Phase 1

TARGETED BROWNFIELD ASSESSMENT

For The

PERRY ARMORY

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

Prepared by:

OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY

March 16, 2010

Prepared for:

City of Perry
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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.

Environmental Professionals in charge of the project:

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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 meets the standard for All Appropriate Inquiry under the Small Business Liability Relief and Brownfield 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. 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 Perry Armory was performed in accordance with the ASTM E 1527-05, a guide for conducting Environmental Site Assessments. Kerry Paul and Heather Mallory of the Oklahoma Department of Environmental Quality (DEQ) performed a site reconnaissance on August 14, 2009. Travis Estes of DEQ performed a second site reconnaissance on October 8, 2009 upon taking over responsibilities for the Phase 1 from Kerry Paul.

The site is located in the Northeast ¼ of the Northwest ¼ of Section 22, Township 21 North, and Range 01 West Indian Meridian in Noble County, Oklahoma. The site's address is 309 N 14th Street, Perry, Oklahoma 73077-6027.

A cursory summary of findings is provided below. However, details were 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.

- Several wipe samples collected by C. H. Guernsey inside the Indoor Firing Range (IFR) contained high levels of lead contamination. Past floods may have dispersed the lead dust throughout the IFR. The results from the Indoor Firing Range Lead Issues Report, prepared by Guernsey, suggest that additional investigation and remediation of lead inside the IFR be conducted. The IFR constitutes a recognized environmental condition (REC) based on the lead concentrations. Marshal Environmental Management (MEM) collected several wipe samples throughout the building and conducted an asbestos assessment, but at the time of this report, the MEM final report had not been submitted to DEQ.

- One 1000-gallon underground storage tank (UST) was removed from the southeast side of the Armory property. The Oklahoma Corporation Commission (OCC) listed one UST having been removed from the subject property in its UST database. According to the 1997 OCC UST Closure Report, a former officer stationed at the Armory remembered that there were two 1000-gallon USTs on the site. As well, there is a second UST shown on a 1995 facility map (Appendix E). Based on the past environmental conditions of this area, the UST constitutes a HREC.

- The window putty in all the window seals and the nine-inch floor tile found in the southwest classroom may be suspect for asbestos containing materials (ACM). ACM is commonly found in older window caulking, nine-inch floor tile and the mastic, which seals the floor tile to the floor. During the site reconnaissance, the floor tile appeared to be non-friable and the window putty is in fair to good condition.

- Fluorescent light bulbs were found in the light fixtures throughout the Armory building. All fluorescent light bulbs contain mercury and the light fixtures may contain Polychlorinated biphenyls (PCBs). Approximately 16 fluorescent light bulbs had green

tips and approximately 61 fluorescent light bulbs did not have green tips. Fluorescent light bulbs with green tips are nonhazardous whereas other fluorescent light bulbs maybe hazardous. Mercury contained in green tipped fluorescent light bulbs is not leachable through toxicity characteristic leaching procedure (TCLP) analysis, which makes them nonhazardous.

- Due to past investigations by DEQ and its contractors, armories built in the 1930s generally contain lead-based paint on metal-painted surfaces and wooden doors.

- No leaking underground storage tank (LUST) sites were listed on the OCC database within ½ mile of the subject property.

- Three heating, ventilating, and air conditioning (HVAC) systems were observed inside the Armory. There may be a potential for these HVAC systems to contain chlorofluorocarbons (CFCs), as these compounds are used in HVAC systems.

- There may be the potential for mold growth due to the age of the Armory, IFR flooding, and visible water damage.

- No National Priorities List (NPL) or delisted NPL sites, active Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) site listings, Resource Conservation and Recovery Act (RCRA) Corrective Action (CORRACTS) and non-CORRACTS Treatment, Storage, or Disposal (TSD) listings, Emergency Response Notification System (ERNS) list, State-equivalent NPL or CERCLIS lists, or State landfills and/or solid waste disposal sites were found on the subject property or within the ASTM minimum search radii. No archived CERCLIS site listings, RCRA generators, or Voluntary Cleanup Program (VCP) sites were found on the subject property or the minimum search radii. No Brownfield sites were found on the subject property or the minimum search radii either.

- The site is not on any Federal or State Institutional Control (IC)/Engineering Control (EC) Registries. The Perry Armory representative, Larry Dayler, was not aware of any ICs or ECs on the property.

- The subject property is on the DEQ's Site Cleanup Assistance Program list for environmental cleanup.

- The subject property is on the National Register of historic properties.

2.0 INTRODUCTION

The Oklahoma DEQ, under a Brownfield Assistance Agreement (No**.** RP96681001-0) (Ref. 1), with the U.S. Environmental Protection Agency (EPA) conducted a Targeted Brownfield Assessment of the Perry, Oklahoma National Guard Armory. The property will be used for future community events.

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 Perry to assist in its revitalization planning 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 Brownfield 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 Phase I will also be used to guide DEQ's cleanup efforts at the Armory.

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. 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, oil and gas records, aerial photographs, Sanborn Fire Insurance Maps, conducted interviews, and performed a site reconnaissance of the area. A good faith effort was made to identify possible environmental conditions that might affect the revitalization of the property.

2.3 Significant Assumptions

The term "recognized environmental condition" as defined by ASTM E 1527-05 Standards, is "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

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 the Brownfield 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. 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 Perry, 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 the report. The assessment does not include sampling of soil, groundwater, surface water, or air.

2.5 Special Terms and Conditions

Certain conditions are beyond the scope of ASTM Phase I Environmental Site Assessments and are therefore outside the scope of this assessment, unless specifically addressed in this report. Those conditions include but are not limited to:

- Radon
- Lead-Based Paint
- Regulatory Compliance
- Cultural and Historic Resources
- Industrial Hygiene
- Health and Safety
- Radioactive Materials under the Jurisdiction of the Nuclear Regulatory Commission
- Ecological Resources
- Indoor Air Quality
- High Voltage Power Lines
- Environmental Permitting Issues
- Asbestos Containing Materials
- Wetland and Endangered Species

3.0 SITE CHARACTERIZATION AND HISTORY

3.1 Location and Legal Description

The subject property is located on 309 N 14th Street in Perry, Oklahoma. The site's legal location is in the Northeast ¼ of the Northwest ¼ of Section 22, Township 21 North, and Range 01 West Indian Meridian (Appendix A).

3.2 Site and Vicinity Characterization

The Perry Armory is located in southwest Perry with residences immediately to the east across North 14th Street, which runs north and south. Calf Creek runs through the southwest section of the lot. Immediately to the south of the property is a skate park built within the last five years.

A review of the topographical map indicated that the surface elevation of the site is approximately 1020 feet above mean sea level. The topographical gradient is to the south and southwest toward Calf Creek. Calf Creek is approximately 0.03 miles southwest of the Armory (Appendix A).

3.3 Description of Structures, Roads, and Other Improvements

The structure of the Armory is in good condition. The roof of the Drill Floor is in excellent condition. According to a former National Guard member, Larry Dayler, the Drill Floor roof was replaced. There was only one observed damaged window at the Armory.

Roads surrounding the Armory are in good condition. All roads are constructed of asphalt pavement. Adjacent properties, which consist of residences, a hospital, and a park, are in good condition. The park behind the Armory appears to be the newest improvement and is in excellent condition (Appendix F).

There is a natural gas easement on the property owned by Oklahoma Natural Gas. The facility is served by city water, sewage, and electric (Ref. 15). Throughout the facility, there are floor drains. Based on previous armories, it is thought that these drains lead into the city sanitary sewage pipes, but at the time of this report that could not be confirmed.

Based on a facility map provided by the OMD from 1995, it is noted that two transformers were along the north boundary of the property (Appendix E). They were not present at the time of the site reconnaissance. At the time of this report, there was no other information found regarding these transformers.

3.4 Owner, Property Manager, and Occupant Information

The subject property is owned by the Oklahoma Department of Environmental Quality (DEQ). The DEQ Site Cleanup Assistance Program (SCAP) is in charge of identifying

environmental hazards and conducting the cleanup of the Armory. After the cleanup is complete, DEQ will transfer ownership of the armory to the City of Perry.

3.4.1 Owner History

The subject property consists of two blocks, 74 and 85. By 1936, the City of Perry had acquired the necessary property and transferred ownership to the State of Oklahoma Military Department (OMD). Prior to city ownership, the blocks had been owned by various families and appear to have remained undeveloped. The two blocks had been separated by Delaware Street, which was closed in preparation for the construction of the armory. As part of the cleanup process, the OMD deeded ownership of the subject property to DEQ. Upon completion, the property will be transferred to the City of Perry.

3.5 Information Reported by User Regarding Environmental Lien or Specialized Knowledge or Experience

Former Perry Armory National Guard member, Larry Dayler, reported no environmental liens on the subject property. Mr. Dayler did have specialized knowledge regarding environmental conditions at the subject property (Ref. 15).

From Mr. Dayler's recollection, there were two 1000-gallon USTs on the subject property. It was his assumption that there was a gasoline UST and a diesel UST. The OCC only indicates that there was one gasoline UST on the subject property. This constitutes a data gap in the site history.

The DEQ conducted a search for environmental liens at the Noble County Courthouse. No environmental liens or use limitations were reported for the subject property.

3.6 Commonly Known or Reasonably Ascertainable Information

Larry Dayler, representative of the Armory, had no exceptional knowledge of commonly known or reasonably ascertainable information within the local community about possible environmental conditions on the property (Ref. 15). It is known within the community that the building functioned as a National Guard Armory since it was constructed until it was decommissioned in 2008.

Within the maintenance closet, there were multiple five gallon buckets of white paint. It is presumed that this was the paint used in the most recent renovation of the armory's interior, as many of the walls are white (Appendix F). At the time of this report, this information could not be confirmed.

3.7 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.

3.8 Current Use of the Property

Currently, the Armory has been vacant since 2008. The Armory is owned by the DEQ, which took ownership from the Oklahoma Military Department in order to resolve the environmental issues on the property. The property will be transferred to the City of Perry following environmental cleanup by the DEQ Site Cleanup Assistance Program.

3.9 Past Use of the Property

3.9.1 Review of Aerial Photographs

Historic aerial photographs were searched to view the changes to the property over time. Aerial photographs from 1937, 1961, 1995, 2003, and 2008 were obtained. The earliest aerial photograph found for the subject property was taken in 1937. This photograph and the 1961 photograph were obtained from the Oklahoma Department of Libraries. The 1995, 2003, and 2008 aerial photographs were obtained from the DEQ Data Viewer. All these photographs are located in Appendix B. The following represents a summary of what was found at the subject property from each photograph.

<u>1937 aerial photograph</u>
The Perry Armory was present during 1937. Due to the size of the photograph it is hard to clearly identify specific site characteristics around the building and site. The road in front of the Armory and blocks in the vicinity of the Armory appear to be the same as today. Adjacent properties to the west and to the south were open farmland or grassland in 1937. The adjacent properties to the east across 14th Street appear to consist of residential structures, many of which are still there today.

<u>1961 aerial photograph</u>
There are no significant changes on or around the subject site based on the comparison of the 1937 and 1961 aerial photographs.

<u>1995 aerial photograph</u>
The 1995 aerial photograph shows the expansion of the facilities to the north of the Armory. Parcels to the northwest of the site have been developed into a hospital. A facility to the west, across Calf Creek, appears to be more clearly defined. This facility may be associated with the St. Louis and San Francisco (SL-SF) Railroad and can be faintly seen in the 1937 and 1961 photographs.

<u>2003 aerial photograph</u>
Immediately to the west of the Armory, across N 15th Street, there is a new structure that is not present on the 1995 or previous photographs. This structure is

the Noble County Department of Human Services office location. Aside from the new office facility, most everything else appears to be the same as the 1995 photograph.

2008 aerial photograph
The recently constructed skate park, directly south of the Armory, is clearly seen in this photograph. Based on this photo, no immediate environmental concerns are noted. This is the only significant change from the 2003 photograph.

3.9.2 Fire Insurance Maps

Sanborn Fire Insurance maps were viewed from the Oklahoma Department of Libraries website. The maps dated from October 1894 through January 1948. The Sanborn map from June of 1948 shows the subject property area.

The June of 1948 map shows the Perry Armory on the site as an appendix to the regular mapping area completed in June of 1927 (Appendix C). The maps did not indicate the location of any USTs or other environmental concerns.

3.10 Current and Past Uses of Adjoining Properties

In 1935, the Works Progress Administration constructed the Perry Armory. As it appears in the 1937 aerial photograph, land surrounding the Armory was open grassland or farmland and residential (Appendix B). In 1937, there were multiple residential structures adjacent to the property across 14th Street.

In the decades that followed, the adjacent property to the north was developed as a hospital, and a community park was developed with a playground and skate park to the south of the Armory.

3.11 Environmental (Physical) Setting

The DEQ reviewed several sources to obtain information on the physical setting of the subject property and its surrounding areas. These sources include: The United States Department of Agriculture Noble County Soil Survey, United States Geological Survey**,** and the Federal Emergency Management Association. Review of the physical setting of the area is to evaluate the sensitivity of the hydrogeology to potential contamination from sources either on or near the site.

3.11.1 Surface Water Characteristics

The elevation at the Perry Armory is approximately 1020 feet. The subject property is relatively flat, with the exception of one area directly to the west of the armory in which there is an increased gradient towards Calf Creek. This change in topography begins approximately 20 feet west of the IFR vent fan and could be a potential transfer route of lead dust expelled from the IFR by means of the vent

fan. The general topographical gradient is to the south and southwest. According to the topography map, drainage from the Perry Armory flows into Calf Creek approximately 0.03 miles southwest of the Armory. The Calf Creek flows through the southern portion of the City of Perry from the west to the east into Cow Creek which eventually flows into Perry Lake (Appendix A).

According to the Federal Emergency Management Agency, the subject property is located adjacent to a special flood hazard caused by Calf Creek. This area is a Zone AE. According to the FEMA website, Zone AE is within an area inundated by a 100 year flood. Zone AE has a determined base flood elevation. The structure lies just east of the flood boundary line, while portions of the property lie within the boundary. All other adjacent properties are outside of the 500 year flood zone hazard area (Appendix D).

3.11.2 Subsurface Geological Characterization

According to the Soil Survey of Noble County, Oklahoma, the subject property consists of a combination of Ashport, Port, and Pulaski soils (APPA), Dale-Urban land complex (DaUA), Grainola-Ashport-Mulhall complex (GAMD), and Norge-Urban land complex (NoUC) (Appendix J). APPA and DaUA comprise approximately 36% of the total area of interest and they are characterized by a slope of 0 to 1 percent, a water table depth of more than 80 inches, and a moderate to high available water capacity. GAMD and NoUC comprise the remaining 64% of the subject property area of interest and they are characterized by a slope of 0 to 8 percent, a water table depth of more than 80 inches, and a high available water capacity. Both APPA and GAMD are subject to frequent flooding and all soil classes, with the exception of GAMD, are at a minimum level of moderately high water capacity.

3.11.3 Ground Water Characteristics

The geology underlying the subject property and adjoining properties is Permian Sumner Group Wellington Formation (Ref. 6). This formation consists of mostly red-brown shale to the north, grading into fine-grained sandstone and mudstone conglomerate to the south.

Perry is part of a rural water district which relies primarily on surface water from Lake Perry for the municipal water supply. Within the city limits there is a well field for pulling water from the alluvial aquifer. This field consists of six wells, with an average depth of 65 feet, the average water level below the surface is 27 feet, and the average yield is 20 gallons per minute. The alluvial aquifer located along minor streams is composed of fine-grained sand containing varying amounts of silt and clay; thus, the permeability is generally low. In area where the aquifer is less than 30 feet thick, the yields to wells are less than 25 gallons per minute. This well field has historically been used for agricultural purposes.

The subject property is in an area where the yield is generally less than 25 gallons of water per minute. These areas generally yield water containing 500 to 1,000 mg/L of dissolved solids, which exceeds the maximum satisfactory level for most uses. The presence of an undesirable constituent or excessive hardness may make the water unsuitable for many purposes.

The direction of the hydraulic gradient is unknown. The direction of shallow groundwater flow is often related to the surface topography. Therefore, the expected shallow groundwater flow direction would be to the south or southwest based on the topography of the site.

3.11.4 Air Characteristics

No air emissions were noticed at the subject property or the adjoining properties. No significant odors were noticed at the subject property during the site visit. There may be the potential for mold growth due to the age of the Armory, IFR flooding, and visible water damage. There is a potential for air particulate issues resulting from lead dust from the IFR.

3.12 Historical Information

A statewide sampling event for lead was conducted by C.H. Guernsey & Company for the Oklahoma Army National Guard on all armories containing IFRs. C.H. Guernsey & Company surveyed the Perry Armory IFR on March 17, 2004 and developed a report entitled the "Indoor Firing Range Lead Issues Report" (Appendix I). In the report are the April 30, 2004, results of the wipe samples collected from the Oklahoma Military Department. The following are the locations and concentrations of lead found in the IFR and surrounding areas.

- 1,171.00 ug/ft^2 of lead was found at the south end of the IFR pit.
- 15,740.00 ug/ft^2 of lead was located in the center of the IFR.
- 161.35 ug/ft^2 of lead was found at the entry to the IFR.
- 58.00 ug/ft^2 of lead was on the drill floor.
- 12,415.00 ug/ft^2 of lead found at the 10-foot by 10-foot target room adjacent to the bullet trap.

4.0 RECORDS REVIEW

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.

4.1 Federal National Priorities List (NPL)

The EPA database was searched for NPL sites near the subject property within the ASTM's recommended search radius of one mile (Ref. 10). The subject property is not a listed NPL site. There are no NPL sites reported within a one-mile radius of the subject property.

There is also an EPA database for deleted NPL sites, which ASTM requires to be reported within ½ mile of the subject property (Ref. 17). No deleted NPL sites are within the ½ mile search radius.

4.2 Federal CERCLIS List

The EPA database for Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS) was searched for active and archived CERCLIS sites on and near the subject property (Ref. 11). The ASTM's recommended search radius of the subject property for both active and archived CERCLIS sites is ½ mile. No active CERCLIS sites were found within ½ mile of the subject property. No archived CERCLIS sites were found within ½ mile of the subject property.

4.3 Federal RCRA CORRACTs List

The EPA database for Resource Conservation and Recovery Act (RCRA) facilities subject to corrective action was searched within the ASTM's required minimum distance of one mile of the subject property (Ref. 12). There are no RCRA CORRACT facilities within the one-mile radius of the subject property.

4.4 Federal RCRA non-CORRACTS TSD List

The EPA database for RCRA facilities not subject to corrective action was searched within the ASTM's required minimum distance of ½ mile of the subject property (Ref. 12). No RCRA non-CORRACT Treatment, Storage and Disposal (TSD) sites are within the ½ mile radius of the subject property.

4.5 Federal RCRA Generators List

The EPA RCRA Notifiers database was searched for RCRA generators within the ASTM's required minimum search distance of the subject property (Ref. 12). The minimum distance is the property and adjoining properties. The subject property did not have any RCRA Notifiers or generators. There are no RCRA Notifier facilities on any of the adjacent properties.

4.6 Federal ERNS List

The Emergency Response Notification system (ERNS) maintained by the National Response Center was searched for any hazardous substance releases or spills within the subject property (Ref. 9). ASTM requires a minimum search distance of the property only when identifying ERNS cases. No ERNS sites were reported within the property or the adjoining properties.

4.7 Federal Institutional Control/Engineering Control Registries

There are no known Institutional Controls/Engineering Controls on the subject property according to the representatives of the subject property and a search of county land records.

4.8 State-Equivalent NPL

Oklahoma does not have a State-equivalent NPL database. Oklahoma does not have a State Superfund law to establish a State-equivalent NPL database.

4.9 State-Equivalent CERCLIS

Oklahoma does not have a State-equivalent CERCLIS database.

4.10 State Landfill and / or Solid Waste Disposal Sites

The DEQ regulates landfills and solid waste disposal sites across the State of Oklahoma. State landfills and solid waste disposal facilities were searched in the DEQ database within the ASTM required minimum distance ½ mile from the subject property (Ref. 16). No permitted landfills or solid waste disposal facilities are located within the search distance of the subject property.

4.11 State Leaking UST List

The OCC's UST Notification Database was searched to locate any known leaking underground storage tanks (LUSTs) sites located within the ASTM's minimum search distance of a ½ mile of the subject property. No LUST sites are listed within the ½ mile radius.

4.12 State Registered UST Sites

The Oklahoma Corporation Commission UST Notification Database was searched to locate registered USTs located within the ASTM's minimum search distance of the subject property and its adjoining properties. There was one registered UST listed on the subject property.

A UST by the name of Cbt Spt Co (-) 1/179 Inf was listed as being located on 309 N 14th Street (Appendix H). The owner of the UST was the Oklahoma Military Department. The UST was installed in 1955 and was used to store gasoline. The UST was last used in 1977 and was removed on October 2, 1997. Closure of the UST case was received on November 17, 1997. The Facility ID of the site is 5205780.

The report of the above referenced UST was discussed in the January 6, 1998 OCC "Closure Report for Permanently Closed Underground Storage Tanks" *(Appendix J)*. The OCC found the UST and fuel dispenser line to be in excellent condition and field screening showed no evidence of a release at the facility. The two soil samples collected from the UST excavation were both reported below any of the OCC action levels for benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, and total petroleum hydrocarbon (TPH) Diesel Range Organics (DRO). Samples were collected on the west end fuel island and at the bottom of the excavation pit. The UST was located on the south side of the building. The report does not mention any testing for teraphthalic acid (TPA) gasoline range organics, which is inconsistent with gasoline tank removal. This may constitute a data gap.

Based on a map of the Armory dated December 12, 1995, the OCC Closure Report, and the interview with Larry Dayler, there is a second UST north of the structure that may not have been removed. This UST is not on the OCC database and there is no record of removal.

4.13 State Institutional Control/Engineering Control Registries

The State Institutional Control/Engineering Control Registry is currently under development by the DEQ. There are no known Institutional Control/Engineering Controls in effect for this property.

4.14 State Voluntary Cleanup Sites

The DEQ Voluntary Cleanup Program (VCP) database was searched for VCP sites within the required ASTM search distance of ½ mile of the subject property (Ref. 16). No VCP sites are located on or within ½ mile of the Perry Armory.

