

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

DOCKET NO. C14-0020-SC-00-A

FINAL ORDER

**APPROVAL OF APPLICATION OF SAN MIGUEL ELECTRIC COOPERATIVE, INC.
OF NEW SURFACE MINING AND RECLAMATION PERMIT
F, G AND H AREA LIGNITE MINE
McMULLEN COUNTY, TEXAS**

The Railroad Commission of Texas ("Commission") finds that, after statutory notice in the above-numbered docket, heard on April 24, 2018, the Administrative Law Judge ("ALJ") made and circulated a proposal for decision on March 2, 2018, and after receipt and review of exceptions and replies made and filed an amended proposal for decision dated April 3, 2018 containing findings of fact and conclusions of law, which was served on all parties of record, and that this proceeding was duly submitted to the Commission at conference held in its offices in Austin, Texas.

The Commission, after review and due consideration of the amended proposal for decision, the findings of fact and conclusions of law contained therein, and the exceptions and replies, hereby adopts as its own the findings of fact and conclusions of law contained in the amended proposal for decision beginning on page 27 of the amended proposal for decision and as set out below. The Commission also adopts the Permit Provisions set out in Appendix I to this Order and the soil-testing plan set out in Appendix II [Appendix VII of Staff's Technical Analysis]:

FINDINGS OF FACT

1. San Miguel Electric Cooperative, Inc. ("SMECI" or "Applicant"), P.O. Box 280, Jourdanton, Texas 78026 submitted its application for a new surface mining and reclamation permit for its proposed F, G, and H Areas located in northern McMullen County, Texas. SMECI currently has additional permitted mines, Permit Nos. 11G and 52A, located in Atascosa and McMullen Counties, Texas. The proposed permit area, consisting of approximately 2,698 acres, is located southwest and adjacent to the existing Permit 11G area along FM 791.
2. The application is made pursuant to the Texas Surface Coal Mining and Reclamation Act (the "Act"), TEX. NAT. RES. CODE ANN. CH. 134 (Vernon Supp. 2017), the Administrative Procedure Act, TEX. GOV'T CODE CH. 2001, and the Commission Practice and Procedure rules and the "Coal Mining Regulations" (the "Regulations"), 16 TEX. ADMIN. CODE CHS. 1 and 12 (Thomson West 2017), respectively.
3. The application was submitted to the Commission's Surface Mining and Reclamation Division ("SMRD" and/or "Staff") on August 6, 2014. The application, consisting of four

volumes, was declared administratively complete by the SMRD Director and docketed with the Commission's Hearings Division by letter dated August 14, 2014. The following supplemental materials for the application, and Staff's review of those materials, were filed in the docket after the initial application was submitted:

- a. Staff's Application Deficiencies and Non-Substantive Comments (February 27, 2015);
 - b. Supplement No. 1 (November 18, 2016);
 - c. Staff's Second Set of Application Deficiencies and Non-Substantive Comments (November 18, 2017);
 - d. Supplement No. 2 (January 23, 2017);
 - e. Staff's Third Set Application Deficiencies and Non-Substantive Comments (February 16, 2017);
 - f. Supplement No. 3 (March 1, 2017);
 - g. Supplement No. 4 (April 4, 2017);
 - h. Supplement No. 5 (April 7, 2017); and
 - i. Supplement No. 6 (May 5, 2017);
 - j. Staff's Technical Analysis (May 10, 2017).
4. On October 4, 2017, SMECI filed Trial Amendment No. 1. The filing was timely received pursuant to a scheduling order issued in the docket (Finding of Fact No. 19, *infra*). Trial Amendment No. 1 contained various updates to the application offered to address multiple requirements set forth in the Regulations. An "Alternative Mine Plan" was submitted in Trial Amendment No. 1 in which SMECI does not propose operations in violation of §12.382 of the Regulations. The remainder of this Order will refer to contents of the Trial Amendment No.1 by name or as the "Alternative Mine Plan." SMECI's initial submittal on August 6, 2014 and Supplements Nos. 1 through 6 (Finding of Fact Nos. 3a, b, d, and f – I) will be referred to as the "Original Mine Plan" throughout this Order. The application consists of all materials provided in the Original Mine Plan and the Alternative Mine Plan, as supplemented through evidence that was admitted into the record during the hearing on the merits. Permit Provision No. 6 is proposed to ensure all supplemental information provided subsequent to the submittal of Supplement No. 6 is compiled in a single volume and notation errors that were cited by Staff regarding Trial Amendment No. 1 are corrected.¹
5. The application and supplements (Nos. 1-6) were verified under oath by officers of the Applicant pursuant to §12.107(g) of the Regulations. The application and all supplements,² and Staff's Technical Analysis³ and deficiency letters⁴ were accepted into the evidentiary record of the proceeding. Staff's deficiency letters and Technical Analysis document (TA) constitute its formal written analysis of the application and Supplements Nos. 1 through 6. Additional information, including Trial Amendment No. 1 and testimony offered by the Applicant and Staff, was admitted into the evidentiary record at the hearing on the merits.
6. Pursuant to §12.108(a), the Applicant paid an application fee of \$5,000.00 by check that was received by the Commission on August 8, 2014.

