AECOM

Submitted to
San Miguel Electric
Cooperative, Inc.
P.O. Box 280,
Jourdanton, Texas 78026

Submitted by
AECOM
9400 Amberglen Boulevard
Austin, Texas 78729

October 17, 2018

CCR Certification: Fault Area

§257.62

for the

Ash Pond, Equalization Pond and Ash Pile

at the

San Miguel Plant

Revision 0

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Executive Summary

This Coal Combustion Residuals (CCR) Certification for the Ash Water Transport Pond Complex (Ash Pond), Equalization Pond, and Ash Pile at the San Miguel Electric Plant (the San Miguel Plant) owned by the San Miguel Electric Cooperative, Inc. has been prepared in accordance with the requirements specified in the USEPA CCR Rule under 40 Code of Federal Regulations §257.62. These regulations require that the specified documentation and assessments for an existing CCR landfill and surface impoundment be prepared by October 17, 2018.

This Fault Area Certification for the Ash Pond, Equalization Pond, and Ash Pile units meet the regulatory requirements as summarized in **Table ES-1**.

Table ES-1 –Certification Summary

Report Section	CCR Rule Reference	Requirement Summary	Requirement Met?	Comments
2.1	§257.62	*Must not be located within 60 meters of the outermost damage zone of a fault area.*	Yes	The CCR units are not located within 60 meters of the outermost damage zone of a fault that has had displacement in Holocene time

The San Miguel Ash Pond, Equalization Pond and Ash Pile were found to meet all requirements as required within the individual assessment in §257.62.

1 Introduction

1.1 Purpose of this Report

The purpose of the Fault Area Certification, as presented in this report, is to document the requirements specified in 40 Code of Federal Regulations (CFR) §257.62 have been met to support the applicable regulatory provisions for the San Miguel Plant Ash Pond, Equalization Pond and Ash Pile. The Ash Pond, Equalization Pond and Ash Pile are existing coal combustion residual (CCR) surface impoundments and a containerized CCR pile, as defined by 40 CFR §257.53. The CCR Rule requires a Fault Area Certification be developed for each existing CCR surface impoundment by October 17, 2018.

The following table identifies the component of the Fault Area Certification which is discussed in §257.62.

Table 1-1 – CCR Rule Cross Reference Table

Report Section	Title	CCR Rule Reference
2.1.1	*Fault Area*	§257.62

1.2 Brief Description of CCR Units

The San Miguel Plant is located in south central Atascosa County in Christine, Texas. The plant is surrounded by open grassy areas, a majority of which is used as pastureland for livestock. The Plant has three CCR units which include two surface impoundments (the Ash Pond and Equalization Pond) and one landfill (the Ash Pile). A site Location Map showing the area surrounding the San Miguel Plant is included as **Figure 1** of **Appendix A**. **Figure 2** in **Appendix A** presents the San Miguel Plant Site Map.

Ash Pond

The Ash Pond System contains two pond cells, Ash Pond A on the north side and Ash Pond B immediately adjacent to the south. The system was constructed as a side-hill impoundment with the northern dike at or near natural grade and includes a central “splitter dike” that separates the pond into north and south sections with a connecting weir. The Ash Pond is generally only closed to isolate the north or south pond for cleaning. According to a San Miguel representative, the Ash Pond was last dredged in 2016.

The total dike perimeter of the Ash Pond is approximately 6,000 feet, and the approximate surface area is 26 acres. The maximum dike height is approximately 20 feet, with side slopes ranging from 2.5 to 1 to 3.0 to 1 (horizontal to vertical), and an average crest width of 10 feet. The elevation of the dike crest is 315 feet[1] with a maximum pool water surface elevation of 313.5 feet (18-inches below crest).

[1] Unless otherwise noted, all elevations in this report are in the NAVD88 datum.

Equalization Pond

The Equalization Pond is a diked impoundment that shares its western dike with a water well storage pond. The perimeter length around the Equalization Pond is approximately 4,800 feet, and the surface area is approximately 25 acres. The maximum dam height is approximately 20 feet with 3 to 1 (horizontal to vertical) side slopes and an average crest width of 10 feet. The elevation of the dike crest is 295.0 feet with a maximum pool level gage elevation of 293.0feet (24 inches below crest).

Ash Pile

The Ash Pile is a temporary storage area of approximately 1.0 acre that is classified as an existing containerized CCR Pile. Located northwest of the Plant, the Ash Pile is used to stage a stabilized mixture of fly ash and flue gas desulfurization (FGD) scrubber waste treatment sludge.