4.15 State Brownfield Sites

The DEQ Brownfield database was searched for Brownfield sites within the required ASTM search distance of ½ mile of the subject property (Ref. 16). No Brownfield sites are located on or within ½ mile of the Perry Armory.

4.16 Oil and Gas Records

The DEQ performed a search of oil and gas records from the Oklahoma Corporation Commission's oil and gas records database. The database did not have any oil and/or gas

well records for Section 22, Township 21 North, and Range 01 West Indian Meridian where the subject property is located.

4.17 National Register of Historic Properties

The DEQ performed a search of the National Register Historical Properties list and found that the Perry Armory is listed as a recognized historical property (Appendix K). It was listed on the register on May 5, 1994.

5.0 SITE RECONNAISSANCE AND INTERVIEWS

5.1 Methodology and Limiting Conditions

A site reconnaissance of the subject property, located at 309 N 14th Street, was performed on August 14, 2009. Kerry Paul and Heather Mallory of the DEQ met Larry Dayler, a former member of the National Guard, at the Armory on August 14, 2009. Mr. Dayler gave Mrs. Paul and Mrs. Mallory a tour of the building and the perimeter of the site answering questions to the best of his knowledge.

A second site reconnaissance of the subject property was performed on October 8, 2009, by Travis Estes of the DEQ. The objective was to verify and clarify observations compiled by Kerry Paul and Heather Mallory during their site reconnaissance.

5.2 General Site conditions

The Perry Armory was built by the Works Progress Administration (WPA) in 1936. The following are general site conditions that were investigated on the property.

<u>Aboveground Storage Tanks (ASTs)</u>
No ASTs are on the subject property or adjacent properties.

<u>Landfills and/or Dumping</u>
No indications of landfills or dumping were found on the property.

<u>Impoundments</u>
No impoundments are on the subject property or the adjacent properties.

<u>Monitoring Wells</u>
There are no monitoring wells on the site. According to the Oklahoma Water Resources Board well log record database, there was a geotechnical boring well (ID 96712) owned by Spirit Architecture on the subject property. It was drilled to a depth of 30 feet and was completed and plugged on October 3, 2005. Within a ½ mile radius, there are three wells total, with the one described above as being the closest to the site.

Disturbed and Stained Soils

No disturbed and/or stained soils were observed at the subject property. There was no stressed vegetation of concern either.

Seeps

While the IFR may have the potential for water seepage into the underlying and surrounding soil, no seepage was observed. Based on the average ground water level of 27 feet and observations made during the October 8, 2009, site reconnaissance, it does not appear that water seepage into the IFR is an immediate concern. The degree, if any, in which water seeps out of the IFR was undetermined.

Chemical Spills

No chemical spills were observed at the subject property. Mr. Dayler was not aware of any chemical spill occurring at the facility.

Farm Waste

No farm waste was observed at the subject property.

Known Pesticide Misapplication

No evidence of pesticide misapplication was detected during the site visit.

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.

Petroleum Products

No petroleum products were observed inside the Armory or on the premises of the property, although there is a potential given the possible existence of a UST on the north side of the property.

Asbestos

Since many of the State armories were built before the 1970s, there is a high potential of finding ACM 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. ACM may be found in the insulation wrapping of the heating pipes and/or heaters, roofing materials, ceiling tiles, window putty, mastic, and floor tiles. Floor tiles that are 9 x 9 inches have been found to regularly contain asbestos.

The building may contain ACM; however, the Marshal Environmental Management (MEM) reports, which include an asbestos and lead-based paint assessment, have not been completed. Nine inch by nine inch square tiles were found on the first floor located in the southwest classroom. The tiles appear to be in good to fair condition and non-friable. The window seal putty throughout the facility may contain asbestos. This material is usually suspect for ACM. Thermal system insulation was not observed but could be present on some of the utility pipes in the building. Insulation was found in fair

condition on the second floor in the ceiling. It was installed in 1993 and determined not to be ACM based upon its age.

Lead-Based Paint

Lead-based paint was commonly used until 1978, when its use in residential paints was restricted in the United States. According to Mr. Dayler, all of the interior paint was applied after 1978, although paint previously applied may contain lead. It is unknown if the paint inside the building contains lead since a lead-paint test has not been completed. However, due to past investigations by DEQ and its contractors, armories built during this era generally contain lead-based paint on metal painted surfaces and wooden doors.

Lead Dust

Lead dust has been transferred from beyond the IFR into the drill floor of the armory. Please refer to section 3.12 of this report, which outlines the findings of the C. H. Guernsey report.

Lead in Soil

During the site reconnaissance by Mrs. Paul and Mrs. Mallory, soil samples were taken outside of the vent fan of the IFR on the west side of structure. The results of the soil test indicate that the lead level was at a value of 71.4 mg/kg, which does not exceed the action level of 500 mg/kg currently used by DEQ.

Mercury

The Armory contained several fluorescent light bulbs, which contain small amounts of mercury. Some bulbs had green tips at the ends whereas some did not. The bulbs with green tips have been shown by analysis not to leach mercury and therefore may be disposed of in the municipal landfill. There were 16 bulbs observed to have green tips and 61 observed that did not. There was no count of how many bulbs were in storage in the maintenance closet.

Transformers/PCB Equipment

No transformers are located on or near the subject property. According to Mr. Dayler, there was at least one transformer removed from the north property easement since 2000. PCBs are mixtures of chemicals that form clear to yellow, oily liquids, or mixtures that form white, crystalline (sand-like) solids and hard resins. They were used in electrical equipment until their regulation in 1977. The fluorescent lighting ballasts may also potentially contain PCBs.

5.3 External Observations

The external observations showed no RECs. The soil on the west side of the facility, immediately outside of the IFR vent van, did not exceed the action level of 500 mg/kg, although it should be noted. A UST was removed from the southeast corner of the subject property in 1997. Confirmation soil samples were below OCC action levels for Total Petroleum Products and BTEX, although there was no test for TPA gasoline range organics.

Based on historical evidence, there may be a second UST that has not been removed on the north side of the building structure. During the course of the site reconnaissance completed on October 8, 2009 by Travis Estes, no physical evidence a UST was observed in the suspect area.

The outside of the Armory is in good to fair condition except for one window. There was extensive paint peeling on wood and metal outside of the Armory. It is unknown when the outside was last painted. The IFR vent is located next to the ground on the west side of the building (Section 3.12). No stressed or stained vegetation was found around the vent or on the subject property. Photographs of the external view of the site can be found in Appendix F.

5.4 Internal Observations

The south side of the first floor consists of the Classroom, Latrine/Shower Room, Supply Room, Kitchen Storage, Locker Room and Kitchen (Appendix F/G). The Classroom has nine inch tile floors that may contain asbestos. Along the west of the Classroom wall is water damage, potentially causing mold. There is one gas furnace heater unit in a closet in the Classroom. The Latrine/Shower Room has two floor drains on the cement floor. The Supply Room and Locker Room both have cement floors. There is one gas furnace heater in the Supply Room. On the cement floor of the Locker Room in the southeast corner, there is standing water above a floor drain. It appears to have been there for a while. In the Kitchen, there is a large gas stove and oven, along with a gas water heater in the northwest corner.

The Drill Floor has two HVAC units, a stage and one overhead door. There is a storage facility behind the stage with a stairs leading to a second level. These stairs were not part of the original (Ref. 15). The floor throughout the Drill Floor and primary hallways is painted cement.

The north side of the Armory consists of four Offices, Latrine/Shower Room, Supply Storage, three small Rental Storage Rooms, a large Rental Storage Space and a Maintenance Closet. The Offices have carpet throughout, and there is one gas furnace heater unit in the northwest Office. The Latrine/Shower Room has one floor drain in the concrete floor. The large Rental Storage Spaces appear to still be storing office supplies and remnants, like lockers and desks, from the Armory, but the small Rental Storage Rooms were empty. There is one HVAC unit towards the east wall in the large Rental Storage Space. In the Maintenance Closet there is one floor drain on the concrete floor and a hot water heater. Remnants from the Armory are also stored in here. There are many fluorescent light bulbs and containers of paint stored within the room.

The Indoor Firing Range is under the old stage area. There is access to it south of the stage using a stairway. According to Mr. Dayler, the IFR sand has been removed within the last five years (Ref. 15). At the time of the Guernsey report in 2005 concerning the IFR, the bullet trap had been removed along with the sand (Appendix I). Their photos

indicate that there is a floor drain within the IFR. No sump pump was observed during the reconnaissance by Kerry Paul and Heather Mallory. The IFR is relatively clean. It is unknown what was done with the removed sand. There is one vent fan in this space. There was no sign of water seepage, despite the fact that it had been intensely raining for many days prior to the site reconnaissance conducted by Travis Estes on October 8, 2009.

The second floor consists of three primary rooms. They appear as if they were used for classrooms, offices, storage or bunks. Exposed insulation was on the ceiling. No determination was made as to whether or not the insulation contained asbestos. According to Mr. Dayler, the insulation was installed around 1993.

Throughout the facility, fluorescent light bulbs were in use. Most of the light bulbs do not have green tips. Green tips indicate that the bulbs have been shown not to be hazardous upon proper disposal. Doing a rough count, not including bulbs in storage, 16 green tipped bulbs and 61 non-green tipped bulbs were observed.

In and around the facility, white paint was peeling from wood and metal surfaces. The downspouts and frames on the garage doors were peeling. Historically, these surfaces test high for lead on historic armories in Oklahoma.

The building was fairly empty with the primary exception of the north Rental Storage Space, which had office furniture and other miscellaneous armory remnants. The only recognized environmental conditions inside the building that may need additional investigation are the IFR; lead-based paints throughout the structure; asbestos associated with floor tiles, insulation, and putty on windows; and mercury and PCBs associated with fluorescent light bulbs. Photographs of the internal view of the site can be found in Appendix E/G.

On both sides of the drill floor, the locker room and rental storage, the spaces were used at one point for vehicle maintenance. At the time of this report, it was undetermined as to what type of maintenance took place in these areas, and where, if any, chemicals were stored and disposed of, and how long each area was used in this capacity.

5.5 Interviews

Larry Dayler, a former National Guard member attached to the Perry Armory, was interviewed at the site on August 14, 2009. The Armory was built by the WPA in 1936 and had been in operation until late 2008. Mr. Dayler gave a tour of the Armory and provided historical and environmental information of the site. He was not aware of any present environmental concerns of the property or adjacent properties. Below is the information obtained from Mr. Dayler (Appendix F):

- The most common type of industrial use of the facility was vehicle repair and the IFR.

- He believes that there has never been a concern for asbestos in the building. To his knowledge, there has never been any visual insulation on the pipes. Insulation that is found is fairly new, installed in 1993.

- One 1000-gallon UST was successfully removed from the southeast corner of the Armory property. All confirmation sample detections were below the Oklahoma Corporation Commission action levels. According to a 1995 site map, there was a gasoline UST and a diesel UST at the site. The UST Closure report also mentions the existence of a second UST north of the Armory structure. Based on the information available at the time of this report, the status of the second UST or why is had not been removed is not addressed.

- Mr. Dayler knows of no chemical spills on the property. To his knowledge, the only chemicals used at the facility were for housekeeping purposes and automotive maintenance.

- There are many natural gas lines, both above and below ground, running throughout the structure.

- The City of Perry would like to use the Armory for future community events.

6.0 FINDINGS

Summarized below are the major findings from this Targeted Brownfield Assessment and DEQ's recommendations. The major findings of the highest environmental concern are presented first.

- Wipe samples collected by C.H. Guernsey inside the IFR contained high levels of lead contamination. Past flooding could have potentially dispersed the sand throughout the IFR; however, the sand has not been present since at least March of 2005. The results from the Indoor Firing Range Lead Issues Report suggest that additional investigation and remediation of lead inside the IFR be conducted. The IFR constitutes a REC based on the lead concentrations.

- One 1000-gallon UST was removed from the southeast corner of the Armory property. The OCC listed one UST as being located at the subject property in its UST database. There is no record of a second UST in the OCC database; although, a map of the armory from December 12, 1995, indicates that there is a UST north of the structure. As well, a second UST is noted in the UST Closure Report and during the site interview. No indication of the UST was observed. Based on the past environmental conditions of this area, the potential presence of this UST constitutes a data gap.

- The window putty in all the window seals and the nine-inch floor tile found may be suspect for asbestos. Asbestos is commonly found in nine-inch floor tile and the mastic, which seals the floor tile to the floor. The floor tile is non-friable and the window putty is in fair to good condition.

- Fluorescent light bulbs were found in the light fixtures throughout the Armory building. The bulbs contain mercury and the light fixtures may contain PCBs. Approximately 16 fluorescent light bulbs had green tips and approximately 61 fluorescent light bulbs did not have green tips. Fluorescent light bulbs with green tips have been shown to be nonhazardous, whereas other fluorescent light bulbs without green tips are potentially hazardous. Mercury contained in green tipped fluorescent light bulbs is not leachable through TCLP analysis, which makes them nonhazardous.

- According to Larry Dayler, all painted walls inside the Armory building were painted after the lead-based paint restrictions went into effect in 1978. While the paint used since that time may not be a lead-based paint, previous layers of paint were probably lead-based and is cause for concern as this may be an issue inside the Armory. Due to past investigations by DEQ and its contractors, armories built in the 1930s generally contain lead-based paint on metal-painted surfaces and wooden doors.

- Three HVAC systems and three gas furnace heaters were found inside the Armory. Air conditioning units may contain chlorofluorocarbons (CFCs), as these compounds are used in HVAC systems. CFCs should be properly removed prior to the removal of these units.

- There may be a potential for mold growth due to the age of the Armory and visible water damage in the classrooms.

- No National Priorities List NPL or delisted NPL sites, active Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) site listings, RCRA CORRACTS and non-CORRACTS TSD listings, ERNS list, State-equivalent NPL or CERCLIS lists, or State landfills and/or solid waste disposal sites were found on the subject property or within the ASTM minimum search radii. No archived CERCLIS site listings, RCRA generators, or VCP sites were found on the subject property or the minimum search radii. No Brownfield sites were found on the subject property and the minimum search radii either.

- The site is not on any Federal or State IC/EC Registries. Mr. Dayler was not aware of any ICs or ECs on the property. A search of county land records showed not liens against the property.

- The subject property is on the DEQ's Site Cleanup Assistance Program list for environmental cleanup.

7.0 OPINION AND 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.

Areas of additional evaluation consist of the following:

- There was a UST located on the southeast corner of the subject property and another one located north of the armory according to Mr. Dayler, the Armory floor plan provided by the OMD, and the closure report of the UST on the southeast section of the property. OCC only recorded one UST to the southeast, which was removed. Additional evaluation may be necessary to determine if there is another UST present on the north side of the armory.

- The floor tile in the facility appears to be in good to fair condition. Some areas where mastic is exposed should be assessed for asbestos. The window putty throughout the building should be assessed for asbestos.

- A lead-based paint survey should be conducted in the armory to determine the presence and location of LBP within the armory and on the exterior painted surfaces.

8.0 DATA GAPS

Section 3.2.20 (ASTM 1527-05) defines a data gap as "a lack or inability to obtain information required by the practice despite good faith efforts of the environmental professional to gather such information." There were two data gaps found. They include the method of removal and location of the disposed sand from the IFR bullet trap, and the second UST mentioned by Mr. Dayler and referenced in the Armory map and OCC UST closure report for the UST on the southeast section of the property. Inadequate soil testing may have occurred during the closure of the known UST, as the closure report indicates that the contractor sampled for diesel range organics when the tank was used for gasoline storage.

Excavation and confirmation sampling of the west side of the Armory building was not mentioned in the Lead Contamination Soil Investigation Report. There were plans for excavation, but there is no final report of remedial activities on record.

No official records were found documenting the removal and disposal of sand from the IFR bullet trap.

There is no official documentation of a UST on the north side of the building or a closure report for the UST. For the UST that was removed, it appears that inadequate testing on the soil may have taken place upon the removal of the tank. The report states that the tank held gasoline, yet there was no test for TPA gasoline range organics.

9.0 CONCLUSIONS

The DEQ has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of property located at 309 14th Street, Perry, Oklahoma. Any exceptions to, or deletions from, this practice are described in Section [10.0] of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following: IFR; the potential existence of a UST on the north side of the Armory property; lead-based paint throughout the structure; asbestos

associated with floor tiles mastic, insulation, and caulking on windows; and mercury and PCBs associated with fluorescent lighting.

The information provided in this assessment is to assist the City of Perry in its revitalization planning 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 Brownfield Revitalization Act of 2002 (Public Law 107-118, Subtitle B – Ref. 3).

10.0 ADDITIONAL SERVICES

Soil sampling outside of the IFR vent fan and lead-dust wipe samples of the IFR were provided in this Phase I Targeted Brownfield Assessment. An asbestos, lead dust, and lead-based paint survey was conducted by Marshall Environmental Management, but the results from the survey were not available at the time of this report.

11.0 DEVIATIONS

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

12.0 REFERENCES

1. U.S. Environmental Protection Agency. (2006). Oklahoma Brownfield Assistance Agreement (No #RP96681001-0). 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 Brownfield Revitalization Act. (Public Law 107-118, Subtitle B). Washington, DC: U.S. Government Printing Office.

4. ASTM International. (2005). Water and Environmental Technology: Phase I Environmental Site Assessment E 1527 – 05. Baltimore, Maryland.

5. United States Department of Agriculture, Soil Conservation Service (1978). Bogard, Vinson A. Fielder, Armer G., and Meinders, Hadley C. Soil Survey of Noble County, Oklahoma. August 1978. U.S. Government Printing Office: Washington, D.C.

6. Oklahoma Geological Survey. Bingham, Roy H., D. L. Bergman. (1980). Hydrological Atlas 3, Reconnaissance of the Water Resources of the Enid Quadrangle. The University of Oklahoma, Norman, OK.

7. Federal Emergency Management Association (FEMA). https://msc.fema.gov.

8. State Landfill site list: http://www.deq.state.ok.us/LpDnew/swindex.html.

9. Emergency Response Notification System: http://www.nrc.uscg.mil/foia.html.

10. EPA NPL list: http://www.epa.gov/superfund/sites/npl/status.htm.

11. CERCLIS current and archived sites: http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.

12. RCRA database: http://www.epa.gov/enviro/html/rcris/rcris_query_java.html.

13. RCRA NOTIFIERS sorted by county and then city: http://www.deq.state.ok.us/LPDnew/HW/Notifiers/notifiersbycountycity.pdf.

14. Sanborn Fire Insurance Maps. Oklahoma Department of Libraries. www.odl.state.ok.us.

15. Kerry Paul, Oklahoma Department of Environmental Quality, interview notes with former National Guard member Larry Dayler, August 14, 2009, Perry Armory

16. Oklahoma Department of Environmental Quality online data viewer. www.deq.state.ok.us

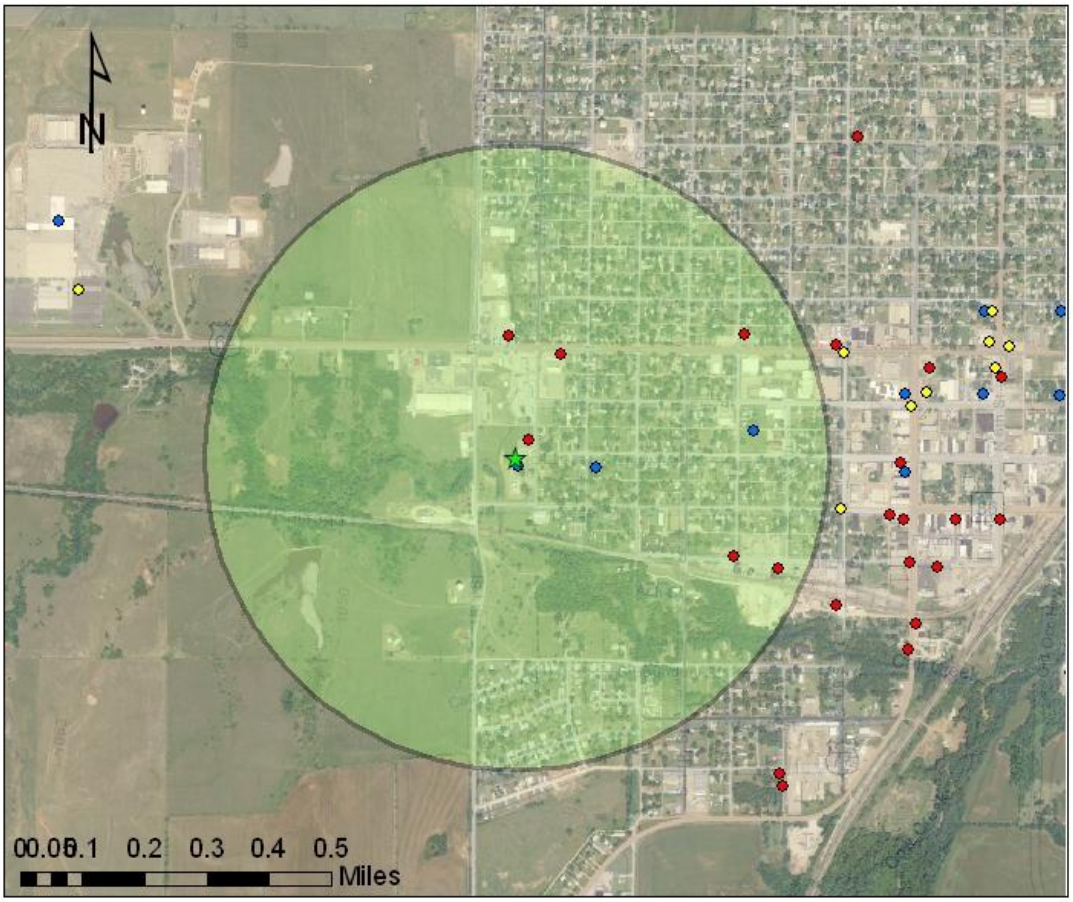
17. Deleted NPL sites database: http://www.epa.gov/superfund/sites/query/queryhtm/npldel.htm