¹ See Staff Exhibit No. 3

² Applicant Exhibit No. I

³ Staff Exhibit No. I

⁴ ALJ Exhibits Nos. 4-6

7. Proper notice of the application was published at least once each week for four consecutive weeks on the following dates in 2017 that invited public comment and requests for hearing: March 15, 22, 29 and April 5 in *The Progress*, the designated publication for public notices related to McMullen County, and March 22, 29, April 5 and 12 in the *Pleasanton Express* published in Atascosa County. Both publications are newspapers of general circulation in McMullen County, Texas. The published notice contained all the information required by §12.207(a) of the Regulations. The notice indicated that the application might be further supplemented. The contents of Trial Amendment No. 1, submitted October 4, 2017, do not result in any material effects on landowners or the environment that are greater than those initially proposed. Accordingly, additional notice is not needed. Original tear sheets and a publisher's affidavit from each newspaper were accepted into the record of the proceeding.⁵
8. Proper notice of the application was mailed by the Commission to local, state and federal agencies, as required by §§12.207(b)-(c) of the Regulations, on March 21 and 24, 2017. By policy of the Commission, Notice of Application was mailed to all persons identified by the applicant as owners of interests in land within or adjacent to the proposed permit area on April 13, 2017. In the ALJ's discretion, the Notice of Application was mailed to alternative addresses available for two interest owners on April 27 and May 2, 2017.
9. Copies of the application, all supplements to, and timely written comments on the application were filed with the McMullen and Atascosa County Clerks and in the offices of the Commission in Austin for public review during normal business hours, in compliance with §12.207(d) of the Regulations.
10. SMRD sent a courtesy copy of the four-volume application to the Texas Parks and Wildlife Department (TPWD) and the U.S. Fish and Wildlife Service (USFWS) on May 20, 2015. On October 28, 2015, TPWD responded by sending a comment letter to the Commission including twelve comments on the permit application. On February 16, 2016, the Commission submitted an electronic copy of the initial application to USFWS, per their request. Staff sent a copy of Supplement No. 1 to TPWD and USFWS on July 27, 2016, and a copy of Supplement No. 2 on February 10, 2017. On May 2, 2017, TPWD responded by sending a comment letter to the Commission which contained two comments on the permit application. Staff sent a copy of Supplement Nos. 3, 4, and 5 to TPWD and USFWS on May 4, 2017, and a copy of Supplement No. 6 on May 8, 2017. A summary of TPWD's comments and Staff's responses based on a review of the application through Supplement No. 6 are provided in Appendix III of Staff's TA. Comments were not received from USFW.
11. Requests for a hearing and requests for party status, filed in compliance with §12.211 of the Regulations, were received from the following: *DCP Sand Hills Pipeline LLC* and *DCP Operating Company LP* (collectively, "DCP"), *EnerQuest Oil & Gas LLC* and *EnerQuest Operating LLC* (collectively, "EnerQuest"), and *Nancy Wheeler Plumlee* and *Lee Bracken Wheeler, Trustee of the L&P Children's Trust* (collectively, the "Wheelers"). Written comments in opposition to the application were timely filed in conjunction with each of the hearing requests received. Per their request, the Wheelers were granted a one-week extension of the comment period afforded under §12.208(b) and timely filed

⁵ ALJ Exhibit No. I (Jurisdictional)

additional comments on May 19, 2017. All written comments received were included in the record of the proceeding. Copies of the comments were transmitted to SMECI and the Atascosa and McMullen County Clerks as required by §12.208(c).

12. On June 5, 2017, an Informal Conference was held, at SMECI's request, to allow the parties an opportunity to conduct informal discussion off the record pursuant to §12.211(c). Immediately following the Informal Conference, a Prehearing Conference was convened to discuss preliminary matters related to the proceeding at which DCP, EnerQuest and the Wheelers were provisionally named parties to the proceeding.
13. During the Prehearing Conference on June 5, 2017, the ALJ issued a scheduling order (Docket Control Order) pursuant to §1.101 of the Commission's Practice and Procedure rules. Pursuant to §1.38, DCP filed a timely appeal requesting the Commission require the ALJ to set aside the Docket Control Order on June 15, 2017. DCP filed a supplement to its appeal on June 23, 2017. Responsive filings were timely received from SMECI, EnerQuest and the Wheelers. The appeal was deemed denied under §1.38(d)(1) in that the Commission did not issue an order by the 46th day following the date of filing. The 46th day was July 31, 2017. The Commission, pursuant to §1.38(e), could have ruled on the motion as soon as one day after the date responses were due, June 27, 2017. Memorandums summarizing the motion, as supplemented, and responsive filings, with the ALJ's analysis and recommendation were provided to the Commissioners on June 16 and 27, 2017. On July 19, 2017, the ALJ issued an order rescinding the Docket Control Order after assessing the record following the Public Hearing held in Tilden. The order was provided to the Commissioners by memorandum dated July 20, 2017.
14. The City of Corpus Christi filed a request to extend the period to file written objections to the application on June 14, 2017 (letter dated June 5, 2017). The request was granted, and the City of Corpus Christi, Texas was provided a copy of the Notice of Public Hearing and received a copy of all correspondence initiated by the Commission's Hearings Division as an interested person. The City of Corpus Christi did not file written objections, request party status or attend any portion of the hearing, but have continued to receive copies of outgoing correspondence related to the docket, including the PFD when it was issued to the parties.
15. Proper notice of the Public Hearing, as required by §12.212 of the Regulations, was published by the Commission in *The Progress*, a local newspaper of general circulation in the locality of the proposed surface coal mining and reclamation operation, at least once each week for three consecutive weeks prior to the scheduled hearing date, on June 21, 28, and July 5, 2017. and on June 5, 2017. The published notice contained all information required by the Regulations. The tear sheets and publisher's affidavit were submitted to the Commission and were accepted into the record of the proceeding.⁶ In addition, the Commission mailed copies of the Notice of Public Hearing for public comment and party status on June 12, 2017 to all persons who had expressed in interest in the application by written notification pursuant to §12.212(c). The notice indicated that the application might be further supplemented. The contents of Trial Amendment No. 1, submitted October 4, 2017, do not result in any material effects on landowners or the environment that are greater than those initially proposed. Accordingly, additional notice is not needed.