It is assumed that the Ash Pile sits on top of compacted construction fill, underlain by a layer of clayey soils acting as protection for the groundwater. A concrete wall partially contains the Ash Pile on the east side and a steel wall contains the Ash Pile on the south side.

2 Fault Area

Regulatory Citation: 40 CFR §257.62 Fault Area

The Fault Area Certifications for the Ash Pond, Equalization Pond and Ash Pile are described in this section.

2.1 Fault Areas

Regulatory Citation: 40 CFR §257.62 (a);

- *New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located within 60 meters (200 feet) of the outermost damage zone of a fault that has had displacement in Holocene time unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that an alternative setback distance of less than 60 meters (200 feet) will prevent damage to the structural integrity of the CCR unit.*

Based on **Figure 3** and **Figure 4** in **Appendix A** showing the site location on a map depicting the nearest faults, the Ash Pond, Equalization Pond and Ash Pile are not located within 60 meters of the outermost damage zone of a fault that has had displacement in Holocene time. A geologic reconnaissance of published data did not indicate any active faults within 1000 meters of any of the CCR units. Therefore no site fault characterization was warranted.

3 Certification

This Certification Statement documents that the Ash Pond, Equalization Pond and Ash Pile at the San Miguel Plant meets the Fault Area Certification requirements specified in 40 CFR §257.62. The Ash Pond, Equalization Pond and Ash Pile are existing CCR surface impoundments as defined by 40 CFR §257.53. The CCR Rule requires that a Fault Area Certification be prepared for any existing CCR surface impoundments by October 17, 2018.

CCR Unit: San Miguel Plant; Ash Pond, Equalization Pond and Ash Pile

I, Ananth Bukkapatnam, being a Registered Professional Engineer in good standing in the State of Texas, do hereby certify, to the best of my knowledge, information, and belief that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above referenced CCR Unit, that the Fault Area Certification dated October 17, 2018 meets the requirements of 40 CFR §257.62.

ANANTH T. BUKKAPATNAM

Printed Name

10 - 11 - 2018

Date

4 Limitations

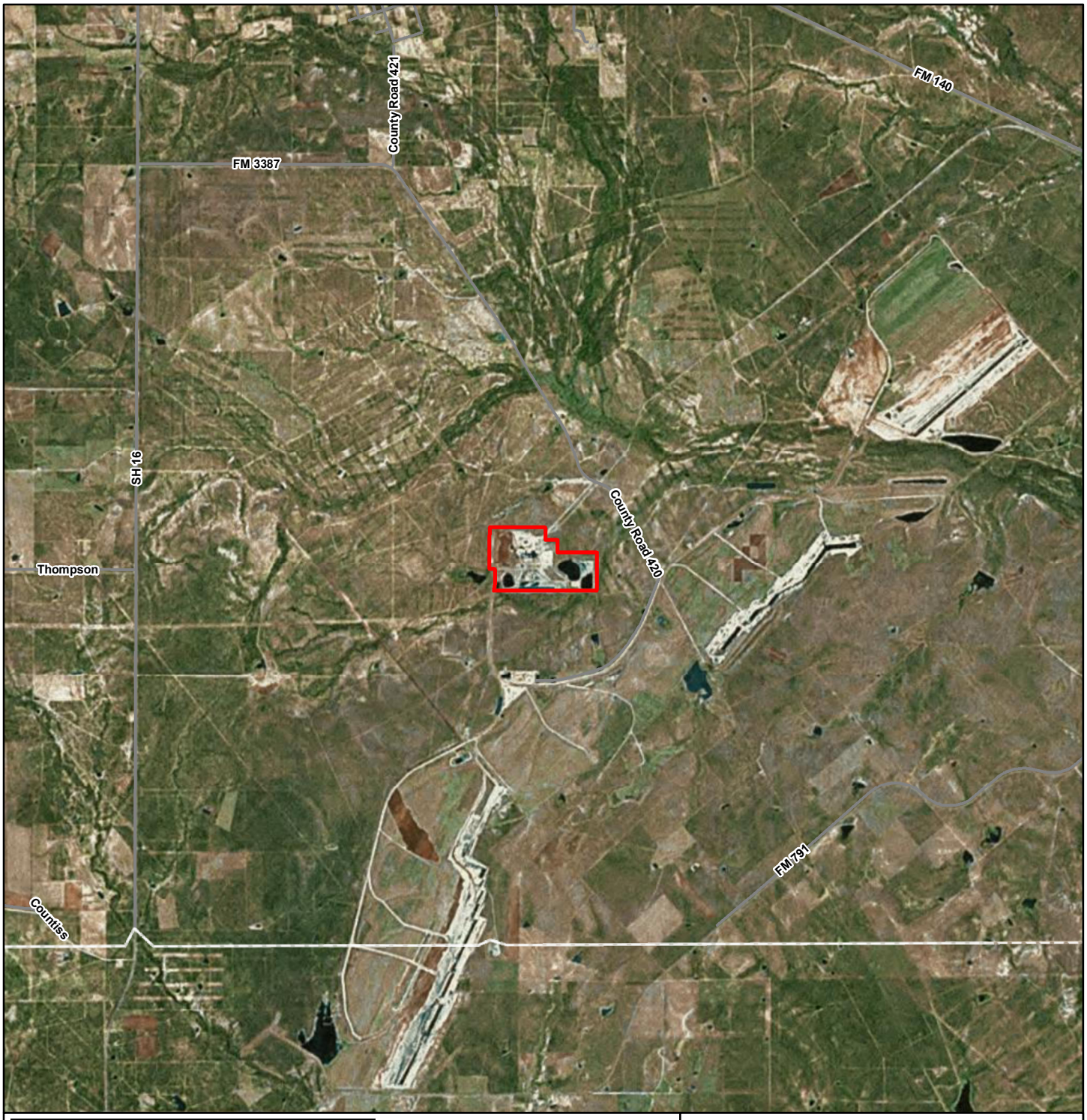
In preparing this report, AECOM has reviewed background information, design basis, and other data furnished to AECOM by SMECI, as well as relevant available information from previous and current investigations of the site. AECOM has relied on this information as furnished without independent verification, and is not responsible for the accuracy or completeness of this information. AECOM shall not be held responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed by SMECI at the time this report was prepared. In addition, the conclusions expressed in this report are subject to certain conditions and assumptions, which are noted in this report and below. Any party reviewing this report must carefully review and consider all such conditions and assumptions.