13.0 APENDICIES

Appendix A	Site Map and Topographic Map
Appendix B	Aerial Photographs
Appendix C	Sanborn Fire Insurance Maps
Appendix D	Flood Insurance Rate Map
Appendix E	Floor Plan
Appendix F	Field Notes
Appendix G	Site Photographs
Appendix H	Oklahoma Corporation Commission Tank Removal and Closure Report For 1-1000 Gallon Underground Storage Tank
Appendix I	C.H. Guernsey & Company Indoor Firing Range Lead Issues Report
Appendix J	Soil Report
Appendix K	National Register Properties Report
Appendix L	Qualification(s) of Environmental Professionals

Appendix A: Site Map and Topographical Map

Perry Armory

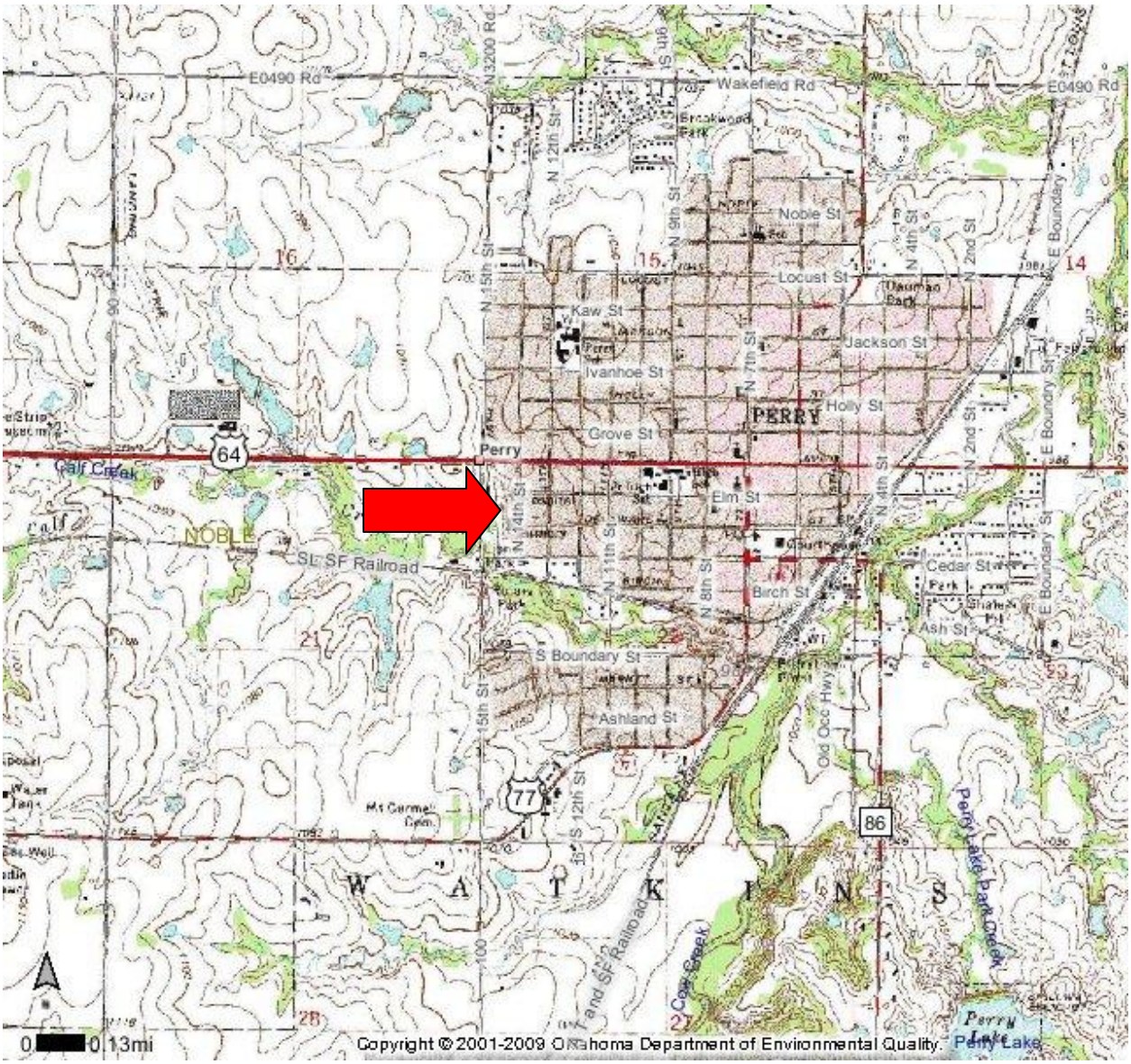


Perry Armory TBA Site Analysis

- Perry Armory
- UST Closed Cases*
- USTs
- Reported Water Wells
- Armory 0.5 Mile Buffer

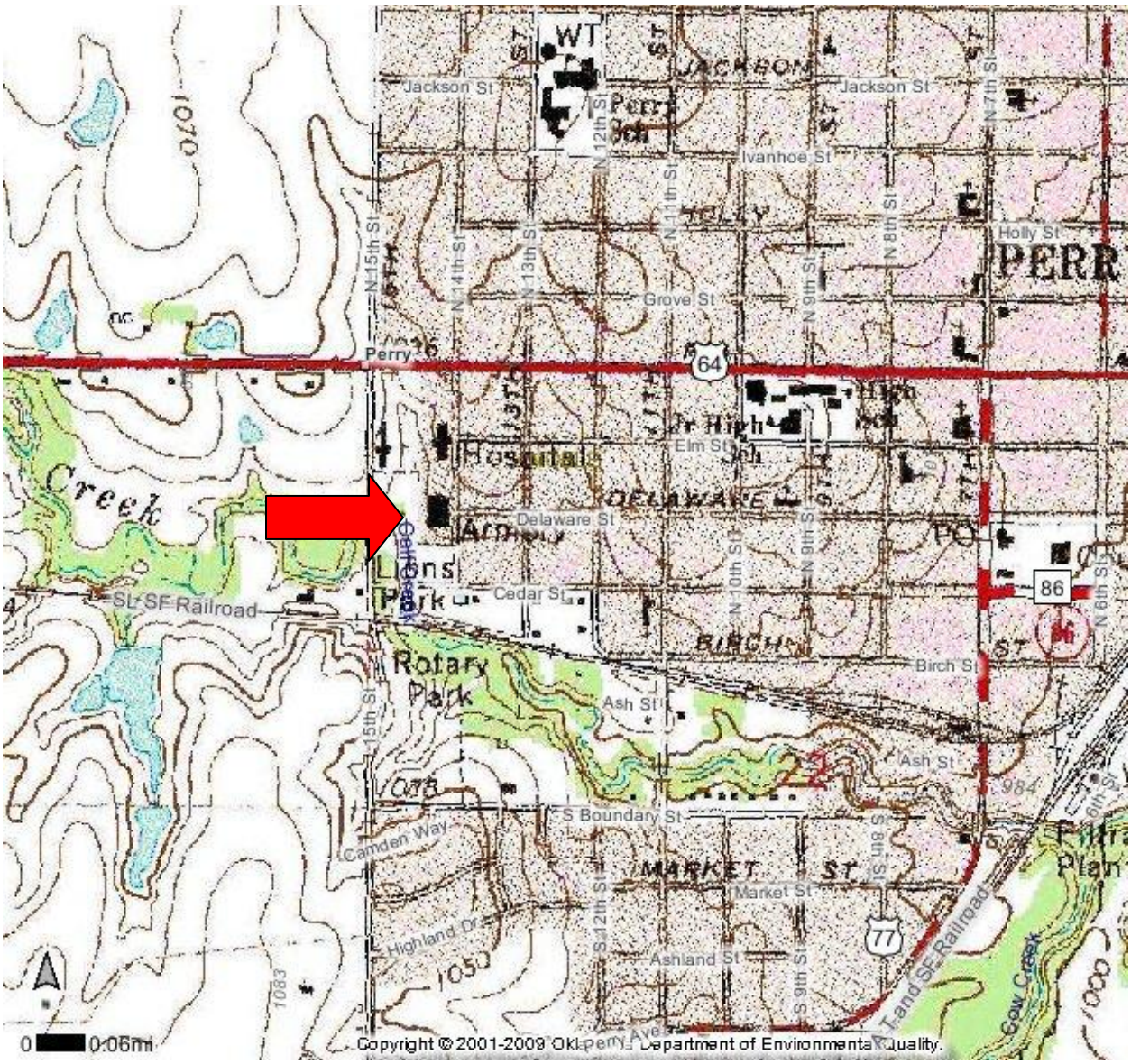
*UST Closed Cases are also listed with USTs

Map created by Travis Estes, DEQ.



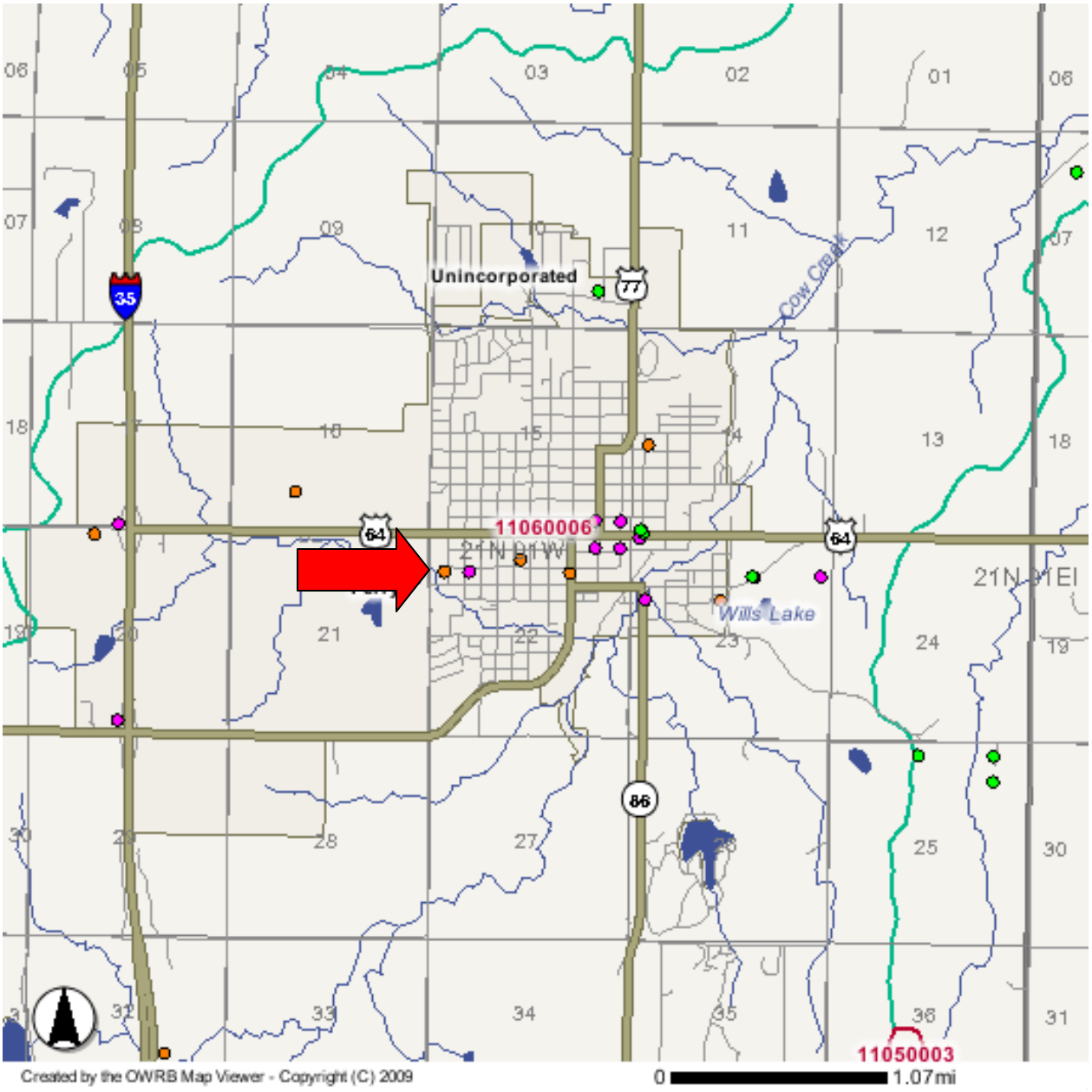
USGS 7.5 minute topographic map.

Map created using the DEQ Data Viewer using a USGS 7.5 minute topographic map. The digital raster graphic scale is 1:24,000.



USGS 7.5 minute topographic map.

Map created using the DEQ Data Viewer using a USGS 7.5 minute topographic map. The digital raster graphic scale is 1:24,000.



Well Locations Map

This map generated using the OWRB Data Viewer. The orange dot with the red arrow indicates the soil boring well referenced in the report.

Appendix B: Aerial Photographs

Aerial of site taken in 1937. Site indicated by the red outline. Source: Oklahoma Department of Libraries.

Aerial of site taken in 1961. Site is indicated by red outline. Source: Oklahoma Department of Libraries.

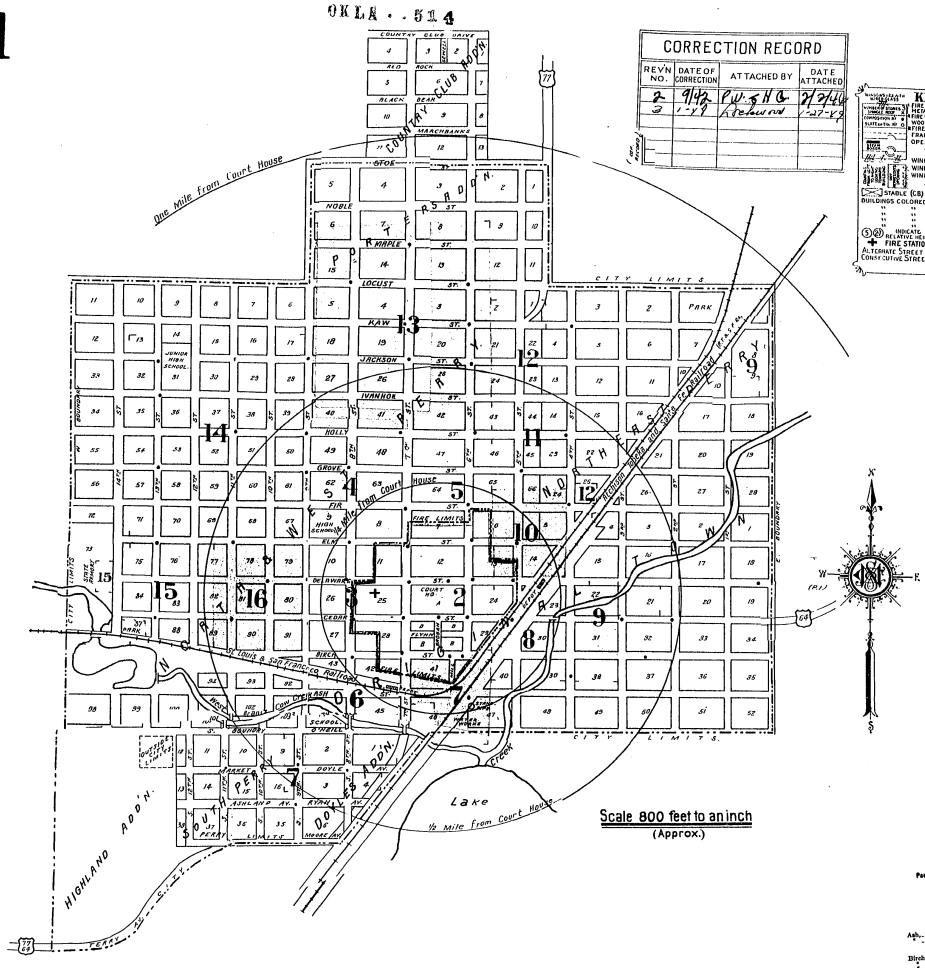
Aerial photo of site taken in 1995. Site indicated by red outline. Source: Oklahoma Department of Environmental Quality online data viewer.

Aerial photo of site taken in 2003. Site indicated by red outline. Source: Oklahoma Department of Environmental Quality online data viewer.

Aerial photo taken of site in 2008. Site indicated by red outline. Source: Oklahoma Department of Environmental Quality online data viewer.

Appendix C: Sanborn Fire Insurance Maps

OKLA. - 514



CORRECTION RECORD

REV'N NO.	DATE OF CORRECTION	ATTACHED BY	DATE ATTACHED
2	9-42	P.V.S.H.G.	2-27-42
3	1-49	R. Edwards	1-27-49

KEY

FIRE WALL 8 IN. ABV. ROOF
METAL CORNICE
FIRE WALL 12 IN. ABV. ROOF
WOOD CORNICE
FIRE WALL 18 IN. ABV. ROOF
FRAME PARTITION
OPENING WITH IRON DOOR
" " " STANDARD IRON DOOR
WINDOWS & IRON SHUTTERS
WINDOW 1st STORY
WINDOWS 1st & 2nd STORIES
" 2nd & 3rd "
STABLE (C.B.) CONCRETE BLOCK
BUILDINGS COLORED YELLOW ARE FRAME
" " RED BRICK
" " BLUE STONE
" " GRAY IRON
" " BROWN FIRE PROOF
INDICATE RELATIVE HEIGHTS
FIRE STATION
AS SHOWN ON KEY MAP
ALTERNATE STREET NUMBERS ARE ACTUAL
CONSECUTIVE STREET NOS. ARE ARBITRARY

SANBORN MAP COMPANY
POPULATION 5045
PREVAILING WINDS S. W.
FOR WATER FACILITIES AND FIRE DEPARTMENT, SEE REPORT
PERRY
NOBLE COUNTY
OKLAHOMA
JUNE 1927
NEW YORK

NEW REPORT, May, 1948

PAVING:—About 10 miles paved streets.
GRADES:—Level.
PUBLIC LIGHTS:—Electric.

WATER FACILITIES

Municipal ownership. Gravity and direct pressure system. Water supply from dam on Cow Creek and dam on W. Branch Cow Creek. Also reserve in small lake 1½ miles southeast of water works with gravity flow to pumps. One 500,000 gallon reservoir and one 230,000 gallon clear well.

2 Len-Courtney centrifugal pumps, capacity 400 gallons per minute each, pumping from lake to reservoir. 1 Dowd centrifugal pump, capacity 600 gallons per minute, electric driven. 1 Dowd centrifugal pump, capacity 180 gallons per minute, electric driven. 1 Len-Courtney centrifugal pump, capacity 400 gallons per minute, electric driven. 1 Worthington centrifugal pump, capacity 750 gallons per minute, gasoline engine driven pumping from clear well to 75,000 gallon gravity tank and elevated 110' above business district.

About 13 miles of 4" to 10" water pipe. 56 double and 8 triple hydrants. Average daily consumption 400,000 gallons. Domestic and fire pressure 60 lbs. at Court House Square.

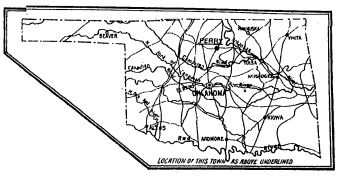
FIRE DEPARTMENT

1 chief and 1 driver, fully paid. 10 volunteers, paid by call. 1 station.

1 Chevrolet combination auto truck with 500 gallon per minute pump, one 200 gallon booster tank and 200' 1½" hose. 1 Stutz combination auto with 750 gallon per minute pump, one 100 gallon booster tank, 200' 1" hose, two 20' extension ladders, one 40' extension ladder, 2 roof ladders and 2,600' 2½" hose.

Fire alarm by telephone and siren on Fire Department.

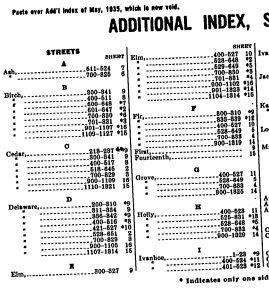
NO FIRE-RESISTIVE ROOFING ORDINANCE.



Paste over Add'l index of May, 1935, which is now void.

PERRY, OKLA.

ADDITIONAL INDEX, SEPTEMBER, 1942



STREETS

		SHEET
A		
Ash,	511-524	7
"	700-825	6
B		
Birch,	300-341	9
"	400-509	8
"	600-648	*7
"	601-647	*2
"	700-829	*6
"	701-831	*3
"	901-1105	*16
"	1109-1127	*15
C		
Cedar,	213-327	9
"	300-341	9
"	400-517	8
"	518-645	2
"	700-829	3
"	901-1107	16
"	1109-1318	15
D		
Delaware,	200-310	*9
"	311-341	*9
"	400-515	*8
"	400-516	*6
"	401-527	*10
"	528-651	2
"	700-829	3
"	901-1108	16
"	1109-1312	15
E		
Elm,	400-527	10
"	528-646	*2
"	529-649	*5
"	700-828	*3
"	701-831	*4
"	1104-1314	*15
F		
Fir,	300-310	*9
"	335-339	*12
"	528-649	4
"	529-649	5
"	700-828	3
"	1109-1319	15
First,		
Fourteenth,		
G		
Grove,	400-527	11
"	528-649	4
"	700-833	4
"	800-1325	14
H		
Holly,	400-527	11
"	528-649	*5
"	528-649	*6
"	800-1325	14
I		
Ivanhoe,	1-23	*9
"	400-525	*11
"	401-528	*12
J		
Jackson,	528-828	12
"	800-1325	14
K		
Kaw,	400-516	12
"	516-627	13
L		
Locust,	523-832	13
M		
Maple,	522-833	13

SPECIALS

		SHEET
A		
American Legion Hall,		4
Armory,		13
Assembly of God Church,		4
C		
Christ Lutheran Church and School,		13
Church of Christ,		4
" Holy, " in Christ (Colored),		6
Cities Service Co., Gas Tank,		13
City Street Department,		13
County Fairgrounds and Buildings,		16
D		
Dale Hotel (Colored),		6
Donalson & Yahn Lumber Co.,		10
F		
First Baptist Church,		4
" Christian Church,		4
P		
Perry Auction Sales Co., Livestock,		9
Elementary School,		14
R		
Red Star Elevator, Grain Elevator,		2
S		
St. Joseph Academy (R. C.),		14
" " Hotel,		5
Sindall Garage,		5
Stillwater Milling Co.,		
Elevator and Feed Mill,		10
Grain Storage Tanks,		7
T		
Texas Co., Oil,		8
Treeman, R. W., & G. Bate, Grain Elevator,		2
ADDITIONS, SUBDIVISIONS, &c.		
N		
North East Perry,		9

* Indicates only one side of Street shown.