⁶ ALJ Exhibit 2 (Jurisdictional)

16. The Notice of Public Hearing established a deadline to request party status (July 10, 2017) prior to the hearing date (July 14, 2017). The following requested party status on the final day of the deadline and were named provisional parties to the proceeding: The City of Three Rivers, Texas ("Three Rivers" or "the City"); Mr. Donald Haynes, Jr.; and, Mr. Martin Soward.
17. As noticed, the hearing for public comment and party status on the application commenced on July 14, 2017 in the McMullen County Courthouse in Tilden, Texas. The scope of the setting was limited to receiving public comment on the application and receiving evidence regarding standing from those who had requested to be named a party. Although approximately 13 people attended the setting in Tilden, only one person, Ms. Bessie Guerrero, who had not requested party status issued public comment on the application. Ms. Guerrero expressed concerns related to light pollution, modification of the existing floodplain, the effect the advancing mine plan might have on her property rights, and water quantity/quality. Mr. Haynes and Mr. Soward provided testimony regarding their interests in property adjacent to the proposed permit area and expressed concerns related to increased noise, light and air (dust) pollution due to the proximity of the proposed operations, and impacts to local wildlife. Three Rivers provided comment on possible impacts to water quality in Choke Canyon Reservoir. The City offered testimony through Mayor Samuel Garcia regarding its ownership in water rights associated with Choke Canyon. The Mayor also testified that the reservoir is the City's only source of drinking water. Prior to the close of the setting in Tilden, the hearing was continued by announcement to reconvene at a time and place to be named pursuant to §12.213 of the Regulations. Attendees at the setting were afforded the opportunity to receive copies of the notice of the hearing on the merits and PFD when they were issued to the parties. Two people provided their contact information and were issued the documents as interested persons.
18. Deadlines to submit written objections challenging standing were established prior to the close of the setting in Tilden on July 14, 2017. The ALJ rescinded those deadlines by letter dated July 19, 2017. A final ruling on any motions challenging the standing of an individual party were to be carried to the PFD. No such motion was made prior to the issuance of the PFD. The City of Three Rivers withdrew from the proceeding on September 12, 2017 prior to the hearing on the merits, but received notice of the setting and continued to receive copies of all outgoing correspondence from the Hearings Division as an interested person.
19. On July 31, 2017, the ALJ issued a second scheduling order (Docket Control Order No. 2) pursuant to §1.101 of the Commission's Practice and Procedure rules that established deadlines related to pre-hearing matters. Docket Control Order No. 2 was subsequently modified on October 12, 2017 following SMECI's request to extend the discovery period based on the contents of Trial Amendment No.1 by letter dated October 11, 2017.
20. A prehearing conference was held on November 1, 2017 to consider preliminary motions and other matters related to the hearing on the merits. On October 19, 2017, notice of the setting was issued to the parties as required under §1.42 of the Commission's Practice and Procedure rules.
21. The Commission mailed Notice of Public Hearing on Merits on October 26, 2017. The notice contained all required information and was issued to the parties and all persons

who had expressed in interest in the application by written notification pursuant to §12.212(c). Publication of the continued setting is not legally required and was not preformed.

22. As noticed, the hearing on the merits of the application was conducted in the Commission's Austin office on November 13 – 17, 2017. The hearing was held pursuant to the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. CH. 134, the Administrative Procedure Act, TEX. GOV'T CODE, CH. 2001, and the Commission's "Practice and Procedure" rules and the "Coal Mining Regulations," 16 TEX. ADMIN. CODE CHS. 1 and 12. EnerQuest represented at the outset of the hearing on the merits that it was working on a settlement and accommodation agreement with SMECI, and given the pendency of the settlement, it would not participate in the evidentiary portion of the proceeding. EnerQuest formally withdrew from the proceeding on November 20, 2017. During the Prehearing Conference held on November 1, 2017, DCP requested permission to be absent during portions of the hearing that would be addressing matters that were not related to its pipeline. DCP's request for leave was granted. Accordingly, DCP's participation in the hearing was primarily limited to matters related to its pipeline. Messrs. Haynes and Soward did not attend the hearing on the merits or submit any additional filings beyond their initial requests.
23. A verbatim transcript was made of each part of the Public Hearing and associated Prehearing Conferences by certified court reporters in compliance with §12.214 of the Regulations. The Commission maintains a complete record of all proceedings related to the docket.
24. The U.S. Department of Interior - Office of Surface Mining Reclamation and Enforcement (OSM) is the agency with jurisdiction over abandoned mine reclamation fees required by Subchapter R of the Regulations and also is the agency that provides reports of each company's compliance with the federal program and with programs in other states. OSM's Applicant-Violator System (AVS) report substantiates that SMECI and those persons or entities that own or control Applicant, have no pending or uncorrected violations that are not being remedied in accordance with the agency's requirements and are not delinquent in payment of reclamation fees (Appendix VI, TA).⁷
25. Applicant, and persons and entities that own or control Applicant, do not control, and have not controlled, mining operations with a demonstrated pattern of willful violations of the Act or Regulations, of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act or Regulations [§12.215(e)].
26. The application, as supplemented, contains the ownership, control, and compliance information regarding the Applicant required by §12.116 of the Regulations. SMECI indicates it is a rural electric cooperative formed under the Federal Rural Utilities Service. Kiewit Mining Group, Inc., the proposed operator of the mine, is a Delaware corporation. During the hearing on the merits SMECI offered updated text and tables related to ownership, control and compliance that were admitted into the record of the

⁷ Staff Exhibit No. I, Appendix VI (Applicant-Violator System Report)

proceeding for the purposes of satisfying the requirements of §12.116.⁸ SMECI will be required to update compliance information upon approval of the Application pursuant to §12.116(a)(2). SMECI provides the name and address of interest owners in lands within and contiguous to the proposed permit area as required under §§12.126(d)(1)-(2).⁹

27. The application, as supplemented and in conjunction with Permit Provision Nos. 1 and 2, provides adequate information to demonstrate compliance with §12.117 of the Regulations.

