



Texas Commission on Environmental Quality Waste Permits Division Correspondence Cover Sheet

Date: 5/24/2022
 Facility Name: Coletto Creek Power Station
 Permit or Registration No.: 31911

Nature of Correspondence:
 Initial/New
 Response/Revision to TCEQ Tracking No.:
27315444 (from subject line of TCEQ letter
 regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
<input type="checkbox"/> New Notice of Intent	<input type="checkbox"/> Alternative Daily Cover Report
<input type="checkbox"/> Notice of Intent Revision	<input type="checkbox"/> Closure Report
<input type="checkbox"/> New Permit (including Subchapter T)	<input type="checkbox"/> Compost Report
<input type="checkbox"/> New Registration (including Subchapter T)	<input type="checkbox"/> Groundwater Alternate Source Demonstration
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Groundwater Corrective Action
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Limited Scope Major Amendment	<input type="checkbox"/> Groundwater Background Evaluation
<input type="checkbox"/> Notice Modification	<input type="checkbox"/> Landfill Gas Corrective Action
<input type="checkbox"/> Non-Notice Modification	<input type="checkbox"/> Landfill Gas Monitoring
<input type="checkbox"/> Transfer/Name Change Modification	<input type="checkbox"/> Liner Evaluation Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Soil Boring Plan
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Special Waste Request
<input type="checkbox"/> Subchapter T Disturbance Non-Enclosed Structure	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
<input type="checkbox"/> New	<input type="checkbox"/> Annual/Biennial Site Activity Report
<input type="checkbox"/> Renewal	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> Post-Closure Order	<input type="checkbox"/> Closure Certification/Report
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Construction Certification/Report
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> CPT Plan/Result
<input checked="" type="checkbox"/> CCR Registration	<input type="checkbox"/> Extension Request
<input type="checkbox"/> CCR Registration Major Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> CCR Registration Minor Amendment	<input type="checkbox"/> Interim Status Change
<input type="checkbox"/> Class 3 Modification	<input type="checkbox"/> Interim Status Closure Plan
<input type="checkbox"/> Class 2 Modification	<input type="checkbox"/> Soil Core Monitoring Report
<input type="checkbox"/> Class 1 ED Modification	<input type="checkbox"/> Treatability Study
<input type="checkbox"/> Class 1 Modification	<input type="checkbox"/> Trial Burn Plan/Result
<input type="checkbox"/> Endorsement	<input type="checkbox"/> Unsaturated Zone Monitoring Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Waste Minimization Report
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Other:
<input type="checkbox"/> 335.6 Notification	
<input type="checkbox"/> Other:	



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Delivered Electronically via IHWPER@tceq.texas.gov

May 24, 2022

Texas Commission on Environmental Quality
Industrial and Hazardous Waste Permits Section - MC-130
12100 Park 35 Circle
Austin, TX 78753

RE: Response to TECHNICAL NOD 1 New Registration No. CCR116
Coletto Creek Power LLC – Fannin, Goliad County
Industrial Solid Waste Registration No. 31911
EPA Identification No. TXD000836999
Tracking No. 27315444; RN100226919/CN605521988

Coletto Creek Power LLC has prepared written responses for the deficiencies identified in the “Email Technical NOD 1 - New Registration No. CCR116” received via email from TCEQ on April 25, 2022. The written responses are in Table 1. Updated application and appendix revisions are attached for review.

If you have any questions or require any additional information, please contact Eric Chavers at 903-389-6062 or by e-mail at eric.chavers@luminant.com.

Sincerely,

A handwritten signature in blue ink that reads "Renee Collins".

Renee Collins

Attachments: CCR116 Application-Revision 1
CCR116 Application Revision 1 REDLINE
APPENDIX A-Revision 1
APPENDIX B-Revision 1

cc with attachments:

Mohamad Abdulkader (Mohamad.abdulkader@tceq.texas.gov)
Daniella Ortiz de Montellano (daniella.ortiz-demontellano@tceq.texas.gov)

Table 1 - NOD Summary and Response
 Registration No. CCR116 - Coledo Creek Power LLC
 Application Deficiencies - Technical NOD 1

ID[1]	App. Section	App. Sub Section	Location[2]	Citation	Deficiency Description/Resolution	Response[3]
1	I. General Information		Application Cover Sheet		This facility has been assigned the registration identification number: CCR116 . Future correspondence should reflect this registration number.	Future correspondence will reflect CCR116 registration number.
2	I. General Information	I.13	[Appendix A]	30 TAC 352.231(g) 330.59(d)(2)	Provide the property owner affidavit. Although this affidavit is not specifically listed in the Registration form or instructions, it is prescribed information. We have attached for your assistance a sample affidavit for your use.	Property owner affidavit completed and added to Appendix A. Comment indicating affidavit added to Appendix A inserted on pg 4 under Item 13. Attachment and Tables list updated on page 18 to reflect addition to Appendix A.
3	I. General Information	I.20	[Appendix A]	30 TAC 352.231(e) 330.59(c)(3)	Revise the map to show all mineral interest ownership under the facility.	As discussed in meeting on May 3, 2022, mineral interest ownership under the CCR unit cannot be derived from real property appraisal records as suggested under 30 TAC 330.59(c)(3). Therefore this information cannot be provided.
4	I. General Information	I.21		30 TAC 352.2; 40 CFR 257.52; 40 CFR 257.3-1; 40 CFR 257.3 2; and 257.3-3	Provide documentation to verify compliance with floodplains, endangered species, and surface water protection requirements.	Brief memo provided by Qualified Professional Engineer indicating compliance added to Appendix A. Comment indicating addition of memo inserted on page 6 under Item 21. Attachments and Tables list updated on page 18 to reflect addition to Appendix A.
5	II. Location Restriction and Geology	II.22	Appendix B	Application Instruction 30 TAC 352.601, 352.611, 352.621, 352.631, 352.641 40 CFR 257.60, 257.61, 257.62, 257.63, 257.64.	Provide supporting information related to fault areas, seismic impact zones, unstable areas, wetlands, and placement above the uppermost aquifer, or reference where this information is located in the application.	Included "Location Restrictions Assessment" by Bullock, Bennett & Associates (2018) in Appendix B. Comment indicating addition of document on page 6 under Item 22. Attachments and Tables list updated on page 18 to reflect addition to Appendix B.

[1] Deficiency ID – Key: Use this number to identify the NOD response .

[2] Location of deficiency in submittal/application. Items in square brackets [] refer to applicant’s supplemental information submitted as attachments/appendices to the application form.

[3] All application form pages have been replaced to indicate CCR116 registration. Will include Revision 1 in footer as well.



Texas Commission on Environmental Quality

Registration Application for Coal Combustion Residuals (CCR) Waste Management

I. General Information

1. Reason for Submittal

Type of Registration Application

- New Major Amendment Minor Amendment
 Notice of Deficiency (NOD) Response Transfer Name Change
 Other

2. Application Fees

\$150 Application Fee

Payment Method

Check Online through ePay portal <www3.tceq.texas.gov/epay/>

If paid online, enter ePay Trace Number: 582EA000467502

3. Facility Information

Facility information must match regulated entity information on the Core Data Form.

Applicant: Owner Operator Owner/Operator

Facility TCEQ Solid Waste Registration No: 31911

Facility EPA ID: TXD000836999

Regulated Entity Reference No. (if issued): RN100226919

Facility Name: COLETO CREEK POWER STATION

Facility (Area Code) Telephone Number: 361-788-5100

Facility physical street address (city, state, zip code, county): 45 FM 2987, FANNIN, TX, 77960, GOLIAD

Facility mailing address (city, state, zip code, county): 6555 Sierra Drive, Irving, TX 75039

Latitude (Degrees, Minutes Seconds): 28° 42' 49"

Longitude (Degrees, Minutes Seconds): 97° 12' 50"

4. Publicly Accessible Website

Provide the URL address of a publicly accessible website where the owner or operator of a CCR unit will post information.
<https://www.luminant.com/ccr/>

5. Facility Landowner(s) Information

Facility landowner(s) name: COLETO CREEK POWER, LLC

Facility landowner mailing address: 6555 Sierra Drive

City: Irving State: TX Zip Code: 75039

(Area Code) Telephone Number: 214-875-8338

Email Address (optional):

6. CCR Waste Management Unit(s)

Landfill Unit(s) Surface Impoundment(s)

For each existing landfill, new landfill and lateral expansion, existing surface impoundment, and new surface impoundment and lateral expansion(s) provide information on type of waste, the registered unit(s) in which they are managed, and sampling and analytical methods.

Submit the following tables:

Table I.6. - CCR Waste Management Units;

Table I.6.A. - Waste Management Information;

Table I.6.B. - Waste Managed in Registered Units; and

Table I.6.C. - Sampling and Analytical Methods.

7. Description of Proposed Activities or Changes to Existing Facility

Provide a brief description of the proposed activities if application is for a new facility, or the proposed changes to an existing facility or registration conditions, if the application is for an amendment.

Coletto Creek Power, LLC operates the Coletto Creek Power Station located at 45 FM 2987 near the city of Fannin in Goliad County, Texas. The boiler uses coal as the primary fuel and fuel oil as a backup fuel to generate electricity. There are two streams of coal combustion residuals (CCR) generated at this plant. Bottom ash is collected from the boiler, combined with water, and transferred in slurry form for disposal in the facility's surface impoundment, referred to as Primary Ash Pond (PAP). Fly ash is collected from the boiler exhaust and transported pneumatically to two storage silos. From there, the fly ash is loaded into enclosed dry haul hoppers for off-site beneficial use. Off-spec fly ash is currently combined with water and pumped to the facility's surface impoundment for disposal. Limited amounts of bottom ash in the surface impoundment is recovered for beneficial reuse via excavation, screening, and placement in covered dump trucks for transport off site.

8. Primary Contact Information

Contact Name: Renee Collins Title: Sr. Director Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: TX Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

Email Address (optional):

9. Notice Publishing

Party responsible for publishing notice:

Applicant Consultant Agent in Service

Contact Name: Renee Collins Title: Sr. Director, Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: TX Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

10. Alternative Language Notice

Is an alternative language notice required for this application? For determination, refer to Alternative Language Checklist on the Public Notice Verification Form (TCEQ-20244-Waste-NORI).

Yes No

11. Public Place Location of Application

Name of the Public Place: **Goliad Public Library**
Physical Address: **320 S. Commercial St**
City: **Goliad** County: **Goliad** State: **TX** Zip Code: **77963**
(Area code) Telephone Number: **361-645-2291**

12. Ownership Status of the Facility

Corporation Limited Partnership
 Sole Proprietorship General Partnership Other (specify): Limited Liability Company

Does the Site Owner (Permittee/Registrant) own all the CCR units and all the facility property?

Yes No

13. Property / Legal Description Information

Provide a legal description and supporting documents of the property where the management of CCR waste will occur; including a survey plat and a boundary metes and bounds description (30 TAC §352.231(g)).

Submit the following documents:

- a. Property Legal Description
- b. Property Metes and Bounds Description
- c. Metes and Bounds Drawings
- d. On-Site Easements Drawings

See APPENDIX A for Property/Legal Description Information and Property Owner Affidavit.

14. Operator Information

Identify the entity who will conduct facility operations, if the owner and operator are not the same.

Operator Name:

Operator mailing address:

City: State: Zip Code:

(Area Code) Telephone Number:

Email Address (optional):

15. Confidential Documents

Does the application contain confidential documents?

- Yes No

If “Yes”, cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked “CONFIDENTIAL.”

16. Permits and Construction Approvals

Permit or Approval	Received	Pending	Not Applicable
Hazardous Waste Management Program under the Texas Solid Waste Disposal Act	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Underground Injection Control Program under the Texas Injection Well Act	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
National Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under Texas Water Code, Chapter 26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (describe):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (describe):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (describe)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Legal Authority

The owner and operator of the facility shall submit verification of their legal status with the application. This shall be a one-page certificate of incorporation issued by the secretary of state. The owner or operator shall list all persons having over a 20% ownership in the facility.

See APPENDIX A for Certificate of Authority.

18. TCEQ Core Data Form

The TCEQ requires that a Core Data Form (TCEQ-10400) be submitted on all incoming applications, unless a Regulated Entity and Customer Reference Number has been issued by the TCEQ and no core data information has changed. For more information regarding the Core Data Form, call (512) 239-5175 or visit the TCEQ Website.

See APPENDIX A for TCEQ Core Data Form.

19. Other Governmental Entities Information

Coastal Management Program

Is the facility within the Coastal Management Program boundary?

Yes No

Local Government Jurisdiction (If Applicable)

Within City Limits of: N/A

Within Extraterritorial Jurisdiction of: N/A

Is the facility located in an area in which the governing body of the municipality or county has prohibited the storage, processing or disposal of municipal or industrial solid waste?

Yes No If "Yes", provide a copy of the ordinance or order as an attachment.

20. Attachments

Does the application include the following?

- General Maps Yes No
- General Topographic Map Yes No
- Facility Layout Map Yes No
- Surrounding Features Map Yes No
- Process Flow Diagram Yes No
- Land Ownership Map Yes No
- Land Ownership List Yes No
- Pre-printed Mailing Labels Yes No

Maps and drawings shall be legible and easily readable by eye without magnification. Scales and paper size shall be chosen based on the type of map submitted, the land area covered, and the amount of detail to be shown. See instructions for details regarding maps and drawings to be submitted in application.

See APPENDIX A for Attachments detailed in Item 20.

21. Verification of Compliance

Does the owner and operator verify that the design, construction, and operation of CCR landfill(s) and surface impoundment(s) meets the requirements of 30 TAC §352.231(f) (30 TAC §352.2; 40 CFR §257.52, and 40 CFR §§257.3-1 - 257.3-3).

Yes No

As requested by TCEQ, please see “Compliance Assessment for Coletto Creek Power Station Primary Ash Pond - 40 CFR 257.52(b)” memorandum for Primary Ash Pond provided by BBA in APPENDIX A.

II. Location Restrictions and Geology

See Instructions and Technical Guidance

22. Location Restrictions

Submit certifications and technical reports demonstrating compliance of CCR unit(s) with applicable location restrictions (30 TAC 352, Subchapter E) and comply with 30 TAC §352.231(d) and 30 TAC §352.4 for submission of engineering and geoscientific information.

- A. **Placement above the uppermost aquifer** (30 TAC §352.601) (40 CFR §257.60). For those CCR units whose base is less than five feet above the upper limit of the uppermost aquifer, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.60(a) - (c).
- B. **Wetlands** (30 TAC §352.611) (40 CFR §257.61). For CCR units located in wetlands, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.61(a) - (c).
- C. **Fault areas** (30 TAC §352.621) (40 CFR §257.62). For CCR units located within 200 feet of the outermost damage zone of a fault, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.62(a) - (c).
- D. **Seismic impact zones** (30 TAC §352.631) (40 CFR §257.63). For CCR units located in a seismic impact zone, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.63(a) - (c).
- E. **Unstable areas** (30 TAC §352.641) (40 CFR §257.64). For CCR units located in unstable areas, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.64(a) - (d).

Location Restrictions Demonstration and Location Restrictions Assessment for the Primary Ash Pond located in APPENDIX B.

23. Geology Summary Report

Submit a summary of the geologic conditions at the facility, including the relation of the geologic condition to each CCR unit. The summary must include enough information and data and include sources and references for the information. Include all groundwater monitoring data required by 40 CFR Part 257, Subpart D, (30 TAC §352.241, §352.601, §352.621, §352.631, and §352.641) and submitted in accordance of 30 TAC §352.4.

Note: Previously prepared documents may be submitted but must be supplemented or updated as necessary to provide the requested information (30 TAC §352.241(b)).

For Geology Summary, please refer to “Groundwater Hydrogeologic Monitoring Plan” reports for the Primary Ash Pond located in APPENDIX E. The Geology and Hydrogeology summary is located in Section 2 of the report.

All groundwater monitoring data summarized in “2020 Annual Groundwater Monitoring and Corrective Action Report” for the Primary Ash Pond located in APPENDIX E

III. Fugitive Dust Control Plan

24. Fugitive Dust Control Plan

- A. **Submit a copy of the CCR Fugitive Dust Control Plan** (30 TAC §352.801) (40 CFR §257.80(b)), or the most recently amended plan. The initial plan or subsequent amended plan must be certified by a qualified Texas licensed professional engineer (Texas P.E.) that the plan meets the requirements of 30 TAC Chapter 352.
- B. **Submit the most recent Annual CCR Fugitive Dust Control Report** (30 TAC §352.801) (40 CFR §257.80(c)) and include the report information.

CCR Fugitive Dust Control Plan and 2021 Annual CCR Fugitive Dust Control Report are located in APPENDIX C.

IV. Landfill Criteria – N/A

See Instructions and Technical Guidance – No. 30 Coal Combustion Residuals Landfill

25. Landfill(s) for CCR Waste

Provide the following information below if there is a landfill; if there is more than one landfill, separate information is required for each landfill.

A. Landfill Characteristics

Describe the design, installation, construction, and operation of the landfill and submit a completed Table IV.A. – Landfill Characteristics.

B. Liner Design

1. For existing landfills, provide attachments describing how the facility will comply with 30 TAC 352, Subchapter F (Design Criteria).

2. For new landfills or lateral expansions of existing landfills, submit pages describing how the facility will comply with 30 TAC §352.261 and 30 TAC §352.701.
3. Complete Table IV.B. - Landfill Liner System and specify the type of liner used for the landfill.
4. Provide attachments describing the design, installation, and operation of the liner and leak detection system. The description must demonstrate that the liner and leak detection system will prevent discharge to the land, groundwater, and surface water. Submit a quality assurance project plan (QAPP) to ensure that each analysis is performed appropriately.

C. Leachate Collection and Removal

Submit design information and description of leachate collection and removal system in accordance with 30 TAC §352.701.

Complete Table IV.C. - Landfill Leachate Collection System

D. Design of Liner and Leachate Collection and Removal System.

For a new landfill or lateral expansion of a CCR landfill, provide a qualified Texas P.E. certification and technical report that the design of the liner and the leachate collection and removal system meets the requirements of 30 TAC §352.711.

E. Run-on and Run-off Controls

At time of application, attach pages describing how the facility will comply with the run-on and run-off system plan for an existing, new, or lateral expansion of a CCR landfill information. Provide a qualified Texas P.E. certification and technical report that the run-on and run-off control system plans meet the requirements of 30 TAC §352.811.

F. Inspection for Landfills

At time of application, attach pages describing how the facility will comply 30 TAC §352.841 and complete Table IV.D. - Inspection Schedule for Landfills. For existing CCR landfills, provide the most recent inspection report. All CCR landfills and any lateral expansions of a CCR landfill must be inspected for any structural weakness, malfunction, deterioration conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit, or any other conditions which may cause harm to human health and environment at a frequency specified in 40 CFR §257.84(a) and (b).

V. Surface Impoundment Criteria

See Instructions and Technical Guidance – No. 31 Coal Combustion Residuals Surface Impoundment

26. Surface Impoundment(s) for CCR Waste

Provide the following information below if there is a surface impoundment; if there is more than one surface impoundment, separate information is required for each surface impoundment.

A. General Surface Impoundment(s) Characteristics

Provide information about the characteristics of the surface impoundment(s): incised, surface area (acres), storage volume (acres-feet), and depth (feet).

For all surface impoundment(s), include the following information:

1. Complete Table V.A. - Surface Impoundments Characteristics. List the surface impoundment(s) to be registered as a CCR unit(s), the wastes managed in each unit, and the rated capacity or size of each unit.
2. Describe the surface impoundment(s) and provide a plan view drawing with cross-sections, if available.

See "History of Construction and Initial Hazard Potential Assessment, Structural Integrity Assessment, and Safety Factor Assessment" in APPENDIX D, section 2.3 for a summary description of the impoundment. For drawings, see Figures 2-4 and 2-5A.

3. Specify the minimum freeboard to be maintained and the basis of the design to prevent overtopping resulting from normal or abnormal operation; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error. Show that adequate freeboard will be available to prevent overtopping from a 100-year, 24-hour storm.

The "Inflow Design Flood Control System Plan" located in APPENDIX D indicates maximum elevation set at 136.1' to allow sufficient freeboard for design storm and wave action. See last paragraph of section 2.0.

4. Waste Flow
Describe the means that will be used to immediately shut off the flow of waste to the impoundment in the event of liner failure or to prevent overtopping.

All inflows that enter the surface impoundment are pumped into the unit under controlled conditions. There are no gravity or uncontrolled inflows. Pumps will be immediately removed from service to shut off flows to the impoundment.

5. Dike Construction Yes No

N/A-Section not required per TCEQ due to Structural Stability Assessment requirement.

If Yes, submit the dike certification (located at the end of the application).

The structural integrity of the dike system must be certified by a qualified Texas P.E. before the registration is issued. If the impoundment is not being used, the dike system must be certified before it can be put into use. The certification must be sealed by a qualified Texas P.E., along with the engineering firm's name and registration number (30 TAC §352.4).

A report shall accompany the dike certification which summarizes the activities, calculations, and laboratory and field analyses performed in support of the dike certification. Describe the design basis used in construction of the dikes. A QAPP should be included in the report to ensure that each analysis is performed appropriately and include:

- (1) Slope Stability Analysis
- (2) Hydrostatic and Hydrodynamic Analysis
- (3) Storm Loading
- (4) Rapid Drawdown

Earthen dikes should have a protective cover to minimize wind and water erosion and to preserve the structural integrity of the dike. Describe the protective cover used and describe its installation and maintenance procedures.

B. Liner Design

For surface impoundment(s), provide information about how the facility will comply with 30 TAC §352.711 for existing CCR surface impoundments. For new and lateral expansion of CCR surface impoundments provide information on how the facility will comply with 30 TAC §352.261, and 30 TAC §352.721, see Instructions and Technical Guidance No. 31 Coal Combustion Residuals Surface Impoundment. The qualified Texas P.E. must certify that the design of the liner complies with the requirements of 30 TAC Chapter 352 and 40 CFR Part 257, Subpart D, where required.

Is the CCR surface impoundment unlined? Yes No

If “Yes”, the CCR unit is subject to the closure requirements under 30 TAC Chapter 352 and 40 CFR §257.101(a) to retrofit or close. A notification must be prepared stating that an assessment of corrective measures has been initiated.

On November 30, 2020, Coletto Creek Power, LLC (CCP) submitted a request to the U.S. Environmental Protection Agency (EPA) for approval of a site-specific alternative deadline to initiate closure pursuant to 40 C.F.R. § 257.103(f)(2) for the Primary Ash Pond located at the Coletto Creek Power Plant near Fannin, Texas. CCP is requesting an extension pursuant to 40 C.F.R. § 257.103(f)(2) so that the Primary Ash Pond may continue to receive CCR and non-CCR wastestreams after April 11, 2021, and complete closure no later than October 17, 2028. On January 11, 2022, EPA issued a letter stating the site-specific alternative deadline demonstration was deemed complete thus tolling the cease receipt date until a final decision is issued on the demonstration. The “Coletto Creek CCR Surface Impoundment Demonstration for a Site-Specific Alternative to the Initiation of Closure” report submitted can be found in APPENDIX D.

1. Complete Table V.B. - Surface Impoundment Liner System for each surface impoundment to be registered.
2. Describe the design, installation and operation of liner and leak detection components. The description must demonstrate that the liner and leak detection system will prevent discharge to the land and surface water. Submit a QAPP report to ensure that each analysis is performed appropriately.

See Section 2 in the “History of Construction and Initial Hazard Potential Assessment, Structural Integrity Assessment, and Safety Factor Assessment” report in APPENDIX D.

3. For new or laterally expansions of existing surface impoundments, provide a subsurface soil investigation report that must include:
 - a. A description of all borings drilled, at the unit location, to test soils and characterize groundwater;
 - b. A unit map drawn to scale showing the surveyed locations and elevations of the borings, including location of permanent identification markers ((30 TAC §352.731) and (40 CFR §257.73(a)(1));
 - c. Cross-sections prepared from the borings depicting the generalized strata at the unit;
 - d. Boring logs, including a description of materials encountered, and any discontinuities such as fractures, fissures, slickensides, lenses or seams;
 - e. A description of the geotechnical data and the geotechnical properties of the subsurface soil materials, including the suitability of the soils and strata for the intended uses; and
 - f. A demonstration that all geotechnical tests were performed in accordance with industry practices and recognized procedures.

C. Hazard Potential Classification

Provide the current hazard potential classification assessment and associated documentation, as required by 30 TAC §352.731 or §352.741 and 40 CFR §257.73(a)(2) or §257.74(a)(2). The qualified Texas P.E. must certify that the initial hazard potential classification and any subsequent periodic classification was conducted in accordance with the requirements of 30 TAC Chapter 352, where required.

Hazard Potential Classification: **LOW**

See “Hazard Potential Classification Assessment” located in APPENDIX D.

D. Emergency Action Plan for High or Significantly High Hazard Potential

Provide the current Emergency Action Plan that has been certified by a qualified Texas P.E. and includes the following requirements from 30 TAC 352, Subchapter F and 40 CFR §257.73(a)(3)(i)(A) - (E) or 40 CFR §257.74 (a)(3)(i)(A) - (E). The qualified Texas P.E. must certify that the written Emergency Action Plan and any subsequent amendment of the plan complies with the requirements of 30 TAC 352, Subchapter F, where required.

Complete Table V.J. - Inspection of Surface Impoundments

N/A

E. Inflow Design Flood Control System Plan

Describe how the surface impoundment(s) system will manage stormwater run-on away from the surface impoundment(s) (30 TAC §352.821 and 40 CFR §257.82(a) and (c)). Stormwater run-on must be diverted away from a surface impoundment, based on the hazard potential. Where dikes are used to divert run-on, they must be protected from erosion. Include all analyses used to calculate run-on volumes. Provide the inflow design flood control system plan. Provide qualified Texas P.E. certification that the initial and periodic inflow design flood control system plans meet the requirements of 30 TAC §352.821, where required.

See “Inflow Design Flood Control System Plan” located in APPENDIX D.

F. History of Construction for Existing CCR Surface Impoundment(s), or the Design and Construction Plans for New and Lateral Expansions

Provide information on the history of construction for each existing CCR surface impoundment (30 TAC §352.731 and 40 CFR §257.73(c)) or the design and construction plans for new and lateral expansions of each CCR surface impoundment (30 TAC §352.741) and (40 CFR §257.74(c)).

See “History of Construction” report located in APPENDIX D.

G. Structural Stability Assessment

Provide the most recent structural stability assessment of the surface impoundments. Include the combined capacity of all surface impoundment spillways with calculations; the peak discharge the unit must meet for all combined spillways; probable maximum flood-high hazard, 1,000-yr-significant high hazard, 100-yr-low hazard; identify if there were any structural stability deficiencies in last assessment; identify how these deficiencies were managed and corrected; and qualified Texas P.E. certification. The structural stability assessment must include all information required in 30 TAC §352.731 for existing surface impoundments or 30 TAC §352.741 for new or laterally expanding surface impoundments.