INDEX

STREETS

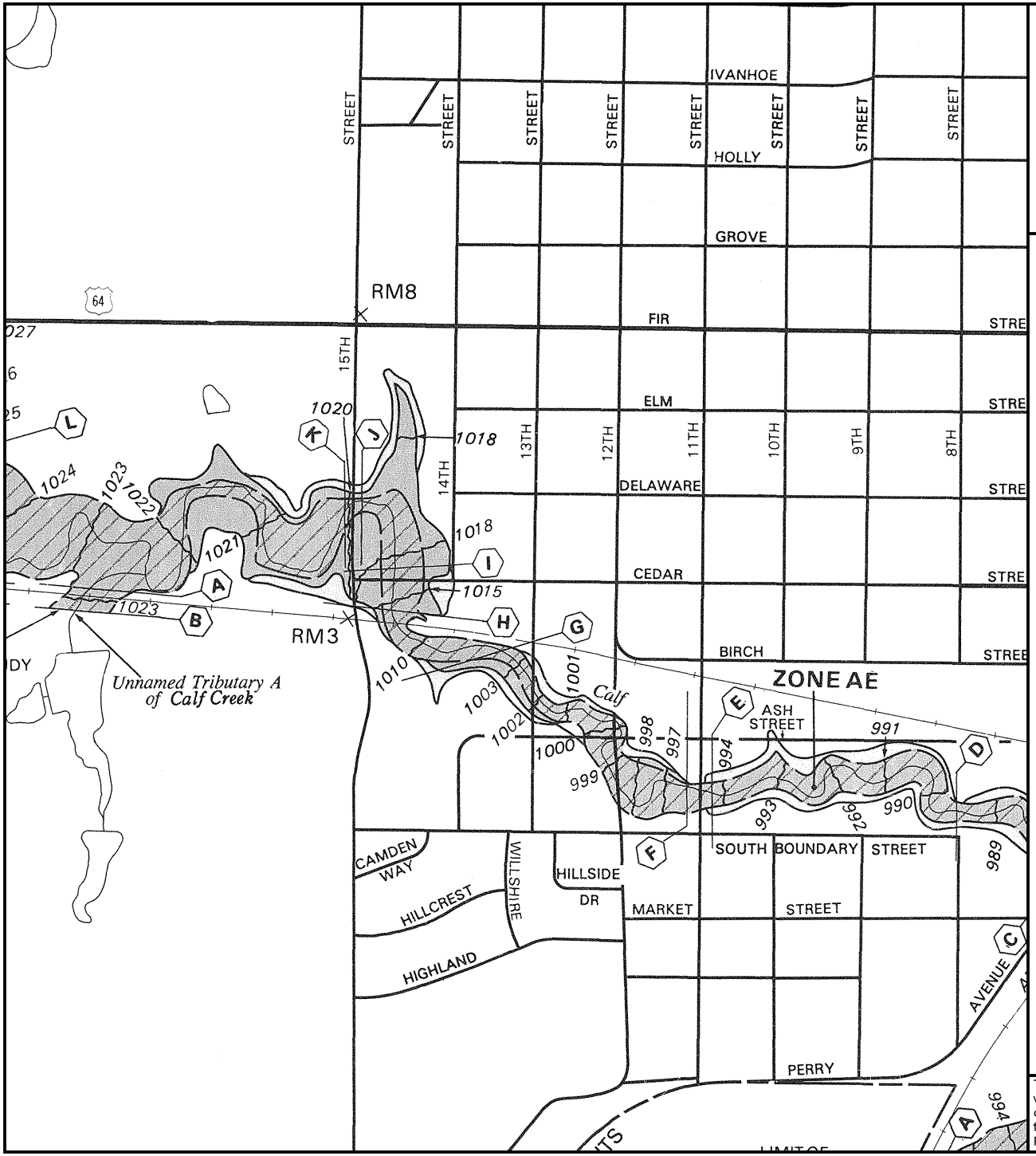
		SHEET
A		
A Street,	301-339	*9
"	511-524	7
"	700-825	6
B		
B Street,	300-341	9
"	400-509	8
"	600-648	*7
"	601-641	*2
"	700-822	*6
"	701-831	*3
"	901-1105	*16
"	1109-1127	*15
Boundary,	900-910	*7
Brogan,	200-227	2
C		
C Street,	213-233	*9
"	300-341	9
"	400-517	8
"	518-645	2
"	700-829	3
"	900-1107	16
"	1109-1318	15
D		
D Street,	200-341	9
"	400-516	*8
"	439-525	*10
"	528-651	2
"	700-829	3
"	901-1108	16
"	1109-1312	15
Doyle,	701-823	*6
"	710-828	*7
"	829-834	7
E		
E Street,	300-327	9
"	400-527	10
"	528-646	*2
"	529-649	*5
"	700-828	*3
"	701-831	*4
"	900-1108	*16
"	901-1323	*14
"	1110-1310	*15
Eighth,	100-129	6
"	200-429	3
"	500-729	4
"	800-1321	13
" S.,	100-229	6
"	300-323	7
Eleventh,	200-429	16
"	500-1021	14
F		
F Street,	300-326	*9
"	333-339	*12
"	400-525	10
"	530-649	5
"	700-833	4
"	900-1315	14
Fifth,	109-212	8
"	400-611	10
"	613-828	11
"	900-1125	12
Flynn,	600-643	2
Fourth,	104-328	*9
"	109-427	*8
"	521-611	*10
"	600-624	*12
"	613-827	*11
"	901-1027	*12
G		
G Street,	400-523	11
"	529-650	5
"	700-831	4
"	900-1325	14
H		
H Street,	400-525	11
"	527-831	*13
"	528-643	*5
"	700-832	*4
"	900-1327	14
I		
I Street,	400-524	*11
"	401-521	*12
"	527-826	13
"	900-1325	14
J		
J Street,	401-526	12
"	527-832	13
"	900-1325	14
K		
K Street,	400-525	12
"	527-836	13
L		
L Street,	523-832	13
M		
M Street,	523-832	13
Market,	900-911	7
Mill,		7
N		
Ninth,	100-128	*6
"	200-428	*3
"	201-427	*16
"	500-728	*4
"	501-1019	*14
"	800-1320	*13
" S.,	100-126	*6
"	200-317	7
O		
O'Neill,	509-520	7
"	700-827	6
S		
Seventh,	100-130	*7
"	101-127	*6
"	200-426	*2
"	201-427	*3
"	500-726	*5
"	501-727	*4
"	800-1321	13
" S.,	101-229	*6
Sixth,	86-129	7
"	200-427	2
"	500-727	5
"	800-1321	13
T		
Tenth,	200-429	16
"	500-1021	14
Third,	103-235	*9
"	300-329	9
"	401-527	*9
Thirt		
Tweh		
"		

* Indicates only one side of Street shown.

A. T. & S. F. R. R. Depot,		8
B		
Baptist Church,		4
Blaine School,		6
C		
Carnegie Public Library,		2
Champlin Refining Co.,		7
Christian Church,		4
" Science Church,		3
Coyle Cotton Gin,		8
D		
Donaldson & Yahn, Lumber Yard,		5
E		
Episcopal Church,		4
Evangelical Lutheran Church and School,		13
F		
Fire Department,		3
First Methodist Episcopal Church,		4
Four Way Hotel,		5
H		
Holiness Church,		6
Hotel Madison,		5
Houston & McCune, Lumber Yard,		2
I		
Illinois Oil Co.,		7
L		
Long Bell Lumber Co.,		2
M		
Magnolia Petroleum Co.,		7
Masonic Temple Building,		3
Miller, T. J., Elevator,		10
" Junior High School,		4
" Mill and Elevator Co.,		14
" Water and Light Plant,		7
Pierce Oil Corp'n,		7
Post Office,		2
S		
St. L. & S. F. R. R. Depot,		6
" Louis Hotel,		3
" Rose Roman Catholic Church and School,		16
Seventh Day Adventist Church,		5
T		
Telephone Exchange,		3
Treeman & Munger, Grain Elevator,		2
" " " Greenhouse,		2
W		
White City Apartments,		15
ADDITIONS, SUBDIVISIONS, &c.		
D		
Doyle's Addition,		6 & 7
N		
North & West Perry,		4,5,10,11,12,13,14,15 & 16
Northeast Perry,		10, 11 & 12
O		
Original Town,		2, 3, 4, 5, 6, 7, 8, 9 & 10
P		
Porter Addition,		13
S		
South Perry,		7


PERRY, OKLA.
JUNE 1927
15
14
16
ELM (E ST.)
DELAWARE (D ST.) 88 ft wide
CEDAR (C ST.) 88 ft wide
BIRCH (B ST.) UNPAVED
13TH ST.
12TH ST.
14TH ST.
WHITE CITY APTS
STATE ARMORY
CITY STREET DEPT.
MACH'Y. STGE.
CON. CREEK
PARK
N O R M A L
S.P. L.&S.F. R.R.
UNPAVED
6" W. PIPE
4" W. PIPE
75
76
77
82
83
84
87
88
89
73
Copyright 1927 by the Sanborn Map Co.

Appendix D: Flood Rate Insurance Maps



APPROXIMATE SCALE IN FEET

800 0 800

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PERRY,
OKLAHOMA
NOBLE COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
400134 0001 C

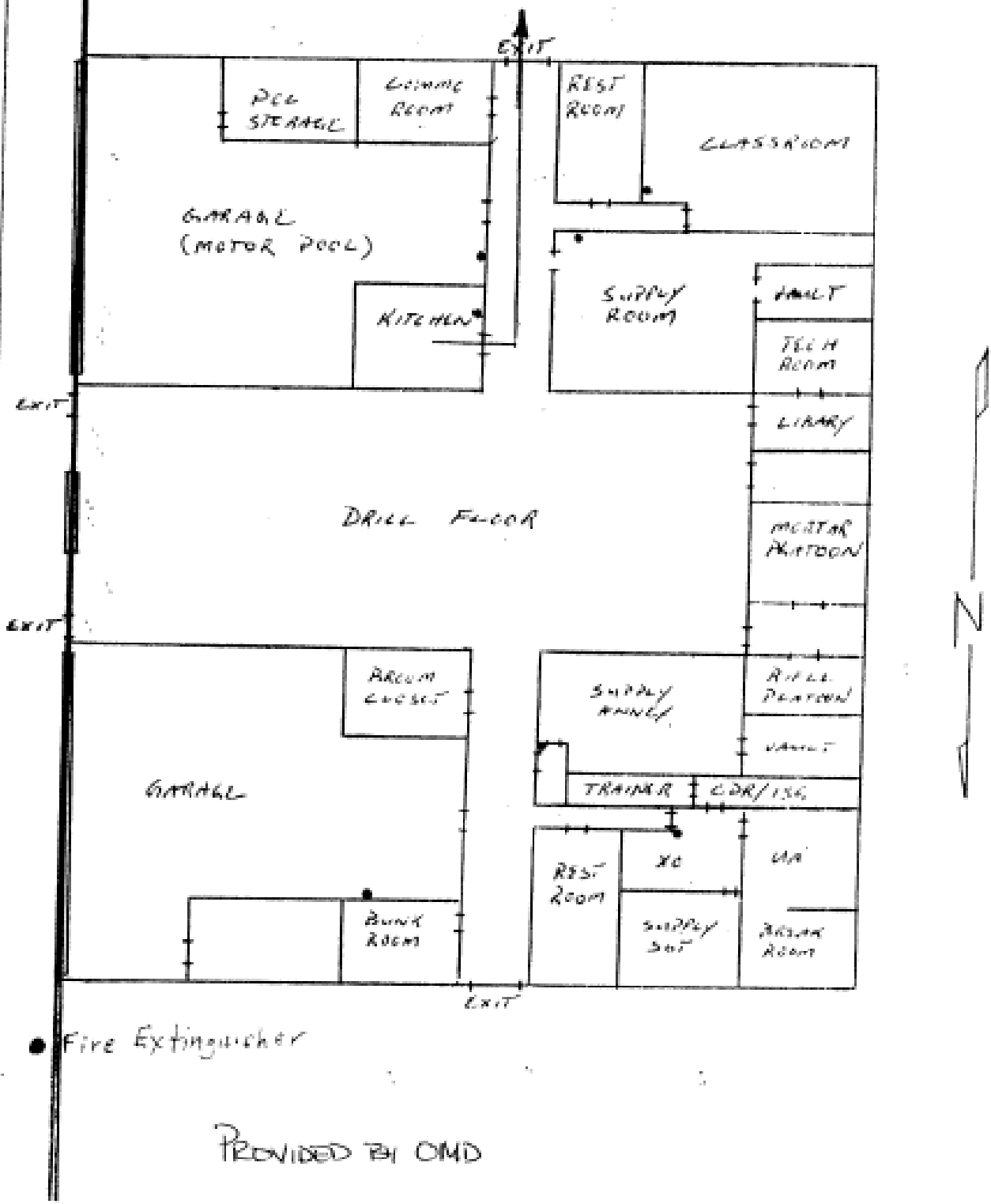
MAP REVISED:
JUNE 18, 1996

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Appendix E: Floor Plan

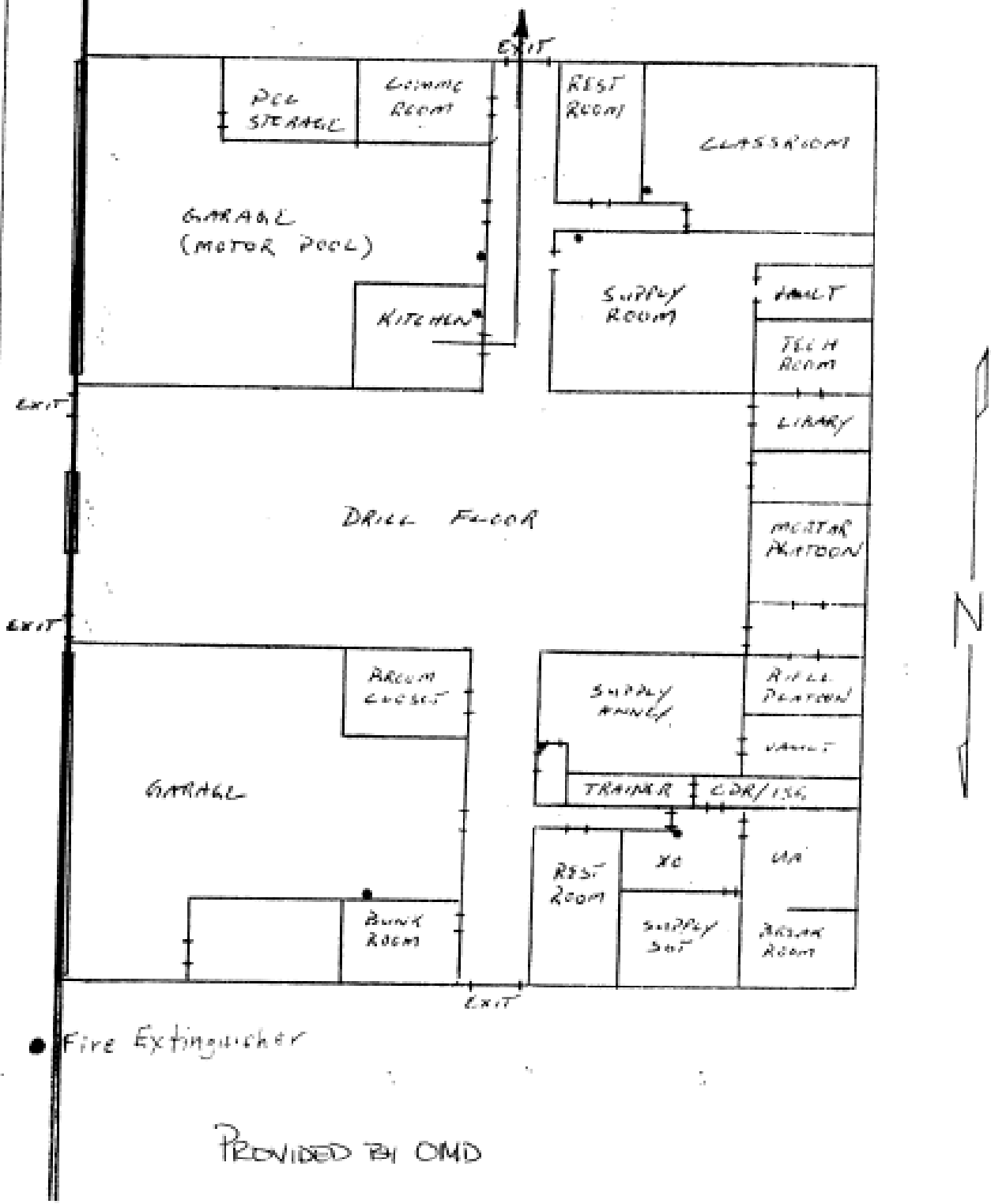
LOCATION OF FIRE CONTROL EQUIPMENT AND PERSONNEL EVACUATION ROUTES



PROVIDED BY OMD

Source: Oklahoma Military Department

LOCATION OF FIRE CONTROL EQUIPMENT AND PERSONNEL EVACUATION ROUTES



PROVIDED BY OMD

Source: Oklahoma Military Department

Appendix F: Field Notes

TRAVIS ESTES

Perry Armory Site Visit Checklist

Date: 10/8/09

Grounds

- Soil stains and stressed vegetation

  NON-OBSERVED

- Run-off concerns

  FLOWS INTO CALF CREEK

- Adjacent properties

  SOUTH - SKATE PARK
  NORTH - HOSPITAL
  EAST - RESIDENTIAL
  WEST - CREEK, EMPTY UNTIL WEST SIDE OF ISL

- Ponding/Creek condition

  CREEK WAS FLOWING AND THERE WAS STANDING WATER TO THE WEST DUE TO HEAVY RAINS

- Transformers/PCB

  NON-OBSERVED

- UST Removal evidence

  NONE OBSERVED

Building

- Structural material and condition

- Windows/doors ALL WINDOWS INTACT, WITH THE EXCEPTION OF ONE OBSERVED BROKEN GLASS. DOORS ARE PEELING WHITE PAINT.
- Paint PEELING IN LOCATIONS
- Tiles (9x9) [asbestos] SOUTH SIDE OF STRUCTURE
- Petro products NON-OBSERVED
- Chemical spills NON-OBSERVED

- Seeps and standing water S. GARAGE / STANDING WATER
- Mold NON-OBSERVED? / WATER DAMAGE IN SW ROOM
- Fluorescent light bulbs (mercury) - GREEN TIP IS GOOD
- HVAC units (CFC)

~~IIII~~ ||| AT LEAST EIGHT UNITS THROUGHOUT. SECOND FLOOR UNIT ALONG WEST WALL APPEARED TO BE RUNNING.

FLB	OBSERVED
GT	NGT
~~IIII~~ ~~IIII~~ ~~IIII~~ /	~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~
16	~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ ~~IIII~~ /
	61

#'s ARE APPROXIMATE

Sample Number: 468453
Project Code: LP-ARM
Agency Number:
Date Collected: 8/5/2009
Time Collected: 1025
Date Received: 8/6/2009
Date Completed: 08/11/2009
Collected By: HM
PWS Id:
Location Code:
Station:
Facility:
Report Date: 08/11/2009

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

EPA Drinking Water Certification #OK00013

To: LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

SAMPLE DATA

Name	Qualifier	Value	Units	Analyzed	Method	Prep Type
Lead, Sediment		71.4	MG/KG	08/11/09	6020	3050
% Solids		96.0	%	08/11/09	CLP 05.3	3050

Summary

Labs performing analysis on this Sample:
Metals

SOURCE: PERRY ARMORY

SAMPLERS COMMENTS:
VENT FAN SOIL;VENT FAN -1

ANALYST`S COMMENTS:

* * ANALYST

Sample Number: 468454
Project Code: LP-ARM
Agency Number:
Date Collected: 8/5/2009
Time Collected: 1040
Date Received: 8/6/2009
Date Completed: 08/11/2009
Collected By: HM
PWS Id:
Location Code:
Station:
Facility:
Report Date: 08/11/2009

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

EPA Drinking Water Certification #OK00013

To: LAND PROTECTION DIVISION
HEATHER MALLORY

CC: FILE COPY

SAMPLE DATA

Name	Qualifier	Value	Units	Analyzed	Method	Prep Type
Lead, Sediment		144	MG/KG	08/11/09	6020	3050
% Solids		96.5	%	08/11/09	CLP 05.3	3050

Summary

Labs performing analysis on this Sample:
Metals

SOURCE: PERRY ARMORY

SAMPLERS COMMENTS:
INDOOR FIRING RANGE SEDIMENT;RANGE 1

ANALYST`S COMMENTS:

* * ANALYST

CHAIN OF CUSTODY RECORD

SUPERFUND/ SITE REMEDIATION UNIT
OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

Site Name:	Site Location:	Code:	Return Results To:
Perry Armory	Perry, OK	493	Heather Mallory, LPD

SAMPLE I.D.	Date	Time	Number of Containers	VOC/ GCMS Purgeables	SVOC/ GCMS Extractables	Metals (Lead)	General Chemistry				SEL Numbers
Range-1	8-5-09	10:40	1			X					468454
Vent Fan-1	8-5-09	10:25	1			X					468453

Sampler's Signature (Relinquished by): Heather Mallory	Date/Time 8-5-09/15:49	Received by: [illegible]	Date/Time 8-6-09 9:00
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Start of Kerry Paul's entries

Heather Mallory
2-4-09

Perry Armory
08/05/09
10:20 am
DEQ Personnel: Heather Mallory + Kerry Paul

On W-side taking 5-part composite approximately 5' out and 2' wide. 0-3"

Photo- facing W side of building @ 10:22 by Kerry Paul

Sample: Ventfan-1 @ 10:25

Firing Range
no water
no sand
Will sample from sone
Sand along west wall; however, this appears to be material

sloughed off of the sandstone walls. Sample will be a composite of this material along western wall.

