeared J. A. Rogers

and Marion Rogers of husband and wife

to me known to be the identical person 1 who executed the within and foregoing instrument and acknowledged to me that they executed the same as their free and voluntary act and deed for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto subscribed my

name and affixed my official seal at

Pawnee Okla on the day last above written.

J. J. Smith

Notary Public.

My commission expires Oct-14, 1937.

Vol. 58-20 Pawnee
19341

DEED

GENERAL WARRANTY

FROM J. A. Rogers et ux

TO Oklahoma National Guard

State of Oklahoma,
Pawnee County, SS:

This instrument was filed for record in my office on the 7th day of November, A.D., 1935, at 4:00 o'clock, P M., and duly recorded in Vol. 55 of Deeds, at page 272.

DIXIE OVERMAN, County Clerk
County Clerk.

By Madge Soursley Deputy

STATE BUSINESS

RECORDED WITHOUT FEE
IN COMPLIANCE WITH 5-21-5
SEC. 30 SEN. BILL 284

At 1935. SESSION LAWS

STATE OF OKLAHOMA)
COUNTY OF PAWNEE) SS. ACKNOWLEDGMENT WHERE GRANTOR SIGNS BY MARK

On this day of , A. D., 19 , before me, the undersigned, a Notary Public in and for the County and State aforesaid, personally appeared and to me known to be the identical person who executed the within and foregoing instrument by mark , in my presence and in the presence of and

as witnesses, and acknowledged to me that executed the same as free and voluntary act and deed for the uses and purposes therein set forth.

Given under hand and seal of office the day and year last above written.

My commission expires

PROOF REAL

STATE OF OKLAHOMA, PAWNEE COUNTY, SS:

Before me, J. J. Smith, a Notary Public

in and for said County and State on this 25th day of October, 1935,

personally appeared J. A. Rogers

and Marion Rogers J. A. Rogers' husband and wife

to me known to be the identical person 1 who executed the within and foregoing instrument and acknowledged to me that they executed the same as their free and voluntary act and deed for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto subscribed my

name and affixed my official seal at

Pawnee Okla on the day last above written.

J. J. Smith

Notary Public.

My commission expires Oct-14, 1937.

No. 58-20 Pawnee
19341

DEED

GENERAL WARRANTY

FROM J. A. Rogers et ux

TO Oklahoma National Guard

State of Oklahoma, Pawnee County, SS:

This instrument was filed for record in my office on the 7th day of November, A.D., 1935, at 4:00 o'clock, P M., and duly recorded in Vol. 55 of Deeds, at page 272.

DIXIE OVERMAN, County Clerk
County Clerk.

By Madge Soursley Deputy

STATE BUSINESS

RECORDED WITHOUT FEE
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SEC. 20 SEN. BILL 284

At 1935. SESSION LAWS

STATE OF OKLAHOMA)
COUNTY OF PAWNEE) SS. ACKNOWLEDGMENT WHERE GRANTOR SIGNS BY MARK

On this day of , A. D., 19 , before me, the undersigned, a Notary Public in and for the County and State aforesaid, personally appeared and to me known to be the identical person who executed the within and foregoing instrument by mark , in my presence and in the presence of and

as witnesses, and acknowledged to me that executed the same as free and voluntary act and deed for the uses and purposes therein set forth.

Given under hand and seal of office the day and year last above written.

My commission expires

PROOF REAL

IN WITNESS WHEREOF, The said parties of the first part have hereunto
set their hands the day and year first above written.

WITNESSES:

J. A. Rogers

Nannie Rogers