(a). In Supplement No. 1, SMECI provided copies of the underlying documents that grant it the right to enter and begin surface mining activities.¹⁰ Leases pertaining to the tracts owned by the Wheelers in Areas H and G, and the Reyes in Area F were submitted. SMECI indicated it purchased the surface and coal and lignite minerals from the owner of Tract No. SL-11 (Maspero family) on March 17, 2016. A copy of the deed was submitted in Supplement No. 1. Land tracts within and adjacent to the proposed permit area were depicted on Exhibit 116-1 (Land Tract Map). Landowners within the proposed permit boundary were identified according to the tax records in McMullen County.¹¹

(1) The Wheelers contended that the leases do not meet the requirements of §12.117 because a third-party is identified as the lessee in the document provided in Supplement No. 1.¹² In response, SMECI submitted copies of the lease assignments related to the property owned by the Wheelers. The lease assignments were officially noticed as public records in the proceeding.¹³ The assignments are sufficient to establish SMECI's legal right to enter and begin surface mining activities on the tracts owned by the Wheelers under the Regulations.

(2) The description provided by SMECI regarding the Reyes property and Tract No. SL-11 is sufficient under §12.117(b) of the Regulations.

(b). The application, as supplemented by evidence admitted in the proceeding, includes information that SMECI's right of entry is subject to pending litigation regarding tracts owned by the Wheelers and portions of the proposed permit area where DCP's right of way exists.

(1) DCP operates a 720-mile, 20-inch common carrier natural gas liquids transmission pipeline, portions of which traverse areas that SMECI proposes to mine under the Original Mine Plan. In order for SMECI to proceed under the Original Mine Plan, DCP's pipeline would have to be removed from the area as the result of an agreement between the parties or by order of a court with competent jurisdiction. SMECI filed suit against

⁸ Applicant Exhibit No. 1D, Section 116, pp. 116-1 – 116-10; Applicant Exhibit No. 1E, Table 116-1; Applicant Exhibit No. 1F, Table 116-1A; Applicant Exhibit No. 1G, Table 116-5; Applicant Exhibit No. 1H Table 116-6; Applicant Exhibit No. 1I, Table 116-8

⁹ Applicant Exhibit No. 1 (Supplement 1), Exhibit 116-1, Table 116-2 and Table 116-4

¹⁰ Applicant Exhibit No. 1, Appendix 117-1

¹¹ Applicant Exhibit No. 1 (Supplement No. 1), Table 116-2

¹² See Wheelers' Written Closing dated December 4, 2017

¹³ ALJ Exhibit No. 19

DCP for declaratory and injunctive relief seeking removal of the pipeline in the 36th Judicial District Court of McMullen County on September 20, 2016.¹⁴ DCP filed a counterclaim for declaratory relief on October 14, 2016.¹⁵ The matters are set to be heard by the District Court on November 5, 2018.¹⁶

- (2) The Wheelers own property comprising over 2,000 acres of the proposed permit area.¹⁷ SMECI's right to mine that property is based on a lease executed in 1954. The Wheelers filed suit seeking a declaratory judgment that the lease is invalid, void or voidable on June 6, 2017.¹⁸ The suit is currently pending before the same District Court in McMullen County that will consider the matters involving DCP.¹⁹
 - (3) SMECI did not file a formal supplement to the application disclosing the existence of the pending litigation discussed in Finding of Facts Nos. 27(b)(1) and 27(b)(2). However, the matters have been incorporated into the application pursuant to §12.3(15) of the Regulations and can be considered by the Commission prior to the action on the Application [§12.216].²⁰
 - (4) The existence of pending litigation does not preclude SMECI from meeting the requirements of §12.117(a). The Regulations require an application *disclose* whether the right claimed by the Applicant is subject to pending litigation.²¹
- (c). SMECI must provide sufficient information to satisfy right of entry requirements under §12.117 of the Regulations prior to disturbing areas currently occupied by the oil and gas operations.
- (1) SMECI has not demonstrated right of entry in portions of Areas G and H that are currently occupied by DCP's pipeline. SMECI must satisfy Permit Provision No. 1 prior to approval of activities that propose to make a cut within one hundred feet or one times the depth of the cut (whichever is greater) of the pipeline owned by DCP. Permit Provision No. 1 is proposed as follows:

No surface mining activities are approved that propose to make a cut within one hundred feet or one times the depth of the cut (whichever is greater) of the pipeline owned by DCP Sand Hills Pipeline, LLC (DCP) that currently lies in Areas G and H of the permit area. Surface mining activities that propose to make a cut within one hundred feet or one

¹⁴ DCP Exhibit No. 2 (Cause No. M-16-0033-CV-A)

¹⁵ Id.; DCP Exhibit No. 3

¹⁶ DCP Exhibit No. 9

¹⁷ See Applicant Exhibit No. 1, Exhibit 116-1

¹⁸ Wheeler Exhibit No. 5(R) (Cause No. M-17-0027-CV-A)

¹⁹ Id.

²⁰ DCP Exhibit Nos. 3 and 9; Wheeler Exhibit No. 5(R)

²¹ See 16 TAC §12.117(a) (emphasis added)

times the depth of the cut (whichever is greater) of DCP's pipeline shall only be approved upon submission of sufficient documentation to demonstrate right of entry within the area occupied by DCP's pipeline and any other required information. The sufficiency of SMECI's right of entry demonstration regarding this area shall be determined by the Commission's Office of General Counsel and the SMRD Director. SMECI will be authorized to proceed with operations that propose to make a cut within one hundred feet or one times the depth of the cut (whichever is greater) of DCP's pipeline only upon approval as indicated by the Office of General Counsel and the SMRD Director after confirmation of the pipeline's decommission and/or relocation by the Field Operations Division of the Commission's Oil and Gas Division. The language set forth in Permit Provision No. 2 does not apply to the area or entity identified in this provision.