Sample:
Range 1 @ 10:40

Kenny R

08/14/09 10:01
Larry Dayler - Interviewee
Area one - has always been office - 2 photos
Area 2 - bathrooms + classrooms
1 photo
Area 3 - includes weapons storage area and supply room
1 photo - weapons area
note: silver paint on all walls + ceiling. Larry states that the silver paint was on prior to 1955
2 photos - supply area
Area 4 - vehicle storage also had silver paint
1 photo

This area includes a storage area that Larry remembers for automotive stuff such as oil.
1 photo - storage

Hydraulic molecules in floor sump. Some water has pooled in the area of the sump. 1 photo.

Additionally, the two doors - they are in bad repair. Missing, chipping, cracking of the bottom doors.

[illegible] kitchen [illegible] that it was probably a water heater area in the NW corner. There is a floor sump also probably from water heater area
1 photo
1 photo

(6) Area 6 - Drill floor
When the troops were here dining, meetings. Recently for Dances + shows.
1 photo
Larry states that the overhead door in this area is dangerous falling apart.
1 photo.

(7) firing range —
room off to south:
storage: blankets,
pillows, etc.
1 photo

firing range proper
1 photo

also an ammunition
storage area
3 photos

this room is
empty now

the firing range bricks
on W wall are
sloughing

(8) blue-room storage
communications room
training room:
1 photo

one other small room
training office
1 photo

up behind stage —
1 small room, currently
containing junk. used
to have janitorial
supplies
1 photo

area above + behind
stairs - supply room —
boxes, packing supplies
1 photo

(9) various rooms (18)
was old stage area
prior to renovation in 69

1965 = 1 photo
Once it was divided up, they made it into a services of business offices

there's a heater in these rooms that buzzes continually.

(10) Used to be vehicle maintenance area but then a OMSY organic maintenance divided up the rooms in approximately 1965
1965 Maintenance used for more vehicle maintenance

The City of Barnsdall also used this area for vehicle maintenance
This area also includes floor drains (1) and a rickity set of garage doors.
Photos: 3
This area currently has desks + cabinets in it
There a three subdivided rooms which one was an office, 1 parts, + one other room
1 photo of each
3 total

(11) main closest - used to be kitchen storage then, to janitorial storage. 1 photo →

(12) Used to be all open, like on the south end - wasn't used much until ~1965 these were all offices, clerical paperwork type stuff.

3 photos of offices

2 photos of bathrooms
1 w/man

meeting rooms
bathrooms
classrooms

(13) Commanders offices
2 photos.

Appendix G: Site Photographs

Office and bathroom (Photos: Kerry Paul)

Classroom and weapons storage area (Photos: KP)

Automotive garage (Photos: KP)

Storage room and automotive garage with doors (Photos: KP)

Standing liquid above drain in automotive garage (Photo: KP)

Kitchen (Photo: KP)

Drill hall (Photos: KP)

Indoor firing range; IFR (Photos: KP)

Indoor firing range; sand removed (Photos: KP)

Communications storage room and office; paint peeling (Photos: KP)

Storage behind stage (Photos: KP)

Storage rooms (Photos: KP)

Second automotive garage (Photos: KP)

Storage room and back of second automotive garage (Photos: KP)

Storage room with pealing/flaking paint (Photos: KP)


Storage room and classroom (Photos: KP)


Classrooms with 9x9 tile on the floor (Photos: KP)


Bathroom and office with gas pipe coming out of the wall (Photos: KP)

Looking north from NE corner.

Looking west from NE corner.

Looking south from NW corner.

Looking southwest from NW corner.

Looking west from NW corner.

Looking south from west side of armory.

All photos on this page were taken by Travis Estes on 10/8/2009.

Looking east from SW corner.

Insulation in office.

Left: Gas furnace heater in classroom.

Right: Supply room.

South hallway.

9 X 9 tile in classroom.

All photos on this page were taken by Travis Estes on 10/8/2009.

Left: Maintenance closet.

Right: Gas water heater in kitchen.

Paint in maintenance closet.

Water damage along west wall in classroom.

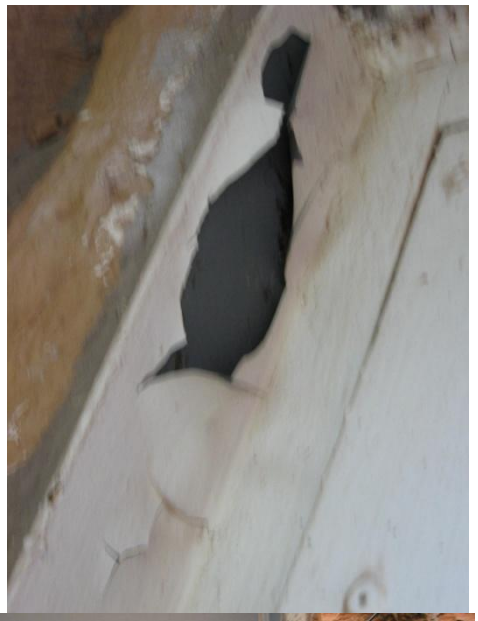
Gas furnace heater in office.

Residue from chipped sandstone wall down south hallway.

All photos on this page were taken by Travis Estes on 10/8/2009.

Right: Peeling paint on door frame.

Left: Peeling paint on garage door frame.



Looking north from along 14th Street.

Broken window on south side.

Peeling paint on downspout.

Front of armory.

All photos on this page were taken by Travis Estes on 10/8/2009.

Looking south from along 14th Street.

Looking east directly across 14th Street..

Looking southeast from along 14th Street.

All photos on this page were taken by Travis Estes on 10/8/2009.

Appendix H: Oklahoma Corporation Commission Tank Removal and Closure Report

For 1-1,000 Gallon Underground Storage Tank

JB ANTHONY
Commissioner

DENISE A. BODE
Commissioner

ED APPLE
Commissioner

OKLAHOMA

CORPORATION COMMISSION

JIM THORPE BUILDING (405) 521-3107

E. R Smith, Director

Fuel Storage Dept.

OKLAHOMA CITY, OKLAHOMA 73105

January 6, 1998

Captain Terrance Smith
Oklahoma Military Department
3517 Military Circle
Oklahoma City, Oklahoma 73111-4398

Reference: Facility #5205780, Tank Removal and Closure Report for 1-1000 gal underground storage tank located at Oklahoma Military Department Armory, 309 14th Street, Perry, Oklahoma.

Dear Captain Smith:

The Oklahoma Corporation Commission is in receipt of your report covering the removal and closure of 1-1000 gallon UST at the referenced site on October 2, 1997. A review of the soil testing reports, dated **October 10, 1997,** indicates the facility does not exceed the action levels established by the Oklahoma Corporation Commission. The subject facility is hereby considered closed within the standards prescribed by the Oklahoma Corporation Commission. Please be advised, however, that any future contamination found may require remediation.

Thank you for your cooperation and assistance to protect the waters of Oklahoma for future generations. If you have any questions, please call (405) -521-3505.

Sincerely,

William F. Hansen

William F. Hansen P.E.
Sr. Environmental Engineer OCC

cc: Facility #5205780
Rick Heck
David H. Cohenour, Caldwell Environmental

November 17, 1997

Mr. Bill Hanson
Oklahoma Corporation Commission
Fuel Storage Department
P.O. Box 52000-200
Oklahoma City, Oklahoma 73152-2000

Re: Oklahoma Military Department
UST Closure, Armory, Perry, Oklahoma

Dear Mr. Hanson:

Please find the attached closure report for the Underground Storage Tank (UST) that was located at the Armory in Perry, Oklahoma. On October 2, 1997, Caldwell Environmental Associates, Inc. (CEA) excavated one 1,000 gallon UST that had been used to store gasoline. The tank and associated piping were in excellent condition with no holes or leaks. Two native soil samples were collected from the UST excavation for laboratory analysis after UST removal. Sample A was collected approximately five feet below the middle of the UST (11 feet BGS). Sample B was collected approximately seven feet below the ground surface (BGS) from the west wall of the excavation pit. The BTEX and TPH gasoline levels were reported below detection limits and below the Oklahoma Corporation Commission action levels in both samples. If you have any questions concerning this report, please call me at 329-7167.

Sincerely,

Terry Andrews
Senior Hydrogeologist

Caldwell Environmental Associates, Inc.
P.O. Box 1608 / Norman, OK 73070 / (405) 329-7167

COMPANY B (-) 1ST BATTALION 179TH INFANTRY
Oklahoma Army National Guard
309 14th Street
Perry, Oklahoma 73077-6027

WPS9B0

23 October 1990

MEMORANDUM FOR: Environmental Officer, Oklahoma Military Department, ATTN: Richard Harwell, 3501 Mil Cir, OKC, OK 73111

SUBJECT: Underground Fuel Tanks

The underground fuel tanks at the National Guard Armory located at 309 14th Street, Perry, Ok has been out of service since 1977. No Fuel has been purchased or pumped since 1977.

FOR THE COMMANDER:

Virgil Biggs
VIRGIL P BIGGS
SFC, OKARNG
Readiness NCO

OKLAHOMA CORPORATION COMMISSION

Fuel Division, UST/AST Program
P.O. Box 52000-2000
Oklahoma City, OK 73152-2000
(405) 522-4640

CLOSURE REPORT
FOR
PERMANENTLY CLOSED UNDERGROUND STORAGE TANKS

PLEASE SUBMIT THIS COMPLETED FORM ALONG WITH ATTACHMENTS WITHIN 45 DAYS OF THE SCHEDULED CLOSURE.

1. **Facility Identification Number.** 5205780

2. **Facility location Name and Address**
   Oklahoma Military Department Armory
   309 14th Street
   Perry, Oklahoma

3. **Owner's Name and Address.**
   Oklahoma Military Department Contact: Captain Terrence Smith
   Directorate of Engineering
   Environmental Office
   3517 Military Circle
   Oklahoma City, Oklahoma 73111-4398

4. Date Work Accomplished: **10-2-97**

5. Number and size of tanks remaining at this facility
   Although an officer at the facility remembered a UST located on the north side of the armory building, we could not locate this UST.

6. Number and size of tanks removed.
   One 1,000 Gallon Steel UST
   (a) Condition of removed tanks. Are there any holes present?
   Excellent condition. No holes.
   (b) Describe the disposal and/or disposition of the tank(s).
   The tank was destroyed on site by cutting a large hole in the end of the tank. The tank was taken to Washita Pipe and Steel Chickasha, Oklahoma for metal recycling.
   (c) If tank system consisted of pressure piping, were samples taken at least every 40 feet? No pressure piping.
   (d) Was excavated soil removed from the site? No
   (e) If so, was a permit obtained for its removal? _____.

7. Number and size of tanks filled with inert material. None
   _____.

8. Estimated date tanks were last used. 1980

9. Assess the site for potential contamination by:
   (a) testing the soil or ground water; or
   (b) using an external leak detection method such as monitoring wells.
   (c) Were field screening instruments used? YES
   (d) If so, what was the type and model number? Organic Vapor Meter (OVM) Photoionization Detector (PID) Model # 580B

NOTE: If soil or ground water samples are used for a site assessment, the person taking the samples must be under the supervision of or be a certified UST Consultant.

10. Certified UST Consultant responsible for the sampling.
    I certify the samples were taken at locations where contamination had most likely occurred.

    Name Terry Andrews
    Address Caldwell Environmental Associates, Inc.
    PO Box 1608
    Norman, Oklahoma 73070
    Phone Number (405) 329-7167
    Certification Number 0334

    Signature of Oklahoma Certified UST Consultant:

    Terry Andrews Date 11/17/97

11. A site sketch shall include:
    (a) North arrow
    (b) Tank pit location
    (c) Proximity of tank pit to roads, buildings, or other landmarks measured in feet
    (d) Piping Layout and pump island location
    (e) Soil sample locations identifying the sample identification

12. Site Assessment prepared by:
    Name Terry Andrews
    Address Caldwell Environmental Associates, Inc.
    PO Box 1608
    Norman, Oklahoma 73070
    Phone Number (405) 329-7167

    Signature of Preparer:

    Terry Andrews Date 11/17/97

Attachments:
See Following Page

ATTACHMENTS

UST Registration Form (Form 7530-1)

Laboratory Report

Site Maps

UST Certificate of Destruction

Field Notes

Site Photographs

Form 7530-1

Registration for Underground Storage Tanks

Oklahoma Corporation Commission
Underground Storage Tank Program
P.O. Box 52000-2000, Rm 250
Oklahoma City, OK 73152-2000

STATE USE ONLY

ID NUMBER

DATE RECEIVED

A. Date entered into computer _____

B. Data entry clerk initials _____

C. Owner was contacted to clarify responses.

Comments: _____

TYPE OF NOTIFICATION

☐ A. NEW FACILITY ☐ B. AMENDED

☒ C. CLOSURE

___No. of tanks at facility. ___No. of continuation sheets attached.

INSTRUCTIONS

Please type or print in ink. This form must be completed for each location containing underground storage tanks. If more than four (4) tanks are owned at this location, photocopy the following sheets, and staple continuation sheets to the form.

GENERAL INFORMATION

Notification is required by Federal and State 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, 1985, or that are brought into use after May 8, 1986.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to civil penalty not to exceed $10,000 for each tank for 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

Directorate of Engineering Env. Office

3517 Military Circle

Mailing Address

Oklahoma City, Ok 73111-4398

City & State Zip Code

Oklahoma

County

(405) 425-8333

(Area Code) Phone Number

II. LOCATION OF TANK(S)

If known, give the geographic location by degrees, minutes, and seconds. Example: Lat.42, 36, 12 N Long 85, 24, 17W.

Latitude _____ Longitude _____

National Guard Armory

Facility Name or Company Site Identifier, as applicable

309 14th Street

Street Address (P.O. Box not acceptable)

Perry, Oklahoma

City & State Zip Code

Noble

County

Date of Ownership Transfer _____

III. TYPE OF OWNER/FACILITY	IV. INDIAN LANDS
☐ Federal Government ☒ State Government ☐ Local Government ☐ Commercial ☐ Farm ☐ Gas Station ☐ Other	Tanks are located on land within an Indian Reservation or on other trust lands. Tribe or Nation _____

V. CONTACT PERSON IN CHARGE OF TANKS

Name	Job Title	Address	Phone Number (Include Area Code)
Captain Torence Smith	Environmental Specialist	3517 Military Circle, OKC, OK 73111-4398	(405) 425-8333

VI. FINANCIAL RESPONSIBILITY

I have met the financial responsibility requirements in accordance with 40 CFR Subpart H & OAC 165:25, Subchapter 13. ☐

VII. DESCRIPTION OF UNDERGROUND STORAGE TANKS COMPLETE FOR EACH TANK AT THIS LOCATION.

Tank Identification Number	Tank No. 1	Tank No.	Tank No.	Tank No.
1. Status of Tank (mark only one)				
Currently In Use	☐	☐	☐	☐
Temporarily Out of Use (Remember to fill out section VIII)	☐	☐	☐	☐
Permanently Out of Use (Remember to fill out section VIII)	☒	☐	☐	☐
2. Date of Installation (mo./year)	1955?			
3. Estimated Total Capacity (gallons)	1,000			
4. Material of Construction (Mark all that apply)				
Coated or Bare Steel	☒	☐	☐	☐
Cathodically Protected Steel	☐	☐	☐	☐
Composite (Steel with Fiberglass)	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐
Lined Interior	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐
Polyethylene Tank Jacket	☐	☐	☐	☐
Concrete	☐	☐	☐	☐
Excavation Liner	☐	☐	☐	☐
Unknown	☐	☐	☐	☐
Other, Please specify	_____	_____	_____	_____
	_____	_____	_____	_____

Tank Identification Number	Tank No. 1	Tank No. ___	Tank No. ___	Tank No ___
5. Piping (Material) (Mark all that appy)				
Steel	X			
Fiberglass Reinforced Plastic				
Copper				
Cathodically Protected				
Double Walled				
Secondary Containment				
Unknown				
Other, Please specify				
6. Piping (Mark all that apply)				
Pressure				
Suction: no valve at tank	X			
Suction: valve at tank				
7. Substances Currently or Last Stored in Greatest Quantity.				
Gasoline	X			
Diesel				
Gasohol				
Kerosene				
Heating Oil				
Used Oil				
Other, Please specify				
Hazardous Substance CAS Number or CERCLA Name				
VIII. TANKS OUT OF USE, OR CHANGE IN SERVICE				
1. Closing of Tank A. Estimated date last used	1980 ?			
B. Estimate date tank closed or removed. (mo./date/year)	10/2/97			
C. Tank was removed from ground.	X			
D. Tank was closed in ground.				
E. Tank filled with inert material. Describe type of material used.				
F. Change in service.				
2. Site Assessment Completed	yes			
Evidence of a leak detected	no			

IX. CERTIFICATION OF COMPLIANCE
(COMPLETE FOR ALL NEW AND UPGRADED TANKS AT THIS LOCATION)

OATH: I certify the information concerning installation that is provided in Section IX is true to the best of my belief and knowledge.

Installer Name: _____ **License #** _____

Position: _____ **Company:** _____

Signature of Installer & Date: _____

Tank Identification Number	Tank No. ___		Tank No. ___		Tank No. ___		Tank No. ___	
1. Installation Installer certified or licensed by the implementing agency	_____		_____		_____		_____	
	TANK	PIPING	TANK	PIPING	TANK	PIPING	TANK	PIPING
2. Release Detection (Mark all that apply)								
A. Manual tank gauging	☐		☐		☐		☐	
B. Tightness testing	☐	☐	☐	☐	☐	☐	☐	☐
C. Inventory controls	☐		☐		☐		☐	
D. Automatic tank gauging	☐		☐		☐		☐	
E. Vapor monitoring	☐	☐	☐	☐	☐	☐	☐	☐
F. Groundwater monitoring	☐	☐	☐	☐	☐	☐	☐	☐
G. Interstitial monitoring double walled tank/piping	☐	☐	☐	☐	☐	☐	☐	☐
H. Interstitial monitoring or secondary containment	☐	☐	☐	☐	☐	☐	☐	☐
I. Automatic line leak detectors		☐		☐		☐		☐
J. Other method allowed by Implementing Agency. Please specify.	☐	☐	☐	☐	☐	☐	☐	☐
	_____		_____		_____		_____	
3. Spill and Overfill Protection								
A. Overfill device installed.	☐		☐		☐		☐	
B. Spill device installed.	☐		☐		☐		☐	

X. 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 this information, I believe that the submitted information is true, accurate, and complete.

Name and offical title of owner or owner's authorized representative (Print) Terry Andrews, Senior Hydrogeologist
Caldwell Env. Assoc., Inc.

Signature & Date: [signature] 11/17/97

Intertek Testing Services
Environmental Laboratories

ANALYTICAL REPORT

DATE RECEIVED : 3-OCT-1997

REPORT NUMBER : D97-12011
REPORT DATE : 10-OCT-1997

ATTENTION : Mr. Terry Andrews
SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ADDRESS : P.O. Box 1608
: Norman, OK 73069

PROJECT : Perry OMD

Included in this data package are the analytical results for the sample group which you have submitted to Intertek Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (972) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

Intertek Testing Services NA Inc.
1089 East Collins Boulevard Richardson, TX 75081
Telephone (972) 238-5591 Fax (972) 238-5592

Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 3-OCT-1997

REPORT NUMBER : D97-12011-1
REPORT DATE : 10-OCT-1997

SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ADDRESS : P.O. Box 1608
: Norman, OK 73069
ATTENTION : Mr. Terry Andrews

SAMPLE MATRIX : Soil
ID MARKS : Sample A
: Perry OMD
PROJECT : Perry OMD
DATE SAMPLED : 2-OCT-1997
ANALYSIS METHOD : EPA 8020B /1
ANALYZED BY : RFG
ANALYZED ON : 9-OCT-1997
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : 27-100897

VOLATILE AROMATIC ORGANICS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Benzene	2	µg/Kg	<	2	µg/Kg
Ethylbenzene	2	µg/Kg	<	2	µg/Kg
Toluene	2	µg/Kg	<	2	µg/Kg
Xylenes	2	µg/Kg	<	2	µg/Kg
Naphthalene			<	10	µg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
4-Bromofluorobenzene (SS)		94.6 %

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ITS Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 3-OCT-1997

REPORT NUMBER : D97-12011-1
REPORT DATE : 10-OCT-1997

SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ADDRESS : P.O. Box 1608
: Norman, OK 73069
ATTENTION : Mr. Terry Andrews

SAMPLE MATRIX : Soil
ID MARKS : Sample A
: Perry OMD
PROJECT : Perry OMD
DATE SAMPLED : 2-OCT-1997
ANALYSIS METHOD : EPA 5030/8015B /1
ANALYZED BY : RFG
ANALYZED ON : 9-OCT-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 28-100897

GASOLINE RANGE ORGANICS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 µg/Kg	< 50 µg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Fluorobenzene		98.3 %

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Intertek Testing Services
Environmental Laboratories

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REPORT NUMBER : D97-12011-1
REPORT DATE : 10-OCT-1997

SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ADDRESS : P.O. Box 1608
: Norman, OK 73069
ATTENTION : Mr. Terry Andrews

SAMPLE MATRIX : Soil
ID MARKS : Sample A
: Perry OMD
PROJECT : Perry OMD
DATE SAMPLED : 2-OCT-1997

MISCELLANEOUS ANALYSES			
TEST REQUESTED		DETECTION LIMIT	RESULTS
Total Solids	/1	0.01 %	90.6 %
Analyzed using ASTM D2216 mod. on 9-OCT-1997 by JJH QC Batch No : 242009			

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Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 3-OCT-1997

REPORT NUMBER : D97-12011-2
REPORT DATE : 10-OCT-1997

SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ADDRESS : P.O. Box 1608
: Norman, OK 73069
ATTENTION : Mr. Terry Andrews

SAMPLE MATRIX : Soil
ID MARKS : Sample B
: Perry OMD
PROJECT : Perry OMD
DATE SAMPLED : 2-OCT-1997
ANALYSIS METHOD : EPA 8020B /1
ANALYZED BY : RFG
ANALYZED ON : 9-OCT-1997
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : 27-100897

VOLATILE AROMATIC ORGANICS					
TEST REQUESTED	DETECTION LIMIT		RESULTS		
Benzene	2	µg/Kg	<	2	µg/Kg
Ethylbenzene	2	µg/Kg	<	2	µg/Kg
Toluene	2	µg/Kg	<	2	µg/Kg
Xylenes	2	µg/Kg	<	2	µg/Kg
Naphthalene			<	10	µg/Kg

