

December 13, 2019

Mr. Ken Kalman
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2738

Mr. Paul Davis
Oklahoma Department of Environmental Quality
707 North Robinson
Oklahoma City, OK 73101

Mr. Robert Evans
U.S. Nuclear Regulatory Commission
1600 East Lamar Blvd; Suite 400
Arlington, TX 76011-4511

Ms. Kary Stackelbeck
Oklahoma Archeological Survey
The University of Oklahoma
111 E. Chesapeake, Room 102
Norman, Oklahoma 73019-5111

Re: Docket No. 70-925; License No. SNM-928
Proposed Scope of Work for Cultural Resources Survey

Dear Sirs:

Solely as Trustee for the Cimarron Environmental Response Trust (CERT), Environmental Properties Management LLC (EPM) submits herein a proposed scope of work for a cultural resources survey to be performed by EPM contractor Burns & McDonnell Engineering Company (Burns & McDonnell).

This scope of work is submitted at the request of Ms. Christine Pineda. Ms. Pineda needs information on the potential cultural resources present at the site to prepare the environmental assessment that will be required to amend License SNM-938 to re-define the licensed area. Ms. Pineda requested that EPM submit a proposed scope of work to the US Nuclear Regulatory Agency (NRC) and the Oklahoma Archeological Survey (OAS) to ensure that the work performed will satisfactorily investigate the property owned by the CERT. This scope of work is also being provided to the Oklahoma Department of Environmental Quality (DEQ), because their approval to perform and fund the survey is needed.

Upon receipt of comments from all three agencies, Burns & McDonnell will finalize the scope of work. The work will not be initiated until the NRC and the DEQ approve the funding. EPM will keep you informed of the status of the work during routine project status teleconferences.



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Should you have questions regarding the attached scope of work, please feel free to contact me at jlux@envpm.com or at (405) 642-5152, or Mr. Dan Rodriguez at dprodriguez@burnsmcd.com or at (817) 570-0009.

Sincerely,

Jeff Lux, P.E.
Trustee Project Manager

Attachment

cc: NRC Public Document Room (electronic copy only)



December 13, 2019

Jeff Lux
Environmental Properties Management
615 North Hudson, Suite 200
Oklahoma City, OK 73102

Re: Proposed Scope of Work for Cultural Resources Survey of the Cimarron Environmental Remediation Site, Logan County, Oklahoma

Dear Mr. Lux:

Cimarron Environmental Response Trust (CERT) is proposing to construct the Cimarron Environmental Remediation Site Project (Project) in Logan County, Oklahoma (Attachment A: Figure A-1). The proposed Project is located on U. S. Geological Survey (USGS) Crescent and Navina topographic quadrangle maps at Township 16 N, Range 4 W, Section 12. The Project is under the jurisdiction of the U.S. Nuclear Regulatory Commission (NRC) and requires a Pre-Construction Notification (PCN) to the United States Army Corps of Engineers (USACE) Tulsa District under a Nationwide Permit (NWP) 12. It is our understanding that due to federal oversight, compliance with the terms of Section 106 of the National Historic Preservation Act (NHPA) is required. Burns & McDonnell Engineering Company (Burns & McDonnell) provides herein a proposed scope of work to perform a cultural resources survey of the approximately 500-acres owned by the CERT, plus an additional approximately 30 acres of property owned by Cimarron Holdings LLC (on which remediation activities will be conducted).

Area of Potential Effects (APE)

The APE is defined as the approximately 530-acre property shown on Attachment A: Figure A-1). The average anticipated depth of impacts are 18 to 36 inches (0.5 to 0.9 m) associated with water discharge piping installation and water conveyance systems, and a maximum of 30 feet associated with extraction and injection trenches.

Background Review

A Burns & McDonnell archeologist performed a cultural resources background review of the Project Area and a 1-mile buffer at the Oklahoma Archeological Survey (OAS) in Norman, Oklahoma and online using the architectural Oklahoma Landmark Inventory (OLI) and National Register of Historic Places (NRHP) NPGallery Database, and historic-age USGS maps. These resources were consulted to identify historic properties listed or eligible for listing on the National Register of Historic Places (NRHP) that may be affected by the proposed Project and to assess the potential for previously unrecorded cultural resources with the Project Area or APE.