The conclusions made in this report are based on the geologic reconnaissance of published data. The conclusions in this report are also based on AECOM's understanding of current plant operations, maintenance, storm water handling, and ash handling procedures at the station based on information provided by SMECI. The passage of time may result in changes in site conditions and variations, technology, economic conditions, and regulatory provisions, all which could render the report inaccurate.

This report was prepared by AECOM in accordance with generally accepted engineering and scientific practice in effect at the time of AECOM's assessment of the subject property. This report was prepared pursuant to an agreement between AECOM and SMECI and is for the exclusive use of the SMECI. Any other reliance on this report shall be at the user's sole risk.

Appendix A
Figures

Figure 1 – Site Location Map
Figure 2 – Aerial Photograph Map
Figure 3 – Geology Map
Figure 4 – Fault Map



Legend

Study Area

Roads

N

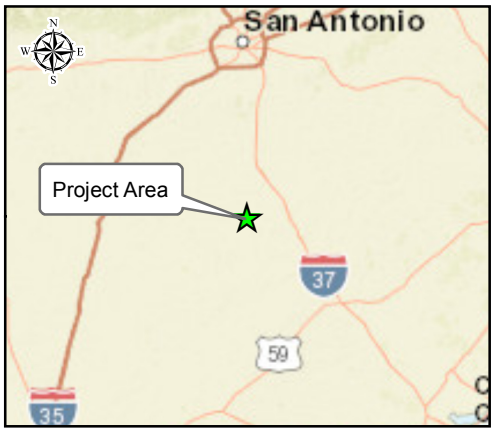
0 1 2 Miles

SITE LOCATION MAP

SAN MIGUEL ELECTRIC COOPERATIVE, INC.
FAULT AREAS CERTIFICATION

AECOM TECHNICAL SERVICES
112 E PECAN, SUITE 400
SAN ANTONIO, TX 78205
(210) 296-0000
(210) 296-2025
WWW.AECOM.COM

DATE DEC 2017	PROJECT 60530067	FIGURE 1



Legend

Study Area

0 500 1,000 Feet

N

Aerial Source: NAIP 2016 (10/10/2016)