QUALITY CONTROL DATA			
SURROGATE COMPOUND		SPIKE RECOVERED	
4-Bromofluorobenzene (SS)		106	%

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Intertek Testing Services
Environmental Laboratories

DATE RECEIVED : 3-OCT-1997

REPORT NUMBER : D97-12011-2
REPORT DATE : 10-OCT-1997

SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ADDRESS : P.O. Box 1608
: Norman, OK 73069
ATTENTION : Mr. Terry Andrews

SAMPLE MATRIX : Soil
ID MARKS : Sample B
: Perry OMD
PROJECT : Perry OMD
DATE SAMPLED : 2-OCT-1997
ANALYSIS METHOD : EPA 5030/8015B /1
ANALYZED BY : RFG
ANALYZED ON : 9-OCT-1997
DILUTION FACTOR : 1
METHOD FACTOR : 1
QC BATCH NO : 28-100897

GASOLINE RANGE ORGANICS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Petroleum Hydrocarbon	50 µg/Kg	< 50 µg/Kg

QUALITY CONTROL DATA		
SURROGATE COMPOUND		SPIKE RECOVERED
Fluorobenzene		90.4 %

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Intertek Testing Services
Environmental Laboratories

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REPORT NUMBER : D97-12011-2
REPORT DATE : 10-OCT-1997

SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ADDRESS : P.O. Box 1608
: Norman, OK 73069
ATTENTION : Mr. Terry Andrews

SAMPLE MATRIX : Soil
ID MARKS : Sample B
: Perry OMD
PROJECT : Perry OMD
DATE SAMPLED : 2-OCT-1997

MISCELLANEOUS ANALYSES		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Total Solids /1	0.01 %	95.5 %
Analyzed using ASTM D2216 mod. on 9-OCT-1997 by JJH QC Batch No : 242009		

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Intertek Testing Services
Environmental Laboratories

REPORT DATE : 10-OCT-1997 REPORT NUMBER : D97-12011

SAMPLE SUBMITTED BY : Caldwell Environmental Associates
ATTENTION : Mr. Terry Andrews
PROJECT : Perry OMD

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Benzene	Ethylbenzene	Total Petroleum Hydrocarbon
BATCH NO.	27-100897	27-100897	28-100897
LCS LOT NO.	AC033-62A	AC033-62A	AC033-62A
PREP METHOD	---	---	---
PREPARED BY	---	---	---
ANALYSIS METHOD	EPA 8020B	EPA 8020B	EPA 5030/8015B
ANALYZED BY	RFG	RFG	RFG
UNITS	µg/Kg	µg/Kg	µg/Kg
METHOD BLANK	< 2.00	< 2.00	< 50.0
SPIKE LEVEL	50.0	50.0	500
SPK REC LIMITS	70.0 - 130	70.0 - 130	70.0 - 130
SPK RPD LIMITS	25.0	25.0	25.0
MS RESULT	49.0	49.8	540
MS RECOVERY %	98.0	99.6	108
MSD RESULT	44.8	45.5	500
MSD RECOVERY %	89.6	91.0	100
MS/MSD RPD %	8.96	9.02	7.69
BS RESULT	NA	NA	NA
BS RECOVERY %	NA	NA	NA
BSD RESULT	NA	NA	NA
BSD RECOVERY %	NA	NA	NA
BS/BSD RPD %	NA	NA	NA
DUP RPD LIMITS	---	---	---
DUPLICATE RPD %	NA	NA	NA
LCS LEVEL	50.0	50.0	500
LCS REC LIMITS	70.0 - 130	70.0 - 130	70.0 - 130
LCS RESULT	40.8	41.7	479
LCS RECOVERY %	81.6	83.4	95.8
SPIKE SAMPLE ID	11848-4	11848-4	11848-4
SAMPLE VALUE	< 2.00	< 2.00	< 50.0
DUP SAMPLE ID	---	---	---
DUP SAMPLE VAL/1	---	---	---
DUP SAMPLE VAL/2	---	---	---

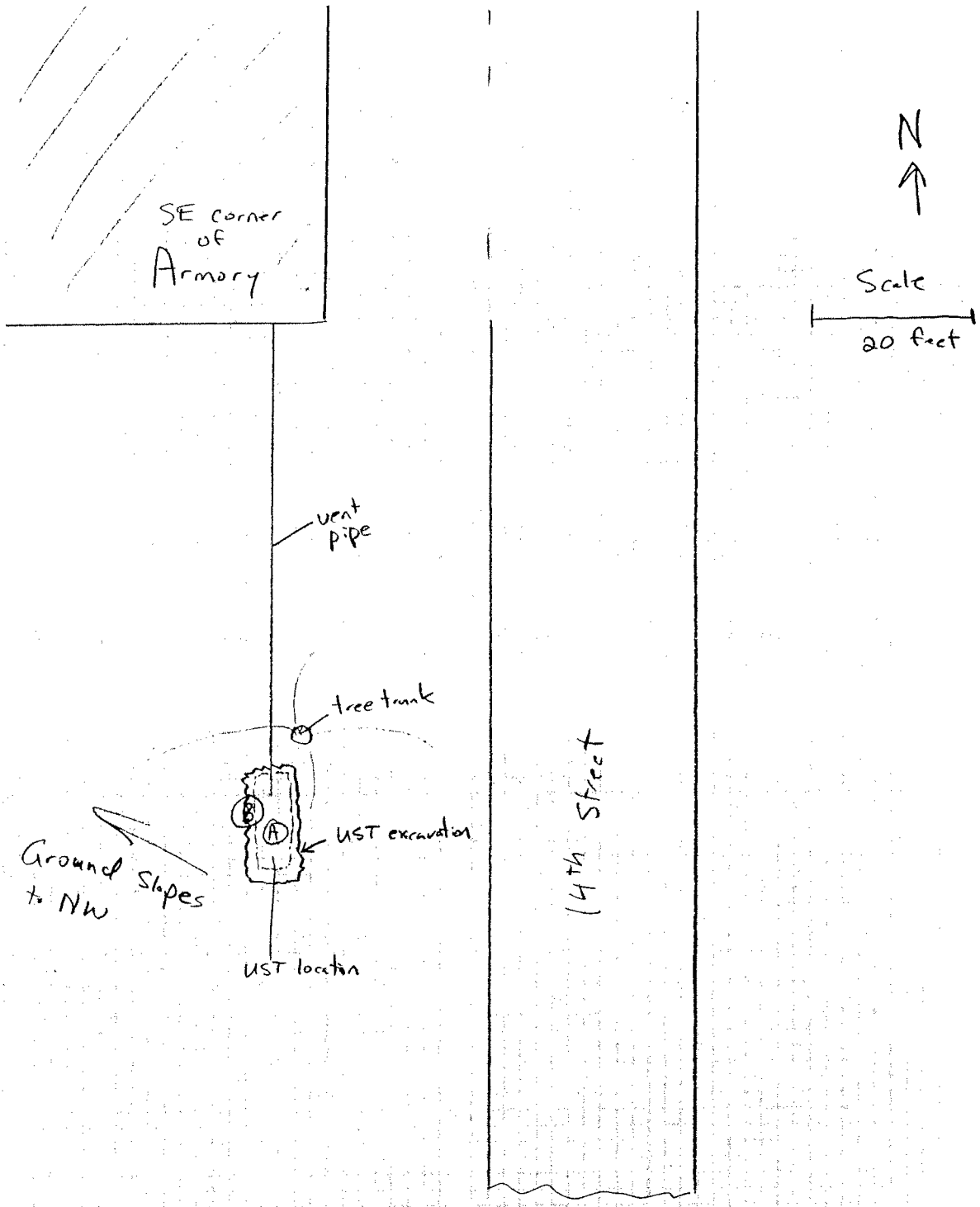
NA Not applicable

Intertek Testing Services NA Inc.
1089 East Collins Boulevard Richardson, TX 75081
Telephone (972) 238-5591 Fax (972) 238-5592

PROJECT: Perry OMD SHEET: 1 OF 1

SUBJECT: UST Closure BY: JA DATE: 10/2/97

Caldwell Environmental Assoc., Inc.
P.O. Box 1608
Norman, OK 73070
(405) 329-7167
Fax (405) 329-7277



(A) - Sample A location of native soil, approx. 5 feet below middle of UST, approx 11 feet BGS.

(B) - Sample B location of native soil, approx. 7 feet BGS in west wall of UST excavation pit.

Date: 10-3-97.
Completed By: TDA.

CERTIFICATE OF DESTRUCTION

Scrapping/Disposal Company:

Washita Pipe and Steel.
P.O. Box 391.
Chickasha, Oklahoma.

Site of Destruction:

Armory.
309 14th Street
Perry, Oklahoma.

Tank Removal Contractor:

Caldwell Environmental Associates, Inc.
P.O. Box 1608.
Norman, Oklahoma 73070.

Tank Identification:

Tank # : 5205780
Size: 1000 Gallon.
Location: Company: Oklahoma Military Department Armory.
Address: 309 14th Street
City/State: Perry, Oklahoma .
Destruction Date: 10-2-97.

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

Signature: Terry Andrews
By

Senior Hydrogeologist.
Title

Subscribed & Sworn to before me this 3rd day of October
in the year 1997.

Terry Andrews
Notary Public

My Commission Expires:
Sept. 11, 1999

PROJECT: Perry OMD SHEET: 1 OF 1

SUBJECT: tank closure BY: JM DATE: 10/2/97

Caldwell Environmental Assoc., Inc.
P.O. Box 1608
Norman, OK 73070
(405) 329-7167
Fax (405) 329-7277

#1 Tank

6:00 Left office, Julie, Mark, Kirk, John, and me

7:30 Arrive at site, set up, have safety meeting - start digging
Staff sergeant Anderson showed us location of tank on south side of building

8:00 Calibrated OVM (read 103 ppm using 100 ppm isobut, lane stated)
Dug out tank. Tank is oriented N-S, approx. 60 feet South of the SE corner of the armory. Under large elm tree, Tank has had dispenser lines removed (short lines that apparently went straight up to dispenser island - which was prob. over tank.) Tank is empty and dry. No odors.

9:23 Tank out of hole. OVM reading from vent pipe hole = 0 ppm, no odors or OVM from soil immediately around tank.

9:30 Collected soil sample A ~ 11 feet BGS immediately below middle of tank approx. 4 feet below bottom of tank in native soil - sandy with some gravel soil (pea size gravel)

9:35 Collected grab soil sample B from west wall approx. 7 feet BGS. with creek approx. 200 feet west and slope of ground to west. Downgradient side is west.

9:40 Started backfilling, cut tank, removed vent pipe

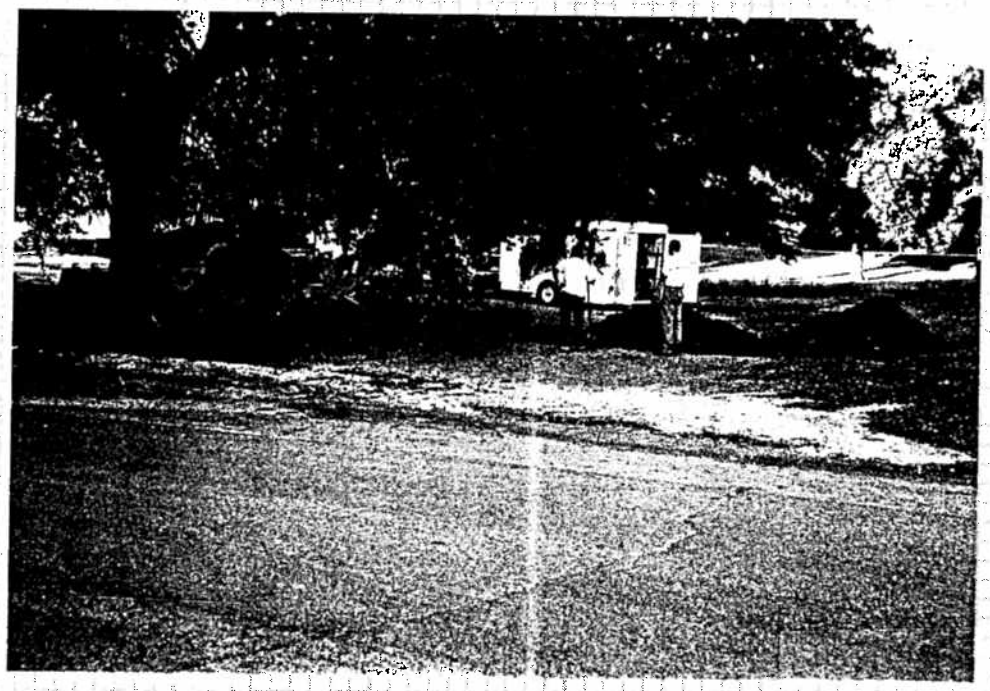
10:30 Finished backfilling, moved to north side of building

PROJECT: Perry OMD SHEET: 1 OF 3

SUBJECT: tank closure BY: KA DATE: 11/17/97

Caldwell Environmental Assoc., Inc.
P.O. Box 1608
Norman, OK 73070
(405) 329-7167
Fax (405) 329-7277

Digging up vent line to find UST



Excavation of vent line. UST was found where backhoe is positioned in photo.

PROJECT: Perry OMD SHEET: 2 OF 3

SUBJECT: tank closure BY: JG DATE: 11/17/97

Caldwell Environmental Assoc., Inc.
P.O. Box 1608
Norman, OK 73070
(405) 329-7167
Fax (405) 329-7277

Checking UST for liquids. UST was dry and free of sediment.

Exposed UST.

PROJECT: Perry OMD SHEET: 3 OF 3

SUBJECT: tank closure BY: JG DATE: 11/17/97

Caldwell Environmental Assoc., Inc.
P.O. Box 1608
Norman, OK 73070
(405) 329-7167
Fax (405) 329-7277

Excavation after pulling UST

Excavation area.

Appendix I: C.H. Guernsey & Company Indoor Firing Range Lead Issues Report
*Photos within this section were taken on March 17, 2005, and do not represent the current condition of the facility.

42.0 PERRY ARMORY

C.H. Guernsey & Company (GUERNSEY) surveyed the indoor firing range (IFR) at the Perry Armory on March 17, 2005 (Photographs 42-1 through 42-37). The IFR is approximately 105 feet long, approximately 12 feet wide, and the ceiling is approximately 15 feet high. An approximately 23 foot by 11 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.

Based upon information supplied to GUERNSEY, Oklahoma Military Department (OMD) personnel collected wipe samples from the IFR on April 30, 2004. Lead concentrations within the IFR ranged from 15,740 $\mu g/ft^2$ at the area where the bullet trap once stood to 161 $\mu g/ft^2$ at the entry to the IFR. Lead concentrations on the drill floor are assumed to be negligible. Table 42-1 summarizes the laboratory results for the wipe samples.

Table 42-1
Laboratory Analysis

Sample ID #	Sample Date	Result (µg/sq. ft.)	Lab Report ID #
440	4/30/2004	15,740.0	Quantem 111870
441	4/30/2004	12,415.0	Quantem 111870
442	4/30/2004	1,525.75	Quantem 111870
443	4/30/2004	118.0	Quantem 111870
444	4/30/2004	161.35	Quantem 111870
1	3/17/2005	146.55	Quantem 122062
2	3/17/2005	240.15	Quantem 122062
3	3/17/2005	58.00	Quantem 122062

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

Table 42-2 provides a preliminary cost estimate to clean the equipment and/or remediate the lead contamination in the IFR. Figure 42-1 shows the approximate locations of the OMD samples.

42.1 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 42-2
Preliminary Cost Estimate

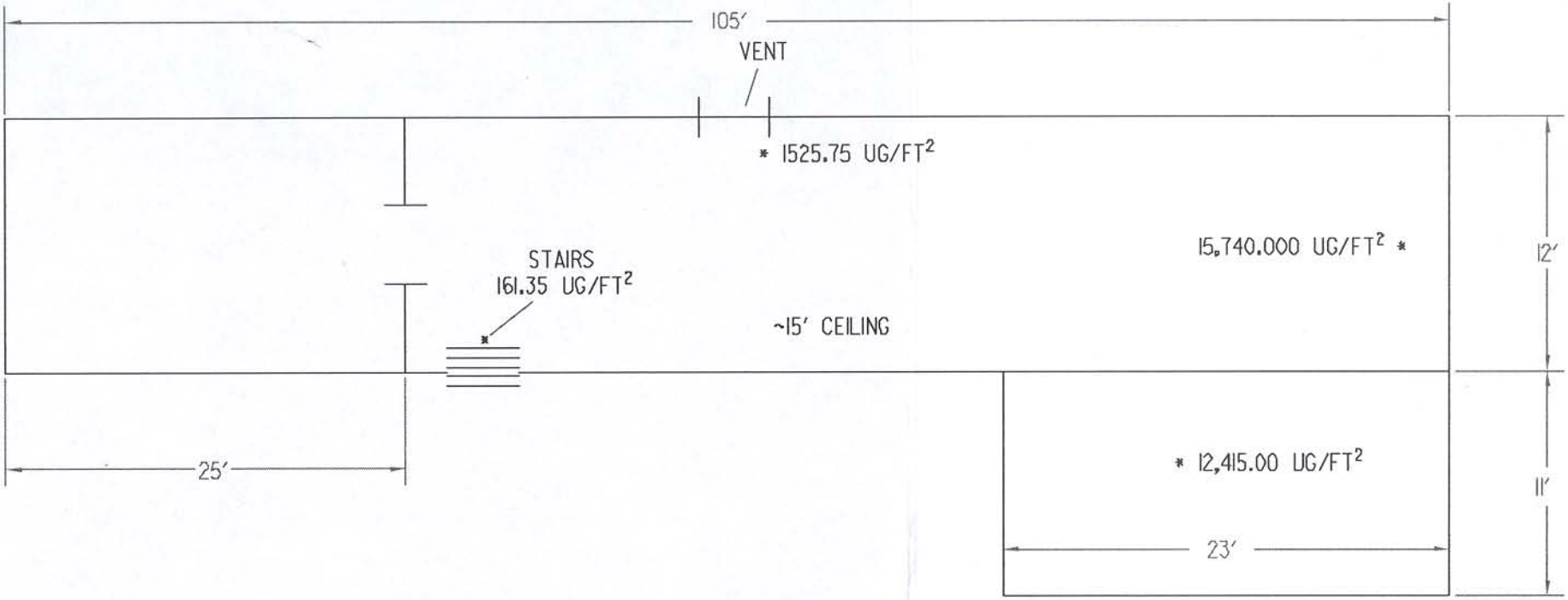
Equipment Cleaning Costs (a)				
Item Description	**Number**	**Unit**	**Cost Per Unit**	**Total Cost**
Total				**$0**

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	7012	ft^2	$5	$31,554
Clean Drill Floor	0	ft^2	$0.10	$0
Solidify/Stabilize Material in Bullet Trap	0	ft^3	$15	$0
Waste Disposal (non-hazardous)	3	Ton	$1,000	$3,000
Total (+/- 25%)				**$38,554**

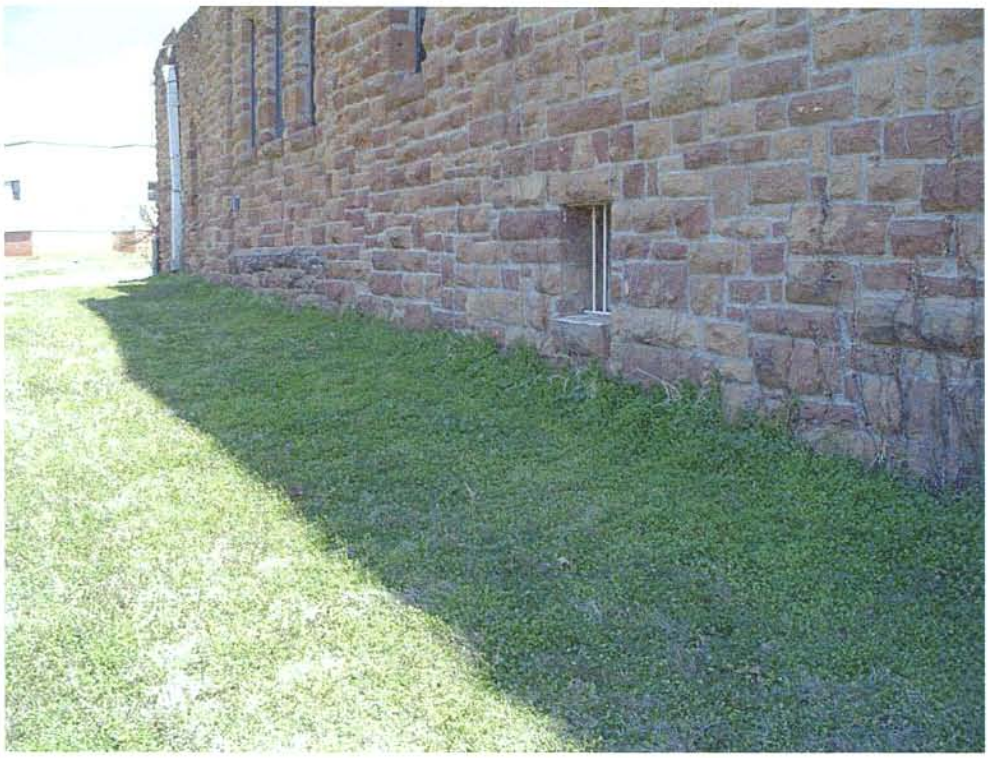
Notes:

(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/ft^2.