Permit Provision No. 1 is adopted.

- (2) As recognized by Staff in its Technical Analysis, SMECI has not demonstrated right of entry as required under §12.117 to operate in any areas that are currently occupied by oil wells, gas wells, or pipelines.²² SMECI provided supplemental information identifying oil wells, gas wells and pipelines within the proposed permit area on October 4, 2017 in Trial Amendment No. 1.²³ This submittal updated information that was initially provided on May 4, 2017 in Supplement No. 6.²⁴ SMECI provided additional updates during the hearing on the merits regarding wells and pipelines in the area based on field reconnaissance work conducted subsequent to the submittal of Trial Amendment No. 1.²⁵ According to the information provided in Trial Amendment No. 1, five active wells, all owned and operated by EnerQuest, are located within the proposed permit boundary and will be disturbed during the requested term. Updates provided during the hearing on the merits indicate that only two or possibly three are active.²⁶ EnerQuest's wells are located on leased land owned by the Wheelers.²⁷ The Wheelers have legal interests in EnerQuest's wells.²⁸ SMECI did not offer any right of entry documentation related to these facilities during the proceeding. Additionally, at the outset of the hearing on the merits, EnerQuest represented that an accommodation agreement was being negotiated with SMECI that would resolve the issues with respect to its wells within the area. The ALJ requested proof of the agreement be submitted once finalized; however, no party has offered any supporting documentation that an

²² Staff Exhibit No. I, Appendix V

²³ Applicant Exhibit No. 1A, Exhibit 135-I-Alt and Appendix 135-I-Alt

²⁴ Applicant Exhibit No. I (Supplement No. 6), Exhibit 135-I and Appendix 135-I

²⁵ Testimony of Don Charbula, Tr., Vol. 3, pp. 68 – 73

²⁶ Testimony of Don Charbula, Tr., Vol. 3, pp. 73 – 74

²⁷ Wheeler Exhibit Nos. 1-3

²⁸ Id.

accommodation agreement has been reached. Permit Provision No. 2 is proposed to address right of entry with respect to these areas:

SMECI has not demonstrated right of entry to disturb any oil well, gas well or pipeline, and their associated facilities; therefore, no disturbance activities are approved within 100 feet of any oil well, gas well, or pipeline, and their associated facilities. Approval of disturbance activities within 100 feet of any oil well, gas well, or pipeline, and their associated facilities, must be obtained through submittal of adequate documentation of right of entry and approval thereof by the Commission's Office of General Counsel and the SMRD Director. If right of entry to disturb an oil or gas well or pipeline, or their associated facilities, cannot be obtained, a revision to the permit shall be submitted, if necessary, no later than 180 days prior to conducting operations as proposed in the revision. This revision may be approved administratively by the SMRD Director if deemed a non-significant revision pursuant to §12.226 of the Regulations.

Permit Provision No. 2 is adopted. Separate permit provisions addressing right of entry are adopted due to extensive evidence in the record related to DCP's pipeline, the pending litigation involving DCP and SMECI in District Court, and the various concerns and arguments voiced by DCP throughout the proceeding. The final sentence of Permit Provision No. 1 is adopted to avoid ambiguity.

[This Finding of Fact amends the PFD issued on May 2, 2018 to indicate EnerQuest's wells are located on leased land owned by the Wheelers and the Wheelers have legal interests in the wells.]

- (d) The Alternative Mine Plan proposes roads and surface water control structures that will cross over DCP's pipeline [See Finding of Fact Nos. 60 and 63, *infra*]. SMECI is not required to demonstrate right of entry to cross DCP's right of way at the surface under the Act or the Regulations.
- 28. The proposed permit area is not within an area designated as prohibited or limited for surface coal mining operations, or designated as unsuitable for surface mining activities, nor is it in an area under study for either such designation in an administrative proceeding. The application does not propose to conduct surface mining activities within 300 feet of a prohibited occupied dwelling [Regulations §12.118].²⁹ SMECI does request a waiver to conduct surface mining activities within 100 feet of a public road pursuant to §12.72(a) of the Regulations [See Finding of Fact No. 63, *infra*].
- 29. The application, as supplemented, includes the information required by §12.119 of the Regulations regarding the proposed permit boundary and term. SMECI requests a permit term of five years from the date of issuance. Under the Original Mine Plan, SMECI proposes to mine approximately 1,086 acres while disturbing a 1,686-acre area

²⁹ Testimony of David Burris, Vol. 2, pp. 216-218

and conducting operations as described in Sections 139 and 145 of the application, as supplemented.³⁰ The Alternative Mine Plan, proposes to mine approximately 1,012 acres while disturbing a 1,507-acre area and conduct operations as described in Sections 139-Alt and 145-Alt [Finding of Fact Nos. 49 and 55, *infra*].³¹ No finding is required under §12.119(b) given the projected life-of-mine under both plans is 5 years.³²