See “Structural Stability Assessment” located in APPENDIX D.

H. Safety Factor Assessment

The current safety factor assessment must be submitted with the application. It must include documentation that demonstrates whether the calculated factors of safety for each CCR surface impoundment achieve the minimum safety factors specified in 30 TAC 352, Subchapter F and 40 CFR §257.73(e)(1)(i) - (iv) and 40 CFR §257.74(e)(1)(i) - (iv) for the critical cross-section of the embankment. The critical cross-section is the cross-section anticipated to be the most susceptible to structural failure based on appropriate engineering considerations, including loading conditions. The safety factor assessments must be supported by appropriate engineering calculations and certified by a qualified Texas P.E.

See "Safety Factor Assessment" located in APPENDIX D.

VI. Groundwater Monitoring and Corrective Action (30 TAC 352, Subchapter H)

See Instructions and Technical Guidance - No. 32 Coal Combustion Residuals Groundwater Monitoring and Corrective Action

27. Groundwater Monitoring System

- A. Complete Table VI.A. - Unit Groundwater Detection Monitoring System.
- B. Provide a map showing location of wells, groundwater elevations, and groundwater flow direction.

See Figures 4 thru 7 in the "Groundwater Hydrogeologic Monitoring Plan" in APPENDIX E.

- C. Provide attachments describing how the facility will comply with the requirements in 30 TAC §352.911 and provide a certification by a qualified Texas P.E or qualified Texas P.G. that the groundwater monitoring system design and construction meet the requirements of 30 TAC Chapter 352.

See Appendix A in the "Groundwater Hydrogeologic Monitoring Plan" located in APPENDIX E for the monitoring system certification.

- D. Provide a figure showing the geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

See Figures 2 and 3 in the "Groundwater Hydrogeologic Monitoring Plan" in APPENDIX E.

- E. For a multiunit groundwater monitoring system, demonstrate that the groundwater monitoring system will be equally as capable of detecting monitored constituents at the waste boundary of the CCR unit as the individual groundwater monitoring system for each CCR unit by providing at minimum the following information:
 - 1. Number, spacing, and orientation of each CCR unit;
 - 2. Hydrogeologic setting; and
 - 3. Site history.

- F. Has there been any sampling concentrations of one or more constituents listed in Appendix IV detected at statistically significant levels above the groundwater protection standard (GWPS)? Yes No
- G. Provide information on how monitoring wells have been constructed and cased in a manner that maintains the integrity of the monitoring well borehole and to prevent contamination of samples and the groundwater.

Groundwater monitoring well construction logs are located in Appendix B of the “Groundwater Hydrogeologic Monitoring Plan” found in APPENDIX E.

28. Groundwater Monitoring Sampling and Analysis Program

Provide a sampling and analysis plan that includes procedures and techniques; sampling and analytical methods that are appropriate for groundwater sampling; and that address the requirements of 30 TAC §352.931 and 40 CFR §257.93. Provide a P.E or P.G. certification that describes the statistical method selected to evaluate the groundwater monitoring data and certifies that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area. Refer to TG-32 for information and guidance.

See “Groundwater Monitoring Plan”, “Statistical Analysis Plan”, and “Statistical Method Certification” in APPENDIX E.

29. CCR Unit(s) in a Detection Monitoring Program

Does the facility have CCR unit(s) in a Detection Monitoring Program?

Yes No

If “Yes”, Submit the following information:

- A. Submit Table VI.C. – Facility CCR Units Under Detection Monitoring.
- B. Provide a Background Evaluation Report.
- C. Provide a report with the results of semiannual monitoring events.
1. Has a statistically significant increase (SSI) been detected for one or more of the constituents listed in Appendix III at any monitoring well?

Yes No
 2. Has a notification to the executive director been sent within 14 days?

Yes No
 3. Date assessment monitoring program will start:
 4. Do you plan to provide an alternative source demonstration (ASD)?

Yes No

30. CCR Unit(s) in an Assessment Monitoring Program

Does the facility have CCR unit(s) in an Assessment Monitoring Program?

Yes No

If “Yes”, Submit information related for units.

- A. Complete Table VI.D. – CCR Units Under Assessment Monitoring.

- B. Provide, for each well in assessment monitoring status, the recorded concentrations lab sheets and results in a tabulated form.

See summary Tables 3 and 4 for all results in tabulated form in the “2020 Annual Groundwater Monitoring and Corrective Action Report” in APPENDIX E.

Have the concentrations of all constituents listed in Appendices III and IV been at or below background values, using the statistical procedures in 30 TAC §352.931 and 40 CFR §257.93(g), for two consecutive sampling events for the CCR unit(s)? Yes No

If answer to above is yes, detection monitoring may resume. The owner or operator must prepare a notification stating that detection monitoring is resuming for the CCR unit and obtain written approval from the executive director.

- C. Are there any concentrations of any constituent in Appendices III and IV above background values? Yes No

1. Has a notification to the executive director been sent within 14 days?

Yes No

- D. Date assessment of corrective measures will be initiated (must be within **90 days** of finding a statistically significant level above the GWPS) for the CCR unit(s):

Not required due to no SSLs to date. Unit is in assessment monitoring but has not triggered assessment of corrective measure to date.

- E. Will you provide an ASD (see TG-32 for an acceptable submittal)? Yes No

- F. Date assessment of corrective measures will be initiated if ASD is not accepted?

Not required.

- G. Complete Table VI.D-2. - Groundwater Detection Monitoring Parameters

Note: Refer to TG-32 regarding establishing a GWPS for each constituent in Appendix IV detected in the groundwater and attach as table.

- H. Have you completed the assessment of corrective measures? Yes No

If “Yes”, date assessment of corrective measures was completed:

If “No”, date assessment of corrective measures will be completed: **Not required**

Expected date of submittal of amendment (see note below):

Provide completed assessment of corrected measures materials.

Note: Within **30 days** of completing the assessment of corrective measures, and before remedy implementation, the owner or operator shall submit an application for amendment to the registration. In some circumstances, the assessment of corrective measures and selected remedy may be approved as part of the initial application for the CCR unit registration.

- I. Have you selected a remedy? Yes No **N/A**

Provide public meeting documentation under 30 TAC §352.961 and a report under 30 TAC §352.971 and 40 CFR §257.97.

VII. Closure and Post-Closure Care

See Instructions and Technical Guidance

Submit a full closure plan and post-closure plan and all information describing how the owner or operator will comply with 30 TAC 352, Subchapter J and 40 CFR §§257.100 - 257.104. The owner of property on which an existing disposal facility is located, following the closure of a unit, must also submit documentation that a notation has been placed in the deed to the facility that will in perpetuity notify any potential

purchasers of the property that the land has been used to manage CCR wastes and its use is restricted (30 TAC §352.1221 and 40 CFR §257.102(i)). For CCR units, closed after October 19, 2015, that were closed before submission of the application, the applicant should submit documentation to show that notices required under 30 TAC 352, Subchapter K and 40 CFR §257.105 or §257.106 have been filed.

See “Closure Plan” and “Post-Closure Plan” in APPENDIX F. Also included in the appendix is a “Closure Plan Addendum” that was prepared to meet the requirements of the site-specific alternative deadline to initiate closure.

31. Closure Plan

This section applies to the owners and operators of all CCR units required to be registered. The applicant must close the facility in a manner that minimizes need for further maintenance and controls, or eliminates, to the extent necessary to protect human health and the environment, the post-closure release of CCR waste, chemical constituents of concern, leachate, contaminated rainfall, or waste decomposition products to the groundwater, surface waters, or to the atmosphere.

The type of unit to be closed can determine the level of detail sufficient for a closure plan. CCR units which have been certified closed after October 19, 2015, must provide documentation to demonstrate compliance with state and federal regulations.

For each unit to be registered, complete Table VII.A.1. - Unit Closure and list the CCR Unit components to be decontaminated, possible methods of decontamination, and possible methods of disposal of wastes and waste residues generated during unit closure. All ancillary components must be decontaminated, and the generated waste disposed of appropriately.

Information about CCR units closed or to be closed under alternative closure requirements must be provided in Table VII.A.2. - CCR Units Under Alternative Closure Notification.

Guidance on design of a closure cap and final cover for non-hazardous industrial solid wastes landfills is provided in EPA publication 530-SW-85-014, TCEQ Technical Guidance No. 3 and TCEQ publication, RG-534, “Guidance for Liner Construction and Testing for a Municipal Solid Waste Landfill”.

32. Post-Closure Care Plan

Provide a post-closure care plan that complies with the requirements of 30 TAC §352.1241.

See “Post-Closure Plan” in APPENDIX F.

Post-closure care of each CCR unit must continue for at least 30 years after the date of completing closure of the unit and must consist of monitoring and reporting of the groundwater monitoring systems, in addition to the maintenance and monitoring of CCR unit. Continuation of certain security requirements may be necessary after the date of closure. Post-closure use of property on or in which waste remains after closure must never be allowed to disrupt the integrity of the containment system. In addition, submit the following information:

- The name, address, and phone number of the person or office to contact about the CCR unit during the post-closure period; and

Luminant-Environmental Services
Renee Collins-Senior Environmental Director
6555 Sierra Drive
Irving, TX 75039
214-875-8338

CCRPostClosurePlan@Luminant.com

- A discussion of the future use of the land associated with each unit.

Following closure of the Primary Ash Pond, a notation on the deed to the property, or some other instrument that is normally examined during title search, will be recorded in accordance with 40 CFR 257.102(i). The notation will notify potential purchasers of the property that the land has been used as a CCR unit and its use is restricted under the post-closure care requirements per 40 CFR 257.104(d)(1)(iii).

Landfills and surface impoundments which have been certified closed after October 19, 2015, must be included in post-closure care plans, unless they have been determined to have been closed by waste removal equivalent to the closure standards in 30 TAC §352.1221 and 40 CFR §257.102 or 30 TAC §352.1231 and 40 CFR §257.103. If such a demonstration has been made pursuant to 40 CFR §257.102 or §257.103, but an equivalency determination has not been made, please submit a copy of the demonstration documentation. If an equivalency determination has been made, applicant should submit a copy of this determination.

VIII. Financial Assurance

33. Post-Closure Care Cost Estimate

Financial assurance for post-closure care (30 TAC §352.1101) applies to owners or operators of all CCR units, except CCR units from which the owner or operator intends to remove wastes and perform clean closure. Provide a written cost estimate in current dollars of the total cost of the 30-year (or longer, if applicable under 30 TAC §352.1101(d)) post-closure care period to perform post-closure care requirements as prescribed in 30 TAC §352.1241. The cost estimate must be based on the costs of hiring a third party to conduct post-closure care maintenance.

Complete Table VIII.A.1 - Post-Closure Cost Summary for Existing Registered Units

See Post-Closure Care Estimate Memo from Golder in APPENDIX G. Coletto Creek Power Station cost estimates are summarized in Table 7.

Complete Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units

34. Financial Assurance Mechanism

The financial assurance for post-closure care is required in accordance with 30 TAC §352.1101. The applicant shall demonstrate the financial assurance within 90 days after approval of the registration with a financial mechanism acceptable to TCEQ in compliance with 30 TAC §352.1101(c) and 30 TAC §37, Subchapters A through D, except as indicated in 30 TAC §352.1111, in an amount no less than the amount specified in the approved Post-Closure Care Cost Summary. Provide a description of the proposed financial assurance mechanism.

Vistra Corporation currently uses AEGIS Insurance Services Endorsement No. 60 (TCEQ Endorsement for Closure, Post-Closure or Corrective Action) as an approved financial assurance mechanism at other Vistra owned facilities. Applicant intends to add post-closure coverage amounts detailed in Table VIII.A.1. to current policy.

Complete Table VIII.B. - Post-Closure Period, for the authorized post-closure period, to meet the requirements of 30 TAC §352.1241(a) through (c).

Signature Page

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Signature: _____ Date: _____

Name and Official Title (type or print): _____

Owner or Operator Signature: _____ Date: _____

Name and Official Title (type or print): _____

To be completed by the owner or operator if the application is signed by an authorized representative for the operator

I, _____ hereby designate _____
(operator) (authorized representative)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a CCR waste management registration. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any registration which might be issued based upon this application.

Printed or Typed Name of Applicant or Principal Executive Officer

Signature

(Note: Application Must Bear Signature & Seal of Notary Public)

Subscribed and sworn to before me by the said _____ on this

_____ day of _____, _____.

My commission expires on the _____ day of _____, _____

(Seal) Notary Public in and for _____ County, Texas

Registration Application for Coal Combustion Residuals Waste Management

(See instructions for P.E/P.G. seal requirements.)

Attachments and Tables

Attachment No.

General Information

Appendix A

Property/Legal Description
Property Owner Affidavit
Legal Authority
Delegation of Signature Authority
TCEQ Core Data Form
Attachments
Compliance Assessment for Coletto Creek Power Station Primary Ash Pond – 40 CFR 257.52(b)

Location Restrictions & Geology

Appendix B

Location Restrictions Demonstration
Location Restrictions Assessment

Fugitive Dust Control Plan

Appendix C

CCR Fugitive Dust Control Plan
2021 Annual CCR Fugitive Dust Control Report

Surface Impoundment Design and Operating Criteria

Appendix D

Alternative Closure Plan Demonstration – §257.103(f)(2)
Hazard Potential Classification Assessment
Inflow Design Flood Control Plan
History of Construction Report
Structural Stability Assessment
Safety Factor Assessment

Groundwater Monitoring and Corrective Action

Appendix E

Groundwater Hydrogeologic Monitoring Plan
Groundwater Monitoring Plan
Statistical Analysis Plan
Statistical Method Certification
2020 Groundwater Monitoring and Corrective Action Report

Closure and Post-Closure Care

Appendix F

Closure Plan
Closure Plan Addendum No.1
Post-Closure Plan

Financial Assurance

Appendix G

Post-Closure Care Estimate Memo

Tables

Tables	Submitted	Not Applicable
Table I.6. - CCR Waste Management Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table I.6.A. - Waste Management Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table I.6.B. - Wastes Managed in Registered Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table I.6.C. - Sampling and Analytical Methods	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table IV.A. - Landfill Characteristics	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table IV.B. - Landfill Liner System	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table IV.C. - Landfill Leachate Collection System	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table IV.D. - Inspection Schedule of Landfills	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table V.A. - Surface Impoundments Characteristics	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table V.B. - Surface Impoundment Liner System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table V.J. - Inspection of Surface Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VI.A. - Unit Groundwater Detection Monitoring System	<input type="checkbox"/>	<input type="checkbox"/>
Table VI.C. - CCR Units Under Detection Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table VI.D. - CCR Units Under Assessment Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VI.D-2. - Groundwater Detection Monitoring Parameters	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VII.A.1. - Unit Closure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VII.A.2. - CCR Units Under Alternative Closure Notification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VIII.A.1. - Post-Closure Cost Summary for Existing Registered Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table VIII.B. - Post-Closure Period	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Engineering Certification(s) - Dike Construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Additional Attachments as Applicable - Select all those apply and add as necessary

- TCEQ Core Data Form(s) **Appendix A**
- Signatory Authority Delegation **Appendix A**
- Fee Payment Receipt
- Confidential Documents
- Certificate of Fact (Certificate of Incorporation) **Appendix A**
- Assumed Name Certificate

Table I.6. – CCR Waste Management Units

CCR Unit No. ¹	Unit Name	N.O.R. No. ¹	Unit Description ³	Capacity	Unit Status ²
001	Primary Ash Pond	001	Surface Impoundment	2,700 acre-feet	Active

1 Registered Unit No. and N.O.R. No. cannot be reassigned to new units or used more than once.
 2 Unit Status options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post-Closure.
 3 If a unit has been transferred, the applicant should indicate which facility/permit it has been transferred to in the Unit Description column.

Table I.6.A. – Waste Management Information

Waste No. ¹	Waste Type(s)	Source	Volume (tons/year)
1	Fly Ash	Coal Combustion Byproduct	57,000 produced 425 disposed
2	Bottom Ash	Coal Combustion Byproduct	13,000 produced 400 disposed

¹ Assign waste number sequentially. Do not remove waste number wastes which are no longer generated.

Table I.6.B. – Wastes Managed in Registered Units

Waste No. ¹	Waste	TCEQ Waste Form Codes and Classification Codes
1	Fly Ash	TWC-20173192, TX Form Code-319, Class 2
2	Bottom Ash	TWC-20183192, TX Form Code-319, Class 2

1 from Table I.6.A., first column

Table I.6.C - Sampling and Analytical Methods

Waste No. ¹	Sampling Location	Sampling Method	Frequency	Parameter	Test Method	Desired Accuracy Level
1	Fly Ash	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below ²
2	Bottom Ash	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below ²

¹ from Table I.6.A., first column

² Analytical protocol will meet EPA quality control and accuracy specifications as published in the SW-846 Methods. The laboratory will be TCEQ accredited.

Table IV.A. - Landfills Characteristics

Registered Unit No.	Landfill	N.O.R. No.	Waste Nos. ¹	Rated Capacity	Dimensions ²	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
N/A								

1 From Table I.6.A., first column

2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table IV.B. – Landfill Liner System

Registered Unit No.*	Landfill	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
N/A							

* This number should match the Registration Unit No. given on Table IV.A.

Registration No.: CCR116
Registrant: Coletto Creek Power Station

Table IV.C. - Landfill Leachate Collection System

Registered Unit No.	Landfill Name	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material
N/A						

Table IV.D. - Inspection Schedule of Landfills

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
N/A		

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 Registrant: Coletto Creek Power Station

Table V.A. – Surface Impoundment Characteristics

Registered Unit No.	Surface Impoundment Name	N.O.R. No.	Waste Nos. ¹	Rated Capacity	Dimensions ²	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
001	Primary Ash Pond	001	1, 2	2,700 acre-feet	2,450 feet W x 3,375 feet L x 20 feet D 190 acres	>5 Feet	n/a	Fly Ash, Bottom Ash

1 From Table I.6.A., first column

2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table V.B. – Surface Impoundment Liner System

Registered Unit No.*	Surface Impoundment Name	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
001	Primary Ash Pond	None	None	None	In-situ clay	<1.0 x 10 ⁻⁷ cm/sec	Avg 9', ranges 4'-20'

* This number should match the Registration Unit No. given on Table V.A.



Table V.J. – Inspection Schedule of Surface Impoundments

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
010-Ash Landfill 1	Inspect for any appearances of actual or potential structural weakness and other conditions which are disrupting or have the potential to disrupt the operation and safety of the CCR unit	Weekly Inspection per 40 CFR 257.84(a)
Embankments	Surface cracking, animal burrows, misalignments, slides, vegetative cover, rutting, erosion, seepage, slope protection/chutes	Weekly Inspection
Capped Areas	Animal burrows, vegetative cover, rutting, surface cracking	Weekly Inspection
Active Work Area	Contact water, dusting	Weekly Inspection
Groundwater Monitoring Wells	Deterioration of pads, bollards, missing locks, compromise of casing integrity	Semi-Annual Inspection
010-Ash Landfill 1		Annually per 40 CFR 257.84(b)
	Inspect for any changed in geometry of the structure since the previous annual inspection.	Annual Inspection
	Estimate the approximate volume of CCR contained in the unit at the time of the inspection.	Annual Inspection
	Inspect for any appearance of actual or potential structural weakness of the CCR unit, and any conditions that are disrupting or have the potential to disrupt the operation and safety of the unit.	Annual Inspection
	Inspect for any other change(s) which have affected the stability or operation of the CCR unit since the previous inspection	Annual Inspection

Table VI.A. - Unit Groundwater Detection Monitoring Systems

Waste Management Unit/Area Name ¹	REPLACE PAGE IN PDF					
Well Number(s):						
Hydrogeologic Unit Monitored						
Type (e.g., point of compliance, background, observation, etc.)						
Up or Down Gradient						
Casing Diameter and Material						
Screen Diameter and Material						
Screen Slot Size (in.)						
Top of Casing Elevation (Ft, Mean Sea Level <i>[MSL]</i>)						
Grade or Surface Elevation (Ft, MSL)						
Well Depth (Ft, Below Grade Surface <i>[BGS]</i>)						
Well Depth (Ft, Below Top of Casing <i>[BTOC]</i>)						
Screen Interval From (Ft, BGS) To (Ft, BGS)						
Screen Interval From (Ft, BTOC) To (Ft, BTOC)						

¹ From Tables in Section I.; *MSL*: Mean Sea Level; *BGS*: Below Grade Surface; *BTOC*: Below Top of Casing

Registration No.: CCR116
 Registrant: Coletto Creek Power Station

Table VI.C. – CCR Units Under Detection Monitoring

N.O.R. Unit No.	Unit Description ^{1,2}	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification ³
N/A					

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
 2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
 3 Enter month, day, and year.

Table VI.D. – CCR Units Under Assessment Monitoring

N.O.R. Unit No.	Unit Description ^{1,2}	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification ³
001	Primary Ash Pond	MW-6, MW-9, MW-10	B	2/12/2018	Notification made 5/9/18
001	Primary Ash Pond	MW-4, MW-5, MW-6, MW-9, MW-10, MW-11	Cl, F, SO4, pH	2/12/2018	ASD Successful for all constituents except Boron (4/11/18)

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
 2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
 3 Enter month, day, and year

Table VI.D-2. - Groundwater Detection Monitoring Parameters

Parameter	Sampling Frequency	Analytical Method	Practical Quantification Limit (units)	Concentration Limit ¹
Boron	Semi-Annual	SW6020A	0.03 mg/L	1.26
Calcium	Semi-Annual	SW6020A	3.0 mg/L	143
Chloride	Semi-Annual	E300	1.0 mg/L	118
Fluoride	Semi-Annual	E300	0.4 mg/L	0.61
Sulfate	Semi-Annual	E300	3.0 mg/L	148
Total Dissolved Solids	Semi-Annual	M2540C	10.0 mg/L	766
pH	Semi-Annual	Field Measured	s.u.	6.51 7.33

¹ The concentration limit is the basis for determining whether a release has occurred from the CCR unit/area.

Table VII.A.1. - Unit Closure

For each unit to be registered, list the unit components to be decontaminated, the possible methods of decontamination, and the possible methods of disposal of wastes and waste residues generated during unit closure.

Equipment or CCR Unit	Possible Methods of Decontamination ¹	Possible Methods of Disposal ¹
001-Primary Ash Pond Piping	Removal	Landfill
001-Primary Ash Pond	Close in Place	No Disposal

¹ Applicants may list more than one appropriate method.

Table VII.A.2. - CCR Units Under Alternative Closure Notification

Registered Unit No.	N.O.R. Unit No.	Unit Description ^{1,2}	Date of Receipt of Last Waste ³	Date of Closure Notification ³
001	001	Surface Impoundment	7/17/2027	11/30/2020

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.

2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.

3 Enter month, day, and year.

Table VIII.A.1. - Post-Closure Cost Summary for Existing Registered Units

Unit	Cost
001-Primary Ash Pond	\$3,117,987
Total Existing Unit Post-Closure Cost Estimate	\$3,117,987 (in 2021 Dollars) ¹

Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units

Unit	Cost

¹ As units are added or deleted from these tables through future registration amendments, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

Table VIII.B. – Post-Closure Period

Unit Name	Date Certified Closed	Authorized Post-Closure Period (Yrs.)	Earliest Date Post-Closure Ends (See Note 1)
[Unit Example 1]	[1/1/1995]	30 years	[1/1/2025]
[Unit Example 2]	[1/1/1990]	30 years	[1/1/2020]
[Unit Example 3]	[1/1/1984]	30 years	[1/1/2014]

Note 1 - Post-Closure Care shall continue beyond the specified date until the Executive Director has approved the applicant's request to reduce or terminate the post-closure period, consistent with 30 TAC §352.1241 - Post-Closure Care Requirements.

N/A



Texas Commission on Environmental Quality

Registration Application for Coal Combustion Residuals (CCR) Waste Management

I. General Information

1. Reason for Submittal

Type of Registration Application

- New Major Amendment Minor Amendment
- Notice of Deficiency (NOD) Response Transfer Name Change
- Other

2. Application Fees

\$150 Application Fee

Payment Method

- Check Online through ePay portal <www3.tceq.texas.gov/epay/>

If paid online, enter ePay Trace Number: 582EA000467502

3. Facility Information

Facility information must match regulated entity information on the Core Data Form.

Applicant: Owner Operator Owner/Operator

Facility TCEQ Solid Waste Registration No: 31911

Facility EPA ID: TXD000836999

Regulated Entity Reference No. (if issued): RN100226919

Facility Name: COLETO CREEK POWER STATION

Facility (Area Code) Telephone Number: 361-788-5100

Facility physical street address (city, state, zip code, county): 45 FM 2987, FANNIN, TX, 77960, GOLIAD

Facility mailing address (city, state, zip code, county): 6555 Sierra Drive, Irving, TX 75039

Latitude (Degrees, Minutes Seconds): 28° 42' 49"

Longitude (Degrees, Minutes Seconds): 97° 12' 50"

4. Publicly Accessible Website

Provide the URL address of a publicly accessible website where the owner or operator of a CCR unit will post information.
<https://www.luminant.com/ccr/>

5. Facility Landowner(s) Information

Facility landowner(s) name: COLETO CREEK POWER, LLC
Facility landowner mailing address: 6555 Sierra Drive
City: Irving State: TX Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338
Email Address (optional):

6. CCR Waste Management Unit(s)

Landfill Unit(s) Surface Impoundment(s)

For each existing landfill, new landfill and lateral expansion, existing surface impoundment, and new surface impoundment and lateral expansion(s) provide information on type of waste, the registered unit(s) in which they are managed, and sampling and analytical methods.

Submit the following tables:

Table I.6. - CCR Waste Management Units;

Table I.6.A. - Waste Management Information;

Table I.6.B. - Waste Managed in Registered Units; and

Table I.6.C. - Sampling and Analytical Methods.

7. Description of Proposed Activities or Changes to Existing Facility

Provide a brief description of the proposed activities if application is for a new facility, or the proposed changes to an existing facility or registration conditions, if the application is for an amendment.

Coletto Creek Power, LLC operates the Coletto Creek Power Station located at 45 FM 2987 near the city of Fannin in Goliad County, Texas. The boiler uses coal as the primary fuel and fuel oil as a backup fuel to generate electricity. There are two streams of coal combustion residuals (CCR) generated at this plant. Bottom ash is collected from the boiler, combined with water, and transferred in slurry form for disposal in the facility's surface impoundment, referred to as Primary Ash Pond (PAP). Fly ash is collected from the boiler exhaust and transported pneumatically to two storage silos. From there, the fly ash is loaded into enclosed dry haul hoppers for off-site beneficial use. Off-spec fly ash is currently combined with water and pumped to the facility's surface impoundment for disposal. Limited amounts of bottom ash in the surface impoundment is recovered for beneficial reuse via excavation, screening, and placement in covered dump trucks for transport off site.