The records review revealed three previously conducted cultural resources surveys within the 1-mile radius, none of which intersect with the APE (Table 1; Attachment A: Figure A-2).

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Table 1: Previous Cultural Resources Surveys within One Mile of the Project Area or APE

Date	Surveyed by	Agency	Intersects Project Area or APE
10/14/1999	Duncan	NRCS-FEMA	No
4/30/2010	O'Shea	ODOT	No
7/2/2004	Graystone	FCC	No

The review also identified one previously recorded archeological site within the 1-mile buffer (see Attachment A: Figure A-2). Site 34LG91 is a historic-age farmstead determined ineligible for NRHP inclusion. The site is not within the proposed APE. No historic properties listed or eligible for listing on the NRHP or additional previously recorded cultural resources were identified within the Project Area or 1-mile buffer in an examination of the OLI and the NRHP NPGallery Database.

A review of historic-age maps covering the APE identified that two buildings once stood within the APE. The buildings are depicted on the USGS Kingfisher, OK, Topographic Quadrangle map dating to 1892, revised 1922 (Attachment A: Figure A-3). These buildings are missing on subsequent maps dating from 1954, 1957, and 1963 (USGS 2019). Additionally, the 1970 USGS Crescent, OK, Topographic Quadrangle map depicts the current buildings and 'Sewage Disposal Ponds' within the APE. These detention ponds are no longer extant as of 1991 aerial photographs (NETR 2019).

The proposed Project is located on the south bank of the Cimarron River with Holocene-age alluvium within the floodplain and Permian-age Garber Sandstone composing the river bluff (Heran et al. 2003). Soils are mapped as both the Yahola-Gracemore-Goodnight-Gaddy (s6236) and the Vanoss-Teller-Norge-Konawa (s6276), respectively (NRCS 2019). The Yahola-Gracemore-Goodnight-Gaddy Complex is composed mainly of sandy or loamy soils derived predominately from Holocene-age alluvium. The Vanoss-Teller-Norge-Konawa Complex is also composed of sandy and loamy soils derived predominately from Pleistocene-age alluvium (NRCS 2019). Topographic maps indicate that the Cimarron River has meandered through this flood plain in recorded history leaving a smaller area of intact alluvial deposits (Attachment A: Figure A-4).

Proposed Scope of Work

A pedestrian survey with shovel testing will be conducted across the approximate 530-acre Project Area (Attachment A: Figure A-4). The survey team will be led by a Principal Investigator who meets the Secretary of the Interior's (SOI) standards as a professional archaeologist. The archaeological field survey will include a pedestrian survey and shovel testing in settings that have potential for buried cultural materials. Shovel tests will be conducted approximately one per

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3 acres or less across the Project. Additional shovel tests will be excavated to determine the boundaries of any archeological sites identified within the Project Area. Typically, site boundaries are defined by a series of shovel tests along transects radiating in the four cardinal directions, or if more appropriate, along perceived major and minor site axes. All shovel tests will be excavated to approximately 3.3 feet (1 m) below the surface or until pre-Holocene soils, soil compaction, or bedrock is reached.

Shovel tests will be excavated to an average depth of approximately 30 centimeters [cm] below surface (cmbs) (12 inches) in the clayey soils and screened through 0.65 cm (0.25-inch) mesh when possible. Clay matrices will be finely divided by hand tools and visually inspected for cultural remains. All cultural materials identified will be recorded in the field but not collected. Archeological sites will be recorded on Oklahoma Archeological Site Survey Forms and submitted to OAS to obtain official state trinomials. Shovel test locations will be recorded using Global Positioning System (GPS) equipment. Artifacts identified during survey will be photographed and analyzed in the field but not collected. Field analysis will include descriptions of artifact type, material, color, method of manufacture, decoration, maker's marks, and any other potentially diagnostic attributes. Artifact photographs will include close-ups of diagnostic attributes. Standing historic resources will be photographed and documented by archeologists onsite and reviewed by a SOI qualified historian.