30. The record of the proceeding contains a certificate of insurance in compliance with §12.120 of the Regulations that evidences liability insurance coverage in amounts equal to, or exceeding, those required by §12.311 of the Regulations.³³ Trial Amendment No. 1 includes a copy of a certificate of insurance, effective July 14, 2017 through July 14, 2018, certified June 19, 2017. SMECI is insured by Westchester Fire Insurance Company with a general liability policy, Policy No. G24915402008, for bodily injury [\$500,000 (each occurrence)/\$1,500,000 (Aggregate)] and property damage [\$500,000 (each occurrence)/\$1,000,000 (Aggregate)]. Additionally, the certificate has language providing \$17,000,000 each occurrence and \$17,000,000 aggregate for “Bodily Injury/Property Damage,” indicating SMECI carries higher limits than required. SMECI is the insured party and the requested permit area is the designated location for a \$10,000,000 general aggregate limit. The policy requires SMECI to notify the Railroad Commission of Texas’ Surface Mining and Reclamation Division whenever substantive policy changes occur, including any termination or failure to renew.
31. Pursuant to §12.121 of the Regulations, the application, as supplemented (Section 121, Supplement 2), contains the following information relating to other licenses and permits required for conducting the proposed surface mining activities: U.S. Army Corps of Engineers Individual Permit, USACE Project No. SWF-2012-00268 (revision submitted November 17, 2016/pending) ; Mine Safety and Health Administration Legal Identity Report, File No. 41-02840, issued April 4, 1979 (revision to be submitted); Texas Commission on Environmental Quality (TCEQ) TPDES Permit No. WQ0002043000 (amendment to be submitted); TCEQ TPDS Storm Water Multi-Sector General Permit TXR050000 (amendment to be submitted); Texas Parks and Wildlife Department (TPWD) Scientific Collecting Permits SPR-0709-169 and SPR-0510-080 issued to Glenn Norton and Jeremiah McKinney, respectively; and, the floodplain development approval from McMullen County issued on December 12, 2016.
32. Copies of the application and of all supplements were filed with the McMullen and Atascosa County Clerks and with the Railroad Commission offices in Austin for public inspection. Notices of the application and the availability of copies for public inspection were included in the public notices published in accordance with §12.123 of the Regulations and in the notices mailed to the owners of record of property located in, and adjacent to, the proposed permit area. Placement of the copies was identified in the application pursuant to §12.122. Copies of Trial Amendment No. 1, filed with the Commission on October 4, 2017, were filed in McMullen and Atascosa Counties on October 12, 2017.³⁴

³⁰ Applicant Exhibit No. I (Supplement No. 3), Table I25-I

³¹ Applicant Exhibit No. IA, Table I25-I-Alt

³² Applicant Exhibit No. I (Supplement I), Exhibit I39-I; Applicant Exhibit No. IA, Exhibit I39-I-Alt

³³ Applicant Exhibit No. IA, Section I20

³⁴ Applicant Exhibit Nos. IB and IC

33. The application, as supplemented, addresses pre-mine environmental resources in Sections 127 through 138 [Finding of Fact Nos. 37 – 48, *infra*]. Sections 136 and 137 provide a listing and cross-reference of the maps, cross sections and plans used to describe environmental resources [Finding of Fact Nos. 46 and 47, *infra*].
34. In accordance with §12.125(1) of the Regulations, the application contains a description and identification of the size, sequence and timing of the subareas of the mine over the anticipated life of the mine depicted in Exhibit 139-1 (Supplement No. 1) and Table 125-1 (Supplement No. 3) for the Original Mine Plan, and in Exhibit 139-1-Alt and Table 125-1-Alt for the Alternative Mine Plan. There are four years of mining proposed over the life of mine under the Original Mine Plan. Mining is to occur all five years under the Alternative Mine Plan.
35. The application, as supplemented, describes and identifies the cultural and historic resources information required by §§12.125(2) and 12.151 of the Regulations.³⁵ The application contains steps to protect and/or mitigate any potential damage to all cultural resource sites that are identified prior to mining and that may be discovered during mining operations [Regulations §12.216(5)]. SMECI lists 58 sites within the proposed permit boundary in Table 125-2 (Supplement No. 3). The status of 5 (five) sites as eligible or ineligible for listing in the National Register of Historic Places (NRHP) from investigations of the proposed permit area has not been determined.³⁶ SMECI indicates that no disturbance shall occur to a site until it has been determined ineligible for listing in the NRHP. SMECI provided an exhibit in Supplement No. 3 that depicts the location of the cultural resource sites. SMECI will concurrently provide to the Commission copies of all correspondence between it and the Texas Historical Commission (THC).³⁷ Pursuant to the 1991 Memorandum of Understanding between the Commission and the THC, the THC is the primary state agency responsible for reviewing the cultural resource site information contained in the application; the Commission coordinates with the THC in making the Commission's final determination regarding cultural resource sites. The application includes THC's review, and the Commission has considered this in its review.³⁸ The ALJ proposes Permit Provision No. 3, contained in Appendix I of this Order, be approved in order to ensure the protection of all sites within the permit boundary identified during or subsequent to baseline surveys, for which eligibility for nomination to the National Register of Historic Places has not yet been determined. Permit Provision No. 3 is adopted.
36. Pursuant to §12.126 of the Regulations, the application, as supplemented and in conjunction with the permit provisions set out in Appendix I to this Order, provides a description of the hydrology, geology and water quality and quantity of all lands within the proposed permit area and adjacent areas, and the general area. This information is included in Sections 127, 128, 129 and 146 of the application, as supplemented [Finding of Fact Nos. 37, 38, 39 and 56, *infra*].

³⁵ Testimony of David Koran, Vol. 18, pp. 85-86

³⁶ Applicant Exhibit No. 1 (Supplement No. 3) at pp. 125-4 125-5 identifies the following five sites for which no disturbance shall occur prior to an eligibility determination from the NRHP: 41MC346; 41MC693; 41MC694; 41MC695; and, 41MC706.