8. Primary Contact Information

Contact Name: Renee Collins Title: Sr. Director Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: TX Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

Email Address (optional):

9. Notice Publishing

Party responsible for publishing notice:

Applicant Consultant Agent in Service

Contact Name: Renee Collins Title: Sr. Director, Environmental Services

Contact mailing address: 6555 Sierra Drive
City: Irving County: Dallas State: TX Zip Code: 75039
(Area Code) Telephone Number: 214-875-8338

10. Alternative Language Notice

Is an alternative language notice required for this application? For determination, refer to Alternative Language Checklist on the Public Notice Verification Form (TCEQ-20244-Waste-NORI).

Yes No

11. Public Place Location of Application

Name of the Public Place: **Goliad Public Library**
Physical Address: **320 S. Commercial St**
City: **Goliad** County: **Goliad** State: **TX** Zip Code: **77963**
(Area code) Telephone Number: **361-645-2291**

12. Ownership Status of the Facility

Corporation Limited Partnership
 Sole Proprietorship General Partnership Other (specify): Limited Liability Company

Does the Site Owner (Permittee/Registrant) own all the CCR units and all the facility property?

Yes No

13. Property / Legal Description Information

Provide a legal description and supporting documents of the property where the management of CCR waste will occur; including a survey plat and a boundary metes and bounds description (30 TAC §352.231(g)).

Submit the following documents:

- a. Property Legal Description
- b. Property Metes and Bounds Description
- c. Metes and Bounds Drawings
- d. On-Site Easements Drawings

See [APPENDIX A for Property/Legal Description Information and Property Owner Affidavit.](#)

14. Operator Information

Identify the entity who will conduct facility operations, if the owner and operator are not the same.

Operator Name:

Operator mailing address:

City: State: Zip Code:

(Area Code) Telephone Number:

Email Address (optional):

15. Confidential Documents

Does the application contain confidential documents?

- Yes No

If “Yes”, cross-reference the confidential documents throughout the application and submit as a separate attachment in a binder clearly marked “CONFIDENTIAL.”

16. Permits and Construction Approvals

Permit or Approval	Received	Pending	Not Applicable
Hazardous Waste Management Program under the Texas Solid Waste Disposal Act	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Underground Injection Control Program under the Texas Injection Well Act	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
National Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under Texas Water Code, Chapter 26	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other (describe):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (describe):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (describe)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Legal Authority

The owner and operator of the facility shall submit verification of their legal status with the application. This shall be a one-page certificate of incorporation issued by the secretary of state. The owner or operator shall list all persons having over a 20% ownership in the facility.

See APPENDIX A for Certificate of Authority.

18. TCEQ Core Data Form

The TCEQ requires that a Core Data Form (TCEQ-10400) be submitted on all incoming applications, unless a Regulated Entity and Customer Reference Number has been issued by the TCEQ and no core data information has changed. For more information regarding the Core Data Form, call (512) 239-5175 or visit the TCEQ Website.

See APPENDIX A for TCEQ Core Data Form.

19. Other Governmental Entities Information

Coastal Management Program

Is the facility within the Coastal Management Program boundary?

Yes No

Local Government Jurisdiction (If Applicable)

Within City Limits of: N/A

Within Extraterritorial Jurisdiction of: N/A

Is the facility located in an area in which the governing body of the municipality or county has prohibited the storage, processing or disposal of municipal or industrial solid waste?

Yes No If "Yes", provide a copy of the ordinance or order as an attachment.

20. Attachments

Does the application include the following?

- General Maps Yes No
- General Topographic Map Yes No
- Facility Layout Map Yes No
- Surrounding Features Map Yes No
- Process Flow Diagram Yes No
- Land Ownership Map Yes No
- Land Ownership List Yes No
- Pre-printed Mailing Labels Yes No

Maps and drawings shall be legible and easily readable by eye without magnification. Scales and paper size shall be chosen based on the type of map submitted, the land area covered, and the amount of detail to be shown. See instructions for details regarding maps and drawings to be submitted in application.

See APPENDIX A for Attachments detailed in Item 20.

21. Verification of Compliance

Does the owner and operator verify that the design, construction, and operation of CCR landfill(s) and surface impoundment(s) meets the requirements of 30 TAC §352.231(f) (30 TAC §352.2; 40 CFR §257.52, and 40 CFR §§257.3-1 - 257.3-3).

Yes No

[As requested by TCEO, please see “Compliance Assessment for Coletto Creek Power Station Primary Ash Pond - 40 CFR 257.52\(b\)” memorandum for Primary Ash Pond provided by BBA in APPENDIX A.](#)

II. Location Restrictions and Geology

See Instructions and Technical Guidance

22. Location Restrictions

Submit certifications and technical reports demonstrating compliance of CCR unit(s) with applicable location restrictions (30 TAC 352, Subchapter E) and comply with 30 TAC §352.231(d) and 30 TAC §352.4 for submission of engineering and geoscientific information.

- A. **Placement above the uppermost aquifer** (30 TAC §352.601) (40 CFR §257.60). For those CCR units whose base is less than five feet above the upper limit of the uppermost aquifer, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.60(a) - (c).
- B. **Wetlands** (30 TAC §352.611) (40 CFR §257.61). For CCR units located in wetlands, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.61(a) - (c).
- C. **Fault areas** (30 TAC §352.621) (40 CFR §257.62). For CCR units located within 200 feet of the outermost damage zone of a fault, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.62(a) - (c).
- D. **Seismic impact zones** (30 TAC §352.631) (40 CFR §257.63). For CCR units located in a seismic impact zone, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.63(a) - (c).
- E. **Unstable areas** (30 TAC §352.641) (40 CFR §257.64). For CCR units located in unstable areas, please submit a copy of the demonstration showing evidence of compliance with 40 CFR §257.64(a) - (d).

[Location Restrictions Demonstration report and Location Restrictions Assessment for the Primary Ash Pond located in APPENDIX B.](#)

23. Geology Summary Report

Submit a summary of the geologic conditions at the facility, including the relation of the geologic condition to each CCR unit. The summary must include enough information and data and include sources and references for the information. Include all groundwater monitoring data required by 40 CFR Part 257, Subpart D, (30 TAC §352.241, §352.601, §352.621, §352.631, and §352.641) and submitted in accordance of 30 TAC §352.4.

Note: Previously prepared documents may be submitted but must be supplemented or updated as necessary to provide the requested information (30 TAC §352.241(b)).

For Geology Summary, please refer to “Groundwater Hydrogeologic Monitoring Plan” reports for the Primary Ash Pond located in APPENDIX E. The Geology and Hydrogeology summary is located in Section 2 of the report.

All groundwater monitoring data summarized in “2020 Annual Groundwater Monitoring and Corrective Action Report” for the Primary Ash Pond located in APPENDIX E

III. Fugitive Dust Control Plan

24. Fugitive Dust Control Plan

- A. **Submit a copy of the CCR Fugitive Dust Control Plan** (30 TAC §352.801) (40 CFR §257.80(b)), or the most recently amended plan. The initial plan or subsequent amended plan must be certified by a qualified Texas licensed professional engineer (Texas P.E.) that the plan meets the requirements of 30 TAC Chapter 352.
- B. **Submit the most recent Annual CCR Fugitive Dust Control Report** (30 TAC §352.801) (40 CFR §257.80(c)) and include the report information.

CCR Fugitive Dust Control Plan and 2021 Annual CCR Fugitive Dust Control Report are located in APPENDIX C.

IV. Landfill Criteria – N/A

See Instructions and Technical Guidance – No. 30 Coal Combustion Residuals Landfill

25. Landfill(s) for CCR Waste

Provide the following information below if there is a landfill; if there is more than one landfill, separate information is required for each landfill.

A. Landfill Characteristics

Describe the design, installation, construction, and operation of the landfill and submit a completed Table IV.A. – Landfill Characteristics.

B. Liner Design

1. For existing landfills, provide attachments describing how the facility will comply with 30 TAC 352, Subchapter F (Design Criteria).

2. For new landfills or lateral expansions of existing landfills, submit pages describing how the facility will comply with 30 TAC §352.261 and 30 TAC §352.701.
3. Complete Table IV.B. - Landfill Liner System and specify the type of liner used for the landfill.
4. Provide attachments describing the design, installation, and operation of the liner and leak detection system. The description must demonstrate that the liner and leak detection system will prevent discharge to the land, groundwater, and surface water. Submit a quality assurance project plan (QAPP) to ensure that each analysis is performed appropriately.

C. Leachate Collection and Removal

Submit design information and description of leachate collection and removal system in accordance with 30 TAC §352.701.

Complete Table IV.C. - Landfill Leachate Collection System

D. Design of Liner and Leachate Collection and Removal System.

For a new landfill or lateral expansion of a CCR landfill, provide a qualified Texas P.E. certification and technical report that the design of the liner and the leachate collection and removal system meets the requirements of 30 TAC §352.711.

E. Run-on and Run-off Controls

At time of application, attach pages describing how the facility will comply with the run-on and run-off system plan for an existing, new, or lateral expansion of a CCR landfill information. Provide a qualified Texas P.E. certification and technical report that the run-on and run-off control system plans meet the requirements of 30 TAC §352.811.

F. Inspection for Landfills

At time of application, attach pages describing how the facility will comply 30 TAC §352.841 and complete Table IV.D. - Inspection Schedule for Landfills. For existing CCR landfills, provide the most recent inspection report. All CCR landfills and any lateral expansions of a CCR landfill must be inspected for any structural weakness, malfunction, deterioration conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit, or any other conditions which may cause harm to human health and environment at a frequency specified in 40 CFR §257.84(a) and (b).

V. Surface Impoundment Criteria

See Instructions and Technical Guidance – No. 31 Coal Combustion Residuals Surface Impoundment

26. Surface Impoundment(s) for CCR Waste

Provide the following information below if there is a surface impoundment; if there is more than one surface impoundment, separate information is required for each surface impoundment.

A. General Surface Impoundment(s) Characteristics

Provide information about the characteristics of the surface impoundment(s): incised, surface area (acres), storage volume (acres-feet), and depth (feet).

For all surface impoundment(s), include the following information:

1. Complete Table V.A. - Surface Impoundments Characteristics. List the surface impoundment(s) to be registered as a CCR unit(s), the wastes managed in each unit, and the rated capacity or size of each unit.
2. Describe the surface impoundment(s) and provide a plan view drawing with cross-sections, if available.

See "History of Construction and Initial Hazard Potential Assessment, Structural Integrity Assessment, and Safety Factor Assessment" in APPENDIX D, section 2.3 for a summary description of the impoundment. For drawings, see Figures 2-4 and 2-5A.

3. Specify the minimum freeboard to be maintained and the basis of the design to prevent overtopping resulting from normal or abnormal operation; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error. Show that adequate freeboard will be available to prevent overtopping from a 100-year, 24-hour storm.

The "Inflow Design Flood Control System Plan" located in APPENDIX D indicates maximum elevation set at 136.1' to allow sufficient freeboard for design storm and wave action. See last paragraph of section 2.0.

4. Waste Flow
Describe the means that will be used to immediately shut off the flow of waste to the impoundment in the event of liner failure or to prevent overtopping.

All inflows that enter the surface impoundment are pumped into the unit under controlled conditions. There are no gravity or uncontrolled inflows. Pumps will be immediately removed from service to shut off flows to the impoundment.

5. Dike Construction Yes No

N/A-Section not required per TCEQ due to Structural Stability Assessment requirement.

If Yes, submit the dike certification (located at the end of the application).

The structural integrity of the dike system must be certified by a qualified Texas P.E. before the registration is issued. If the impoundment is not being used, the dike system must be certified before it can be put into use. The certification must be sealed by a qualified Texas P.E., along with the engineering firm's name and registration number (30 TAC §352.4).

A report shall accompany the dike certification which summarizes the activities, calculations, and laboratory and field analyses performed in support of the dike certification. Describe the design basis used in construction of the dikes. A QAPP should be included in the report to ensure that each analysis is performed appropriately and include:

- (1) Slope Stability Analysis
- (2) Hydrostatic and Hydrodynamic Analysis
- (3) Storm Loading
- (4) Rapid Drawdown

Earthen dikes should have a protective cover to minimize wind and water erosion and to preserve the structural integrity of the dike. Describe the protective cover used and describe its installation and maintenance procedures.

B. Liner Design

For surface impoundment(s), provide information about how the facility will comply with 30 TAC §352.711 for existing CCR surface impoundments. For new and lateral expansion of CCR surface impoundments provide information on how the facility will comply with 30 TAC §352.261, and 30 TAC §352.721, see Instructions and Technical Guidance No. 31 Coal Combustion Residuals Surface Impoundment. The qualified Texas P.E. must certify that the design of the liner complies with the requirements of 30 TAC Chapter 352 and 40 CFR Part 257, Subpart D, where required.

Is the CCR surface impoundment unlined? Yes No

If “Yes”, the CCR unit is subject to the closure requirements under 30 TAC Chapter 352 and 40 CFR §257.101(a) to retrofit or close. A notification must be prepared stating that an assessment of corrective measures has been initiated.

On November 30, 2020, Coletto Creek Power, LLC (CCP) submitted a request to the U.S. Environmental Protection Agency (EPA) for approval of a site-specific alternative deadline to initiate closure pursuant to 40 C.F.R. § 257.103(f)(2) for the Primary Ash Pond located at the Coletto Creek Power Plant near Fannin, Texas. CCP is requesting an extension pursuant to 40 C.F.R. § 257.103(f)(2) so that the Primary Ash Pond may continue to receive CCR and non-CCR wastestreams after April 11, 2021, and complete closure no later than October 17, 2028. On January 11, 2022, EPA issued a letter stating the site-specific alternative deadline demonstration was deemed complete thus tolling the cease receipt date until a final decision is issued on the demonstration. The “Coletto Creek CCR Surface Impoundment Demonstration for a Site-Specific Alternative to the Initiation of Closure” report submitted can be found in APPENDIX D.

1. Complete Table V.B. - Surface Impoundment Liner System for each surface impoundment to be registered.
2. Describe the design, installation and operation of liner and leak detection components. The description must demonstrate that the liner and leak detection system will prevent discharge to the land and surface water. Submit a QAPP report to ensure that each analysis is performed appropriately.

See Section 2 in the “History of Construction and Initial Hazard Potential Assessment, Structural Integrity Assessment, and Safety Factor Assessment” report in APPENDIX D.

3. For new or laterally expansions of existing surface impoundments, provide a subsurface soil investigation report that must include:
 - a. A description of all borings drilled, at the unit location, to test soils and characterize groundwater;
 - b. A unit map drawn to scale showing the surveyed locations and elevations of the borings, including location of permanent identification markers ((30 TAC §352.731) and (40 CFR §257.73(a)(1));
 - c. Cross-sections prepared from the borings depicting the generalized strata at the unit;
 - d. Boring logs, including a description of materials encountered, and any discontinuities such as fractures, fissures, slickensides, lenses or seams;
 - e. A description of the geotechnical data and the geotechnical properties of the subsurface soil materials, including the suitability of the soils and strata for the intended uses; and
 - f. A demonstration that all geotechnical tests were performed in accordance with industry practices and recognized procedures.

C. Hazard Potential Classification

Provide the current hazard potential classification assessment and associated documentation, as required by 30 TAC §352.731 or §352.741 and 40 CFR §257.73(a)(2) or §257.74(a)(2). The qualified Texas P.E. must certify that the initial hazard potential classification and any subsequent periodic classification was conducted in accordance with the requirements of 30 TAC Chapter 352, where required.

Hazard Potential Classification: **LOW**

See “Hazard Potential Classification Assessment” located in APPENDIX D.

D. Emergency Action Plan for High or Significantly High Hazard Potential

Provide the current Emergency Action Plan that has been certified by a qualified Texas P.E. and includes the following requirements from 30 TAC 352, Subchapter F and 40 CFR §257.73(a)(3)(i)(A) - (E) or 40 CFR §257.74 (a)(3)(i)(A) - (E). The qualified Texas P.E. must certify that the written Emergency Action Plan and any subsequent amendment of the plan complies with the requirements of 30 TAC 352, Subchapter F, where required.

Complete Table V.J. - Inspection of Surface Impoundments

N/A

E. Inflow Design Flood Control System Plan

Describe how the surface impoundment(s) system will manage stormwater run-on away from the surface impoundment(s) (30 TAC §352.821 and 40 CFR §257.82(a) and (c)). Stormwater run-on must be diverted away from a surface impoundment, based on the hazard potential. Where dikes are used to divert run-on, they must be protected from erosion. Include all analyses used to calculate run-on volumes. Provide the inflow design flood control system plan. Provide qualified Texas P.E. certification that the initial and periodic inflow design flood control system plans meet the requirements of 30 TAC §352.821, where required.

See “Inflow Design Flood Control System Plan” located in APPENDIX D.

F. History of Construction for Existing CCR Surface Impoundment(s), or the Design and Construction Plans for New and Lateral Expansions

Provide information on the history of construction for each existing CCR surface impoundment (30 TAC §352.731 and 40 CFR §257.73(c)) or the design and construction plans for new and lateral expansions of each CCR surface impoundment (30 TAC §352.741) and (40 CFR §257.74(c)).

See “History of Construction” report located in APPENDIX D.

G. Structural Stability Assessment

Provide the most recent structural stability assessment of the surface impoundments. Include the combined capacity of all surface impoundment spillways with calculations; the peak discharge the unit must meet for all combined spillways; probable maximum flood-high hazard, 1,000-yr-significant high hazard, 100-yr-low hazard; identify if there were any structural stability deficiencies in last assessment; identify how these deficiencies were managed and corrected; and qualified Texas P.E. certification. The structural stability assessment must include all information required in 30 TAC §352.731 for existing surface impoundments or 30 TAC §352.741 for new or laterally expanding surface impoundments.

See “Structural Stability Assessment” located in APPENDIX D.

H. Safety Factor Assessment

The current safety factor assessment must be submitted with the application. It must include documentation that demonstrates whether the calculated factors of safety for each CCR surface impoundment achieve the minimum safety factors specified in 30 TAC 352, Subchapter F and 40 CFR §257.73(e)(1)(i) - (iv) and 40 CFR §257.74(e)(1)(i) - (iv) for the critical cross-section of the embankment. The critical cross-section is the cross-section anticipated to be the most susceptible to structural failure based on appropriate engineering considerations, including loading conditions. The safety factor assessments must be supported by appropriate engineering calculations and certified by a qualified Texas P.E.

See "Safety Factor Assessment" located in APPENDIX D.

VI. Groundwater Monitoring and Corrective Action (30 TAC 352, Subchapter H)

See Instructions and Technical Guidance - No. 32 Coal Combustion Residuals Groundwater Monitoring and Corrective Action

27. Groundwater Monitoring System

- A. Complete Table VI.A. - Unit Groundwater Detection Monitoring System.
- B. Provide a map showing location of wells, groundwater elevations, and groundwater flow direction.

See Figures 4 thru 7 in the "Groundwater Hydrogeologic Monitoring Plan" in APPENDIX E.

- C. Provide attachments describing how the facility will comply with the requirements in 30 TAC §352.911 and provide a certification by a qualified Texas P.E or qualified Texas P.G. that the groundwater monitoring system design and construction meet the requirements of 30 TAC Chapter 352.

See Appendix A in the "Groundwater Hydrogeologic Monitoring Plan" located in APPENDIX E for the monitoring system certification.

- D. Provide a figure showing the geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

See Figures 2 and 3 in the "Groundwater Hydrogeologic Monitoring Plan" in APPENDIX E.

- E. For a multiunit groundwater monitoring system, demonstrate that the groundwater monitoring system will be equally as capable of detecting monitored constituents at the waste boundary of the CCR unit as the individual groundwater monitoring system for each CCR unit by providing at minimum the following information:
 - 1. Number, spacing, and orientation of each CCR unit;
 - 2. Hydrogeologic setting; and
 - 3. Site history.

- F. Has there been any sampling concentrations of one or more constituents listed in Appendix IV detected at statistically significant levels above the groundwater protection standard (GWPS)? Yes No
- G. Provide information on how monitoring wells have been constructed and cased in a manner that maintains the integrity of the monitoring well borehole and to prevent contamination of samples and the groundwater.

Groundwater monitoring well construction logs are located in Appendix B of the “Groundwater Hydrogeologic Monitoring Plan” found in APPENDIX E.

28. Groundwater Monitoring Sampling and Analysis Program

Provide a sampling and analysis plan that includes procedures and techniques; sampling and analytical methods that are appropriate for groundwater sampling; and that address the requirements of 30 TAC §352.931 and 40 CFR §257.93. Provide a P.E or P.G. certification that describes the statistical method selected to evaluate the groundwater monitoring data and certifies that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area. Refer to TG-32 for information and guidance.

See “Groundwater Monitoring Plan”, “Statistical Analysis Plan”, and “Statistical Method Certification” in APPENDIX E.

29. CCR Unit(s) in a Detection Monitoring Program

Does the facility have CCR unit(s) in a Detection Monitoring Program?

Yes No

If “Yes”, Submit the following information:

- A. Submit Table VI.C. – Facility CCR Units Under Detection Monitoring.
- B. Provide a Background Evaluation Report.
- C. Provide a report with the results of semiannual monitoring events.
1. Has a statistically significant increase (SSI) been detected for one or more of the constituents listed in Appendix III at any monitoring well?
 Yes No
 2. Has a notification to the executive director been sent within 14 days?
 Yes No
 3. Date assessment monitoring program will start:
 4. Do you plan to provide an alternative source demonstration (ASD)?
 Yes No

30. CCR Unit(s) in an Assessment Monitoring Program

Does the facility have CCR unit(s) in an Assessment Monitoring Program?

Yes No

If “Yes”, Submit information related for units.

- A. Complete Table VI.D. – CCR Units Under Assessment Monitoring.

- B. Provide, for each well in assessment monitoring status, the recorded concentrations lab sheets and results in a tabulated form.

See summary Tables 3 and 4 for all results in tabulated form in the “2020 Annual Groundwater Monitoring and Corrective Action Report” in APPENDIX E.

Have the concentrations of all constituents listed in Appendices III and IV been at or below background values, using the statistical procedures in 30 TAC §352.931 and 40 CFR §257.93(g), for two consecutive sampling events for the CCR unit(s)? Yes No

If answer to above is yes, detection monitoring may resume. The owner or operator must prepare a notification stating that detection monitoring is resuming for the CCR unit and obtain written approval from the executive director.

- C. Are there any concentrations of any constituent in Appendices III and IV above background values? Yes No

1. Has a notification to the executive director been sent within 14 days?

Yes No

- D. Date assessment of corrective measures will be initiated (must be within **90 days** of finding a statistically significant level above the GWPS) for the CCR unit(s):

Not required due to no SSLs to date. Unit is in assessment monitoring but has not triggered assessment of corrective measure to date.

- E. Will you provide an ASD (see TG-32 for an acceptable submittal)? Yes No

- F. Date assessment of corrective measures will be initiated if ASD is not accepted?

Not required.

- G. Complete Table VI.D-2. - Groundwater Detection Monitoring Parameters

Note: Refer to TG-32 regarding establishing a GWPS for each constituent in Appendix IV detected in the groundwater and attach as table.

- H. Have you completed the assessment of corrective measures? Yes No

If “Yes”, date assessment of corrective measures was completed:

If “No”, date assessment of corrective measures will be completed: **Not required**

Expected date of submittal of amendment (see note below):

Provide completed assessment of corrected measures materials.

Note: Within **30 days** of completing the assessment of corrective measures, and before remedy implementation, the owner or operator shall submit an application for amendment to the registration. In some circumstances, the assessment of corrective measures and selected remedy may be approved as part of the initial application for the CCR unit registration.

- I. Have you selected a remedy? Yes No **N/A**

Provide public meeting documentation under 30 TAC §352.961 and a report under 30 TAC §352.971 and 40 CFR §257.97.

VII. Closure and Post-Closure Care

See Instructions and Technical Guidance

Submit a full closure plan and post-closure plan and all information describing how the owner or operator will comply with 30 TAC 352, Subchapter J and 40 CFR §§257.100 - 257.104. The owner of property on which an existing disposal facility is located, following the closure of a unit, must also submit documentation that a notation has been placed in the deed to the facility that will in perpetuity notify any potential

purchasers of the property that the land has been used to manage CCR wastes and its use is restricted (30 TAC §352.1221 and 40 CFR §257.102(i)). For CCR units, closed after October 19, 2015, that were closed before submission of the application, the applicant should submit documentation to show that notices required under 30 TAC 352, Subchapter K and 40 CFR §257.105 or §257.106 have been filed.

See “Closure Plan” and “Post-Closure Plan” in APPENDIX F. Also included in the appendix is a “Closure Plan Addendum” that was prepared to meet the requirements of the site-specific alternative deadline to initiate closure.

31. Closure Plan

This section applies to the owners and operators of all CCR units required to be registered. The applicant must close the facility in a manner that minimizes need for further maintenance and controls, or eliminates, to the extent necessary to protect human health and the environment, the post-closure release of CCR waste, chemical constituents of concern, leachate, contaminated rainfall, or waste decomposition products to the groundwater, surface waters, or to the atmosphere.

The type of unit to be closed can determine the level of detail sufficient for a closure plan. CCR units which have been certified closed after October 19, 2015, must provide documentation to demonstrate compliance with state and federal regulations.

For each unit to be registered, complete Table VII.A.1. - Unit Closure and list the CCR Unit components to be decontaminated, possible methods of decontamination, and possible methods of disposal of wastes and waste residues generated during unit closure. All ancillary components must be decontaminated, and the generated waste disposed of appropriately.

Information about CCR units closed or to be closed under alternative closure requirements must be provided in Table VII.A.2. - CCR Units Under Alternative Closure Notification.

Guidance on design of a closure cap and final cover for non-hazardous industrial solid wastes landfills is provided in EPA publication 530-SW-85-014, TCEQ Technical Guidance No. 3 and TCEQ publication, RG-534, “Guidance for Liner Construction and Testing for a Municipal Solid Waste Landfill”.

32. Post-Closure Care Plan

Provide a post-closure care plan that complies with the requirements of 30 TAC §352.1241.

See “Post-Closure Plan” in APPENDIX F.