105′
VENT
* 1525.75 UG/FT2
15,740.000 UG/FT2 *
12′
STAIRS
161.35 UG/FT2
~15′ CEILING
25′
* 12,415.00 UG/FT2
11′
23′

PERRY ARMORY - PHOTOGRAPH LOG



Photograph #42-1

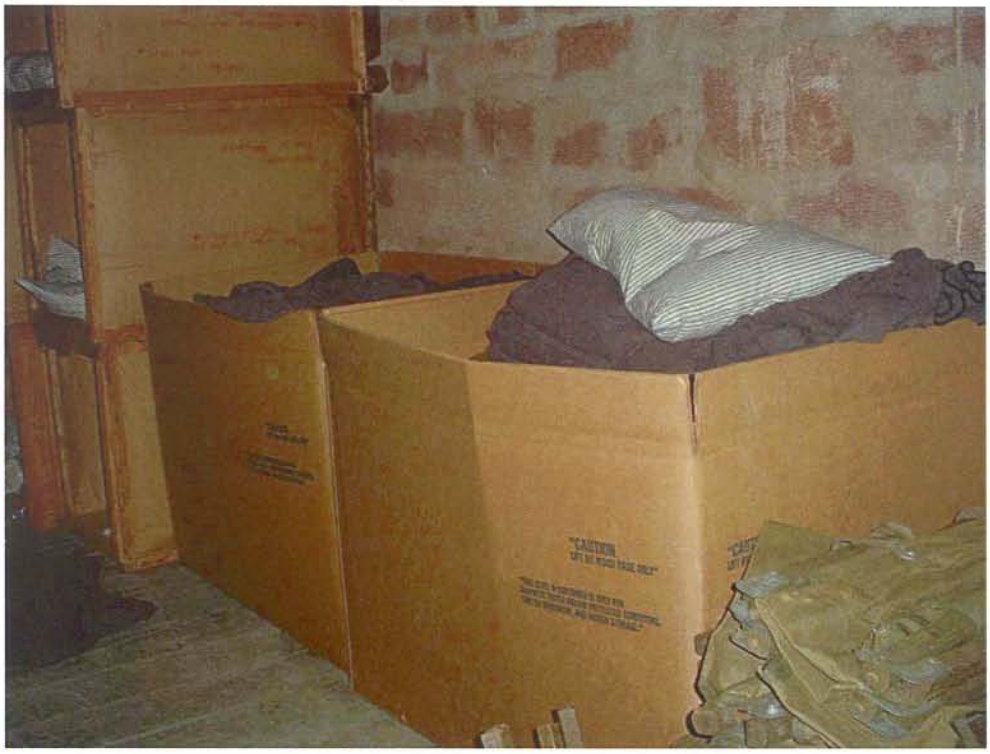
Photograph #42-2

Photograph #42-3

Photograph #42-4

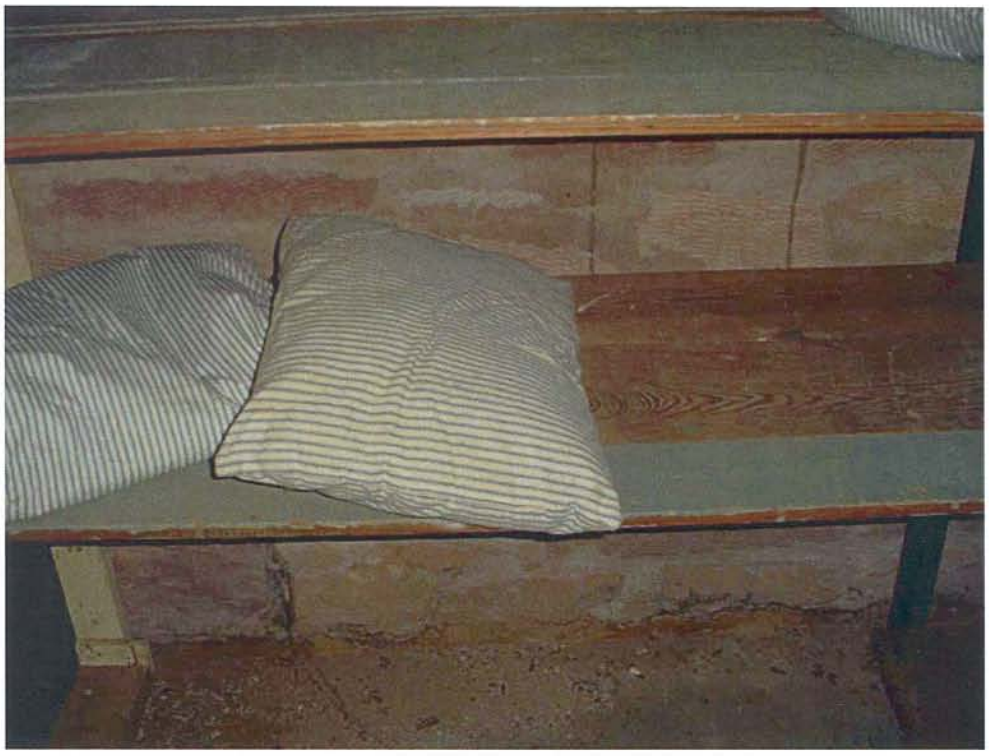
Photograph #42-5

Photograph #42-6



Photograph #42-7

Photograph #42-8

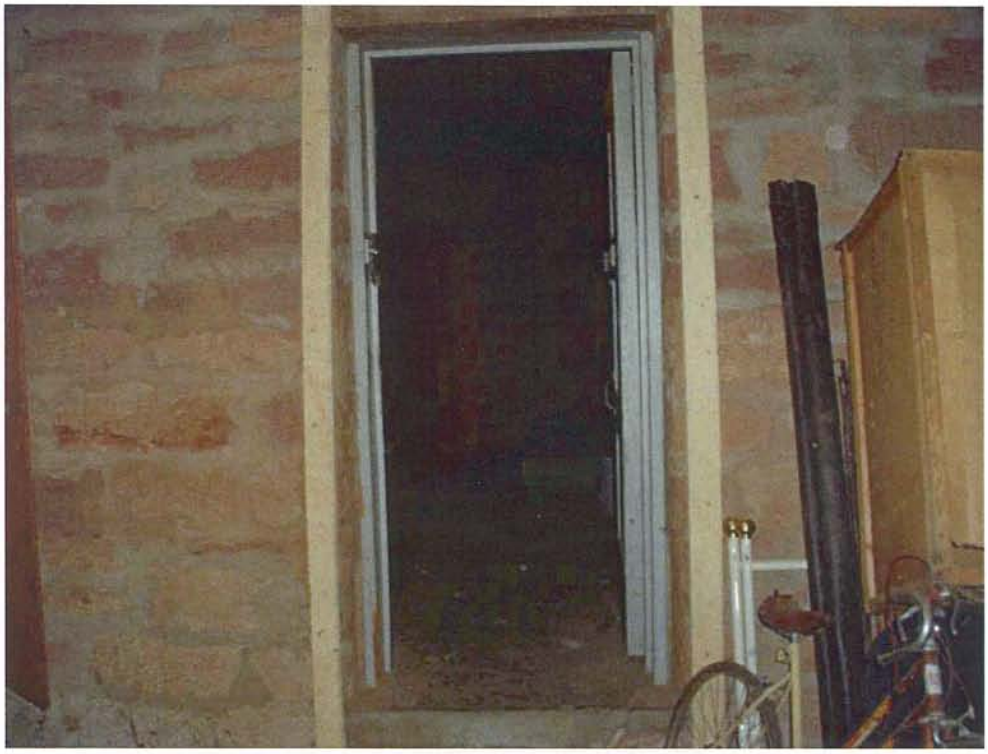


Photograph #42-9

Photograph #42-10

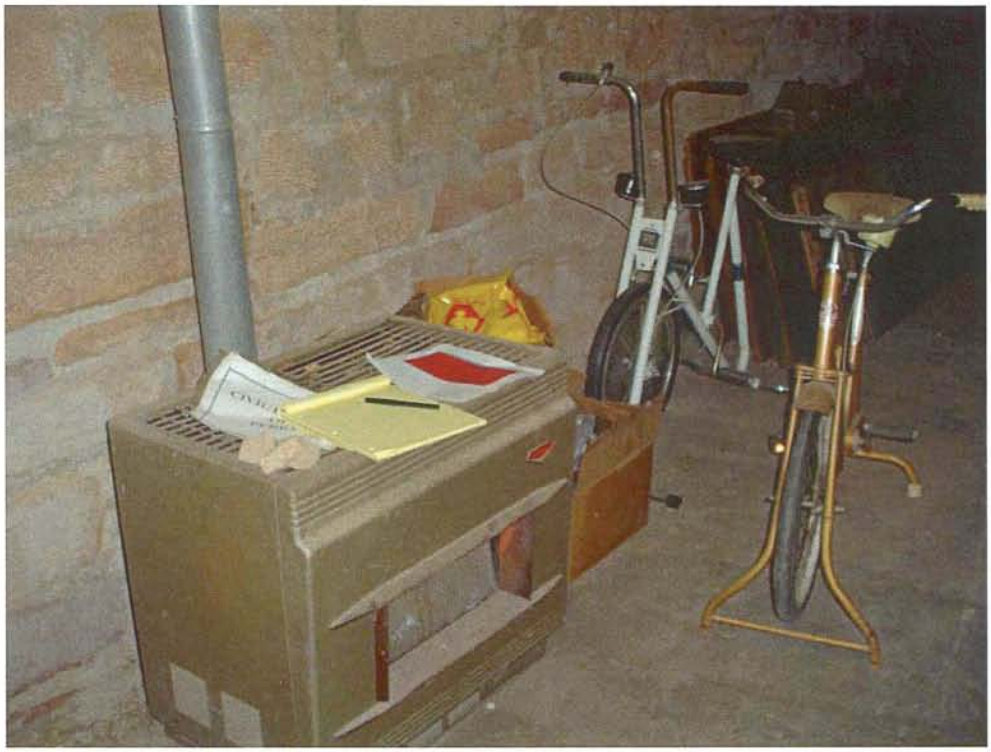
Photograph #42-11

Photograph #42-12



Photograph #42-13

Photograph #42-14



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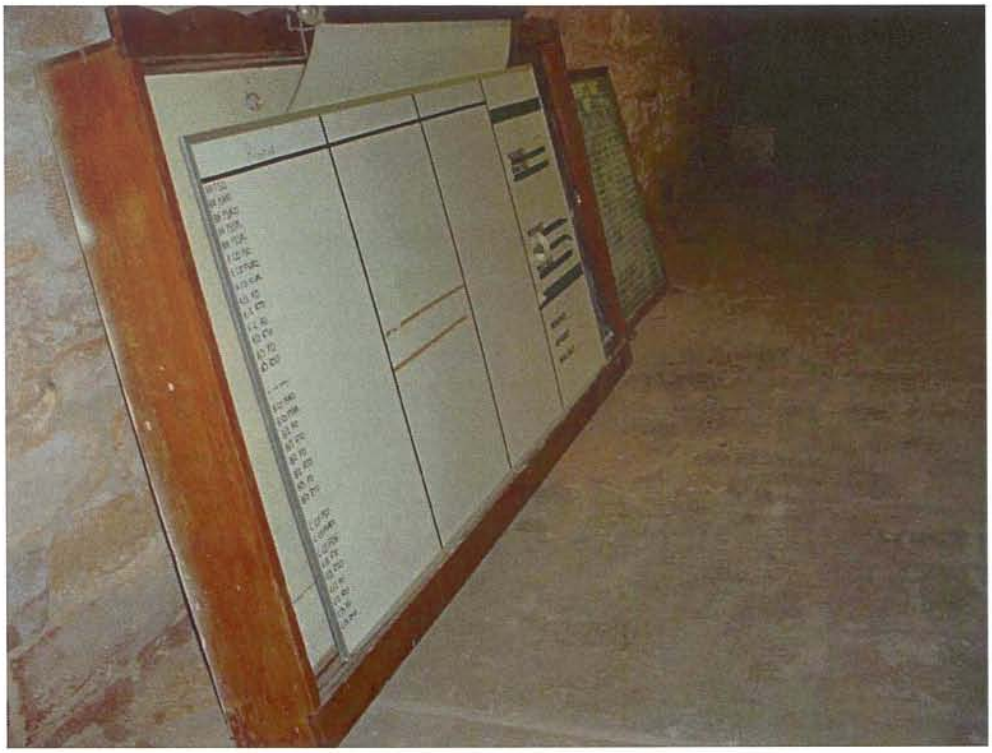

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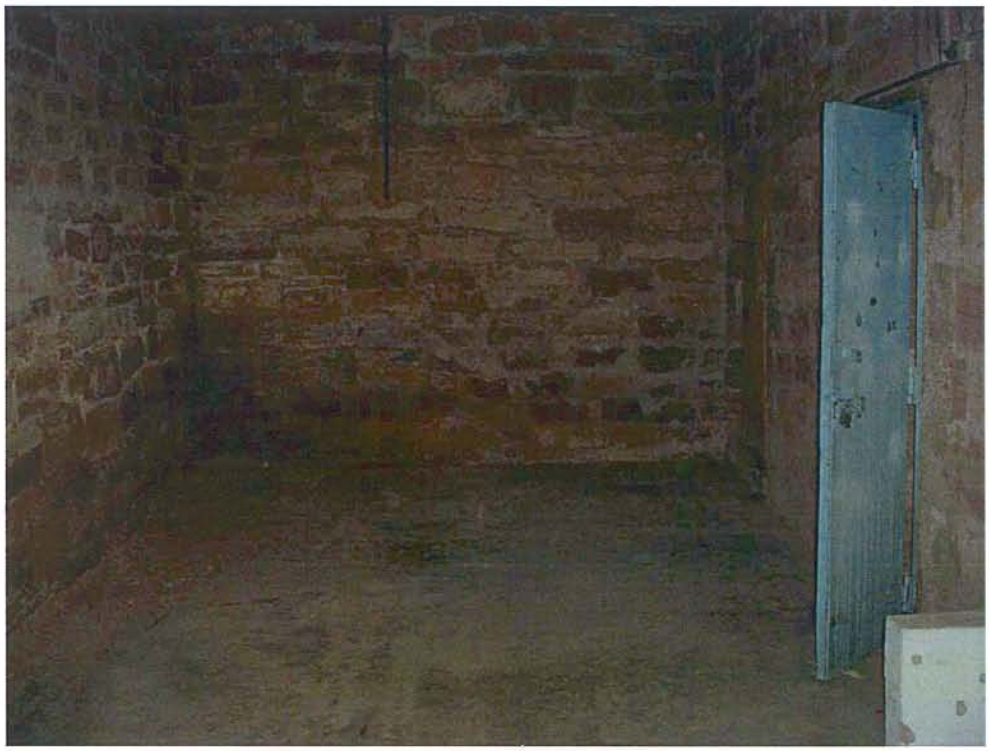

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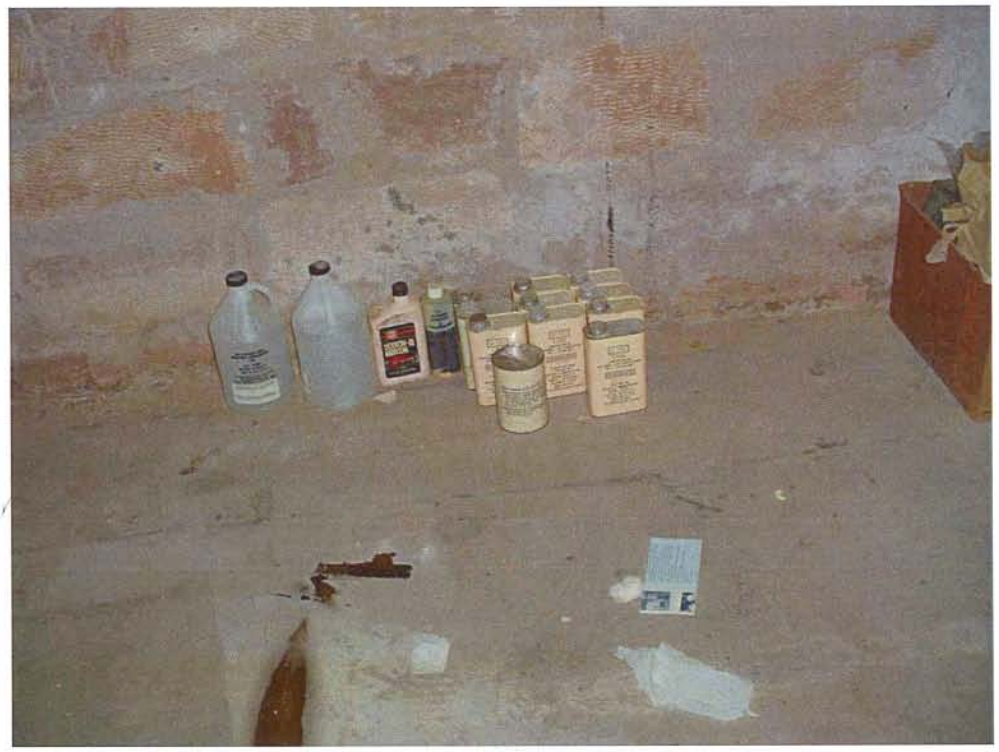

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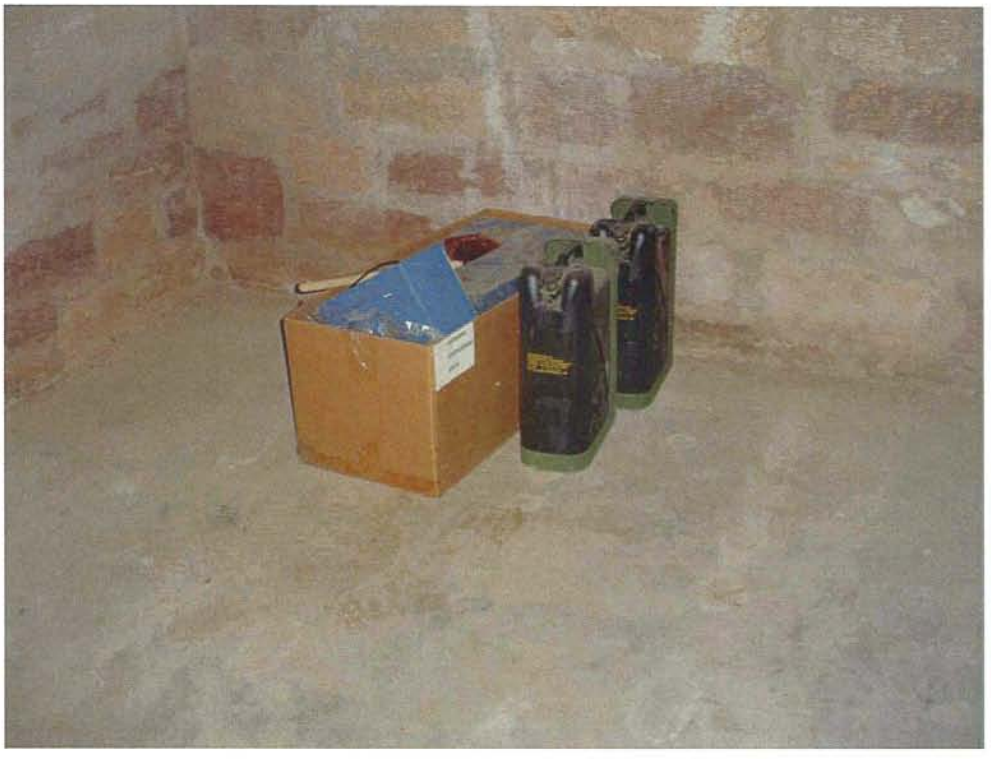


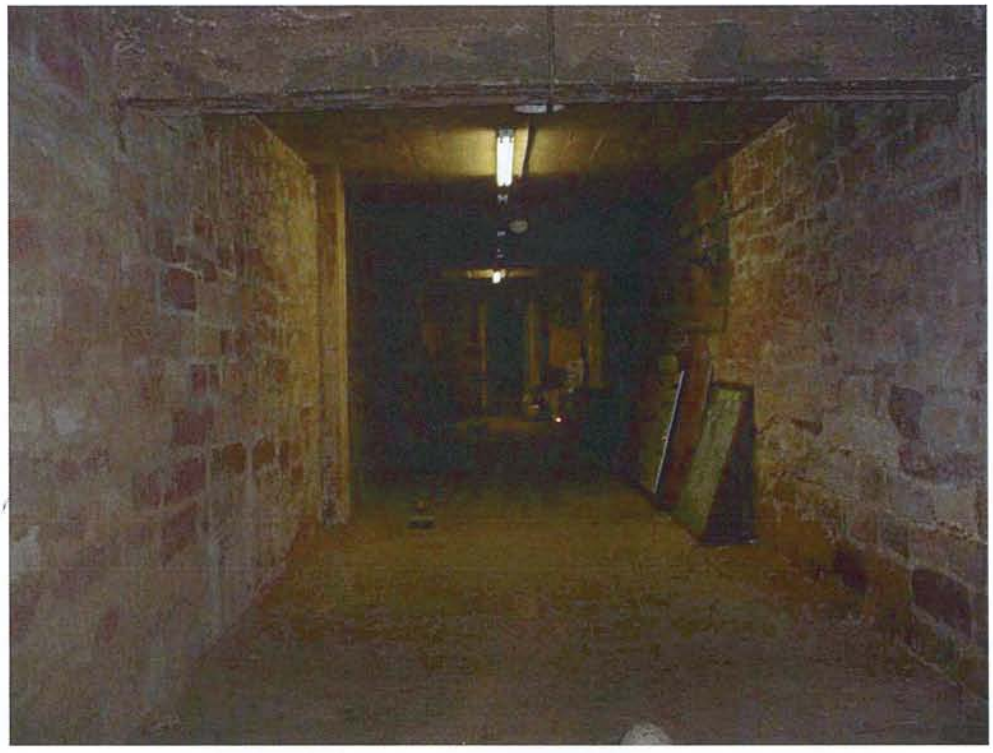
Photograph #42-25

Photograph #42-26

Photograph #42-27

Photograph #42-28

Photograph #42-29



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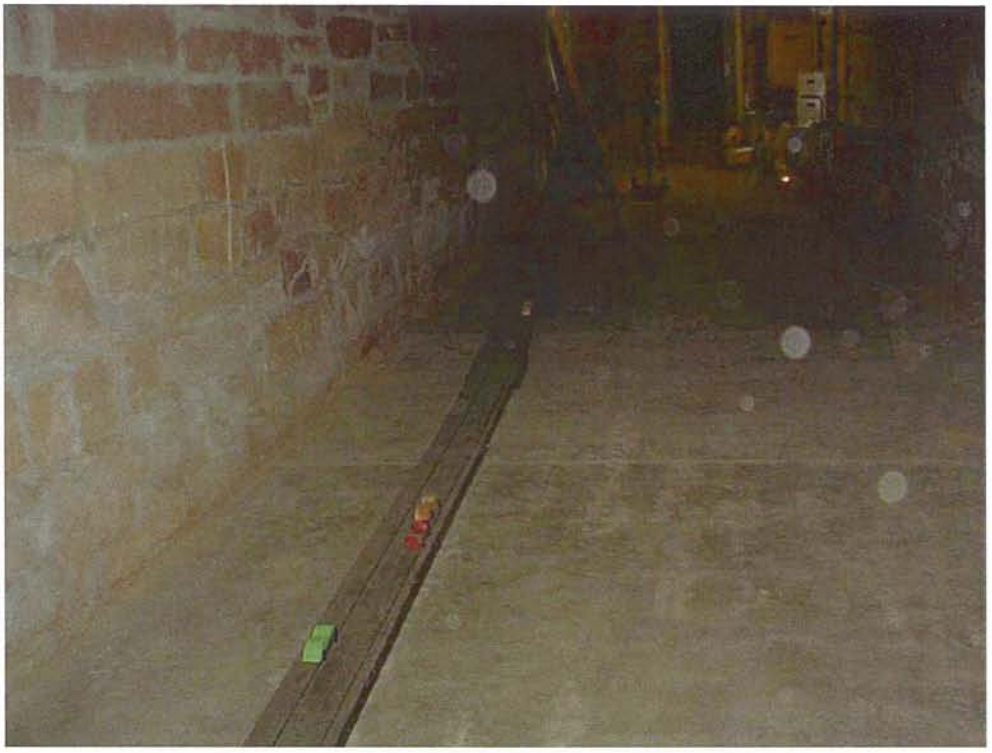