³⁷ Applicant Exhibit No. 1 (Supplement No. 3), p. 125-3; and Staff Exhibit No. 1, p. 16

³⁸ Applicant Exhibit No. 1 (Supplement No. 2), Appendix 125-1

37. The application, as supplemented and in conjunction with Permit Provision No. 4, meets the requirements set forth in §12.127 of the Regulations. *[This Finding of Fact relates directly to Conclusion of Law No. 6 that was amended after the PFD was issued on March 2, 2018. This Order amends Conclusion of Law No. 6 to clarify the influence of an applicant's proposed operations on the requirements of §12.127 and replaces language that SMECI had not "met its burden" with language consistent with the first sentence of Finding of Fact No. 37 to avoid any ambiguity regarding compliance with the Regulations.]*
- (a). The geology of the proposed permit area has been extensively studied. SMECI provided regional formation descriptions from the Bureau of Economic Geology's Geologic Atlas of Texas-Crystal City-Eagle Pass Sheet (Barnes, 1976) and the Geology of Texas (Sellards et al., 1932).³⁹ SMECI has been conducting permitted mining operations in what is currently the Permit No. 11G area since the 1980s. The Permit No. 11G area is adjacent to the northern boundary of the proposed permit area.
- (1) The F, G and H Area is located in the South Texas Coastal Plain physiographic province and the Rio Grande Plain land resource area. The topography is nearly flat to gently rolling uplands with the major drainages, including San Miguel Creek and its tributaries, towards the southwest portion of the area. Elevations above mean sea level range from 330 feet in the central uplands to 240 feet in the areas of the San Miguel Creek drainage.
- (2) The proposed permit area is stratigraphically located near the base of the Jackson Group in the Manning Formation. The Manning Formation is within an undivided lower section of the Jackson Group along with the Wellborn and Caddell Formations.
- (3) The proposed permit area lies in the western portion of the Gulf Coast Geosyncline. The lignite and overburden material that will be disturbed during mining are stratigraphically within the late Eocene Manning Formation of the Jackson Group.
- (b). In the initial submittal, SMECI provided analytical results from seven overburden cores, each representing approximately 250 acres within the proposed permit boundary, collected in 2012 and 2013.⁴⁰ The core data was submitted pursuant to §12.127(b) of the Regulations that requires an application contain analyses of "samples collected...down to and including... the stratum immediately below the lowest coal seam to be mined..."⁴¹ Staff, in its deficiency letter dated February 27, 2015, noted numerous issues that called into question the scientific validity of the data and analysis provided.⁴² Subsequent to this deficiency letter, the identified issues were appropriately addressed in supplements to the application filed by the applicant, as described in Staff's Technical Analysis filed on May 10, 2017.

³⁹ See Applicant Exhibit No. 1, pp. 127-4 through 127-8

⁴⁰ Applicant Exhibit No. 1, Section 127

⁴¹ 16 TAC §12.127(b)

⁴² ALJ Exhibit No. 4, pp. 2-5, 14-15

- (1) Pursuant to §12.127(b)(2) of the Regulations, the analyses from the core data provided by SMECI must depict the lithologic characteristics, including physical properties and thickness of each stratum and each coal seam. According to technical guidance issued by SMRD, lithological units are to be characterized through sampling measures dependent on the thickness of the unit, as measured from the surface. A sampling interval is to be terminated at a lithological contact and the units are to be no smaller than two feet thick and no larger than ten feet. If a lithologic unit exceeds ten feet in thickness, two or more samples should be taken, each representing no more than ten feet. Additionally, a minimum of 90% core recovery is required for each lithologic unit sampled except in the 0 to 4-foot depth interval where 100% core recover is required. Further, all core material collected is to be properly packaged to prevent mixing, contamination, oxidation, and other conditions that may inhibit the accuracy of the analyses. The samples are then to be labeled and transported to a laboratory in a timely manner.⁴³ Pursuant to §12.127(b)(3), SMECI is required to provide chemical analyses of the samples for the purposes of identifying those strata that may contain acid- or toxic-forming or alkalinity producing materials and to determine their content.
- (2) Staff noted the following issues in its February 27, 2015 review of the analyses provided by SMECI: SMECI had not described whether lithological contact occurred within individual cores; did not terminate the sample intervals at lithological contacts according to the accepted practice; analysis for 18 samples was canceled per SMECI request; certain intervals within some of the cores were not accounted for even though the sample ID chronology indicated that no break in the data should exist; a significant number of pages were missing from the two work orders that were provided by the lab and submitted by SMECI; quality assurance data and control data were not provided; chain of custody information was not provided; oxidation of pyrite was evident in numerous intervals indicating the samples were not conducted in a timely manner; the work orders from the analytical laboratory indicated significant levels of pyrite above the redox boundary depicted in continuous core summary diagrams provided in the application; and extreme levels of intrasample variability existed between the soil samples provided in Section 134 and the corresponding intervals of the overburden continuous cores.⁴⁴ Further, SMECI used a rotary drilling method to obtain the samples from surface to depths ranging variously from 15 to 35 feet before commencing core drilling. Staff noted the rotary chip samples obtained using this method are not suitable for interval identification or accurate chemical analysis of the sampled interval, and do not meet the standard that 100% recovery of the top four-foot interval or 90% recovery for the remainder of the core interval.⁴⁵ Additionally, work orders from the lab indicated that when SMECI was alerted that the

⁴³ Technical Release SG-2 (November 1987)

⁴⁴ ALJ Exhibit No. 4, pp. 2-5, 14-15

⁴⁵ ALJ Exhibit No. 4, pp. 2-3

sample container IDs did not match the chain of custody sample, a SMECI representative went to the laboratory to attempt to correct the issue.⁴⁶ The representative's actions included reorganizing all samples and, in certain instances, compositing two or more samples to create new individual samples.⁴⁷