Post-closure care of each CCR unit must continue for at least 30 years after the date of completing closure of the unit and must consist of monitoring and reporting of the groundwater monitoring systems, in addition to the maintenance and monitoring of CCR unit. Continuation of certain security requirements may be necessary after the date of closure. Post-closure use of property on or in which waste remains after closure must never be allowed to disrupt the integrity of the containment system. In addition, submit the following information:

- The name, address, and phone number of the person or office to contact about the CCR unit during the post-closure period; and

Luminant-Environmental Services
Renee Collins-Senior Environmental Director
6555 Sierra Drive
Irving, TX 75039
214-875-8338

CCRPostClosurePlan@Luminant.com

- A discussion of the future use of the land associated with each unit.

Following closure of the Primary Ash Pond, a notation on the deed to the property, or some other instrument that is normally examined during title search, will be recorded in accordance with 40 CFR 257.102(i). The notation will notify potential purchasers of the property that the land has been used as a CCR unit and its use is restricted under the post-closure care requirements per 40 CFR 257.104(d)(1)(iii).

Landfills and surface impoundments which have been certified closed after October 19, 2015, must be included in post-closure care plans, unless they have been determined to have been closed by waste removal equivalent to the closure standards in 30 TAC §352.1221 and 40 CFR §257.102 or 30 TAC §352.1231 and 40 CFR §257.103. If such a demonstration has been made pursuant to 40 CFR §257.102 or §257.103, but an equivalency determination has not been made, please submit a copy of the demonstration documentation. If an equivalency determination has been made, applicant should submit a copy of this determination.

VIII. Financial Assurance

33. Post-Closure Care Cost Estimate

Financial assurance for post-closure care (30 TAC §352.1101) applies to owners or operators of all CCR units, except CCR units from which the owner or operator intends to remove wastes and perform clean closure. Provide a written cost estimate in current dollars of the total cost of the 30-year (or longer, if applicable under 30 TAC §352.1101(d)) post-closure care period to perform post-closure care requirements as prescribed in 30 TAC §352.1241. The cost estimate must be based on the costs of hiring a third party to conduct post-closure care maintenance.

Complete Table VIII.A.1 - Post-Closure Cost Summary for Existing Registered Units

See Post-Closure Care Estimate Memo from Golder in APPENDIX G. Coletto Creek Power Station cost estimates are summarized in Table 7.

Complete Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units

34. Financial Assurance Mechanism

The financial assurance for post-closure care is required in accordance with 30 TAC §352.1101. The applicant shall demonstrate the financial assurance within 90 days after approval of the registration with a financial mechanism acceptable to TCEQ in compliance with 30 TAC §352.1101(c) and 30 TAC §37, Subchapters A through D, except as indicated in 30 TAC §352.1111, in an amount no less than the amount specified in the approved Post-Closure Care Cost Summary. Provide a description of the proposed financial assurance mechanism.

Vistra Corporation currently uses AEGIS Insurance Services Endorsement No. 60 (TCEQ Endorsement for Closure, Post-Closure or Corrective Action) as an approved financial assurance mechanism at other Vistra owned facilities. Applicant intends to add post-closure coverage amounts detailed in Table VIII.A.1. to current policy.

Complete Table VIII.B. - Post-Closure Period, for the authorized post-closure period, to meet the requirements of 30 TAC §352.1241(a) through (c).

Signature Page

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Signature: _____ Date: _____

Name and Official Title (type or print): _____

Owner or Operator Signature: _____ Date: _____

Name and Official Title (type or print): _____

To be completed by the owner or operator if the application is signed by an authorized representative for the operator

I, _____ hereby designate _____
(operator) (authorized representative)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a CCR waste management registration. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any registration which might be issued based upon this application.

Printed or Typed Name of Applicant or Principal Executive Officer

Signature

(Note: Application Must Bear Signature & Seal of Notary Public)

Subscribed and sworn to before me by the said _____ on this

_____ day of _____, _____.

My commission expires on the _____ day of _____, _____

(Seal) Notary Public in and for _____ County, Texas

Registration Application for Coal Combustion Residuals Waste Management

(See instructions for P.E/P.G. seal requirements.)

Attachments and Tables

Attachment No.

General Information

Appendix A

Property/Legal Description

Property Owner Affidavit

Legal Authority

Delegation of Signature Authority

TCEQ Core Data Form

Attachments

Compliance Assessment for Coletto Creek Power Station Primary Ash Pond - 40 CFR 257.52(b)

Location Restrictions & Geology

Appendix B

Location Restrictions Demonstration

Location Restrictions Assessment

Fugitive Dust Control Plan

Appendix C

CCR Fugitive Dust Control Plan

2021 Annual CCR Fugitive Dust Control Report

Surface Impoundment Design and Operating Criteria

Appendix D

Alternative Closure Plan Demonstration - §257.103(f)(2)

Hazard Potential Classification Assessment

Inflow Design Flood Control Plan

History of Construction Report

Structural Stability Assessment

Safety Factor Assessment

Groundwater Monitoring and Corrective Action

Appendix E

Groundwater Hydrogeologic Monitoring Plan

Groundwater Monitoring Plan

Statistical Analysis Plan

Statistical Method Certification

2020 Groundwater Monitoring and Corrective Action Report

Closure and Post-Closure Care

Appendix F

Closure Plan

Closure Plan Addendum No.1

Post-Closure Plan

Financial Assurance

Appendix G

Post-Closure Care Estimate Memo

Tables

Tables	Submitted	Not Applicable
Table I.6. - CCR Waste Management Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table I.6.A. - Waste Management Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table I.6.B. - Wastes Managed in Registered Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table I.6.C. - Sampling and Analytical Methods	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table IV.A. - Landfill Characteristics	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table IV.B. - Landfill Liner System	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table IV.C. - Landfill Leachate Collection System	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table IV.D. - Inspection Schedule of Landfills	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table V.A. - Surface Impoundments Characteristics	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table V.B. - Surface Impoundment Liner System	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table V.J. - Inspection of Surface Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VI.A. - Unit Groundwater Detection Monitoring System	<input type="checkbox"/>	<input type="checkbox"/>
Table VI.C. - CCR Units Under Detection Monitoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table VI.D. - CCR Units Under Assessment Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VI.D-2. - Groundwater Detection Monitoring Parameters	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VII.A.1. - Unit Closure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VII.A.2. - CCR Units Under Alternative Closure Notification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VIII.A.1. - Post-Closure Cost Summary for Existing Registered Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Table VIII.A.2. - Post-Closure Cost Summary for Proposed Registered Units	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Table VIII.B. - Post-Closure Period	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Engineering Certification(s) - Dike Construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Additional Attachments as Applicable - Select all those apply and add as necessary

- TCEQ Core Data Form(s) **Appendix A**
- Signatory Authority Delegation **Appendix A**
- Fee Payment Receipt
- Confidential Documents
- Certificate of Fact (Certificate of Incorporation) **Appendix A**
- Assumed Name Certificate

Table I.6. – CCR Waste Management Units

CCR Unit No. ¹	Unit Name	N.O.R. No. ¹	Unit Description ³	Capacity	Unit Status ²
001	Primary Ash Pond	001	Surface Impoundment	2,700 acre-feet	Active

1 Registered Unit No. and N.O.R. No. cannot be reassigned to new units or used more than once.
 2 Unit Status options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post-Closure.
 3 If a unit has been transferred, the applicant should indicate which facility/permit it has been transferred to in the Unit Description column.

Table I.6.A. – Waste Management Information

Waste No. ¹	Waste Type(s)	Source	Volume (tons/year)
1	Fly Ash	Coal Combustion Byproduct	57,000 produced 425 disposed
2	Bottom Ash	Coal Combustion Byproduct	13,000 produced 400 disposed

1 Assign waste number sequentially. Do not remove waste number wastes which are no longer generated.

Table I.6.B. – Wastes Managed in Registered Units

Waste No. ¹	Waste	TCEQ Waste Form Codes and Classification Codes
1	Fly Ash	TWC-20173192, TX Form Code-319, Class 2
2	Bottom Ash	TWC-20183192, TX Form Code-319, Class 2

1 from Table I.6.A., first column

Table I.6.C – Sampling and Analytical Methods

Waste No. ¹	Sampling Location	Sampling Method	Frequency	Parameter	Test Method	Desired Accuracy Level
1	Fly Ash	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below ²
2	Bottom Ash	Grab	<5 years	TCLP Metals	SW1311/7470A SW1311/6020B	See below ²

¹ from Table I.6.A., first column

² Analytical protocol will meet EPA quality control and accuracy specifications as published in the SW-846 Methods. The laboratory will be TCEQ accredited.

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 Registrant: Coletto Creek Power Station

Table IV.A. - Landfills Characteristics

Registered Unit No.	Landfill	N.O.R. No.	Waste Nos. ¹	Rated Capacity	Dimensions ²	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
N/A								

1 From Table I.6.A., first column

2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

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 Registrant: Coletto Creek Power Station

Table IV.B. – Landfill Liner System

Registered Unit No.*	Landfill	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
N/A							

* This number should match the Registration Unit No. given on Table IV.A.

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Registrant: Coletto Creek Power Station

Table IV.C. - Landfill Leachate Collection System

Registered Unit No.	Landfill Name	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material
N/A						

Table IV.D. - Inspection Schedule of Landfills

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
N/A		

Registration No.: **NewCCR116**
 Registrant: Coletto Creek Power Station

Table V.A. – Surface Impoundment Characteristics

Registered Unit No.	Surface Impoundment Name	N.O.R. No.	Waste Nos. ¹	Rated Capacity	Dimensions ²	Distance from lowest liner to groundwater	Action Leakage Rate (if required)	Unit will manage CCR Waste and non-CCR Waste (state all that apply)
001	Primary Ash Pond	001	1, 2	2,700 acre-feet	2,450 feet W x 3,375 feet L x 20 feet D 190 acres	>5 Feet	n/a	Fly Ash, Bottom Ash

1 From Table I.6.A., first column

2 Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Registration No.: **NewCCR116**
 Registrant: Coletto Creek Power Station

Table V.B. – Surface Impoundment Liner System

Registered Unit No.*	Surface Impoundment Name	Geomembrane Liner Material	Geomembrane Liner Permeability (cm/sec)	Geomembrane Liner Thickness	Soil Liner Material	Soil Liner Permeability (cm/sec)	Soil Liner Thickness
001	Primary Ash Pond	None	None	None	In-situ clay	<1.0 x 10 ⁻⁷ cm/sec	Avg 9', ranges 4'-20'

* This number should match the Registration Unit No. given on Table V.A.



Table V.J. – Inspection Schedule of Surface Impoundments

Facility Unit(s) and Basic Elements	Possible Error, Malfunction, or Deterioration	Frequency of Inspection
010-Ash Landfill 1	Inspect for any appearances of actual or potential structural weakness and other conditions which are disrupting or have the potential to disrupt the operation and safety of the CCR unit	Weekly Inspection per 40 CFR 257.84(a)
Embankments	Surface cracking, animal burrows, misalignments, slides, vegetative cover, rutting, erosion, seepage, slope protection/chutes	Weekly Inspection
Capped Areas	Animal burrows, vegetative cover, rutting, surface cracking	Weekly Inspection
Active Work Area	Contact water, dusting	Weekly Inspection
Groundwater Monitoring Wells	Deterioration of pads, bollards, missing locks, compromise of casing integrity	Semi-Annual Inspection
010-Ash Landfill 1		Annually per 40 CFR 257.84(b)
	Inspect for any changed in geometry of the structure since the previous annual inspection.	Annual Inspection
	Estimate the approximate volume of CCR contained in the unit at the time of the inspection.	Annual Inspection
	Inspect for any appearance of actual or potential structural weakness of the CCR unit, and any conditions that are disrupting or have the potential to disrupt the operation and safety of the unit.	Annual Inspection
	Inspect for any other change(s) which have affected the stability or operation of the CCR unit since the previous inspection	Annual Inspection

Table VI.A. - Unit Groundwater Detection Monitoring Systems

Waste Management Unit/Area Name ¹	REPLACE PAGE IN PDF					
Well Number(s):						
Hydrogeologic Unit Monitored						
Type (e.g., point of compliance, background, observation, etc.)						
Up or Down Gradient						
Casing Diameter and Material						
Screen Diameter and Material						
Screen Slot Size (in.)						
Top of Casing Elevation (Ft, Mean Sea Level <i>[MSL]</i>)						
Grade or Surface Elevation (Ft, MSL)						
Well Depth (Ft, Below Grade Surface <i>[BGS]</i>)						
Well Depth (Ft, Below Top of Casing <i>[BTOC]</i>)						
Screen Interval From (Ft, BGS) To (Ft, BGS)						
Screen Interval From (Ft, BTOC) To (Ft, BTOC)						

¹ From Tables in Section I.; *MSL*: Mean Sea Level; *BGS*: Below Grade Surface; *BTOC*: Below Top of Casing

Registration No.: **NewCCR116**
 Registrant: Coletto Creek Power Station

Table VI.C. – CCR Units Under Detection Monitoring

N.O.R. Unit No.	Unit Description ^{1,2}	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification ³
N/A					

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
 2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
 3 Enter month, day, and year.

Table VI.D. – CCR Units Under Assessment Monitoring

N.O.R. Unit No.	Unit Description ^{1,2}	Well(s)	Constituent(s)	Date of SSI Determination	Date of Assessment Monitoring Notification ³
001	Primary Ash Pond	MW-6, MW-9, MW-10	B	2/12/2018	Notification made 5/9/18
001	Primary Ash Pond	MW-4, MW-5, MW-6, MW-9, MW-10, MW-11	Cl, F, SO4, pH	2/12/2018	ASD Successful for all constituents except Boron (4/11/18)

1 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been requested pursuant to 40 CFR §257.103.
 2 Indicates a unit for which a 30 TAC Chapter 352/40 CFR Part 257, Subpart D alternative closure determination has been made pursuant to 40 CFR §257.103.
 3 Enter month, day, and year

Table VI.D-2. - Groundwater Detection Monitoring Parameters

Parameter	Sampling Frequency	Analytical Method	Practical Quantification Limit (units)	Concentration Limit ¹
Boron	Semi-Annual	SW6020A	0.03 mg/L	1.26
Calcium	Semi-Annual	SW6020A	3.0 mg/L	143
Chloride	Semi-Annual	E300	1.0 mg/L	118
Fluoride	Semi-Annual	E300	0.4 mg/L	0.61
Sulfate	Semi-Annual	E300	3.0 mg/L	148
Total Dissolved Solids	Semi-Annual	M2540C	10.0 mg/L	766
pH	Semi-Annual	Field Measured	s.u.	6.51 7.33

¹ The concentration limit is the basis for determining whether a release has occurred from the CCR unit/area.

Registration No.: **NewCCR116**
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Table VII.A.1. - Unit Closure

For each unit to be registered, list the unit components to be decontaminated, the possible methods of decontamination, and the possible methods of disposal of wastes and waste residues generated during unit closure.

Equipment or CCR Unit	Possible Methods of Decontamination ¹	Possible Methods of Disposal ¹
001-Primary Ash Pond Piping	Removal	Landfill
001-Primary Ash Pond	Close in Place	No Disposal

¹ Applicants may list more than one appropriate method.

Registration No.: **NewCCR116**
Registrant: Coletto Creek Power Station

Table VIII.B. – Post-Closure Period

Unit Name	Date Certified Closed	Authorized Post-Closure Period (Yrs.)	Earliest Date Post-Closure Ends (See Note 1)
[Unit Example 1]	[1/1/1995]	30 years	[1/1/2025]
[Unit Example 2]	[1/1/1990]	30 years	[1/1/2020]
[Unit Example 3]	[1/1/1984]	30 years	[1/1/2014]

Note 1 - Post-Closure Care shall continue beyond the specified date until the Executive Director has approved the applicant's request to reduce or terminate the post-closure period, consistent with 30 TAC §352.1241 - Post-Closure Care Requirements.

N/A

APPENDIX A – GENERAL INFORMATION

Property/Legal Description

Property Owner Affidavit

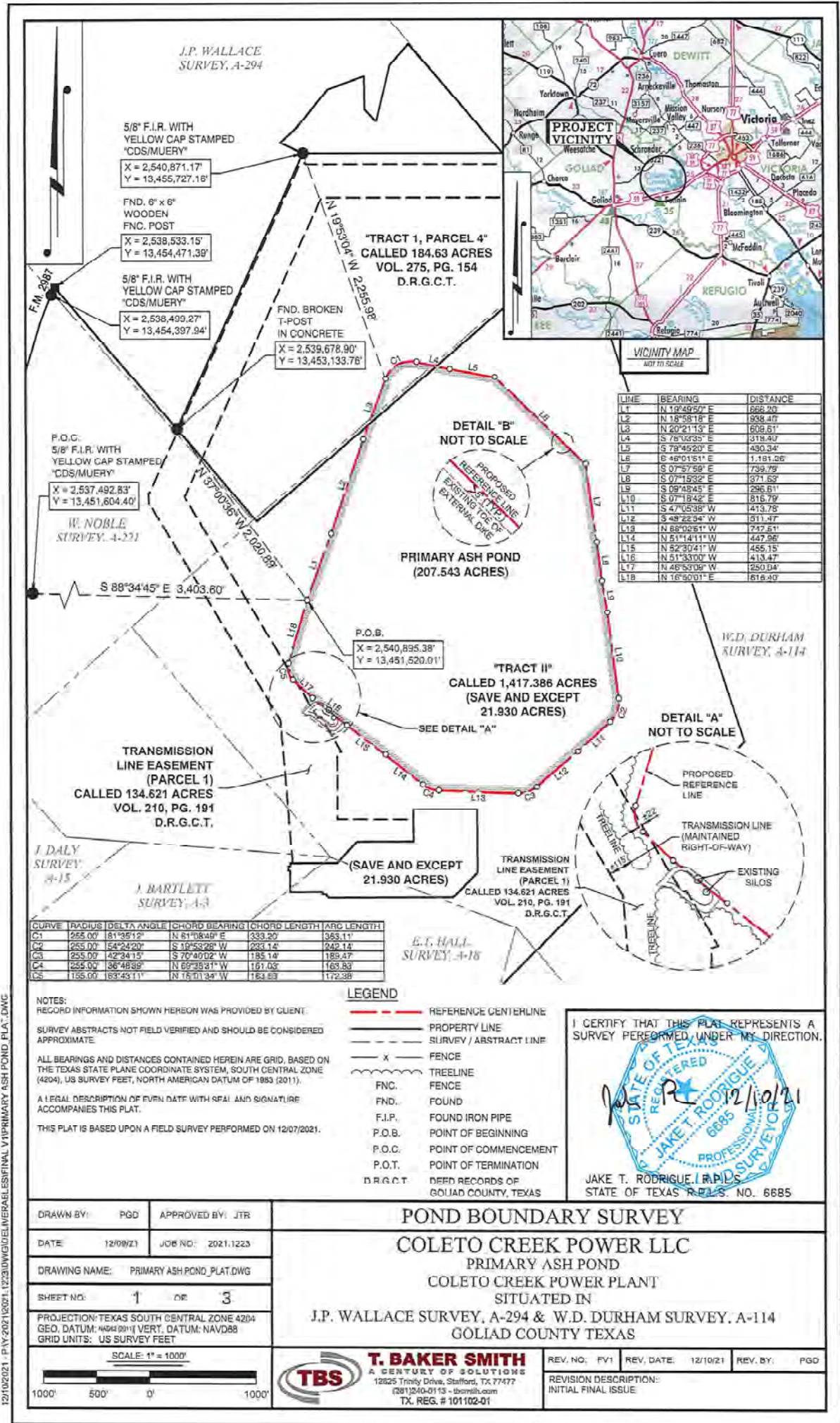
Legal Authority

Delegation of Signature Authority

TCEQ Core Data Form

Attachments

Compliance Assessment for Item 21





TX, REG. #101102-01
12825 Trinity Dr., Stafford, TX 77477
Main Line: 281.240.0113 • Toll Free: 1.866.357.1050 • Fax: 281.240.0245 • Online: www.tbsmith.com

EXHIBIT "A"
FIELD NOTES FOR
PRIMARY ASH POND

Being a reference line description for the boundary of the existing **PRIMARY ASH POND** and being out of the J.P. Wallace Survey, Abstract No. 294 and the W.D. Durham Survey, Abstract No. 114 in Goliad County, Texas, said reference line being situated upon, over, through and across a called 184.63 acre tract "Tract I, Parcel 4" as referenced to a prior instrument: Volume 275, Page 154 of the Deed Records of Goliad County, Texas (D.R.G.C.T.) and a called 1,417.386 acre tract "Tract II" (save and except 21.930 acres) consisting of the following tracts: a portion of a called 1,236.71 acres as described in Volume 285, Page 411, D.R.G.C.T., all of a called 218.98 acres as described in Volume 270, Page 925, D.R.G.C.T., a portion of a called 144.24 acres and all of a called 0.82 acres as described in Volume 270, Page 925, D.R.G.C.T., a portion of a called 37.74 acres, all of a called 1.11 acres, and all of a called 0.26 acres as described in Volume 273, Page 614, D.R.G.C.T., all of a called 0.14 acres as described in Volume 275, Page 151, D.R.G.C.T., a portion of a called 124.89 acres and all of a called 0.45 acres, all of a called 188.77 acres and all of a called 0.11 acres as described in Volume 274, Page 717, D.R.G.C.T., and a portion of a called 200.90 acres as described in Volume 273, Page 609, D.R.G.C.T. (The previous six tracts also being described in Volume 359, Page 433, D.R.G.C.T.). Said reference line being situated five (5) feet outside of the existing toe of the external dike of said **PRIMARY ASH POND** and being more particularly described by metes and bounds as follows:

COMMENCING at a 5/8" iron rod with yellow cap stamped "CDS/MUERY" found in the westerly boundary line of "Tract II" and the easterly right-of-way line of Farm to Market 2987 for the **POINT OF COMMENCEMENT** of the herein described reference line;

THENCE S 88°34'45" E, over and across "Tract II", a distance of 3,403.60 feet to the **POINT OF BEGINNING** of the herein described reference line, from which a broken t-post in concrete found at a westerly corner of "Tract I, Parcel 4" bears N 37°00'36" W, a distance of 2,020.89 feet;

THENCE continuing across "Tract II", the following courses and distances:

N 19°49'50" E, a distance of 666.20 feet;
N 18°58'18" E, a distance of 938.40 feet;

THENCE N 20°21'13" E, at 145.84 feet passing the southeast line of "Tract I, Parcel 4", and continuing over and across "Tract I, Parcel 4" and "Tract II" for a total distance of 609.61 feet to the point of curvature of a curve to the right, from which a 5/8" iron rod with yellow cap stamped "CDS/MUERY" found at a northerly corner of "Tract II" bears N 19°53'04" W, a distance of 2,255.98 feet;

THENCE with said curve to the right, having a radius of 255.00 feet, a delta angle of 81°35'12", a chord bearing of N 61°08'49" E and a chord length of 333.20 feet, with an arc length of 363.11 feet to the point of tangency;

THENCE S 78°03'35" E, at 193.27 feet passing the southeast line of "Tract I, Parcel 4", and continuing over and across "Tract I, Parcel 4" and "Tract II" for a total distance of 318.40 feet;

THENCE continuing across "Tract II", the following courses and distances:

S 79°45'20" E, a distance of 430.34 feet;
S 46°01'51" E, a distance of 1,181.26 feet;
S 07°57'59" E, a distance of 739.79 feet;
S 07°15'32" E, a distance of 371.63 feet;
S 09°48'45" E, a distance of 296.61 feet;
S 07°18'42" E, a distance of 816.79 feet to the point of curvature of a curve to the right;

THENCE with said curve to the right, having a radius of 255.00 feet, a delta angle of 54°24'20", a chord bearing of S 19°53'28" W and a chord length of 233.14 feet, with an arc length of 242.14 feet to the point of tangency;

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12825 Trinity Dr., Stafford, TX 77477

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THENCE continuing across "Tract II", the following courses and distances:

S 47°05'38" W, a distance of 413.78 feet;

S 49°22'54" W, a distance of 511.47 feet to the point of curvature of a curve to the right;

THENCE with said curve to the right, having a radius of 255.00 feet, a delta angle of 42°34'15", a chord bearing of S 70°40'02" W and a chord length of 185.14 feet, with an arc length of 189.47 feet to the point of tangency;

THENCE N 88°02'51" W, continuing across "Tract II" a distance of 747.51 feet to the point of curvature of a curve to the right;

THENCE with said curve to the right, having a radius of 255.00 feet, a delta angle of 36°48'39", a chord bearing of N 69°38'31" W and a chord length of 161.03 feet, with an arc length of 163.83 feet to the point of tangency;

THENCE continuing across "Tract II", the following courses and distances:

N 51°14'11" W, a distance of 447.96 feet;

N 52°30'41" W, a distance of 455.15 feet;

N 51°33'00" W, a distance of 413.37 feet;

N 46°53'09" W, a distance of 250.04 feet to the point of curvature of a curve to the right;

THENCE with said curve to the right, having a radius of 155.00 feet, a delta angle of 63°43'11", a chord bearing of N 15°01'34" W and a chord length of 163.63 feet, with an arc length of 172.38 feet to the point of tangency;

THENCE N 16°50'01" E, continuing across "Tract II" a distance of 616.40 feet to the point of **POINT OF BEGINNING** and containing 207.543 acres, more or less, as depicted on the attached plat of survey;

A plat of even date accompanies this legal description on page 1.

Basis of Bearings: State Plane Coordinate System, Texas South Central Zone, NAD 83 (2011) Datum.

Prepared December 9, 2021, Revised December 10, 2021



Jake T. Rodrigue, R.P.L.S.
Texas Registered Professional Land Surveyor No. 6685

Property Owner Affidavit

"I/We, Renee Collins, as Delegated Representative
(Printed Signatory Name) (Signatory Capacity)

As authorized signatory for Coletto Creek Power, LLC
(Printed Name of Property Owner of Record)

Acknowledge that the State of Texas may hold the property owner of record either jointly or severally responsible for the operation, maintenance, and closure and post-closure care of the facility. I further acknowledge that I or the operator and the State of Texas shall have access to the property during the active life and post-closure care period, if required, after closure for the purpose of inspection and maintenance."

Renee Collins
(Property Owner's Signature)

5/9/2022
(Date)



Office of the Secretary of State

CERTIFICATE OF FILING OF

Coleto Creek Power, LLC
File Number: 802989013

The undersigned, as Secretary of State of Texas, hereby certifies that an Application for Registration for the above named Foreign Limited Liability Company (LLC) to transact business in this State has been received in this office and has been found to conform to the applicable provisions of law.

ACCORDINGLY, the undersigned, as Secretary of State, and by virtue of the authority vested in the secretary by law, hereby issues this certificate evidencing the authority of the entity to transact business in this State from and after the effective date shown below for the purpose or purposes set forth in the application under the name of

Coleto Creek Power, LLC

The issuance of this certificate does not authorize the use of a name in this state in violation of the rights of another under the federal Trademark Act of 1946, the Texas trademark law, the Assumed Business or Professional Name Act, or the common law.