In addition to the pedestrian survey, mechanical deep testing will be conducted in the defined intact area of the flood plain of the Cimarron River (see the "Area of Trenching" in Attachment A: Figure A-4). Deep testing will be conducted at an interval of one per 6 acres. Burn & McDonnell will subcontract a mechanical excavator and operator. The excavator will be fitted with an approximately 3-foot-wide toothless bucket. Trenches will be approximately 15 feet (4.6 m) long and approximately 3 feet (1 m) wide. Mechanized excavations will proceed in a slow, controlled manner from the ground surface to a depth of 4 feet (1.2 m). A bench will be excavated along one side to a depth of 2 feet (0.6 m). Trench walls will then be closely examined for the presence of archaeological deposits, a vertical section will be scraped clean, and a stratigraphic profile will be recorded. Trench locations will be mapped using a GPS unit with sub-meter accuracy. After examination, each trench will be slowly excavated down to the level at which pre-Holocene soils or water table is reached, or to the maximum reach of the excavator arm. At that point, the stratigraphic profile will be completed. During excavation, trench spoil pile will be visually inspected for artifacts and other evidence of archaeological deposits. A sample of sediment will be screened if buried soils or archaeological artifacts were encountered. All trenches will be photographed upon completion and then backfilled. All trenching operations will conform to current Occupational Safety and Health Administration standards and guidelines. Artifacts identified during deep testing will be described and photographed in the field, but not collected.



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Reporting

The results of either survey option and deep testing will be summarized in a report that would follow SHPO/OAS *Guidelines for Developing Archaeological Survey Reports in Oklahoma and Report Components* and the reporting requirements under Section 106. The report will provide the NRHP eligibility assessments of any resources identified during the survey as well as recommendations for potential avoidance or mitigation of project impacts.

It is our understanding that Environmental Properties Management will submit this proposed scope of work to the NRC, the OAS, and the Oklahoma Department of Environmental Quality (DEQ) for their review. Upon receipt of comments from the agencies, Burns & McDonnell will revise the scope if recommended, and will advise EPM of any cost impact associated with the revised scope of work. Burns & McDonnell will not initiate the field work until the scope of work has been approved by the agencies and the agencies have approved the funding for the work. Should agency personnel have questions regarding this scope of work, they are welcome to contact me at dprodriguez@burnsmcd.com or (817) 570-0009.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel Rodriguez".

