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Log # TXNB-10072

Ref. # 10 CFR 52

October 11, 2010

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555
ATTN: David B. Matthews, Director
Division of New Reactor Licensing

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 3 AND 4
DOCKET NUMBERS 52-034 AND 52-035
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION NO. 4957, 5027,
AND 5052

Dear Sir:

Luminant Generation Company LLC (Luminant) submits herein the response to Request for Additional Information (RAI) No. 4957, 5027, and 5052 for the Combined License Application for Comanche Peak Nuclear Power Plant Units 3 and 4. The RAIs involve communications systems, ITAAC, and paleoliquifaction, respectively.

Should you have any questions regarding this response, please contact Don Woodlan (254-897-6887, Donald.Woodlan@luminant.com) or me.

There are no commitments in this letter.

I state under penalty of perjury that the foregoing is true and correct.

Executed on October 11, 2010.

Sincerely,

Luminant Generation Company LLC

RF Flores
Rafael Flores *for*

- Attachments: 1. Response to Request for Additional Information No. 4957 (CP RAI #178)
2. Response to Request for Additional Information No. 5027 (CP RAI #177)
3. Response to Request for Additional Information No. 5052 (CP RAI #179)

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NRO*

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Luminant Records Management (.pdf files only)

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Attachment 1

Response to Request for Additional Information No. 4957 (CP RAI #178)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

**Comanche Peak, Units 3 and 4
Luminant Generation Company LLC
Docket Nos. 52-034 and 52-035**

RAI NO.: 4957 (CP RAI #178)

SRP SECTION: 09.05.02 - Communications Systems

**QUESTIONS for Instrumentation, Controls and Electrical Engineering 1 (AP1000/EPR Projects)
(ICE1)**

DATE OF RAI ISSUE: 9/9/2010

QUESTION NO.: 09.05.02-2

Title 10 CFR 52.79(a)(21) requires emergency plans complying with the requirements of 10 CFR 50.47 and 10 CFR 50, Appendix E. Title 10 CFR 52.79(a)(17) requires the submission of information with respect to compliance with technically relevant positions of the Three Mile Island requirements in 10 CFR 50.34(f). Title 10 CFR Part 50, Appendix E, Part IV.E(9)(d), 10 CFR 50.34(f)(2)(xxv), 10 CFR Part 50.47(a)(8) require, in part, provisions for offsite communications for the onsite operations support center. In the US-APWR DCD, Section 9.5.2.2.5.1, it states: "Plant offsite communications arrangements are site-specific and are described by the COL applicant." In the Comanche Peak Units 3 and 4 FSAR, Section 9.5.2.2.5.2, "Emergency Communications," Luminant states that "The offsite communications systems within the onsite Technical Support Center and operations support center provide for emergency response following a design basis accident. During emergencies, the TSC is the primary onsite communications center for the communications to the control room, the operations support center, and the NRC." Luminant does not specify which offsite communications systems are "within" the onsite operations support center. This is COL Item Number 9.5(8).

Luminant is requested to provide additional information regarding provisions for offsite communication capabilities for the onsite operations support center. If the communications provisions are not of a type already discussed in the application, please provide details regarding operation, power supply and backup capabilities.

ANSWER:

The Operations Support Center (OSC) is equipped with a Private Automatic Branch Telephone Exchange (PABX) system similar to that provided for the Technical Support Center (TSC) and the Emergency Operating Facility (EOF). This PABX telephone system is connected to the offsite commercial telephone system and provides voice and facsimile communications capability for normal and emergency communications between the control room, TSC, EOF, OSC, corporate offices, NRC, state agencies, and county Sheriff's offices.

The TSC is the primary off-site and on-site communications center for communications with the control room, the OSC, and the NRC until the EOF is activated and operational. The primary purpose of the OSC is to provide a centralized area and necessary support resources for the assembly of designated operations support personnel during emergency conditions. Although equipped with a means to communicate with off-site agencies through the PABX telephone system, the OSC does not have off-site emergency communications responsibility.

The PABX system is powered from the plant non safety-related load group and consists of independent chargers and batteries for each PABX node. The batteries have the capability to operate the plant telephone system for approximately eight hours following loss of normal ac. The PABX power source is described in DCD Subsection 9.5.2.2.2.3.

In addition to the PABX system, the plant communication systems for the OSC include the public address system/plant page-party system, the plant radio system, and the sound powered telephone system.