Dated: 04/13/2018

Effective: 04/13/2018



A handwritten signature in black ink, appearing to read "Rolando B. Pablos".

Rolando B. Pablos
Secretary of State

Come visit us on the internet at <http://www.sos.state.tx.us/>



Vistra Corp.
6555 Sierra Drive
Irving, TX 75039

O 214-875-8996

Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

Re: Delegation of Administrative Authority for Vistra Corp.

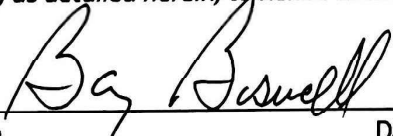
This letter confirms the signatory authority for environmental matters related to the subsidiary entities of Vistra Operations Company LLC, which is a subsidiary of Vistra Corp.

Vistra Operations Company LLC hereby authorizes Renee Collins, Senior Director – Environmental Services, to act in the following capacities as it relates to administrative issues related to the below listed subsidiaries: Authorized Responsible Official and Alternate Designated Representative; as well, Ms. Collins has signatory authority for all air, water and waste permitting activities, and for water rights and water quality regulatory submissions. Those subsidiaries for which Ms. Collins has signatory authority are: Luminant Mining Company LLC, Luminant Generation Company LLC, La Frontera Holdings, LLC, Sandow Power Company LLC, Oak Grove Management Company LLC, Coletto Creek Power, LLC, Brightside Solar, LLC, Emerald Grove, LLC, and Core Solar SPV I, LLC.

Vistra Operations Company LLC hereby authorizes Renee Collins, Senior Director – Environmental Services, to act in the following capacities as it relates to administrative issues related to the below listed Vistra Corp. subsidiaries: Duly Authorized Representative and Alternate Designated Representative; as well, Ms. Collins has signatory authority for all air, water and waste permitting activities, and for water rights and water quality regulatory submissions. Those subsidiaries for which Ms. Collins has signatory authority are: Hays Energy, LLC and Midlothian Energy, LLC.

This delegation of authority is effective as of January 12, 2022, supersedes all previous delegations for this responsibility, and is valid until revoked or revised by Vistra Operations Company LLC.

I, Barry Boswell, being Executive Vice President—Generation Operations and Services of Vistra Operations Company LLC, the parent company to each of the above listed entities, and designee in charge of business functions, policy or decision-making functions for solar, battery, and fossil operations, hereby delegate authority, as detailed herein, to Renee Collins, Senior Director – Environmental Services.

 1/12/22
Signature Date

cc: David Mitchell – Senior Counsel



TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number (if issued)
CN 605521988		RN 100226919

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	01/24/2022	
<input type="checkbox"/> New Customer <input checked="" type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)			
The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).			
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)		If new Customer, enter previous Customer below:	
Coletto Creek Power, LLC			
7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number (if applicable)
0802989013	32066860142	030599683	146129908
11. Type of Customer:	<input checked="" type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Other:	
12. Number of Employees	13. Independently Owned and Operated?		
<input checked="" type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following			
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:			
15. Mailing Address:	6555 Sierra Drive		
	City	Irving	State TX ZIP 75039 ZIP + 4 2479
16. Country Mailing Information (if outside USA)		17. E-Mail Address (if applicable)	
18. Telephone Number	19. Extension or Code	20. Fax Number (if applicable)	
(214) 875-8338		() -	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)	
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information	
The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).	
22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)	
Coletto Creek Power Station	

23. Street Address of the Regulated Entity: <i>(No PO Boxes)</i>	45 FM 2987							
	City	Fannin	State	TX	ZIP	77960	ZIP + 4	
24. County	Goliad							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	On 45 FM 2987								
26. Nearest City	Fannin				State	TX	Nearest ZIP Code		
27. Latitude (N) In Decimal:	28.7128			28. Longitude (W) In Decimal:	-97.2142				
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds				
28	42	49	97	12	50				
29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)		32. Secondary NAICS Code (5 or 6 digits)				
4911			221112						
33. What is the Primary Business of this entity? <i>(Do not repeat the SIC or NAICS description.)</i>									
Generation of Electricity									
34. Mailing Address:	6555 Sierra Drive								
	City	Irving	State	TX	ZIP	75039	ZIP + 4	2479	
35. E-Mail Address:									
36. Telephone Number			37. Extension or Code			38. Fax Number <i>(if applicable)</i>			
(214) 875-8338						() -			

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

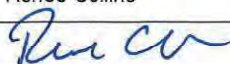
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

SECTION IV: Preparer Information

40. Name:	Eric Chavers	41. Title:	Environmental Coordinator
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(903) 389-6062		() -	eric.chavers@luminant.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Luminant Generation Company LLC	Job Title:	Sr. Director, Environmental Services
Name <i>(In Print)</i> :	Renee Collins	Phone:	(214) 875- 8382
Signature:		Date:	1/28/2022

ATTACHMENT 1
CCR UNIT MAPS AND INFORMATION

<u>Figure No.</u>	<u>Description</u>
Figure 1	General Location Map
Figure 2	Topographic Map
Figure 3	Facility Layout Map
Figure 4	Surrounding Features Map
Figure 5	Simplified CCR Process Flow Diagram
Figure 6	Land Ownership Map

<u>Table No.</u>	
Table 1	Land Ownership List

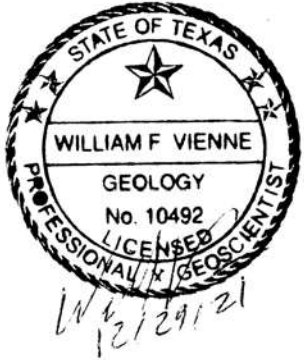


REFERENCE(S)
 BASE MAP TAKEN FROM BING MAPS.

COLETO CREEK POWER LP

COLETO CREEK POWER STATION
 FANNIN, TEXAS

GENERAL LOCATION MAP

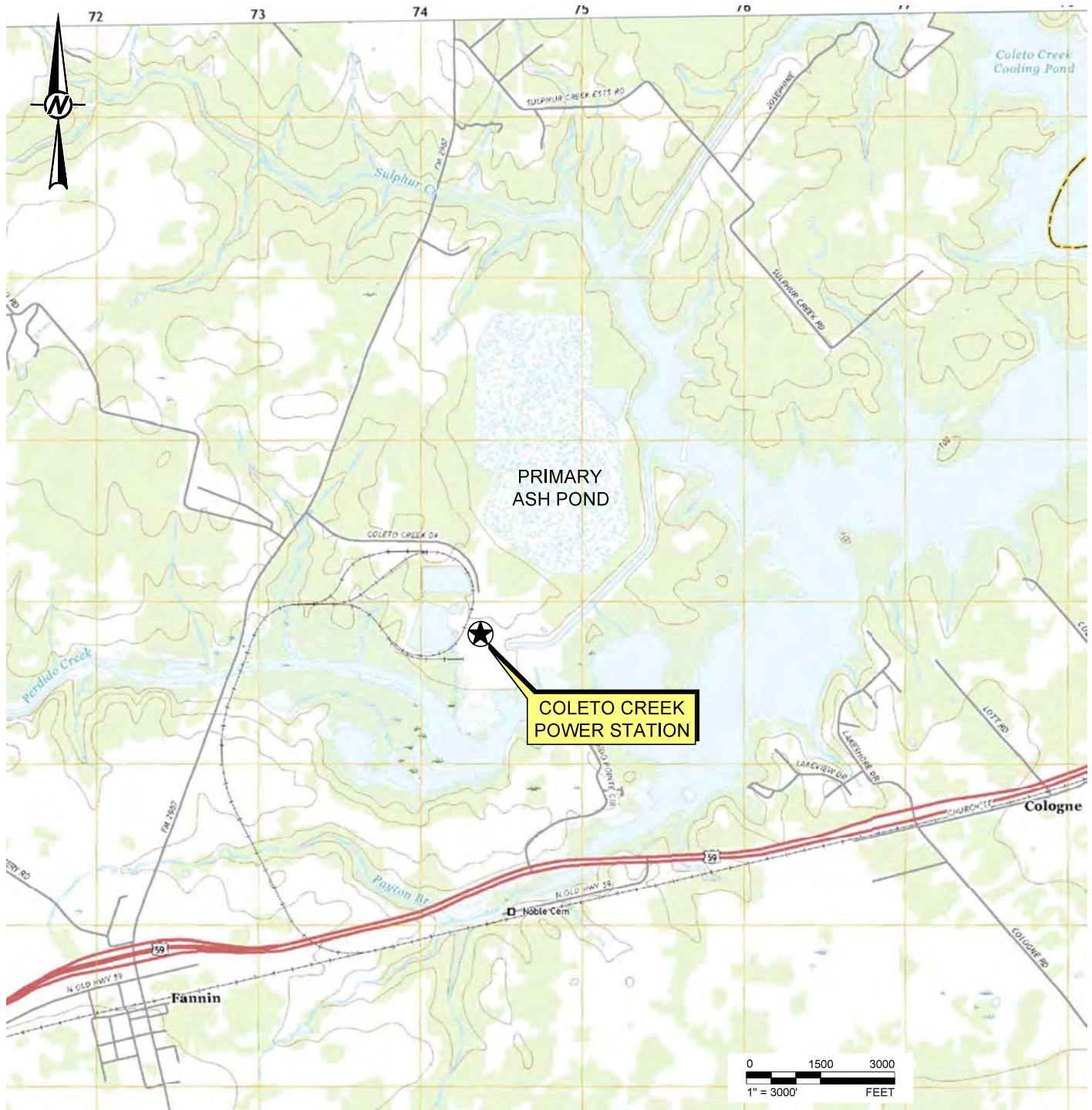


2021-12-14
RS
RS
WfV
WfV

20142034

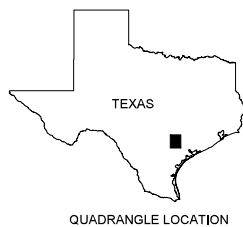
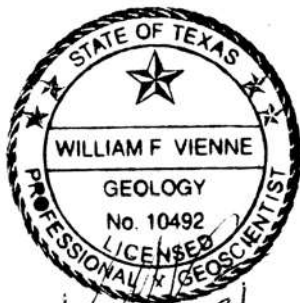
0

FIGURE
1



REFERENCE(S)
 BASE MAP TAKEN FROM USGS.GOV, FANNIN, TX 7.5 MIN. USGS QUADRANGLE DATED 2019.

CLIENT
 COLETO CREEK POWER LP



PROJECT
 COLETO CREEK POWER STATION
 FANNIN, TEXAS

TITLE
 TOPOGRAPHIC MAP

CONSULTANT



YYYY-MM-DD	2021-12-07
DESIGNED	AJD
PREPARED	AJD
REVIEWED	WFV
APPROVED	WFV

PROJECT NO.
 20142034

CONTROL

REV.
 0

FIGURE
 2

Last Edited By: adiamond Date: 2021-12-08 Time: 11:06:46 AM | Printed By: TBookout Date: 2021-12-23 Time: 2:57:34 PM
 Path: \\golder\gis\complextask\atx\atx\projects - round rock_2020\20142034 - lumina\production\c - COLETO CREEK | File Name: Topographic Map.dwg

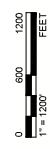
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIA



- LEGEND**
- PROPERTY BOUNDARY
 - - - CCR MONITORING UNIT
 - - - DOWNGRADIENT CCR MONITORING WELL
 - - - UPGRADE CCR MONITORING WELL
 - RAILROAD



REFERENCES)
 BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 11/5/21.



CLIENT
 COLETO CREEK POWER LP

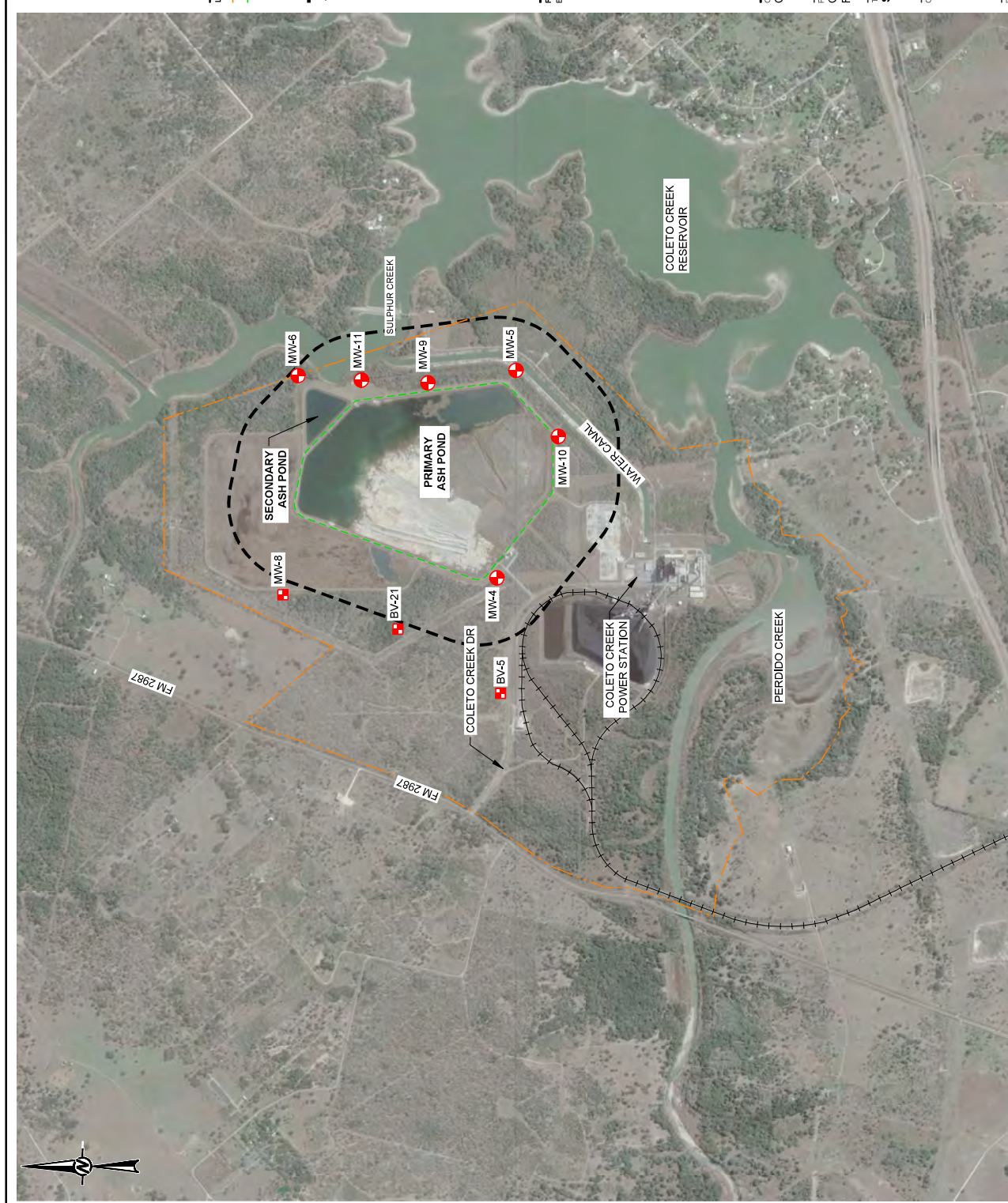
PROJECT
 COLETO CREEK POWER STATION
 FANNIN, TEXAS

TITLE
 FACILITY LAYOUT MAP

CONSULTANT	YYYY-MM-DD	2021-12-14
DESIGNED	RS	
PREPARED	RS	
REVIEWED	WFV	
APPROVED	WFV	

GOLDER
 MEMBER OF WSP

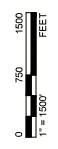
PROJECT NO. 20142034
 REV. 0
 FIGURE 3



- LEGEND**
- PROPERTY BOUNDARY
 - CCR MONITORING UNIT
 - DOWNGRADIENT CCR MONITORING WELL
 - UPGRADE CCR MONITORING WELL
 - 1,000 FT RADIUS
 - RAILROAD



REFERENCES)
 BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 11/5/21.



CLIENT
 COLETO CREEK POWER LP

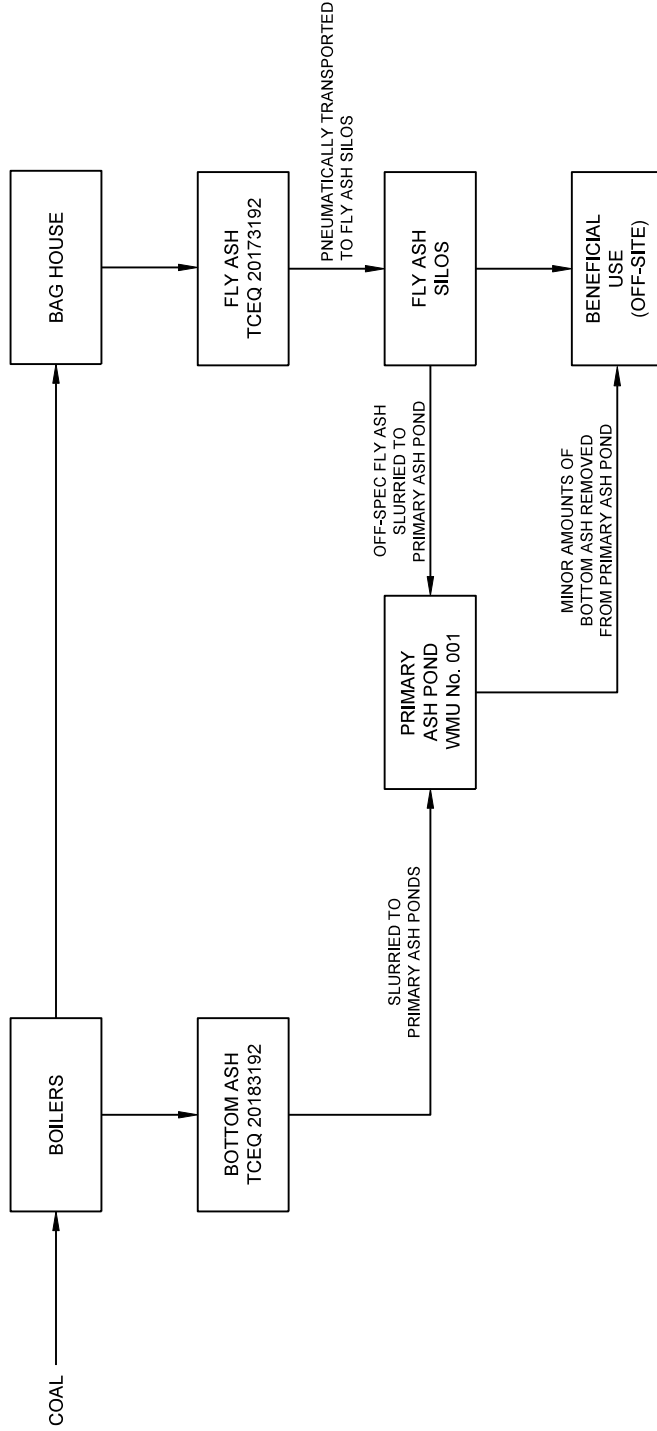
PROJECT
 COLETO CREEK POWER STATION
 FANNIN, TEXAS

TITLE
 SURROUNDING FEATURES MAP

CONSULTANT	YYYY-MM-DD	2021-12-14
DESIGNED	RS	
PREPARED	RS	
REVIEWED	WFV	
APPROVED	WFV	

GOLDER
 MEMBER OF WSP

PROJECT NO. 20142034
 REV. 0
 FIGURE 4



IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSIA

PROJECT
**COLETO CREEK POWER STATION
 FANNIN, TEXAS**

TITLE
SIMPLIFIED CCR PROCESS FLOW DIAGRAM

PROJECT NO. CONTROL
 20142034 0

FIGURE
 5

CLIENT
COLETO CREEK POWER LP

CONSULTANT
**GOLDER
 MEMBER OF WSP**

YYYY-MM-DD	2021-12-13
DESIGNED	AJD
PREPARED	AJD
REVIEWED	WVW
APPROVED	PJB





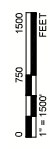
- LEGEND**
- PROPERTY BOUNDARY
 - CCR MONITORING UNIT
 - DOWNGRADIENT CCR MONITORING WELL
 - UPGRADIENT CCR MONITORING WELL
 - 0.25 MILE RADIUS
 - RAILROAD
 - PARCEL MAP ID

NOTES

- NR - NO RECORD OF PROPERTY OWNERSHIP IN COUNTY APPRAISAL DISTRICT RECORDS.

REFERENCES

- BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 11/16/21.
- PROPERTY AND MINERAL OWNERSHIP NAMES AND MAILING ADDRESSES WERE OBTAINED FROM THE COUNTY APPRAISAL DISTRICT REAL PROPERTY ACCOUNT INFORMATION RECORDS AS OF DECEMBER 13, 2021.



CLIENT
COLETO CREEK POWER LP

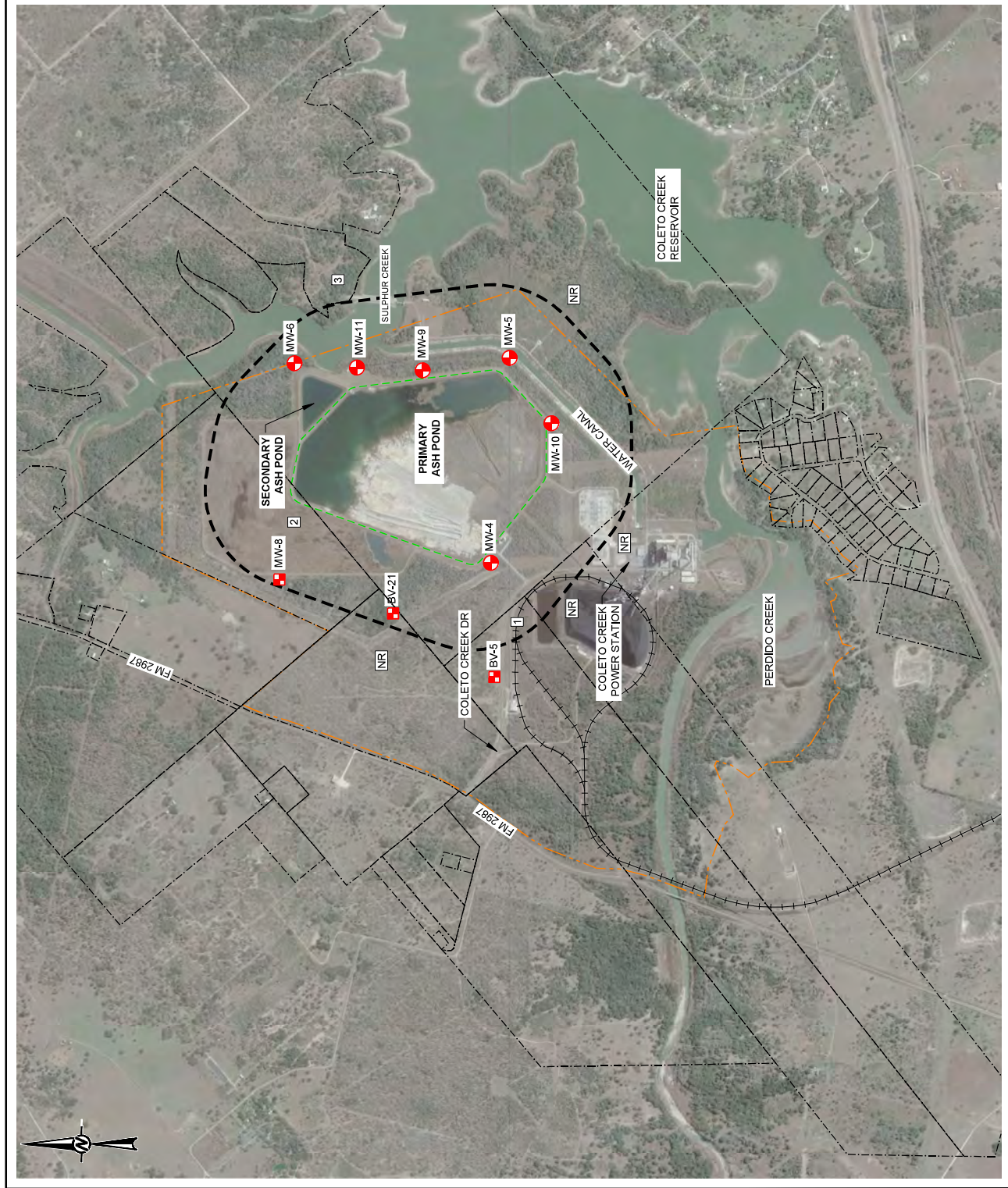
PROJECT
COLETO CREEK POWER STATION
FANNIN, TEXAS

TITLE
LAND OWNERSHIP MAP

CONSULTANT	YYYY-MM-DD	2021-12-14
DESIGNED	RS	
PREPARED	RS	
REVIEWED	WFV	
APPROVED	WFV	



PROJECT NO. 20142034
REV. 0
FIGURE 6



**TABLE 1
LAND OWNERSHIP LIST
COLETO CREEK POWER STATION**

ID No.	Owner Name	Mailing Address
1	HANLEY RANCH PARTNERSHIP	576 LAKESHORE DR VICTORIA TX 77905
2	COLETO CREEK POWER LLC	6555 SIERRA DRIVE IRVING TX 75039
3	GREG SCHERER	7875 US HWY 87N VICTORIA TX 77904

Notes:

1. Property information from Goliad County Appraisal District (CAD) real property account information records as of December 3, 2021.





Bullock, Bennett & Associates, LLC * 165 N. Lampasas Street * Bertram, Texas 78605
Telephone: 512.355.9198 * Fax: 512.355.9197

TECHNICAL MEMORANDUM

TO: Eric Chavers – Luminant

FROM: Dan Bullock, P.E. – BBA (TX PE No. 82596)

RE: Compliance Assessment for Coletto Creek Power Station Primary Ash Pond – 40 CFR §257.52(b)

DATE: May 20, 2022

The Primary Ash Pond, located at the Luminant Coletto Creek Power Station in Fannin, Goliad County, Texas, is regulated by the Texas Commission on Environmental Quality's (TCEQ) Coal Combustion Residual (CCR) rules (Title 30 Texas Administrative Code (TAC) Chapter 352) which incorporate by reference the federal CCR rules codified in Title 40 Code of Federal Regulations (CFR) Part 257 Subpart D. Luminant, and the other historical facility owners, have prepared all documentation required by rule to demonstrate compliance with the CCR regulations. The TCEQ; however, has requested additional documentation regarding the requirements detailed in 40 CFR § 257.52(b). Bullock, Bennett & Associates, LLC (BBA) has prepared this Technical Memorandum to document that the Coletto Creek Primary Ash Pond is in compliance with this rule.