Daniel Rodriguez, MA, RPA
Staff Cultural Resources Specialist

Attachment A: Figures



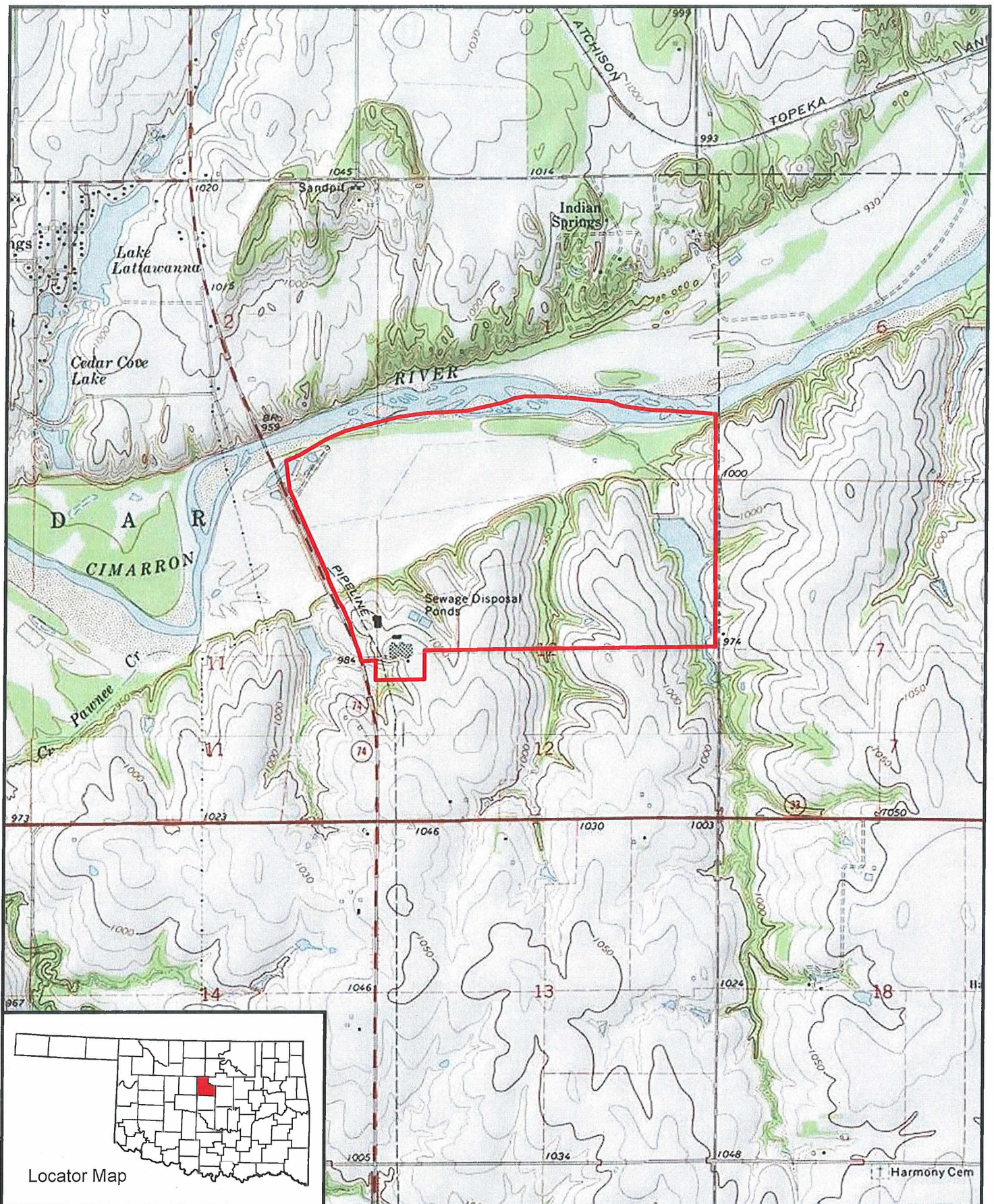
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References