A review of the regulatory sections identified in the question concluded that there are no requirements for off-site communications for the on-site OSC.

FSAR Subsection 9.5.2.2.5.2 has been clarified

Impact on R-COLA

See attached marked-up FSAR Revision 1 page 9.5-21.

Impact on DCD

None.

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 2, FSAR

The offsite communications systems within the onsite Technical Support Center ~~and operations support center~~ provide for emergency response following a design basis accident. During emergencies, the TSC is the primary onsite communication center for the communications to the control room, the operations support center and the NRC.

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In addition, provisions for communication with state and local operations centers are provided in the onsite TSC to initiate early notification and recommendations to offsite authorities prior to activation of the EOF. This is in accordance with the requirements of 10 CFR 50 Appendix E, Part IV.E.9.

~~CPSTD~~ COL
9.5(5)
~~CPSTD~~ COL
9.5(6)
~~CPSTD~~ COL
9.5(9)

Replace sixth paragraph in DCD Subsection 9.5.2.2.5.2 with the following.

CTS-01140

The emergency offsite communication system serves as an alternate means of communication to notify local authorities of an emergency at the nuclear plant. Radios are provided for communications with the main control room, TSC, EOF, and local authorities.

This emergency radio communications system connects onsite and offsite monitoring teams with the operation support center and EOF respectively.

The plant is provided with separate telephone systems for operations and for security pursuant to 10 CFR 73.55(f). Data Communications is discussed in Section 7.9. Fire brigade communications is covered in Subsection 9.5.1.

The ~~CPNPP~~ emergency plan and security plan are described in Sections 13.3 and 13.6, respectively. These plans require testing of offsite communications links.

CTS-01140

9.5.2.3 Safety Evaluation

~~CPSTD~~ COL
9.5(7)

Add the following paragraph after the first paragraph in DCD Subsection 9.5.2.3.

CTS-01140

Plant specific safety evaluations and procedures are established by the plant operator to prevent any unauthorized access to secure locations and or unconfirmed removal of strategic special nuclear material in accordance with 10 CFR 73.45(e)(2)(iii).

9.5.4.3 Safety Evaluation

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Attachment 2

Response to Request for Additional Information No. 5027 (CP RAI #177)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Comanche Peak, Units 3 and 4

Luminant Generation Company LLC

Docket Nos. 52-034 and 52-035

RAI NO.: 5027 (CP RAI #177)

SRP SECTION: 14.03.07 - Plant Systems - Inspections, Tests, Analyses, and Acceptance Criteria

QUESTIONS for Technical Specification Branch (CTSB)

DATE OF RAI ISSUE: 9/9/2010

QUESTION NO.: 14.03.07-32

Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Items 2.a and 2.b in Table A.3-1

The regulatory basis for this question is 10 CFR 50.70 and 10 CFR 50, Appendix B, Criterion III, Design Control.

The NRC staff requested the applicant to revise these ITAAC for RAI question 14.03.07-10 (RAI Number 81 (3293) Question 13068) because the AC of both of these ITAAC refer to the "appropriate locations" for either flood barriers and water-tight doors instead of actual locations or locations as shown on figures or as indicated in tables. The applicant in its response, dated November 13, 2009, revised both ITAAC to perform an inspection to verify the existence of reports that indicate the locations of the flood barriers and water-tight doors. The staff agreed in part with the applicant's response in that the exact locations of the flood barriers and water-tight doors can be identified in a report similarly to figures and tables.

Nevertheless, it is the staff's position that the inspections for both ITAAC are of the as-built installations in order to verify the locations and integrity of both the flood barriers and water-tight doors for ITAAC Items 2.a and 2.b in Table A.3-1, respectively not for the existence of reports. The applicant is requested to provide a response that addresses the staff's concerns.

ANSWER:

The ITA for Items 2.a and 2.b have been revised to state that inspections of the as-built divisional flood barriers and water tight doors will be performed. This is consistent with the latest version of the DCD and the response to RAI No. 5004 (CP RAI #174) in letter TXNB-10067 dated October 6, 2010.

Impact on R-COLA

See attached marked-up COLA Part 10 Revision 1 page 31.

Impact on DCD

None.

**Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application
Part 10 - ITAAC and Proposed License Conditions
Appendix A.3**

**Table A.3-1 (Sheet 1 of 3)
UHSRS, ESWPT and PSFSV Inspections, Tests, Analyses, and Acceptance Criteria**

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The structural configurations of the UHSRS, ESWPT and PSFSV are as described in <u>Table A.3-2 as shown on FSAR Figures 3.8-201 through 3.8-214 and Table A.3-2.</u>	1. Inspections of the as-built structural configurations of the UHSRS, ESWPT and PSFSV will be performed.	1. The as-built design configurations of the UHSRS, ESWPT and PSFSV <u>conform to the structural configurations as described in Table A.3-2 and as shown on</u> are reconciled with descriptions in FSAR Figures 3.8-201 through 3.8-214 and <u>Table A.3-2.</u>
2.a Divisional flood barriers are provided in the UHSRS, ESWPT and PSFSV to protect against the internal and external flooding.	2.a An inspection will be performed to verify that the as-built divisional flood barriers exist in the UHSRS, ESWPT and PSFSV. <u>An inspection of the as-built divisional flood barriers in the UHSRS, ESWPT, and PSFSV will be performed.</u>	2.a <u>A report exists and concludes that</u> The as-built divisional flood barriers <u>exist at the appropriate locations conform with the design bases for the protection against internal and external flooding in the UHSRS, ESWPT and PSFSV against the internal and external flooding.</u>
2.b Water-tight doors are provided in the UHSRS, ESWPT and PSFSV to protect against the internal and external flooding.	2.b An inspection of the as-built water tight doors will be performed. <u>An inspection of the as-built water-tight doors in the UHSRS, ESWPT, and PSFSV will be performed.</u>	2.b <u>A report exists and concludes that</u> The as-built water-tight doors <u>exist at the appropriate locations conform with the design bases for the protection against internal and external flooding in the UHSRS, ESWPT and PSFSV against the internal and external flooding.</u>
3. Penetrations in the divisional walls of the UHSRS, ESWPT and PSFSV, except for water-tight doors, are provided appropriately against <u>sealed up to the internal and external flooding levels.</u>	3. An inspection of the as-built penetrations will be performed.	3. The as-built penetrations in the divisional walls of the UHSRS, ESWPT and PSFSV, except for watertight doors, are installed at an acceptable level above the floor, and are sealed up to the internal and external flooding levels.
4. For the UHSRS, ESWPT and PSFSV, external wall thicknesses are as <u>indicated in Table A.3-2 below flood level</u> is provided to protect against water seepage.	4. An inspection of the as-built external wall thickness for the UHSRS, ESWPT and PSFSV will be performed.	4. For the UHSRS, ESWPT and PSFSV, the as-built external walls <u>thicknesses are as indicated in Table A.3-2 below flood level</u> are provided with adequate thickness to protect against water seepage.

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RCOL2_14.03.07-9

RCOL2_14.03.07-10

RCOL2_14.03.07-32

RCOL2_14.03.07-10

RCOL2_14.03.07-11

RCOL2_14.03.07-7

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Attachment 3

Response to Request for Additional Information No. 5052 (CP RAI #179)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Comanche Peak, Units 3 and 4
Luminant Generation Company LLC
Docket Nos. 52-034 and 52-035

RAI NO.: 5052 (CP RAI #179)

SRP SECTION: 02.05.01 - Basic Geologic and Seismic Information

QUESTIONS for Geosciences and Geotechnical Engineering Branch 1 (RGS1)

DATE OF RAI ISSUE: 9/10/2010

QUESTION NO.: 02.05.01-21

NUREG-0800, Standard Review Plan (SRP), Chapter 2.5.1, 'Basic Geologic and Seismic Information, establishes criteria that the NRC staff intends to use to evaluate whether an applicant meets the NRC's regulations.

In your response to RAI No. 21 (3015) question 2.5.1-17, dated September 10, 2009, requesting a detailed description of field reconnaissance investigations of Quaternary-age deposits, you stated the following:

Generally, all publicly accessible locations in and around the site area were visited in order to verify the accuracy of the site area map, to search for signs of deformation in bedrock and surficial outcrops, and to search for paleoliquefaction features.

The response states that "significant aerial extents" of Quaternary alluvium exist in the site area and that these locations were inspected during the field reconnaissance for evidence of liquefaction or deformation. The response also states that little information was gathered on these deposits during the field reconnaissance investigations because they are flat, highly vegetated and not observable in outcrop.