40 CFR § 257.52(b) Overview

The specific requirements of this rule are as follows:

§ 257.52 Applicability of other regulations.

(b) Any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit continues to be subject to the requirements in §§ 257.3-1, 257.3-2, and 257.3-3.

The language for each cited rule and Luminant's compliance with regulatory requirements are documented in the following paragraphs.

40 CFR § 257.3-1 - Floodplains

(a) Facilities or practices in floodplains shall not restrict the flow of the base flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste, so as to pose a hazard to human life, wildlife, or land or water resources.

(b) As used in this section:

(1) Based flood means a flood that has a 1 percent or greater chance of recurring in any year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period

(2) Floodplain means the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, which are inundated by the base flood.

(3) Washout means the carrying away of solid waste by waters of the base flood.

As shown on Figure 1, the Coletto Creek Primary Ash Pond is not located within the 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA). Therefore, this regulation does not apply to operation of the Primary Ash Pond.

40 CFR § 257.3-2 – Endangered Species

(a) Facilities or practices shall not cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife.

(b) The facility or practice shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species as identified in 50 CFR part 17.

(c) As used in this section:

(1) Endangered or threatened species means any species listed as such pursuant to section 4 of the Endangered Species Act.

(2) Destruction or adverse modification means a direct or indirect alteration of critical habitat which appreciably diminishes the likelihood of the survival and recovery of threatened or endangered species using that habitat.

(3) Taking means harassing, harming, pursuing, hunting, wounding, killing, trapping, capturing, or collecting or attempting to engage in such conduct.

According to the available map information provided at the Texas Parks and Wildlife Department (TPWD) website for Rare, Threatened, and Endangered Species of Texas (www.tpwd.texas.gov/gis/rtest), the Coletto Creek Primary Ash Pond is not located within a United States Fish & Wildlife Service (USFWS) critical habitat. In addition, the Coletto Creek Power Plant property is not in an area listed in Title 50 CFR Part 17, §17.95 Critical Habitat - Fish and Wildlife or §17.96 Critical Habitat – Plants. The facility does not engage in practices that would cause or contribute to the taking of endangered or threatened species of plants, fish, or wildlife. Therefore, the Coletto Creek Primary Ash Pond is in compliance with this regulation.

40 CFR § 257.3-3 – Surface Water

(a) For purposes of section 4004(a) of the Act, a facility shall not cause a discharge of pollutants into waters of the United States that is in violation of the requirements of the National Pollutant Discharge Elimination System (NPDES) under section 402 of the Clean Water Act, as amended.

(b) For purposes of section 4004(a) of the Act, a facility shall not cause a discharge of dredged material or fill material to waters of the United States that is in violation of the requirements under section 404 of the Clean Water Act, as amended.

(c) A facility or practice shall not cause non-point source pollution of waters of the United States that violates applicable legal requirements implementing an areawide or Statewide water quality management plan that has been approved by the Administrator under section 208 of the Clean Water Act, as amended.

(d) Definitions of the terms Discharge of dredged material, Point source, Pollutant, Waters of the United States, and Wetlands can be found in the Clean Water Act, as amended, 33 U.S.C. 1251 et seq., and implementing regulations, specifically 33 CFR part 323 (42 FR 37122, July 19, 1977).

Discharge of treated water from the Primary Ash Pond, via the Secondary Pond, is regulated by the facility's Texas Pollutant Discharge Elimination System (TPDES) permit (No. WQ0002159000) and is subject to discharge monitoring requirements to ensure compliance. In addition, the Primary Ash Pond is operated in such a manner as to minimize the potential for a release to surface waters of the state by maintaining sufficient freeboard (as noted in the report titled *Coal Combustion Residuals Surface Impoundment Inflow Design Flood Control System Plan 5-Year Periodic Update Coletto Creek Power Station Fannin, TX (BBA, 2021)*) and by conducting regular inspections of the impoundment perimeter dikes in accordance with 40 CFR §257.83. The Coletto Creek Primary Ash Pond does not cause non-point source pollution of waters of the United States that violates applicable legal requirements implementing an areawide or Statewide water quality management plan that has been approved by the Administrator under section 208 of the Clean Water Act. Therefore, the Coletto Creek Primary Ash Pond is in compliance with this regulation.

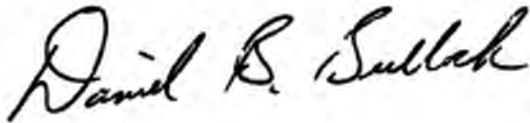
Summary

Based on the results of the assessment as described above, the Coletto Creek Power Station Primary Ash Pond is in compliance with 40 CFR §§ 257.3-1, 257.3-2, and 257.3-3, and thus is also in compliance with 40 CFR § 257.52(b).

Certification Statement 40 CFR § 257.52(b) – Applicability of Other Regulations

CCR Unit: Luminant; Coletto Creek Power Station; Coletto Creek Primary Ash Pond

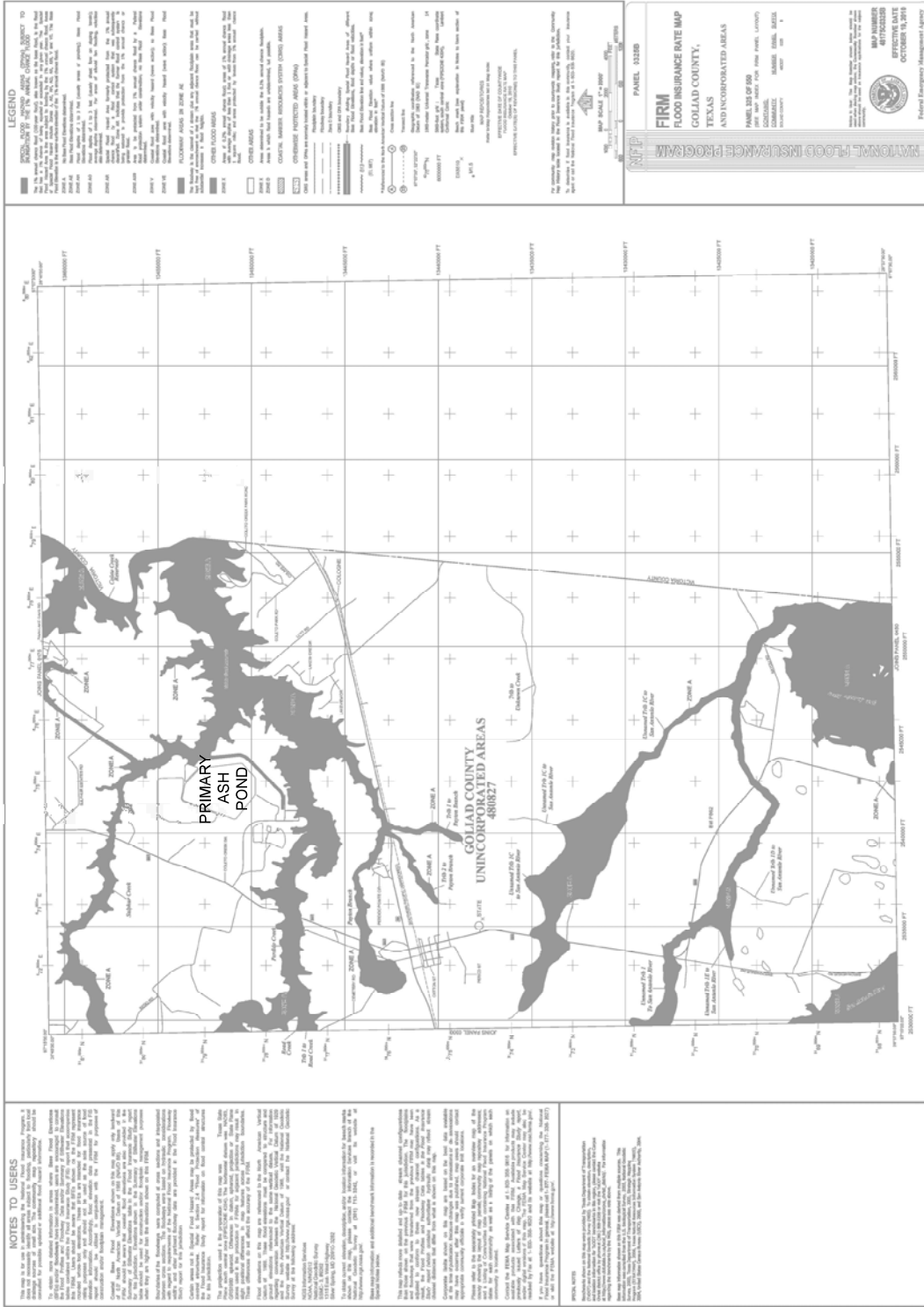
I, Daniel Bullock, being a Registered Professional Engineer in good standing in the State of Texas, do hereby certify, to the best of my knowledge, information, and belief that the information contained in this Technical Memorandum has been prepared in accordance with the accepted practice of engineering. I certify the above referenced CCR Unit meets the requirements of 40 CFR § 257.52(b).



Daniel B. Bullock, P.E. (TX 82596)



Luminant
 Figure 1
**COLETO CREEK POWER
 STATION FLOODPLAIN MAP**
 PROJECT: 272 | DATE: MAY 2022 | BY: RCADARS | CHECKED: DBS
Bullock, Bennett & Associates, LLC
 Engineering and Geoscience
 Texas Registrations: Engineering L-8542, Geoscience 60127



APPENDIX B – LOCATION RESTRICTIONS AND GEOLOGY

**Location Restrictions Demonstration
Location Restrictions Assessment**

MEMORANDUM

October 17, 2018

SUBJECT: Location Restriction Demonstration – Placement Above Uppermost Aquifer
Coletto Creek Power, LP
Coletto Creek Power Station
Coletto Creek Primary Ash Pond
Fannin, Texas

Coletto Creek Power, LP operates the coal-fired Coletto Creek Power Station (Plant) located in Fannin, Texas. The Coletto Creek Primary Ash Pond (Unit) is an existing coal combustion residuals (CCR) surface impoundment. This demonstration addresses the requirements of 40 CFR §257.60 *Placement Above the Uppermost Aquifer* of the US Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 rule, effective 19 October 2015 for the Unit.

§257.60(a): New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must be constructed with a base that is located no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer, or must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table). The owner or operator must demonstrate by the dates specified in paragraph (c) of this section that the CCR unit meets the minimum requirements for placement above the uppermost aquifer.

Bullock, Bennett & Associates, LLC (BBA) reviewed original construction documentation and the results of other historic field investigation programs at the Unit and used that information to create a generalized stratigraphic model of the site. Elevations for the top of the uppermost aquifer as defined in the rule range from approximately El. 82 feet NAVD88 to El. 116 feet NAVD88. Base of unit elevations appear to range from El. 101 feet NAVD88 to El. 135 feet NAVD88. As a result, the separation between the base of the unit and the upper limit of the uppermost aquifer was confirmed to be greater than five feet and therefore meets the requirement of §257.60(a) for the Unit.

§257.60(b): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

I, Daniel Bullock, being a Licensed 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 CCR Unit meets the Placement Above the Uppermost Aquifer criteria as included in the CCR Rule Location Restrictions Evaluation memorandum dated 17 October 2018 and, therefore, meets the requirements of 40 CFR §257.60(a).

Signed: *Daniel B. Bullock*
Principal Engineer

Print Name: Daniel Bullock, P.E.
Texas License No.: 82596
Title: Principal Engineer
Firm: Bullock, Bennett & Associates, LLC
Texas Engineering Firm No.: F-8542



Daniel B. Bullock

10-17-2018

MEMORANDUM

October 17, 2018

SUBJECT: Location Restriction Demonstration – Wetlands
Coleto Creek Power, LP
Coleto Creek Power Station
Coleto Creek Primary Ash Pond
Fannin, Texas

Coleto Creek Power, LP operates the coal-fired Coleto Creek Power Station (Plant) located in Fannin, Texas. The Coleto Creek Primary Ash Pond (Unit) is an existing coal combustion residuals (CCR) surface impoundment. This demonstration addresses the requirements of 40 CFR §257.61 *Wetlands* of the US Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 rule, effective 19 October 2015 for the Unit.

§257.61(a): New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in wetlands, as defined in §232.2 of this chapter, unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that the CCR unit meets the requirements of paragraphs (a)(1) through (5) of this section.

Bullock, Bennett & Associates (BBA) reviewed USGS Topographic Maps, National Wetlands Inventory data, local soil survey data, and FEMA floodplain data to evaluate whether the Unit is located in a wetland area. BBA's findings were field verified during a site visit. The Unit is not located in wetlands as defined by 40 CFR §232.2

§257.61(b): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

I, Daniel Bullock, being a Licensed 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 CCR Unit is not located in wetlands as included in the CCR Rule Location Restrictions Evaluation memorandum dated 17 October 2018 and, therefore, meets the requirements of 40 CFR §257.61(a).

Signed: *Daniel B. Bullock*
Principal Engineer

Print Name: Daniel Bullock, P.E.
Texas License No.: 82596
Title: Principal Engineer
Firm: Bullock, Bennett & Associates, LLC
Texas Engineering Firm No.: F-8542



Daniel B. Bullock
10-17-2018

MEMORANDUM

October 17, 2018

SUBJECT: Location Restriction Demonstration – Fault Areas
Coleto Creek Power, LP
Coleto Creek Power Station
Coleto Creek Primary Ash Pond
Fannin, Texas

Coleto Creek Power, LP operates the coal-fired Coleto Creek Power Station (Plant) located in Fannin, Texas. The Coleto Creek Primary Ash Pond (Unit) is an existing coal combustion residuals (CCR) surface impoundment. This demonstration addresses the requirements of 40 CFR §257.62 *Fault Areas* of the U.S. Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 rule effective 19 October 2015, for the Unit.

§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.

Bullock, Bennett & Associates (BBA) reviewed available public records including the United States Geologic Survey (USGS) Earthquake Hazards Program Quarternary Fault and Fold Database, USGS Interactive Fault Map, The Geologic Atlas of Texas, and reports generated by the Texas Bureau of Economic Geology. BBA also reviewed site boring log and stratigraphy data supplemented by a site visit to perform a visual inspection. Based on the available published geologic data and information reviewed, there are no active faults or fault damage zones that have had displacement in Holocene time reported or indicated within 200 feet of the Unit.

§257.62(b): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

I, Daniel Bullock, being a Licensed 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 CCR Unit is not located within 60 meters (200 feet) of the outermost damage zone of a fault that has had a displacement in Holocene time as included in the CCR Rule Location Restrictions Evaluation memorandum dated 17 October 2018 and, therefore, meets the requirements of 40 CFR §257.62(a).

Signed: *Daniel B. Bullock*
Principal Engineer

Print Name: Daniel Bullock, P.E.
Texas License No.: 82596
Title: Principal Engineer
Firm: Bullock, Bennett & Associates, LLC
Texas Engineering Firm No.: F-8542



Daniel B. Bullock
10-17-2018

MEMORANDUM

October 17, 2018

SUBJECT: Location Restriction Demonstration – Seismic Impact Zones
Coleto Creek Power, LP
Coleto Creek Power Station
Coleto Creek Primary Ash Pond
Fannin, Texas

Coleto Creek Power, LP operates the coal-fired Coleto Creek Power Station (Plant) located in Fannin, Texas. The Coleto Creek Primary Ash Pond (Unit) is an existing coal combustion residuals (CCR) surface impoundment. This demonstration addresses the requirements of 40 CFR §257.63 *Seismic Impact Zones* of the U.S. Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 rule, effective 19 October 2015, for the Unit.

§257.63(a): New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of a CCR unit must not be located in seismic impact zones unless the owner or operator demonstrates by October 17, 2018 that all structural components including liners, leachate collection and removal systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

A Seismic Impact Zone is defined in 40 CFR §257.63 as "an area having a 2% or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 50 years." The 2014 U.S. Geological Survey National Seismic Hazard Map indicates that the Unit falls within the area with a maximum probable earthquake peak ground acceleration ranging from 0.02 g to 0.04g. Accordingly, the Unit is not located in a seismic impact zone and a demonstration that the structural components have been designed to resist the maximum horizontal acceleration in lithified earth material for the site is not required.

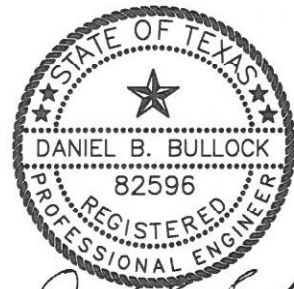
MEMORANDUM
October 17, 2018
Page 2 of 2

§257.63(b): *The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.*

I, Daniel Bullock, being a Licensed 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 demonstration that the CCR Unit is not located in a seismic impact zone as included in the CCR Rule Location Restrictions Evaluation memorandum dated 17 October 2018 meets the requirements of 40 CFR §257.63(a).

Signed: *Daniel B. Bullock*
Principal Engineer

Print Name: Daniel Bullock, P.E.
Texas License No.: 82596
Title: Principal Engineer
Firm: Bullock, Bennett & Associates, LLC
Texas Engineering Firm No.: F-8542



Daniel B. Bullock
10-17-2018

MEMORANDUM

October 17, 2018

SUBJECT: Location Restriction Demonstration – Unstable Area
Coleto Creek Power, LP
Coleto Creek Power Station
Coleto Creek Primary Ash Pond
Fannin, Texas

Coleto Creek Power, LP operates the coal-fired Coleto Creek Power Station (Plant) located in Fannin, Texas. The Coleto Creek Primary Ash Pond (Unit) is an existing coal combustion residuals (CCR) surface impoundment. This demonstration addresses the requirements of 40 CFR §257.64 *Unstable Area* of the US Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 rule, effective 19 October 2015, for the Unit.

§257.64(a): An existing or new CCR landfill, existing or new CCR surface impoundment, or any lateral expansion of a CCR unit must not be located in an unstable area unless the owner or operator demonstrates by the dates specified in paragraph (d) of this section that recognized and generally accepted good engineering practices have been incorporated into the design of the CCR unit to ensure that the integrity of the structural components of the CCR unit will not be disrupted.

§257.64(b): The owner or operator must consider all of the following factors, at a minimum, when determining whether an area is unstable:

- (1) On-site or local soil conditions that may result in significant differential settling;*
- (2) On-site or local geologic or geomorphologic features; and*
- (3) On-site or local human-made features or events (both surface and subsurface).*

Bullock, Bennett & Associates, LLC (BBA) reviewed original construction documentation and the results of other historic field investigation programs at the Unit and used that information to create a generalized stratigraphic model of the site. In addition, BBA reviewed historic annual Unit inspection reports generated by professional engineers and the findings of the Liquefaction Assessment conducted in support of the Initial Structural Integrity Assessment. As a result of this evaluation, BBA concludes that the Unit is not located in an unstable area and therefore meets the requirement of §257.64(a) for the Unit.

MEMORANDUM
October 17, 2018
Page 2 of 2

§257.64(c): The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the demonstration meets the requirements of paragraph (a) of this section.

I, Daniel Bullock, being a Licensed 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 CCR Unit is not located in an unstable area as included in the CCR Rule Location Restrictions Evaluation memorandum dated 17 October 2018 and, therefore, meets the requirements of 40 CFR §257.64(a).

Signed: *Daniel B. Bullock*
Principal Engineer

Print Name: Daniel Bullock, P.E.
Texas License No.: 82596
Title: Principal Engineer
Firm: Bullock, Bennett & Associates, LLC
Texas Engineering Firm No.: F-8542



Daniel B. Bullock
10-17-2018

**COAL COMBUSTION RESIDUALS
SURFACE IMPOUNDMENT
LOCATION RESTRICTIONS ASSESSMENT**

**COLETO CREEK POWER STATION
FANNIN, TEXAS**

OCTOBER 17, 2018

Prepared for:

**COLETO CREEK POWER, LP
FANNIN, TEXAS**

Prepared by:

BULLOCK, BENNETT & ASSOCIATES, LLC
Engineering and Geoscience
Registrations: Engineering F-8542, Geoscience 50127

165 N. Lampasas Street
Bertram, Texas 78605
(512) 355-9198

BBA Project No. 17256

**COAL COMBUSTION RESIDUALS
SURFACE IMPOUNDMENT**

LOCATION RESTRICTIONS ASSESSMENT

**COLETO CREEK POWER STATION
FANNIN, TEXAS**

OCTOBER 17, 2018

Prepared for:

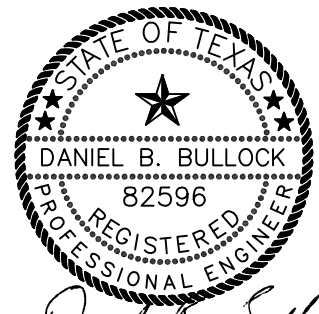
**COLETO CREEK POWER, LP
FANNIN, TEXAS**

Prepared by:

BULLOCK, BENNETT & ASSOCIATES, LLC
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165 N. Lampasas Street
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BBA Project No. 17256



Daniel B. Bullock

10-17-2018

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EXECUTIVE SUMMARY

This *Location Restrictions Report* for the Coletto Creek Primary Ash Pond at the Coletto Creek Power, LP Coletto Creek Power Station has been prepared in accordance with the requirements specified in the United States Environmental Protection Agency (USEPA) Final Rule to regulate the disposal of Coal Combustion Residuals (CCR) as solid waste under Subtitle D of the Resource Conservation and Recovery Act [40 *CFR* 257 Subpart D, referred to hereafter as the CCR Rule]. Specifically, this report addresses the rules regarding physical setting restrictions for new and existing CCR surface impoundments at coal-fired power plants. The locations restrictions requirements are defined in the following regulatory sections:

- §257.60 Placement Above the Uppermost Aquifer
- §257.61 Wetlands
- §257.62 Fault Areas
- §257.63 Seismic Impact Zones
- §257.64 Unstable Areas

The CCR Rule requires the CCR unit owner or operator to certify that each existing and active CCR unit meets the specified location restriction requirement for continued operation of the CCR unit by October 17, 2018.

Currently, the Coletto Creek Primary Ash Pond meets all five location restriction criteria as discussed further in this report. The professional engineer certifications are contained within each section.

1.0 INTRODUCTION

On April 17, 2015, the Environmental Protection Agency (EPA) published rules in the Federal Register (80 FR 21301) which codified 40 *Code of Federal Regulations (CFR)* Part 257 to address potential risks associated with operating CCR surface impoundments at coal-fired power plants. The effective date of the CCR Rule is six months after the publication date, or October 17, 2017. This report has been prepared to specifically address the requirements identified in §257.60 through §257.64 regarding Location Restrictions for existing CCR surface impoundments. Section 2.0 of the report provides a description of the subject facility. Section 3.0 addresses Placement Above the Uppermost Aquifer (§257.60). Section 4.0 contains the Wetlands evaluation (§257.61). Sections 5.0 and 6.0 evaluate Fault Areas (§257.62) and Seismic Impact Zones (§257.63), respectively. Section 7.0 includes an assessment of Unstable Areas (§257.64).

2.0 FACILITY AND CCR UNIT DESCRIPTION

Coleto Creek Power Station is located at 45 FM 2987 just outside the city of Fannin in Goliad County, Texas. The power station consists of one coal-fired boiler. Bottom ash and fly ash, or CCR, generated in the boiler are either shipped off-site for beneficial re-use or managed in an on-site CCR surface impoundment (Primary Ash Pond). Figures 1A and 1B provide site location maps showing the Primary Ash Pond configuration. Figures 1A and 1B show other ponds located at the power station – Coal Pile Pond, Evaporation Pond, and Secondary Pond. The Primary Ash Pond is the only surface impoundment that is subject to the CCR Rules.

The Primary Ash Pond was constructed between 1976 and 1977 during overall site development. Construction was performed by H. B. Zachary Construction with full-time on-site inspection by Sargent & Lundy Engineers (S&L). Field testing of site soils and construction materials was performed by Trinity Testing Laboratory, Inc. The Primary Ash Pond is approximately 190 acres in size and was constructed using in-situ cohesive soils as the pond lining and the geotechnical characteristics of those soils are documented in the S&L design and construction summary report dated December 1978 (S&L, December 1978). In general, the Primary Ash Pond dikes have a height ranging from approximately 4 feet up to 34 feet with a maximum reported storage volume of 2,700 acre-feet (S&L, December 1978). Primary Ash Pond dikes were constructed using controlled and compacted cohesive fill excavated from borrow areas around the Plant site (S&L, December 1978). Site soils generally consist of clayey sand and silty clay, with various amounts of caliche.

3.0 PLACEMENT ABOVE UPPERMOST AQUIFER ASSESSMENT

3.1 §257.60(a) Placement Above the Uppermost Aquifer Citation

New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must be constructed with a base that is located no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer, or must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table).

The CCR rules define aquifer as: "... a geologic formation, group of formations, or portion of a formation capable of yielding usable quantities of groundwater to wells or springs."

3.2 Separation of Aquifer to Base of CCR Unit

Bullock, Bennett & Associates (BBA) reviewed original Primary Ash Pond construction documentation contained in the S&L report titled *Design and Construction Summary for Coal Pile and Wastewater Pond Facilities Coletto Creek Power Station – Unit 1* (S&L, December 1978) in order to evaluate whether the Primary Ash Pond bottom is located at least five feet above the uppermost aquifer. This document summarizes boring logs, soil geotechnical data, groundwater elevation data, soil unit stratigraphy, and as-built construction drawings. A "Thickness Map of In-Situ Cohesive Soils" from the S&L report is provided as Figure 2. In addition, BBA reviewed 2016 stratigraphy and bathymetry data collected in support of the Structural Integrity Assessment performed as required in 40 *CFR* §257.73, boring logs from recently installed Primary Ash Pond perimeter monitoring wells, and the 1959 United States Geologic Service (USGS) pre-construction topographic map for the area (USGS, 1959). This data was combined to create a stratigraphic model of the site which is illustrated in Figures 3 through 5.

Figures 4 and 5 provide generalized cross-sections of the underlying stratigraphy and the relation between the bottom of the Primary Ash Pond and the uppermost aquifer. Unit 1 is the uppermost unit and consists primarily of sandy and silty clay (AECOM, November 2009). Unit 2 in the drawings represents the uppermost aquifer unit as defined in the rule. As shown on the figures, the combined thickness of Unit 1 in-situ and/or Unit 1 backfilled material is shown to

meet or exceed the 5 feet of separation required by rule in 40 *CFR* §257.60(a). Therefore, the Primary Ash Pond meets the Placement Above Uppermost Aquifer criteria.