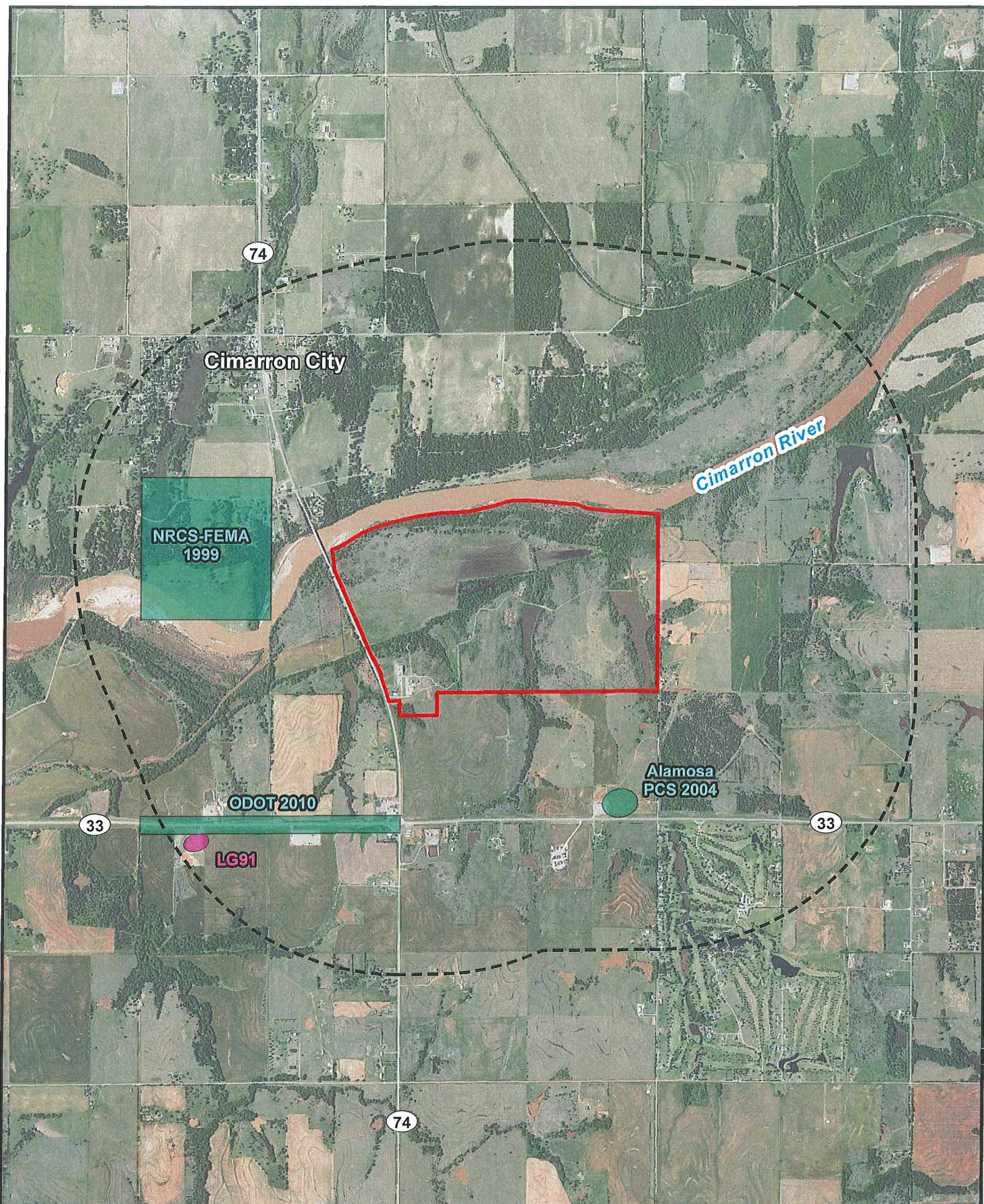
- Heran, W. D., Green, G. and Stoeser, D. B.
2003 *A Digital Geologic Map Database of Oklahoma: U.S.G.S. Open File Report 03-247.*
- National Resources Conservation Service (NRCS).
2019 *NRCS Web Soil Survey*. Retrieved November 18, 2019, from <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- Nationwide Environmental Title Research (NETR)
2019 *Historic Aerials Viewer*. Retrieved November 18, 2019, from <https://www.historicaerials.com/viewer>
- U.S. Geological Survey (USGS)
2019 *Texas Geology Web Map Viewer*. Retrieved November 18, 2019, from [/Txpub.usgs.gov](http://txpub.usgs.gov), txpub.usgs.gov/dss/texasgeology/