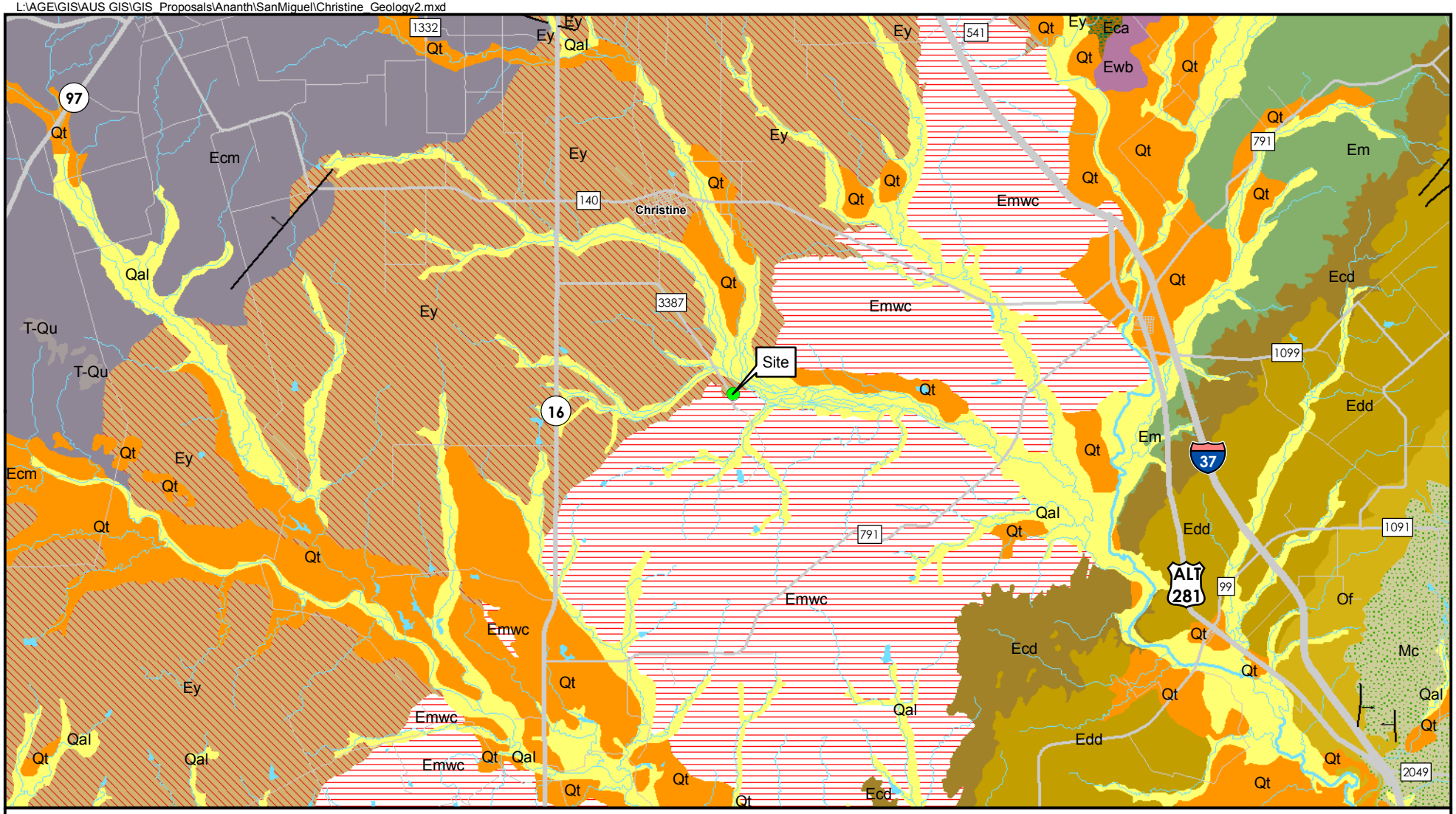
2016 AERIAL PHOTOGRAPH MAP

SAN MIGUEL ELECTRIC COOPERATIVE, INC.
FAULT AREAS CERTIFICATION

AECOM TECHNICAL SERVICES
112 E PECAN, SUITE 400
SAN ANTONIO, TX 78205
(210) 296-0000
(210) 296-2025
WWW.AECOM.COM

DATE DEC 2017	PROJECT 60530067	FIGURE 2

L:\AGE\GIS\AUS GIS\GIS_Proposals\Ananth\SanMiguel\Christine_Geology2.mxd



0 1.75 3.5 7 Miles

N

Geology

- Eca
- Ecd
- Ecm
- Edd
- Em
- Emwc
- Ewb
- Ey
- Mc
- Of
- Qal
- Qt
- T-Qu
- Normal Fault