The staff reviewed the WLA "Field Reconnaissance Report" that you provided to the NRC (ADAMS Number ML092290416) but found no specific mention of localities targeted to investigate paleoliquefaction features in Quaternary alluvial deposits. The staff also reviewed the GPS track log of areas covered during the field investigations, but found it difficult to identify locations specifically targeted to investigate liquefaction features because those locations were not identified in the field logs.

Please provide more detailed documentation of the locations investigated to specifically search for paleoliquefaction features or deformation in Quaternary alluvial deposits. Did you specifically search for locations, where outcrops of these deposits might exist? In addition, please explain if any follow up investigations were conducted to further investigate the presence or absence of such features.

(a) Did you re-investigate aerial photographs for signs of sand blows or fissures, separate from the lineament analysis? If not, why? (b) Did you re-investigate Quaternary alluvial surfaces when water levels and vegetative growth were at a minimum? If not, why?

Reference: Luminant responses to RAI 3015 02.05.01-17, dated September 10, 2009 (ADAMS Number ML092820486)

ANSWER:

The field reconnaissance records in the WLA "Field Reconnaissance Report" (ML092290416) do not specify any locations targeted for liquefaction inspection because no locations were identified from the initial evaluation of the aerial photography. As shown on the track log plots on Figure 1, the Quaternary deposits were visited where public access was available. No evidence for seismically-induced liquefaction was noted during geologic field reconnaissance. However, it was noted that much of the Quaternary surfaces are highly vegetated and exposures are limited. No follow-up investigations were conducted after the two site area reconnaissance visits.

(a) Aerial photographs were re-investigated to search for signs of sand blows and fissures. Figure 1 shows the coverage area of aerial photographs evaluated. As shown in the table below, these photographs are black-and-white images acquired by the U.S. Geological Survey (USGS) and Texas Natural Resources Information Services (TNRIS) between 1942 and 1958, predating construction activities at the site. These photographs include both stereo-paired and oblique imagery. A few of these photographs show semi-circular areas of light-colored surface material that could be interpreted as possible evidence for surficial sand-blow deposits. However, these features are located in areas of active cultivation as well as Glen Rose Formation outcroppings where the material is not susceptible to liquefaction (limestone and shale) and the water table is deep. Taken together, the results from geologic field reconnaissance and evaluation of aerial photographs indicate the absence of seismically-induced liquefaction features within the site area and beyond.

Date	Source	Scale	Description	Frame Numbers
1/2/1948	TNRIS	1:20,000	Black-and-white, stereo-paired	CGT-1E-135 through CGT-1E-144 (71 through 80); CGT-1E-157 through CGT-1E-166 (98 through 108); CGT-1E-193 through CGT-1E-202 (125 through 134); CGT-2E-3 through CGT-2E-13 (150 through 160); CGT-2E-53 through CGT-2E-60 (197 through 204); CGT-2E-103 through CGT-2E-108 (241 through 246); CGT-2E-149 through CGT-2E-153 (286 through 290)
1/14/1948	TNRIS	1:20,000	Black-and-white, stereo-paired	CGT-3E-6 through CGT-3E-16 (45 through 55); CGT-3E-20 through CGT-3E-29 (174 through 183); CGT-3E-60 through CGT-3E-66 (219 through 225)
2/9/1948	TNRIS	1:20,000	Black-and-white, stereo-paired	CGT-3E-118 through CGT-3E-123 (264 through 269);

Date	Source	Scale	Description	Frame Numbers
No date	TNRIS	No Scale	Black-and-white, stereo-paired	1 through 2; 6 through 9; 17 through 21; 31 through 35; 45 through 52; 61 through 68; 75 through 83; 88 through 95; 100 through 106; 108 through 116
7/30/1958	USGS	1:22,180	Black-and-white, oblique	1B-122 through 1B-131; 1F-122 through 1F-131
7/31/1958	USGS	1:22,180	Black-and-white, oblique	2B-2 through 2B-12; 2B-31 through 2B-36; 2B-38 through 2B-43; 2B-45 through 2B-54; 2B-56 through 2B-58; 2B-71 through 2B-79; 2B-81 through 2B-85; 2F-2 through 2F-5; 2F-7 through 2F-12; 2F-31 through 2F-43; 2F-45 through 2F-58; 2F-71 through 2F-85
8/12/1958	USGS	1:22,180	Black and white, oblique	3B-26 through 3B-32; 3F-26 through 3F-32

- (b) The Quaternary surfaces in the site area as shown on Figure 1 were not re-investigated due to observations made during the initial geologic field reconnaissance investigations and aerial photography review, neither of which provided evidence for seismically-induced liquefaction. Further, the sparse historical seismicity of the region does not indicate a strong potential for the existence of seismically-induced liquefaction features within the site area.