ATTACHMENT A - FIGURES

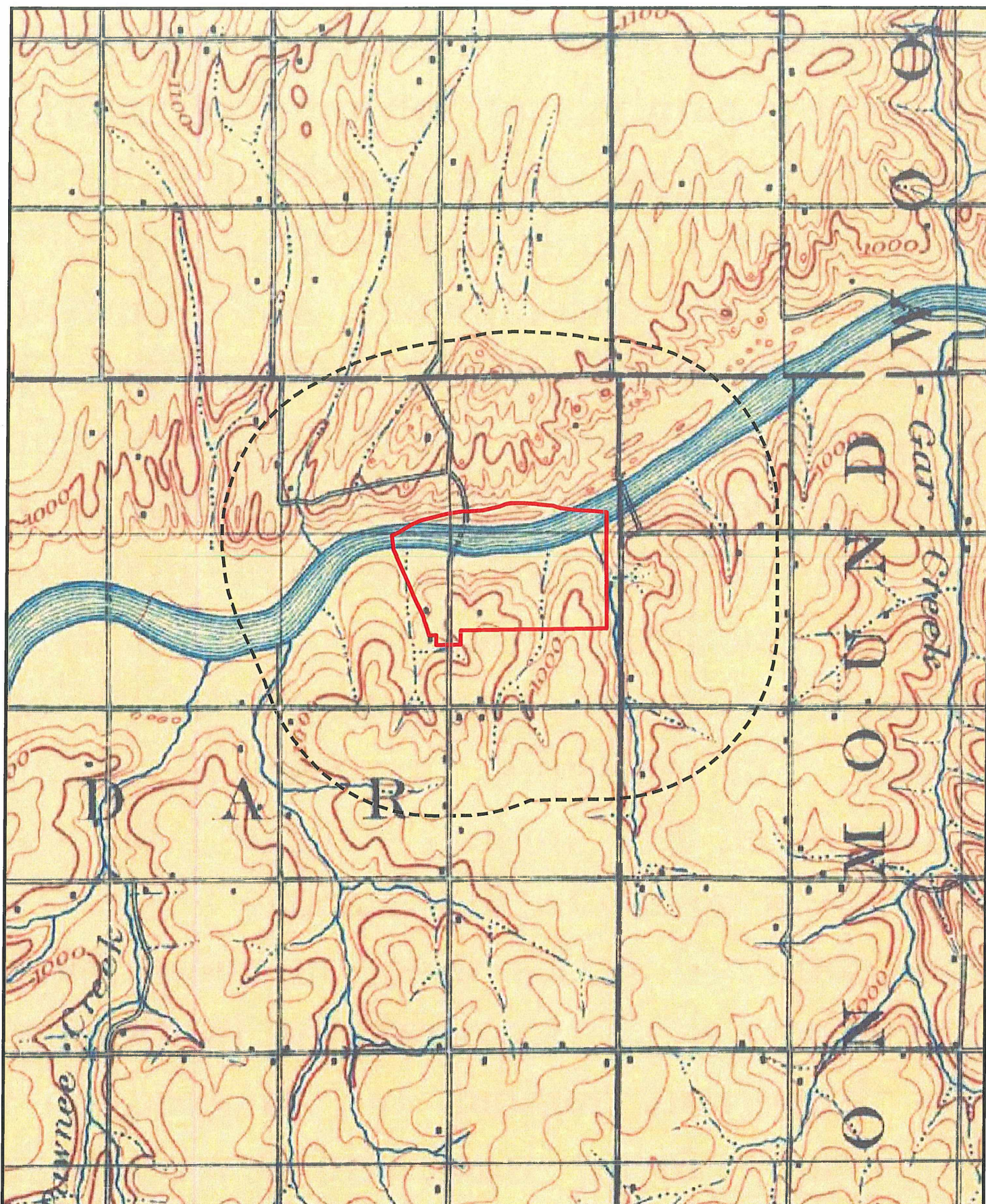
Path: Z:\Clients\ENSCERT\ ClientInfo\Sites\Database\Geospatial\Maps & Dwg\ArcGIS\BMC\CD_Files\Arcdocs\2019\2019 Cultural Resources Survey\Figure A-1 - Project Location.mxd kgouvin 11/26/2019
Service Layer Credits: Copyright © 2013 National Geographic Society, Inc.





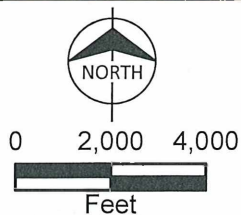
<p> Area of Potential Effect</p> <p> NORTH</p> <p>2,000 1,000 0 2,000  Feet</p>		<p>Attachment A: Figure A-1 Project Location Cimarron Environmental Response Trust Site Logan County, Oklahoma</p>
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<ul style="list-style-type: none"> Area of Potential Effect 1-mile Records Review Buffer Previously Recorded Archaeological Site Previously Conducted Archaeological Survey	 0 0.25 0.5 Miles		Attachment A: Figure A-2 Records Review Cimarron Environmental Response Trust Site Logan County, Oklahoma
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-  Area of Potential Effect
-  1-mile Records Review Buffer



Attachment A: Figure A-3
1892 USGS Map (revised 1922)
Cimarron Environmental
Response Trust Site
Logan County, Oklahoma