4.0 WETLANDS ASSESSMENT

4.1 §257.61(a) Wetlands Citation

New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in wetlands, as defined in §232.2 of this chapter, unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that the CCR unit meets the requirements of paragraphs (a)(1) through (5) of this section.

Wetlands areas are defined in §232.2 as “... those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

4.2 Wetlands Determination

BBA’s evaluation of the presence of wetlands included a review of USGS Topographic Maps, National Wetlands Inventory data, local soil survey data, and FEMA floodplain data. Observations deduced from a review of this information was field verified during a one-day site visit conducted by Craig Bennett, P.G. and Edward Ficker, P.G. of BBA on November 9, 2017.

As shown in Figure 1B, the north side of the Primary Ash Pond is bound by the Evaporation Pond and the Secondary Pond. The Evaporation Pond continues around the west side of the pond. The Coletto Creek Power Station facilities are located to the south and the facility’s cooling water discharge flume is located to the east. In essence, the entire pond is surrounded by industrial operations. The National Wetlands Inventory map does not indicate the presence of wetlands in the immediate vicinity of the Primary Ash Pond (Figure 6). The visual inspection of the area surrounding the footprint of the Primary Ash Pond also did not identify the presence of wetlands. Therefore, the Primary Ash Pond meets the wetlands restrictions codified in §257.61.

5.0 FAULT AREAS ASSESSMENT

5.1 §257.62(a) Fault Areas Citation

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.

5.2 Distance to Holocene Faults

The Holocene time is defined as the geologic period beginning after the Pleistocene period (approximately 10,000 years ago) through present and is part of the Quarternary Period (USGS, 2017). BBA reviewed available public records in an effort to identify known fault sites in the vicinity of the Coletto Creek Power Station. These resources included the United States Geologic Survey (USGS) Earthquake Hazards Program Quarternary Fault and Fold Database for Class A, B, C, and D faults (<https://earthquake.usgs.gov/hazards/qfaults/>), USGS Interactive Fault Map (<https://earthquake.usgs.gov/hazards/qfaults/map/#qfaults>), *The Geologic Atlas of Texas*, and reports generated by the Texas Bureau of Economic Geology including *Lineations and Faults in the Texas Coastal Zone and Upper Tertiary* (Kreitler, 1976) and *Quarternary Depositional Systems Central Coastal Plain, Texas – Regional Geology of the Coastal Aquifer and Potential Liquid-Waste Repositories* (Solis, 1981). In addition, BBA reviewed site boring log and stratigraphy data for evidence of displacement possibly caused by faulting. A site visit was performed on November 9, 2017 by Craig Bennett, P.G. and Edward Ficker, P.G. of BBA to visually inspect the site for indications of faulting in the vicinity of the site.

BBA's review of the USGS Quarternary Fault and Fold Database of the United States did not indicate the presence of a known, clearly defined fault in Goliad County, nor in any of the surrounding counties of Bee, DeWitt, Karnes, Refugio, and Victoria. Likewise, a review of the *Geologic Atlas Map of Texas* and the other listed sources did not indicate the presence of any faults in this area. These findings were confirmed during the on-site fault reconnaissance and evaluation of site stratigraphic data. The Coletto Creek Power Station Primary Ash Pond, therefore, is not located within a Fault Area and no further evaluation of alternative setback distance will be necessary.

6.0 SEISMIC IMPACT ZONE ASSESSMENT

6.1 §257.63(a) Seismic Impact Zone Citation

New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must not be located in seismic impact zones unless the owner or operator demonstrates by the dates specified in paragraph (c) of this section that all structural components including liners, leachate collection and removal systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

The “seismic impact zone” is defined in §257.53 as “... an area having a 2% or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 50 years.”

6.2 Seismic Impact Zone

The United States Geologic Survey (USGS), under its Earthquake Hazards Program, generates a *National Seismic Hazard Map* as shown in Figure 7. This map depicts the maximum probable earthquake peak ground acceleration with a 2 percent Probability of Exceedance in 50 years. Based on the information contained within this map, no further seismic impact zone assessment methods were deemed necessary.

As shown in Figure 7, the Coletto Creek Power Station falls within the area with a maximum probable earthquake peak ground acceleration ranging from 0.02 g to 0.04 g with a 2 percent Probability of Exceedance in 50 years. This value is below the seismic impact zone peak ground acceleration criteria of 0.1 g. The Primary Ash Pond, therefore, is not located within a seismic impact zone.

7.0 UNSTABLE AREAS ASSESSMENT

7.1 §257.64(a) – (b) Unstable Areas Citation

(a) An existing or new CCR landfill, existing or new CCR surface impoundment, or any lateral expansion of a CCR unit must not be located in an unstable area unless the owner or operator demonstrates by the dates specified in paragraph (d) of this section that recognized and generally accepted good engineering practices have been incorporated into the design of the CCR unit to ensure that the integrity of the structural components of the CCR unit will not be disrupted.

(b) The owner or operator must consider all of the following factors, at a minimum, when determining whether an area is unstable:

- (1) On-site or local soil conditions that may result in significant differential settling;*
- (2) On-site or local geologic or geomorphologic features; and*
- (3) On-site or local human-made features or events (both surface and subsurface)."*

7.2 Unstable Areas Assessment

The Primary Ash Pond was designed and constructed under the guidance of Sargent & Lundy Engineers (S&L). As part of the design process, S&L advanced 63 soil borings and installed eight monitoring wells in the immediate vicinity of the Primary Ash Pond. Based on the information collected, the pond is constructed within a surface deposit of cohesive soils consisting of mostly clayey sand and silty clay with varying amounts of caliche. The soils are classified as CH, CL, and SC soils using the Unified Soil Classification System. These soils range in thickness from 10 to 20 feet (S&L, December 1978) in the vicinity of the Primary Ash Pond as shown in Figure 2. No unstable areas were noted in the construction document.

The Primary Ash Pond has been in operation for approximately 40 years and is inspected both weekly by plant personnel and annually by a professional engineer. No levee instability issues have been observed in annual inspections. In addition, a Liquefaction Assessment was performed in 2016 in support of the Initial Structural Integrity Assessment as detailed in the report titled *Coal Combustion Residuals Surface Impoundment History of Construction and Initial Hazard Potential Assessment, Structural Integrity Assessment, and Safety Factor Assessment Coletto Creek Power Plant Fannin, TX* (BBA, September 2016). This evaluation

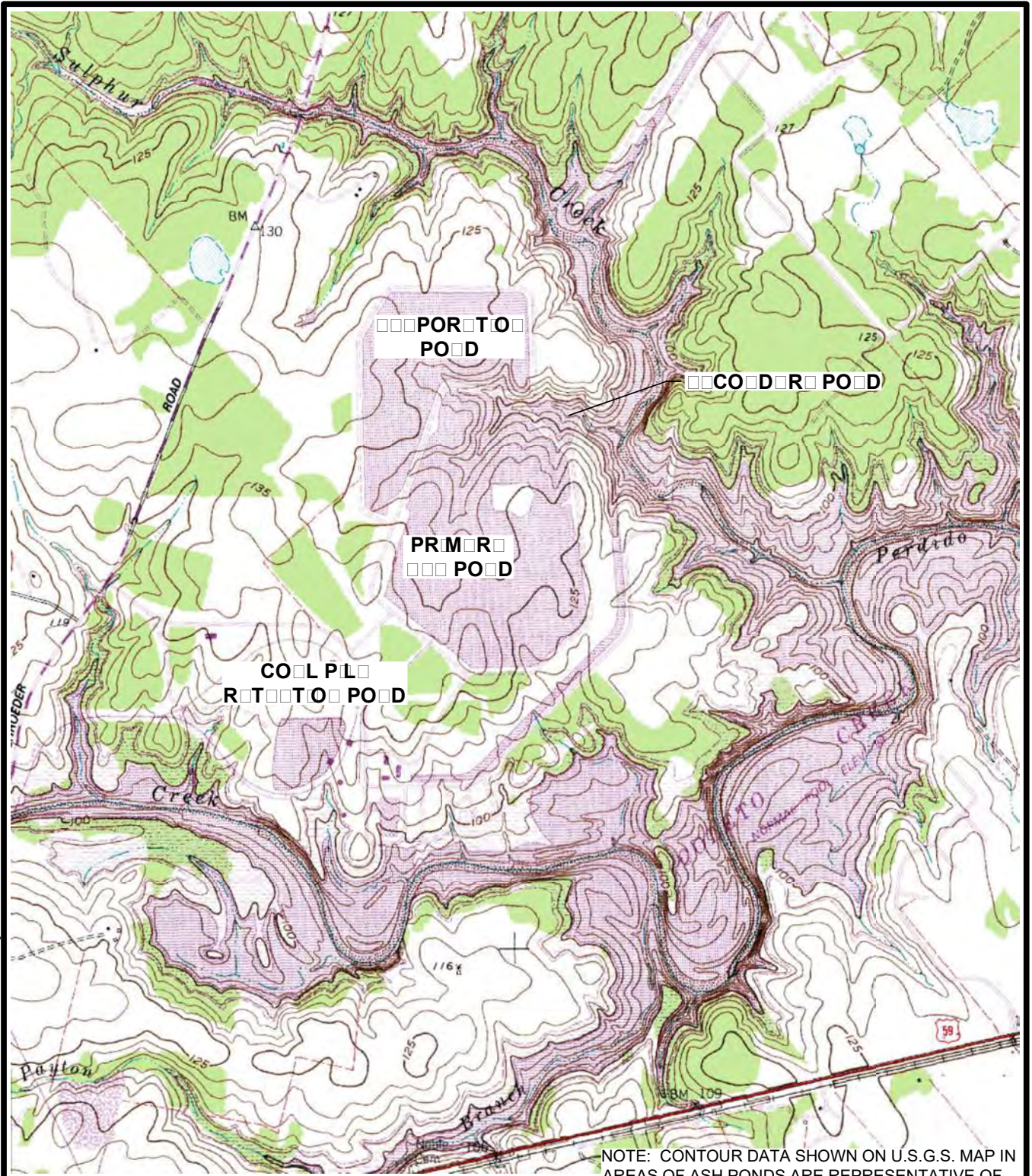
found that the underlying soils would not be expected to be prone to liquefaction in the event of a seismic event based on their geotechnical characteristics. Therefore, the Primary Ash Pond was not constructed in an unstable area.

8.0 REFERENCES

- AECOM. (March 2012). *Geotechnical Stability and Hydraulic Analysis of the Coletto Creek Energy Facility Primary and Secondary Ash Ponds*. Green Bay, Wisconsin: AECOM Technical Services, Inc.
- AECOM. (November 2009). *Groundwater Quality Assessment Plan, Coletto Creek Power Plant, Fannin, Goliad County, Texas. Document No.: 12261-003*. AECOM.
- BBA. (2015, November 24). Letter to Mr. Robert Stevens from Mr. Dan Bullock RE: Coletto-Creek Power - September 2015 Primary and Secondary Ash Ponds Dike Inspection. Bullock, Bennett & Associates, LLC.
- BBA. (2017, January 30). Letter to Mr. Robert Stevens from Mr. Dan Bullock RE: Coletto-Creek Power - November 2016 Primary and Secondary Ash Ponds Dike Inspection. Bullock, Bennett & Associates.
- BBA. (September 2016). *Initial Inflow Design Flood Control System Report*. Bullock, Bennett & Associates.
- BBA. (September 2016). *Structural Integrity Report for the Primary and Secondary Ash Ponds at the Coletto Creek Power Station*. Bullock, Bennett & Associates.
- CDM. (March 2011). *Assessment of Dam Safety of Coal Combustion Surface Impoundments Coletto LP, LLC Coletto Creek Power, LP*.
- GBRA. (2013). *Coletto Creek Watershed River Segments, Descriptions and Concerns*. (G.-B. R. Authority, Ed.) Retrieved from Guadalupe-Blanco River Authority Web site: <http://www.gbra.org/documents/publications/basinsummary/2013j.pdf>
- Kreitler, C. W. (1976). *Report of Investigations No. 85 "Lineations and Faults in the Texas Coastal Zone"*. Austin, Texas: Bureau of Economic Geology, The University of Texas at Austin.
- S&L. (1981). *Waste Disposal Plan. Central Southwest Services, Inc. Central Power & Light Company. Coletto Creek Power Station - Units 1 and 2*. Sargent & Lundy Engineers.
- S&L. (December 1978). *Design and Construction Summary for Coal Pile and Wastewater Pond Facilities, Coletto Creek Power Station Unit 1, Report SL-3689*. Sargent & Lundy Engineers.
- Solis, R. F. (1981). *Report of Investigations No. 108 "Upper Tertiary and Quaternary Depositional Systems, Central Coastal Plain, Texas - Regional Geology of the Coastal Aquifer and Potential Liquid-Waste epositories"*. Austin, Texas: Bureau of Economic Geology, The University of Texas at Austin.

- TCEQ. (January 2007). *Hydrologic and Hydraulic Guidelines for Dams in Texas*. Dam Safety Program, Texas Commission on Environmental Quality.
- URM. (1982). Evaluation and Recommendations Regarding Subsurface Drainage System at Coletto Creek Power Station for Central Power & Light Company. Underground Resource Management, Inc.
- URM. (July 29, 1981). *Investigation of Seepage from Primary and Secondary Settling Ponds at the Coletto Creek Power Station*. Underground Resource Management, Inc.
- USGS. (1959). US Topo 7.5 Minute Map for Fannin, Texas. United States Geological Survey.
- USGS. (2017). *Earthquake Glossary*. Retrieved from United States Geological Survey Earthquake Hazards Program:
<https://earthquake.usgs.gov/learn/glossary/?term=Holocene>

FIGURES



NOTE: CONTOUR DATA SHOWN ON U.S.G.S. MAP IN AREAS OF ASH PONDS ARE REPRESENTATIVE OF CONDITIONS PRIOR TO ASH POND CONSTRUCTION.



SOURCE: U.S.G.S. FANNIN TEXAS, DATE: 2016, SCALE 1:24000, 10' CONTOURS. NAD1983, NAVD1988.

APPROXIMATE SCALE: 1" = 2000'



Coleto Creek Power, LP

Figure 1A

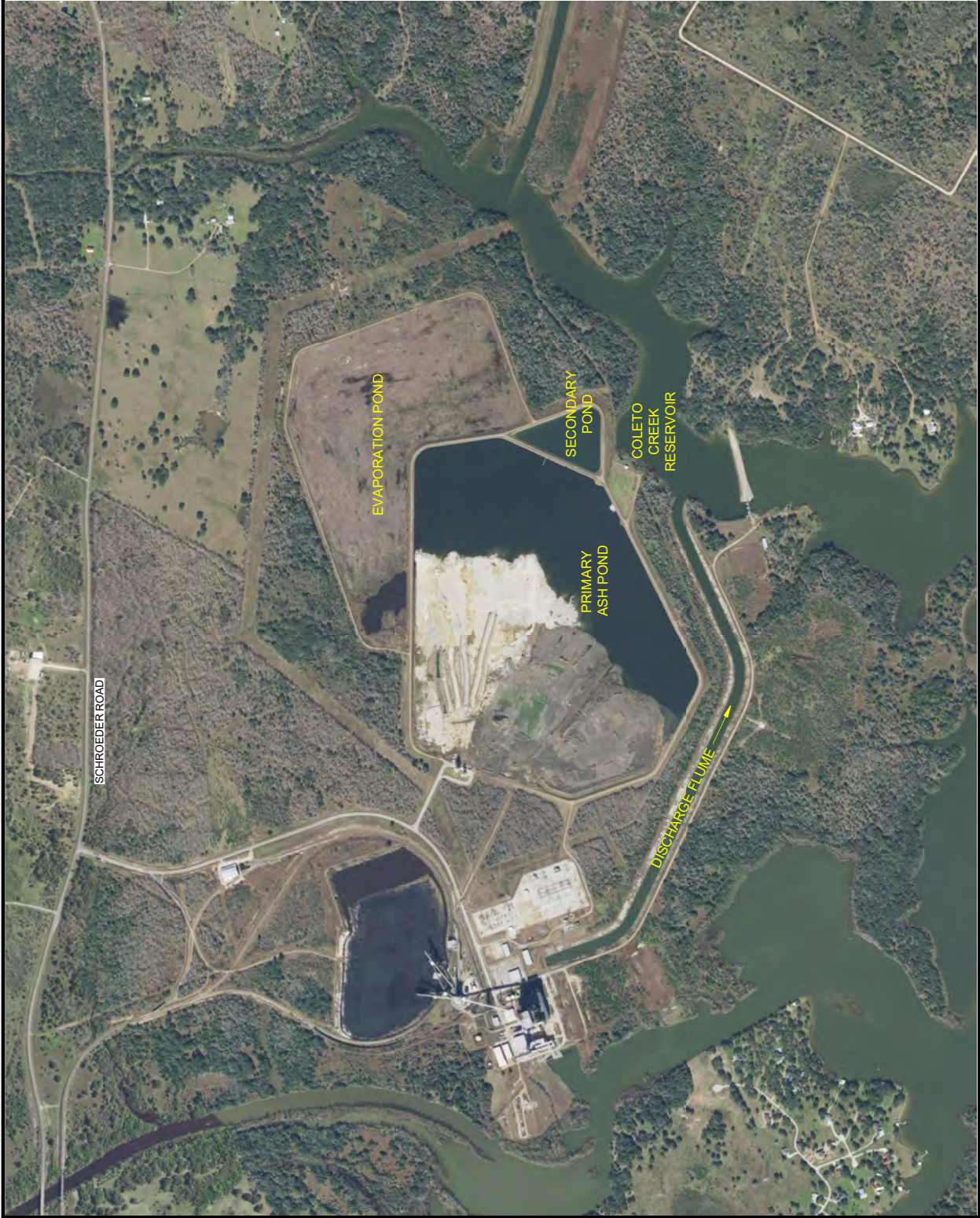
SITE LOCATION MAP

PROJECT: 17256 BY: RCAD-RR DATE: OCT 2018 CHECKED: CEB

Bullock, Bennett & Associates, LLC

Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

Plot Date: 10/04/18 - 5:24 pm. Plotted by: roodj
Drawing Path: K:\clients\bbat\Coleto CK. Drawing Name: W-USGS-METERS 7-5minute -uad.dwg

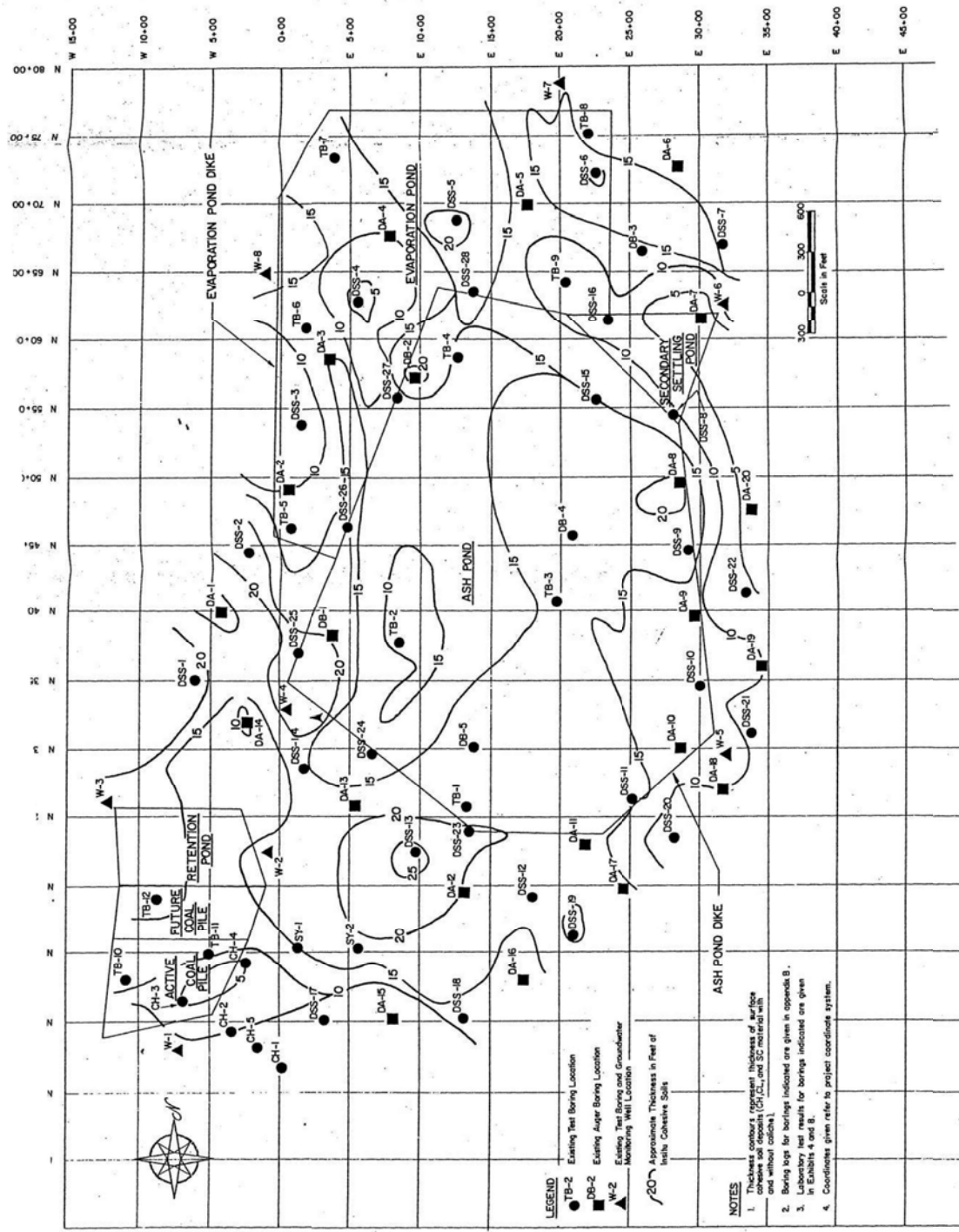


APPROXIMATE SCALE: 1" = 1000'



SOURCE: AERIAL PHOTO PROVIDED
 BY T.N.R.I.S., NAD83 UTM ZONE 14N,
 DATE: OCT 2014-AUG 2015.

Coleto Creek Power, LP	
Figure 1B	
SITE LOCATION MAP	
PROJECT: 17286	BY: BR
DATE: OCT 2018	CHECKED: DBB
Bullock, Bennett & Associates, LLC	
Engineering and Geoscience	
Texas Registrations: Engineering E-8542, Geoscience 50127	



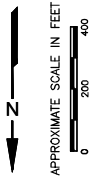
SOURCE: MAP PROVIDED BY SARGENT AND LUNDY ENGINEERS, CHICAGO, IL.

Coletto Creek Power, LP

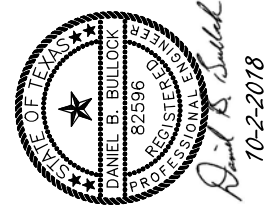
Figure 2

THICKNESS MAP OF IN-SITU COHESIVE SOILS

PROJECT: 17256 BY: RR DATE: DEC 2017 CHECKED: DEB
 Bullock, Bennett & Associates, LLC
 Engineering and Geoscience
 Texas Registrations: Engineering E-3852, Geoscience 50127

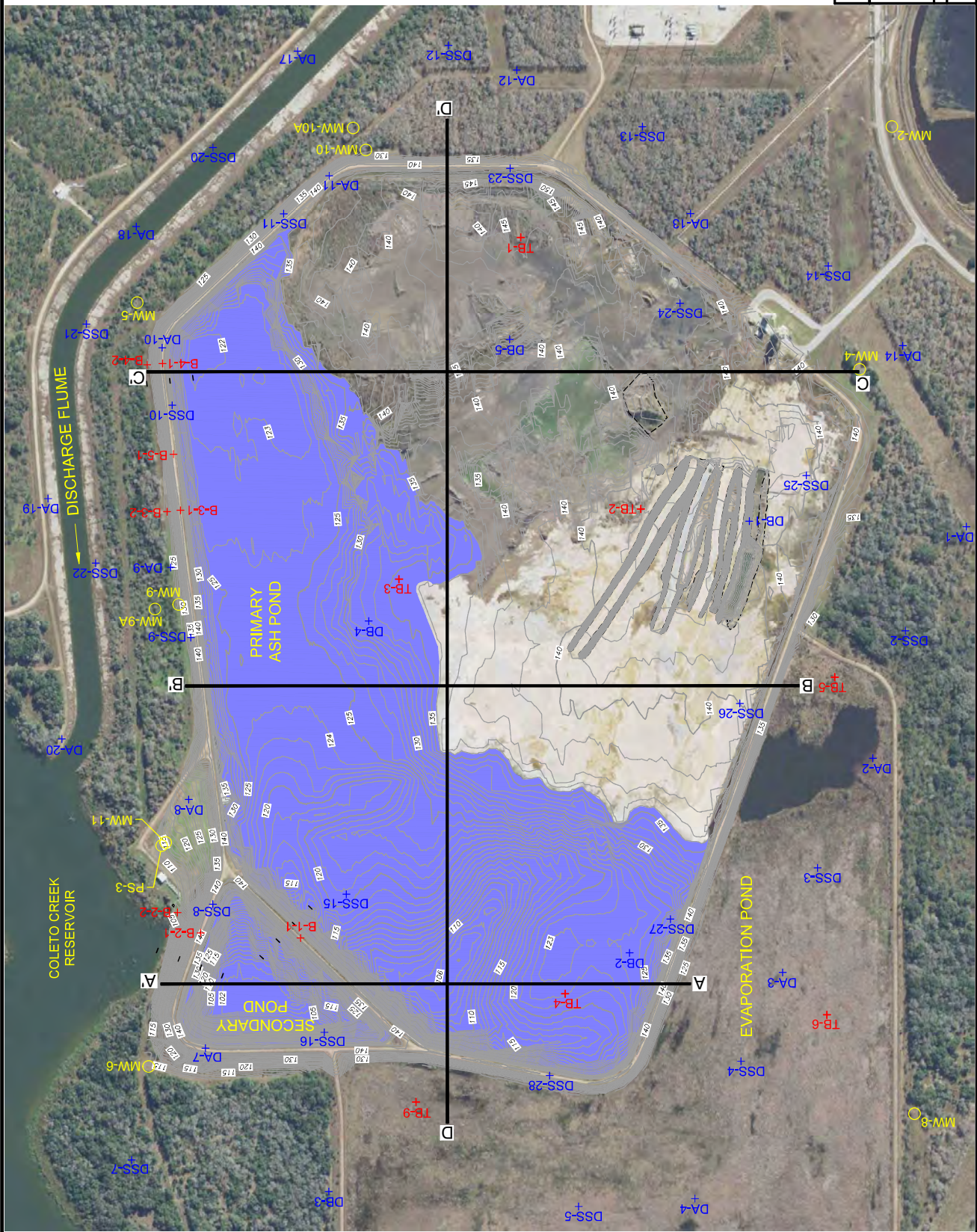


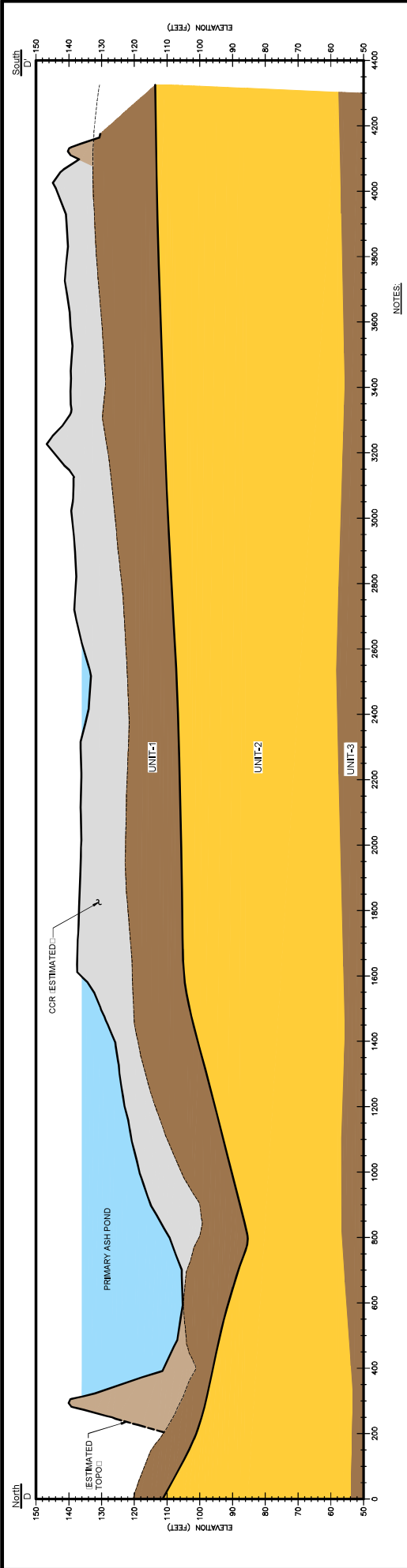
- EXPLANATION**
- MW-30 MONITORING WELL
 - + DA-11 PRE-CONSTRUCTION BORING
 - + DB-5 PRE-CONSTRUCTION BORING
 - + DSS-20 PRE-CONSTRUCTION BORING
 - + TB-1 POST-CONSTRUCTION BORING
 - + TB-51 POST-CONSTRUCTION BORING



SOURCES:
 ON-GROUND TOPOGRAPHIC AND BATHYMETRIC SURVEY
 HORIZONTAL DATUM: NAD83, TEXAS CENTRAL SOUTH ZONE,
 US FEET, VERTICAL DATUM: NAVD83.
 AERIAL PHOTO PROVIDED BY IMAGEPATCH.COM EARTHSTAR
 GEOGRAPHICS, DATE: MAR-OCT 2011.