Attachment

Figure 1, Map of Quaternary geology, geologic field reconnaissance, and aerial photograph coverage of the site area and beyond.

Impact on R-COLA

None.

Impact on DCD

None.

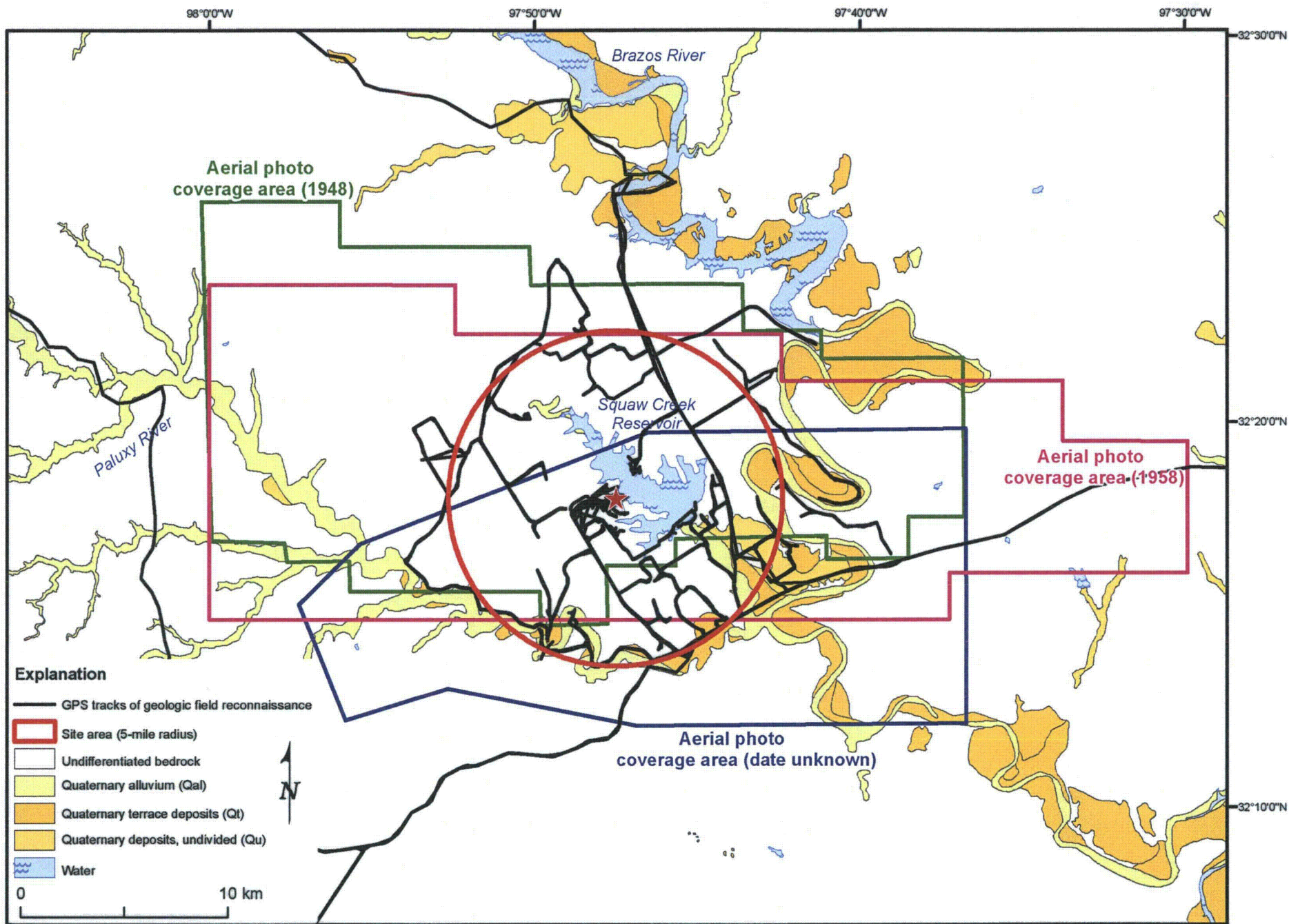


Figure 1. Map of Quaternary geology, geologic field reconnaissance, and aerial photograph coverage of the site area and beyond.