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FIGURE 3 - GEOLOGY MAP

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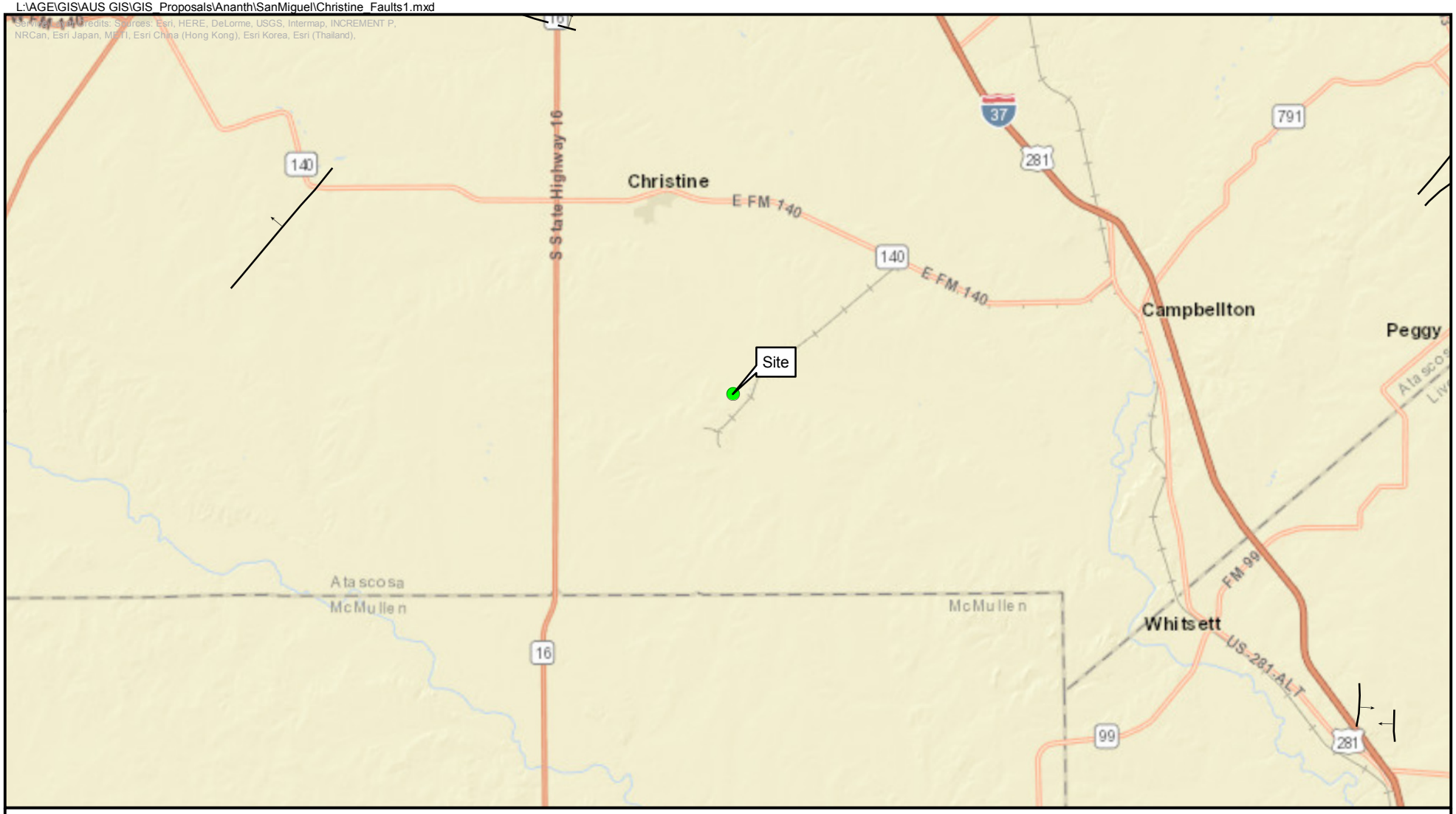

0 1.75 3.5 7 Miles

N

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Geology

Normal Fault

FIGURE 4 - FAULT MAP

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About AECOM

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government. With approximately 45,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and collaborative technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments. A Fortune 500 company, AECOM serves clients in more than 100 countries and has annual revenue in excess of $6 billion.