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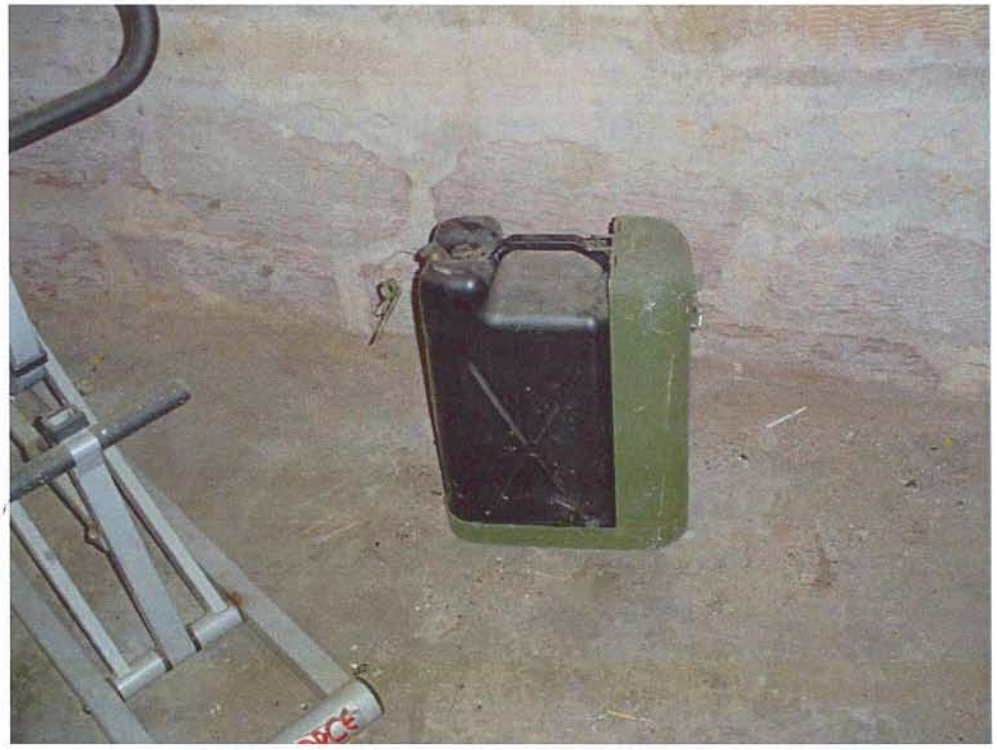

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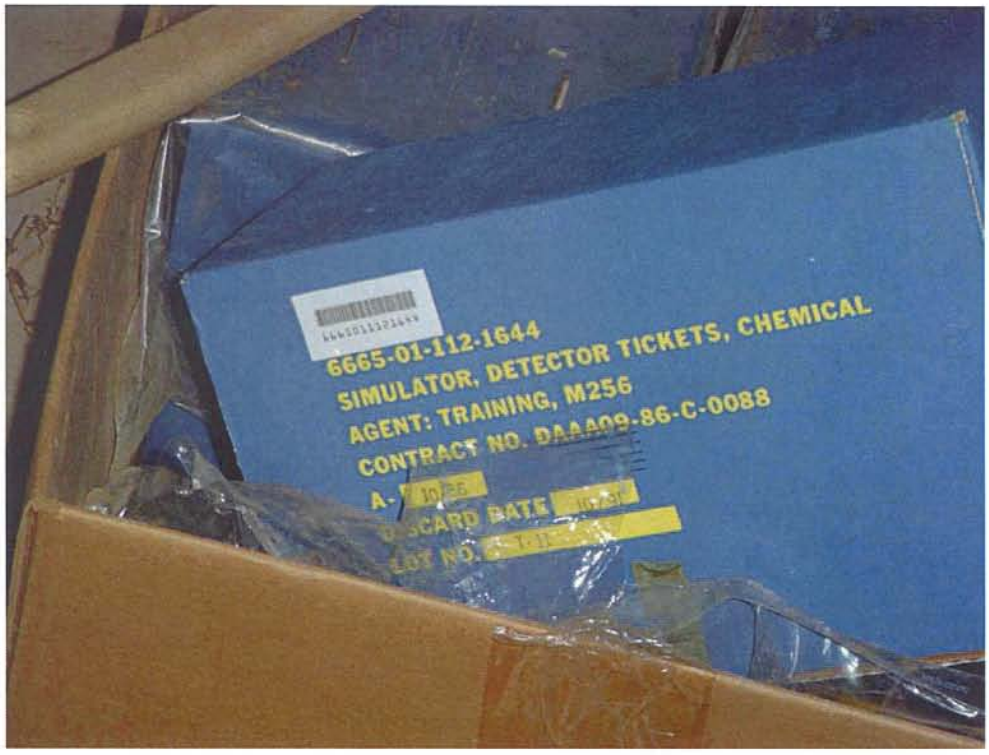
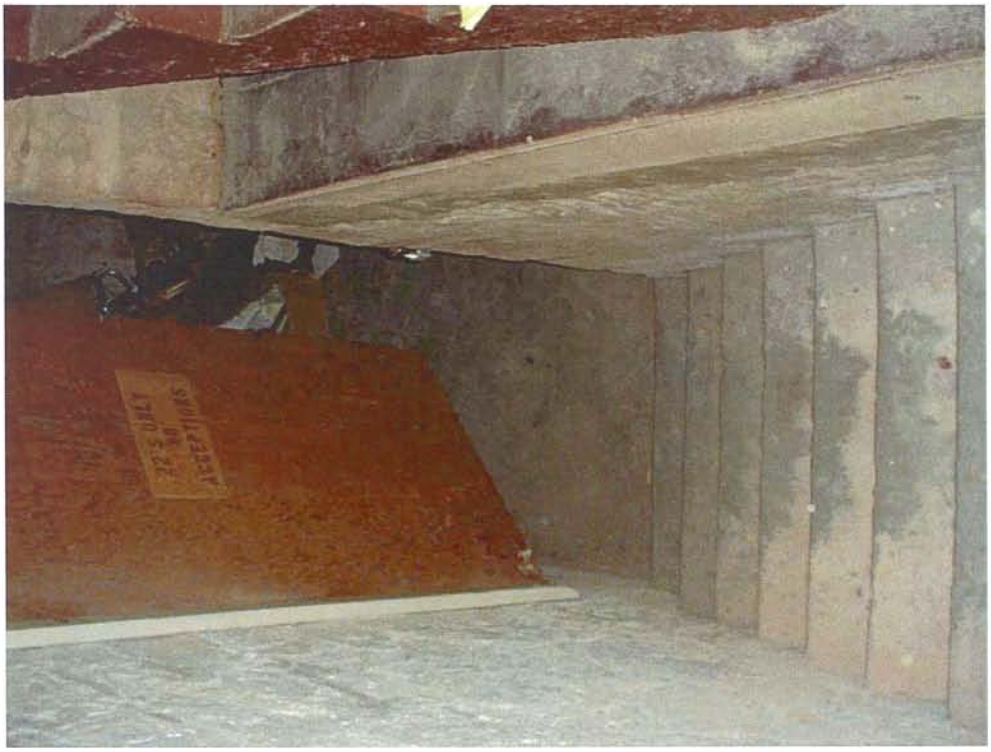


Photograph #42-33

Photograph #42-34



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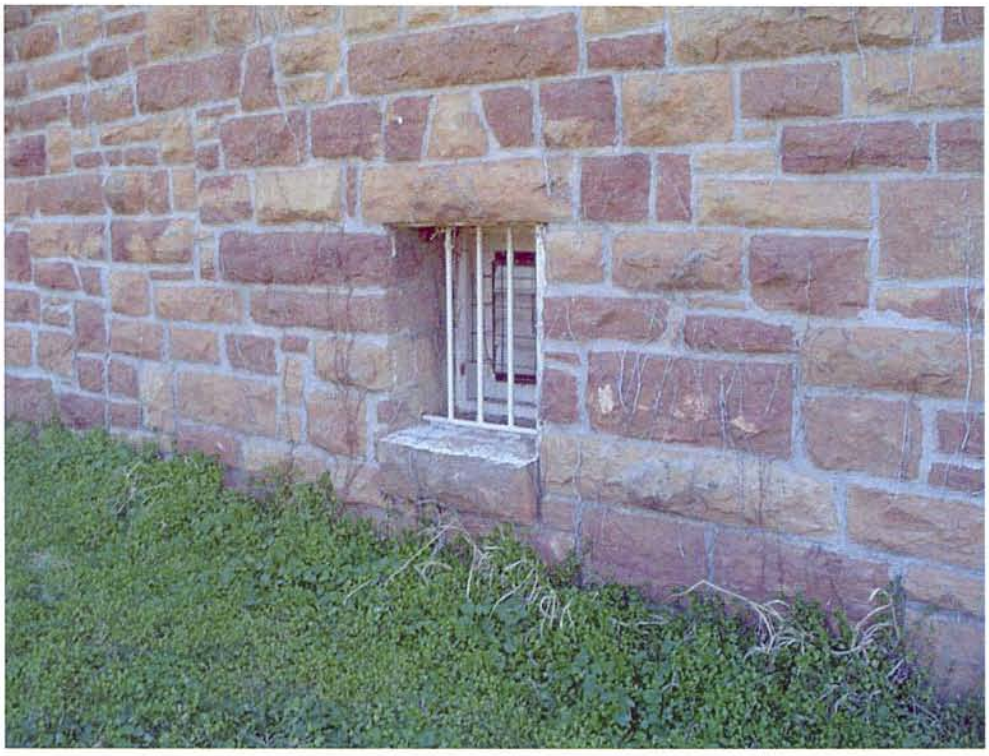
Photograph #42-36



Photograph #42-37

Appendix J: Soil Report

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Noble County, Oklahoma

Perry Armory TBA

September 15, 2009

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features

- Gully
- Short Steep Slope
- Other

Political Features

- Cities

Water Features

- Oceans
- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:853 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 14N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Noble County, Oklahoma
Survey Area Data: Version 8, Sep 16, 2008

Date(s) aerial images were photographed: 7/4/2003

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Noble County, Oklahoma (OK103)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
APPA	Ashport, Port, and Pulaski soils, 0 to 1 percent slopes, frequently flooded	0.8	20.2%
DaUA	Dale-Urban land complex, 0 to 1 percent slopes, rarely flooded	0.6	15.5%
GAMD	Grainola-Ashport-Mulhall complex, 0 to 8 percent slopes	1.4	35.4%
NoUC	Norge-Urban land complex, 1 to 5 percent slopes	1.1	28.9%
Totals for Area of Interest		**3.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic

classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Noble County, Oklahoma

APPA—Ashport, Port, and Pulaski soils, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

Elevation: 700 to 1,300 feet
Mean annual precipitation: 33 to 40 inches
Mean annual air temperature: 57 to 60 degrees F
Frost-free period: 200 to 215 days

Map Unit Composition

Ashport and similar soils: 61 percent
Pulaski and similar soils: 15 percent
Port and similar soils: 15 percent
Minor components: 9 percent

Description of Ashport

Setting

Landform: Valley flats on flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-silty alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water capacity: High (about 11.8 inches)

Interpretive groups

Land capability (nonirrigated): 5w
Ecological site: Loamy Bottomland PE 44-64 (R080AY050OK)

Typical profile

0 to 14 inches: Silty clay loam
14 to 27 inches: Silt loam
27 to 80 inches: Stratified fine sandy loam to silty clay loam

Description of Port

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Calcareous loamy alluvium

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water capacity: High (about 11.7 inches)

Interpretive groups

Land capability (nonirrigated): 5w
Ecological site: Loamy Bottomland PE 44-64 (R080AY050OK)

Typical profile

0 to 7 inches: Fine sandy loam
7 to 27 inches: Silt loam
27 to 46 inches: Silt loam
46 to 51 inches: Silt loam
51 to 80 inches: Silt loam

Description of Pulaski

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water capacity: Moderate (about 8.9 inches)

Interpretive groups

Land capability (nonirrigated): 5w
Ecological site: Loamy Bottomland PE 48-64 (R084AY050OK)

Typical profile

0 to 9 inches: Fine sandy loam
9 to 25 inches: Fine sandy loam
25 to 80 inches: Stratified loamy fine sand to loam

Minor Components

Easpur

Percent of map unit: 9 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Loamy Bottomland PE 44-64 (R080AY050OK)

DaUA—Dale-Urban land complex, 0 to 1 percent slopes, rarely flooded

Map Unit Setting

Elevation: 700 to 1,300 feet
Mean annual precipitation: 33 to 40 inches
Mean annual air temperature: 57 to 60 degrees F
Frost-free period: 200 to 215 days

Map Unit Composition

Dale and similar soils: 48 percent
Urban land: 42 percent
Minor components: 10 percent

Description of Dale

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: High (about 12.0 inches)

Interpretive groups

Land capability (nonirrigated): 1

Typical profile

0 to 13 inches: Silt loam
13 to 22 inches: Silty clay loam
22 to 34 inches: Silty clay loam
34 to 50 inches: Clay loam
50 to 80 inches: Clay loam

Description of Urban Land

Setting

Parent material: Fine-silty mine spoil or earthy fill derived from sandstone and shale

Properties and qualities

Slope: 0 to 1 percent
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 2.00 in/hr)
Frequency of flooding: Rare
Available water capacity: Very low (about 0.0 inches)

Interpretive groups

Land capability (nonirrigated): 8

Typical profile

0 to 60 inches: Variable

Minor Components

Easpur

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Norge

Percent of map unit: 5 percent
Landform: Paleoterraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex

GAMD—Grainola-Ashport-Mulhall complex, 0 to 8 percent slopes

Map Unit Setting

Elevation: 800 to 1,300 feet
Mean annual precipitation: 34 to 39 inches
Mean annual air temperature: 57 to 60 degrees F
Frost-free period: 200 to 215 days

Map Unit Composition

Grainola and similar soils: 26 percent
Ashport and similar soils: 21 percent
Mulhall and similar soils: 20 percent
Minor components: 33 percent

Description of Grainola

Setting

Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous clayey residuum weathered from shale

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water capacity: Low (about 5.7 inches)

Interpretive groups

Land capability (nonirrigated): 4e
Ecological site: Claypan Prairie (North) PE 44-64 (R080AY010OK)

Typical profile

0 to 4 inches: Silty clay loam
4 to 14 inches: Silty clay
14 to 36 inches: Silty clay
36 to 40 inches: Bedrock

Description of Ashport

Setting

Landform: Valley flats on drainageways
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine-silty alluvium

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 41 to 79 inches to densic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: High (about 9.1 inches)

Interpretive groups

Land capability (nonirrigated): 5w
Ecological site: Loamy Bottomland PE 44-64 (R080AY050OK)

Typical profile

0 to 13 inches: Silty clay loam
13 to 32 inches: Silt loam
32 to 40 inches: Silt loam
40 to 46 inches: Silty clay loam
46 to 58 inches: Silty clay

Description of Mulhall

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Concave
Parent material: Loamy colluvium over silty residuum weathered from shale

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: High (about 9.4 inches)

Interpretive groups

Land capability (nonirrigated): 4e
Ecological site: Loamy Prairie PE 44-64 (R080AY056OK)

Typical profile

0 to 10 inches: Loam
10 to 14 inches: Loam
14 to 23 inches: Clay loam
23 to 33 inches: Clay loam
33 to 42 inches: Clay loam
42 to 56 inches: Clay loam
56 to 80 inches: Clay loam

Minor Components

Kingfisher

Percent of map unit: 10 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Loamy Prairie PE 44-64 (R080AY056OK)

Lucien

Percent of map unit: 9 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Shallow Prairie PE 44-64 (R080AY083OK)

Renfrow

Percent of map unit: 7 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Linear

Ecological site: Claypan Prairie (North) PE 44-64 (R080AY010OK)

Pawhuska

Percent of map unit: 7 percent
Landform: Hillslopes on hills
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Slickspot PE 44-64 (R080AY091OK)

NoUC—Norge-Urban land complex, 1 to 5 percent slopes

Map Unit Setting

Elevation: 700 to 1,300 feet
Mean annual precipitation: 33 to 40 inches
Mean annual air temperature: 57 to 60 degrees F
Frost-free period: 200 to 215 days

Map Unit Composition

Norge and similar soils: 55 percent
Urban land: 30 percent
Minor components: 15 percent

Description of Norge

Setting

Landform: Paleoterraces
Landform position (three-dimensional): Riser
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy alluvium

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Available water capacity: High (about 11.5 inches)

Interpretive groups

Land capability (nonirrigated): 3e

Typical profile

0 to 7 inches: Silt loam

7 to 10 inches: Silt loam
10 to 20 inches: Silty clay loam
20 to 39 inches: Silty clay loam
39 to 45 inches: Silty clay loam
45 to 80 inches: Silty clay loam

Description of Urban Land

Setting

Parent material: Silty mine spoil or earthy fill

Interpretive groups

Land capability (nonirrigated): 8

Typical profile

0 to 60 inches: Variable

Minor Components

Bethany

Percent of map unit: 5 percent
Landform: Plains on paleoterraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear

Dale

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Milan

Percent of map unit: 5 percent
Landform: Hillslopes on paleoterraces
Landform position (two-dimensional): Backslope
Down-slope shape: Convex
Across-slope shape: Convex

Appendix K: National Register Properties Report

National Register Properties in Oklahoma

PERRY ARMORY

For more information Click here

Complete National Register Site Documentation: Click Here

Image may be distorted for Actual Size Image :- Click Here

DESCRIPTION: THE PERRY ARMORY WAS A 1936 PROJECT OF THE WORKS PROGRESS ADMINISTRATION IN NOBLE COUNTY.

THE ARMORY IS A SINGLE-STORY RECTANGULAR BUILDING CONSTRUCTED OF RUSTICATED AND CUT NATIVE STONE IN A RANDOM COURSED ASHLAR PATTERN. THE BUILDING IS A CENTRAL BLOCK AND WINGS TYPE WITH A CENTRAL, BARREL ROOFED DRILL HALL, AND ADMINISTRATIVE AND OTHER FACILITIES LOCATED IN THE FLAT ROOFED WINGS TO EITHER SIDE. LISTED IN THE NATIONAL REGISTER, 5/20/1994.

NR ID Number	88001362
Historic Name	PERRY ARMORY
Current Name	
Project Name	WPA PUBLIC BUILDINGS, RECREATIONAL FACILITIES AND WATER QUALITY IMPROVEMENTS IN NORTHWESTERN OKLAHOMA, 1935-1943
Latitude	36.28706
Longitude	-97.29943
Address	DELAWARE AND FOURTEENTH STREETS
City	PERRY
County	NOBLE
County code	103
Lot	
Block	73 AND 74, NORTH SECOND WEST PERRY ORIGINAL
Section	
Township	
Range	
Type	BUILDING
Historic Function	DEFENSE: ARMS STORAGE
Current Function	DEFENSE: ARMS STORAGE
Area Significance 1	ARCHITECTURE
Area Significance 2	MILITARY
Architect / Builder	WORKS PROGRESS ADMINISTRATION - BUILDER
Date Prepared	1988
Year Built	1936
Original Site	YES

Architectural Style	OTHER (WPA STANDARDIZED STYLE)
Roof Material	ASPHALT
Wall Material	STONE
Window Material	METAL
Door Material	UNCOLLECTED
Decorative Detail	
Condition	GOOD

Comments:-

DOCUMENTATION SOURCES: (CONT) HISTORICAL ANNUAL: NATIONAL GUARD OF THE STATE OF OKLAHOMA, 1938, BATON ROUGE, LA: ARMY AND NAVY PUBLISHING COMPANY, 1938; "INDEX TO REFERENCE CARDS FOR WORKS PROJECTS ADMINISTRATION PROJECT FILES, 1935-1942", WASHINGTON D.C.: WPA, 1942, MICRO T-935, REEL 54.

Appendix L: Qualification(s) of Environmental Professionals

Environmental Professional Qualifications

Travis Estes is currently working on a Masters Degree in Regional and City Planning at the University of Oklahoma. As an environmental intern, he has been involved with DEQ's Brownfield Program working to update and revise Brownfield's regulatory rules, the ARRA grant process, and Targeted Brownfield Assessments.

Heather Mallory holds a Bachelors and Masters Degree in Environmental Science from the University of Oklahoma. Mrs. Mallory has 7 years experience in environmental sampling and technical studies. She is an Environmental Programs Specialist with the Land Protection Division of the Oklahoma Department of Environmental Quality. Her responsibilities include: project management of various sites in the Voluntary Cleanup Program, conducting and reviewing Targeted Brownfield Assessments, and project management of National Environmental Policy Act related activities for the Tar Creek buyout.

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 seventeen years, working in the Superfund and Brownfields Programs. She has over seventeen 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 Brownfield Memorandum of Agreement (MOA) with EPA, and the development of Oklahoma's Brownfield Cleanup Revolving Loan Program.