PROJECT: 17256		DATE: OCT 2018	BY: RCO/SGR	CHECKED: GSB
Bullock, Bennett & Associates, LLC ENGINEERING AND GEOSCIENCE Texas Registration: Engineering 15852, Geoscience 59127				
Colieto Creek Power, LP				
FIGURE 3				
GEOLOGIC CROSS SECTIONS AND				
LOCATION MAP				





NOTES:
 July 2016 bathymetry and to logs the surface data collected by Naimin Marine Services of Corpus Christi, Texas.
 Unit 1 thickness based on EXHIBIT 3, BORING LOCATION PLAN AND THICKNESS CONTOURS OF INSITU COHESIVE SOILS from Sargent & Lundy (1978).
 Original pond bottom elevations and site stratigraphy are estimated based on data in Sargent & Lundy (1978); 1959 USGS pre-construction topography data, and various post-construction borings located outside of pond footprint.

UNIT DESCRIPTIONS:
 Unit 1 - Sandy CLAY and Silty CLAY, Surficial unit.
 Unit 2 - Sand and Silty SAND with caliche and CLAY/Sandy CLAY lenses, First groundwater-bearing unit.
 Unit 3 - CLAY and Silty CLAY, Basal unit.
 Unit description based on AECOM (2009).

UNIT DESCRIPTIONS:
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 Unit description based on AECOM (2009).

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 Unit 2 - Sand and Silty SAND with caliche and CLAY/Sandy CLAY lenses, First groundwater-bearing unit.
 Unit 3 - CLAY and Silty CLAY, Basal unit.
 Unit description based on AECOM (2009).

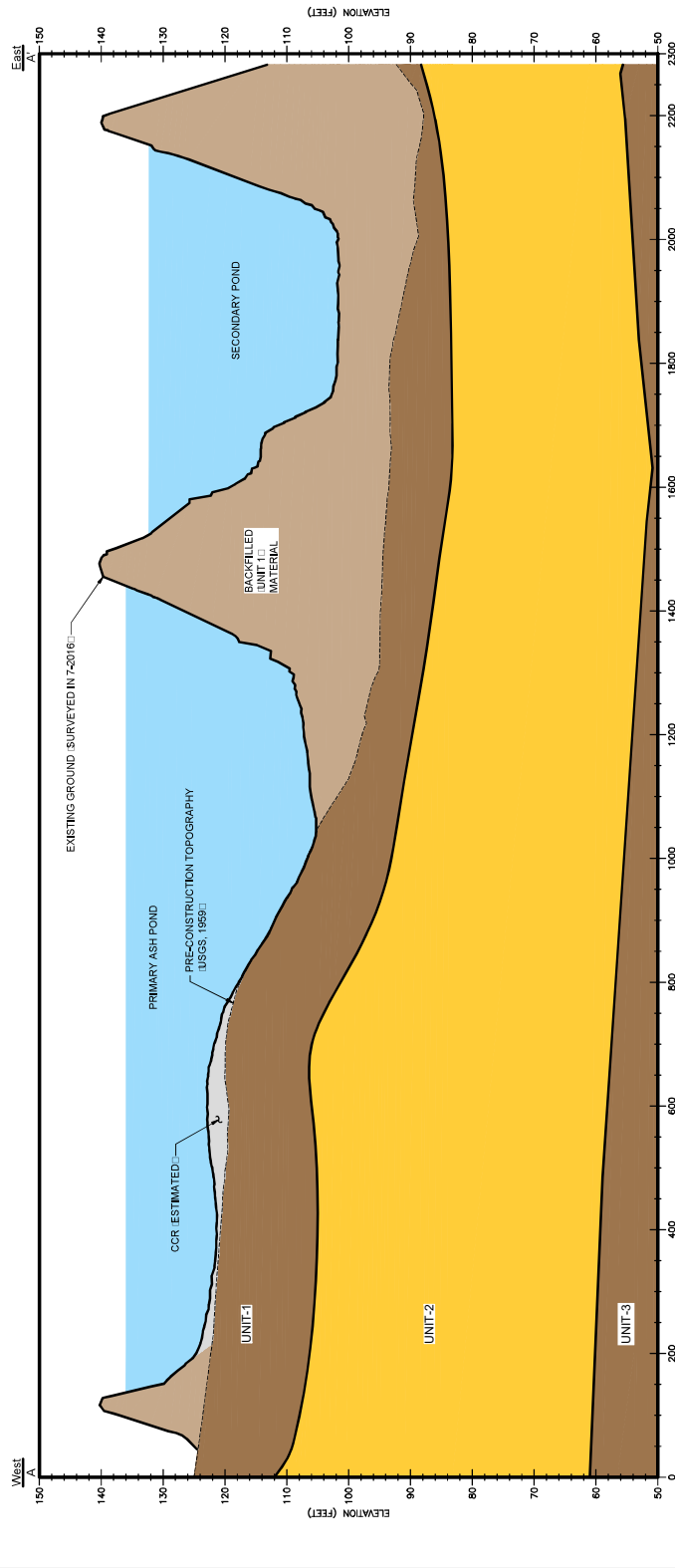
UNIT DESCRIPTIONS:
 Unit 1 - Sandy CLAY and Silty CLAY, Surficial unit.
 Unit 2 - Sand and Silty SAND with caliche and CLAY/Sandy CLAY lenses, First groundwater-bearing unit.
 Unit 3 - CLAY and Silty CLAY, Basal unit.
 Unit description based on AECOM (2009).

UNIT DESCRIPTIONS:
 Unit 1 - Sandy CLAY and Silty CLAY, Surficial unit.
 Unit 2 - Sand and Silty SAND with caliche and CLAY/Sandy CLAY lenses, First groundwater-bearing unit.
 Unit 3 - CLAY and Silty CLAY, Basal unit.
 Unit description based on AECOM (2009).

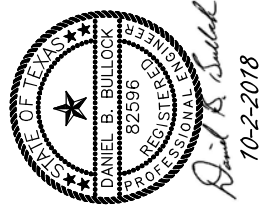
UNIT DESCRIPTIONS:
 Unit 1 - Sandy CLAY and Silty CLAY, Surficial unit.
 Unit 2 - Sand and Silty SAND with caliche and CLAY/Sandy CLAY lenses, First groundwater-bearing unit.
 Unit 3 - CLAY and Silty CLAY, Basal unit.
 Unit description based on AECOM (2009).

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 Unit 2 - Sand and Silty SAND with caliche and CLAY/Sandy CLAY lenses, First groundwater-bearing unit.
 Unit 3 - CLAY and Silty CLAY, Basal unit.
 Unit description based on AECOM (2009).

CROSS SECTION D-D' LOOKING EAST
 SCALE: 1"=3000' H, 1"=30' V



CROSS SECTION A-A' LOOKING NORTH
 SCALE: 1"=200' H, 1"=20' V



Coletto Creek Power, LP

FIGURE 4

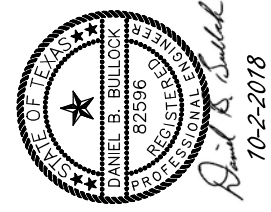
GENERALIZED CROSS SECTIONS A-A' AND D-D'

PROJECT: 17255	DATE: OCT 2018	BY: RCL/SJR	CHECKED: GJB
Bullock, Bennett & Associates, LLC ENGINEERING AND SCIENCE Texas Registration: Engineering 15827, Geoscience 59127			

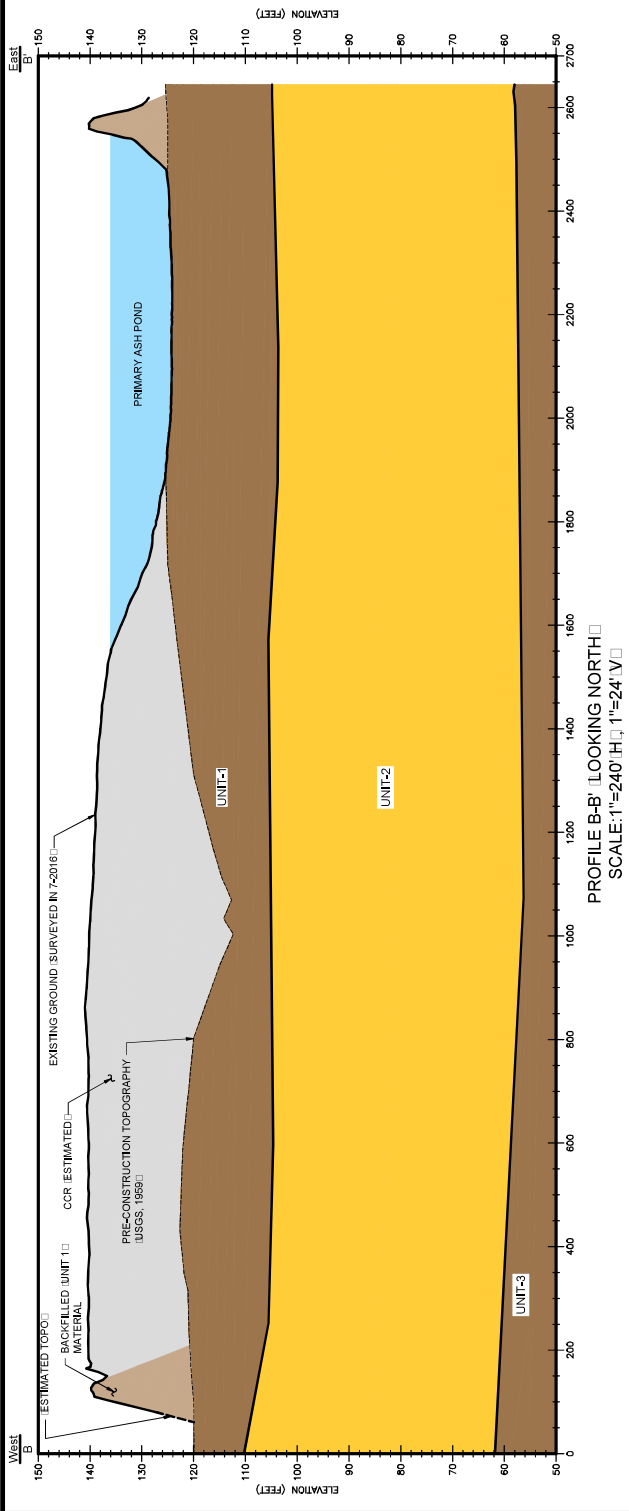
NOTES:
 July 2016 bathymetry and to digra this surface data collected by Naismith Marine Services of Corpus Christi, Texas.
 Unit 1 thickness based on EXHIBIT 3 BORING LOCATION PLAN AND THICKNESS CONTOURS OF NISITU COHESIVE SOILS from Sargent & Lundy (1978).
 Original pond bottom elevations and site stratigraphy are estimated and interpolated based on data in Sargent & Lundy (1978); 1959 USGS bathymetry data; and AECOM (2009) and 2006 and 2007 penetration borings located outside of pond footprint.

UNIT DESCRIPTIONS:

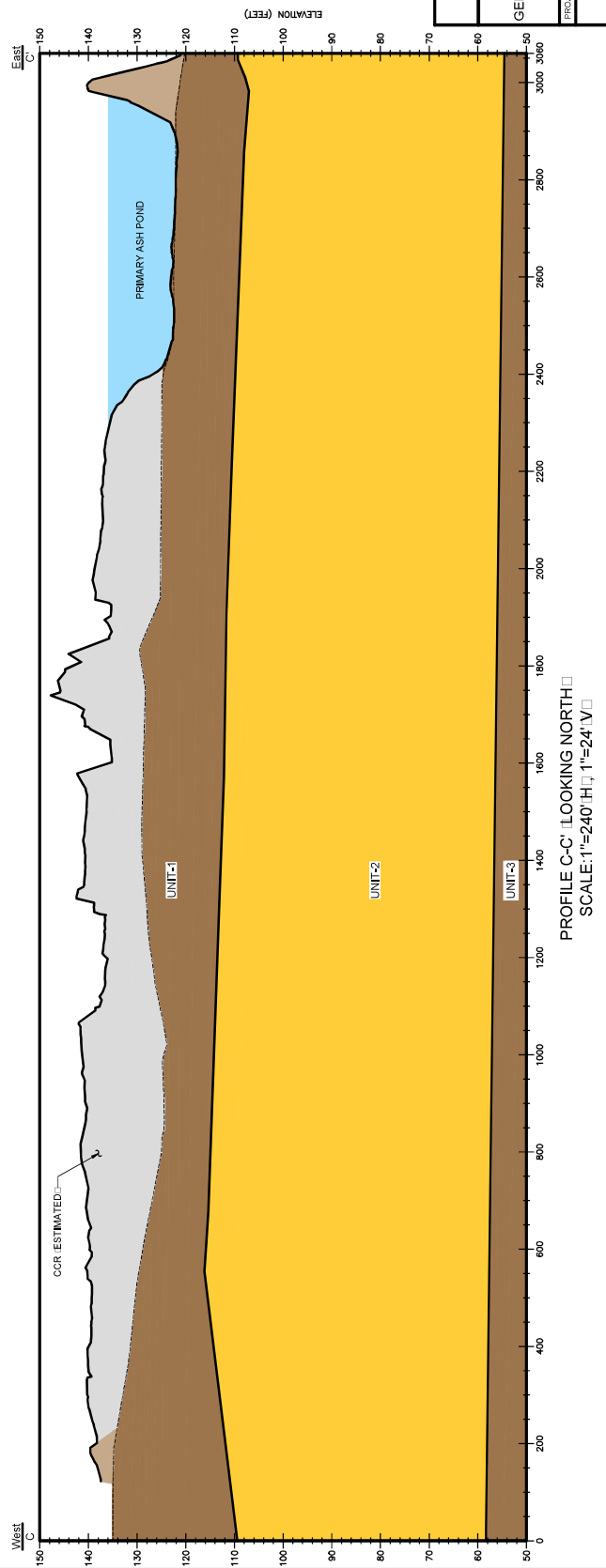
- Unit 1 - Sandy CLAY and SILY CLAY, Surficial unit.
- Unit 2 - Sand and SILY SAND with calciche and CLAY/Sandy CLAY lenses, First groundwater-bearing unit.
- Unit 3 - CLAY and SILY CLAY, Basal unit.
- Unit descriptions based on AECOM (2009)



Coleto Creek Power, LP	
FIGURE 5	
GENERALIZED CROSS SECTIONS B-B' AND C-C'	
PROJECT 17225	DATE OCT 2018
BY: P. GOSLER	CHECKED: GBB
Bullock, Bennett & Associates, LLC	
ENGINEERING AND SCIENCE	
Texas Registration: Engineering F5457, Geoscience 59137	



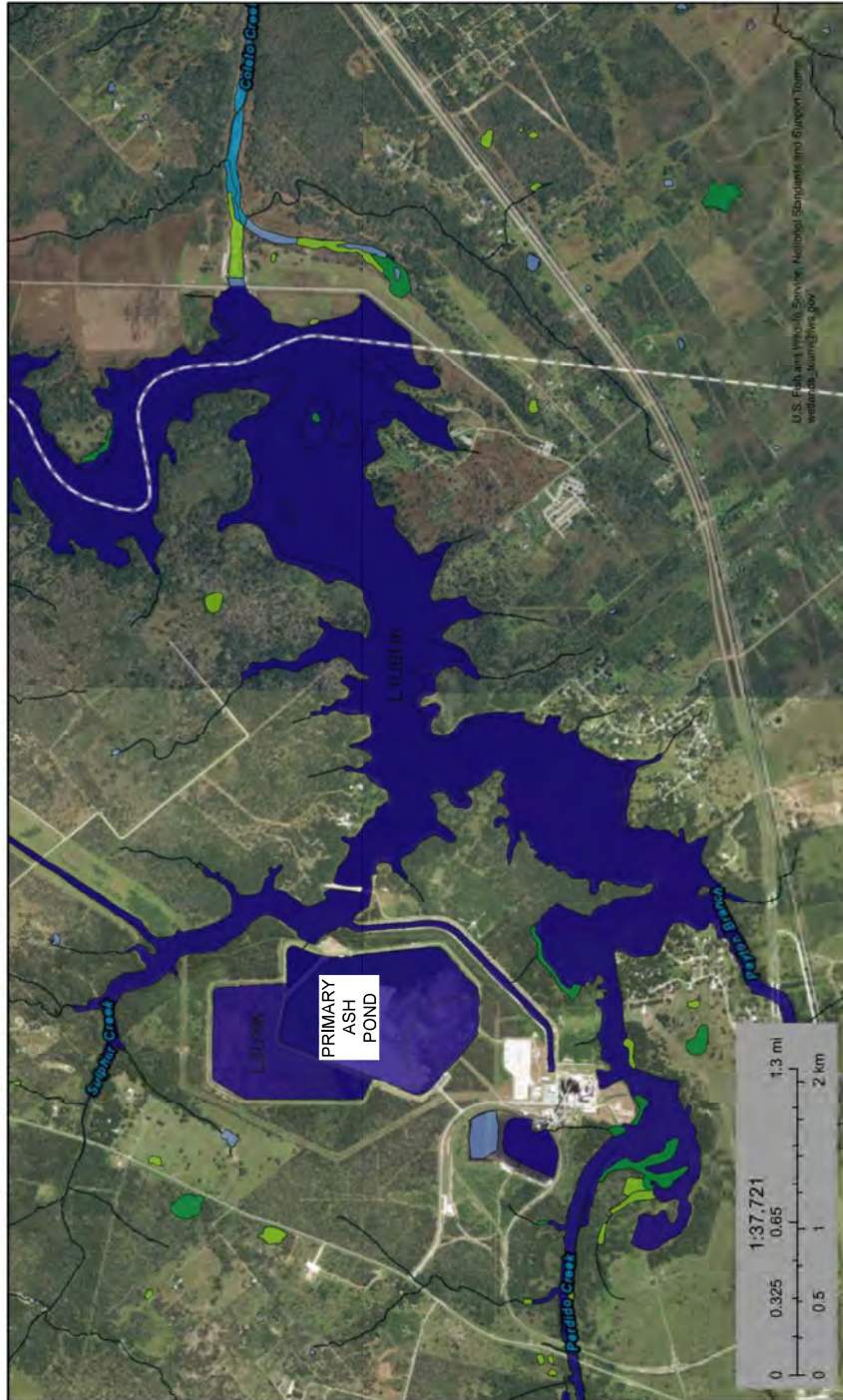
PROFILE B-B' (LOOKING NORTH)
 SCALE: 1"=240' H, 1"=24' V



PROFILE C-C' (LOOKING NORTH)
 SCALE: 1"=240' H, 1"=24' V

U.S. Fish and Wildlife Service
National Wetlands Inventory

Coletto Creek Power Station

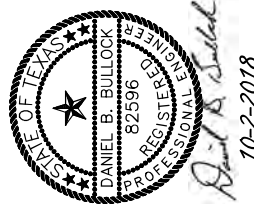


November 16, 2017

Wetlands

- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Estuarine and Marine Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

National Wetlands Inventory (NWI)
 This page was produced by the NWI mapper

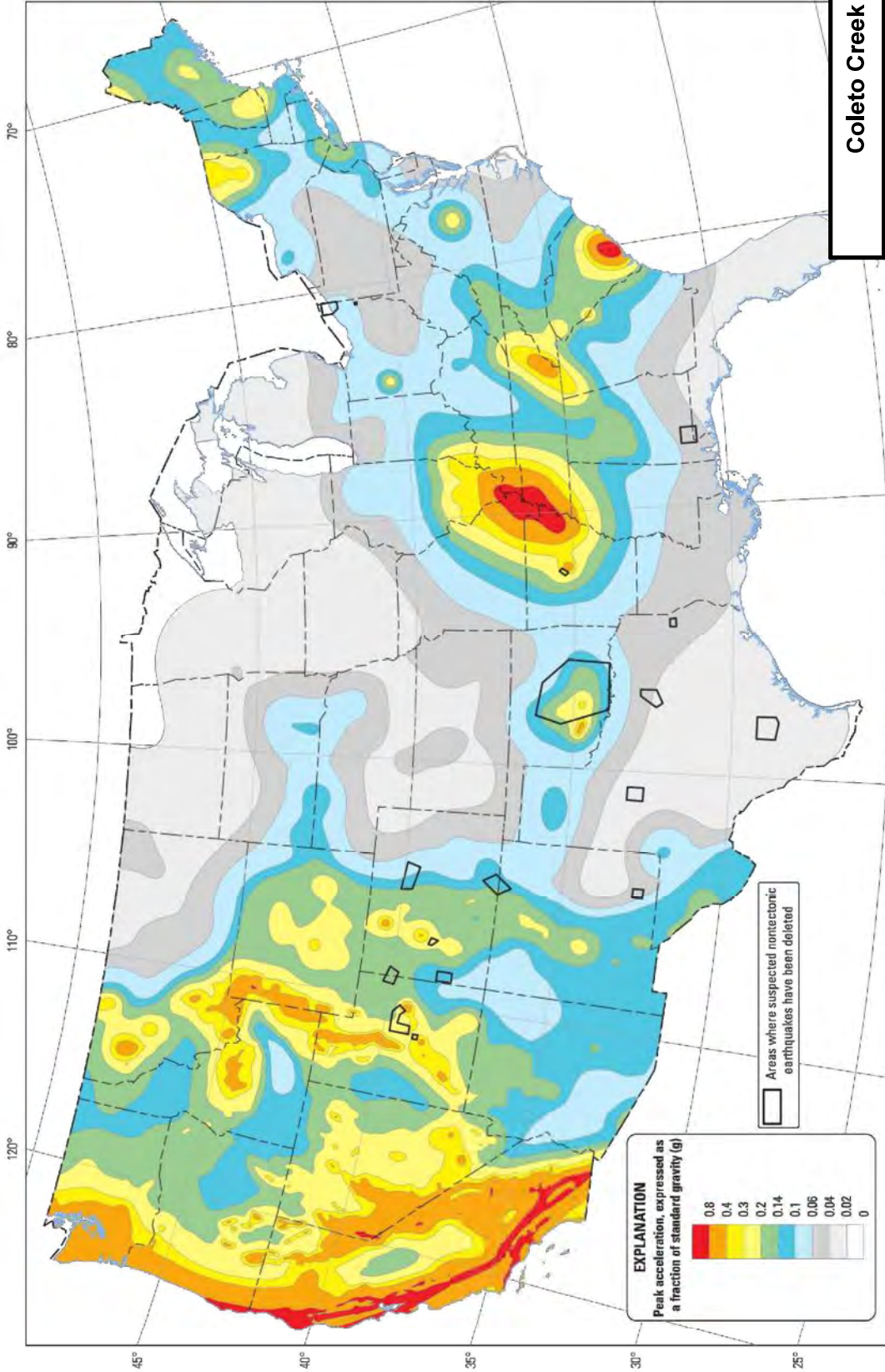


Coletto Creek Power, LP

Figure 6
**NATIONAL WETLANDS
 INVENTORY SEARCH**

PROJECT: 17256	BY: BR	DATE: OCT 2018	CHECKED: CEB
Bullock, Bennett & Associates, LLC Engineering and Geoscience Texas Registrations: Engineering F-8542, Geoscience 50127			

Plot Date: 10/04/18 - 3:31 pm, Plotted by: roodj
 Drawing Path: K:\client\stibat\Coletto CK - Drawing Name: C-ST-PL126.dwg



Coletto Creek Power, LP

Figure 7

Two-percent probability of exceedance in 50 years maximum peak ground acceleration

PROJECT: 17256 BY: ROAD-RR DATE: OCT 2018 CHECKED: CEB
Bullock, Bennett & Associates, LLC
 Engineering and Geoscience
 Texas Registrations: Engineering F-8542, Geoscience 50127