- (3) In response to several of the issues noted in Finding of Fact No. 37(b)(2), SMECI cited the haulback operation proposed in Sections 139 and 145 of the application.⁴⁸ Further, SMECI characterized the overburden above the lignite as a single unit based on a 1994 study submitted in a previous application for another SMECI mine.⁴⁹ Testimony provided by SMECI during the hearing on the merits established sampling was not conducted according to Commission guidance set out in Technical Release SG-2 because the field geologist that performed the sampling was not familiar with the Commission's recommended sampling procedures.⁵⁰ Regarding the corrective actions taken on site at the laboratory, SMECI estimated 50% matched the sample IDs and asserted that samples that were combined were done so according to Commission guidance.⁵¹ SMECI admits the intervals identified in the overburden core samples do not match the lithologic description that was provided in the application.⁵² In Supplement No. 1, SMECI provided the missing pages of the laboratory reports, submitted a third work order from the lab to account for a majority of the missing intervals, revised the continuous core diagrams to be consistent with the analytical data obtained from the cores, and indicated "the samples were analyzed within the holding time specified by the laboratory methods for pyritic sulfur and sulfate."⁵³ [*This Finding of Fact amends the PFD issued on March 2, 2018 to clarify Technical Release SG-2 is guidance issued by the Commission and includes the addition of the final two sentences to accurately reflect the record.*]
- (4) Staff changed its position regarding the sufficiency of the data provided in Section 127 subsequent to SMECI's response to Staff's February 27, 2015, review. Currently, Staff and SMECI assert the information provided in Section 127 of the application, as supplemented, meets the requirements of §12.127 based on the method SMECI proposes to use to reclaim the top four feet of postmine soils described in Sections 139 and 145 of the application.⁵⁴ Multiple witnesses from SMECI and Staff testified that the information provided in Section 127 of the application would not satisfy the requirements of the Regulations if SMECI proposed to utilize the soils substitution method as opposed to the top soil replacement

⁴⁶ Applicant Exhibit No. 1 (Supplement 1), Appendix 127-B

⁴⁷ Id.

⁴⁸ Id. at Errata pp. 3, 4, 6 and 21

⁴⁹ Id. at Errata at pp. 2-3

⁵⁰ Testimony of Nellie Frisbee, Tr., Vol. 2, pp. 188-189

⁵¹ Testimony of Nellie Frisbee, Tr., Vol. 2, pp. 191-192

⁵² Applicant Exhibit No. 1, p. 127-14

⁵³ Applicant Exhibit No. 1 (Supplement 1); Section 127 and Errata Section

⁵⁴ Testimony of SMRD Witness Xiaoyan Dai, Tr. Vol. 4, pp.31-33; Testimony of SMECI Witness Nellie Frisbee, Tr. Vol. 2, pp. 176-178

method.⁵⁵ The primary basis for this position is that the chemical analyses of the data is used to identify the materials that are appropriate for use under a soils substitution plan. Since SMECI proposes to perform a haulback operation, it contends the data obtained from the core drilling is inconsequential in that it does not propose to use materials below the 0 to 4-foot interval to reconstruct the surface 4-feet of postmine soils.⁵⁶

- (5) The information provided by an applicant to meet the requirements set out in §§12.127(a) and (b) of the Regulations is not subject to two separate standards.⁵⁷ While the Commission may require more information based on the proposed mining and reclamation operations pursuant to §12.127(c), the proposed operations are not factored into an initial determination on whether the information provided complies with §§12.127(a) and (b).⁵⁸ This interpretation is evident in the plain language of the Section,⁵⁹ consistent with the overall framework of the Regulations,⁶⁰ conforms with the underlying purposes of the Act,⁶¹ and has been historically followed by Staff in its review of §12.127 information.⁶²
- (6) The application, as supplemented, remains deficient pursuant to §12.127 of the Regulations if the permittee desires in the future to conduct a soils substitution operation rather than the proposed topsoil/subsoil haulback operation. The ALJ proposes adoption of Permit Provision No. 4 to ensure compliance with §12.127 and other sections of the Regulations that SMECI addressed through incorporation of the materials provided in Section 127 of the application, as supplemented. Permit Provision No. 4 set forth in Appendix I to this Order is as follows:

Haulback operations are the only handling plan approved for reconstruction of the top four feet of the reclaimed surface. Any change from a haulback operation to a soil substitution operation or any other handling plan will require submittal of a revision application under §12.226. Such revision application shall include all required information pursuant to §12.134(c) and §12.335(e) and, if determined by the Director not to be significant revision pursuant to §12.226, may be reviewed administratively and approved by the Director. Implementation of such a soil substitution or any other handling plan shall be applicable

⁵⁵ See Testimony of SMECI Witnesses Nellie Frisbee, Tr. Vol. 2, pp. 176-178; and Eric Matzner, Tr. Vol. 1, pp. 110-111; and, Testimony of SMRD Witnesses Tim Walter, Tr. Vol. 3, pp. 155-157; and Xiaoyan Dai, Tr. Vol. 4, pp. 31-33

⁵⁶ See Testimony of David Burris, Tr., Vol. 3, P. 56

⁵⁷ See 16 TAC §12.127; and, Testimony of Dale Donahue, Tr. Vol. 4, p. 50

⁵⁸ See Testimony of Dale Donahue, Tr., Vol. 4, p. 51

⁵⁹ See 16 TAC §12.127

⁶⁰ See 16 TAC Ch. 12

⁶¹ See Tex. Nat. Res. Code. §134.003 (3)

⁶² See Testimony of Dale Donahue, Tr., Vol. 4, pp. 53-54; and, 16 TAC §12.127(c)

only to areas disturbed after approval of that handling plan revision.

Permit Provision No. 4 is adopted.

38. Section 12.128 of the application, as supplemented, contains a description of the groundwater hydrology of the proposed permit area and adjacent areas. The information provided characterizes the groundwater hydrology in compliance with §12.128 of the Regulations.
- (a). The geologic units that contain significant sources of groundwater in the general area range in age from Tertiary to Recent. A summary of the age, approximate thickness, stratigraphy, and water-bearing properties of these units is presented in Table .128-1. The Carrizo/Wilcox Aquifer is the principal available water supply for the area and deepest aquifer in the vicinity of the proposed permit area. The top of the Carrizo-Wilcox aquifer is approximately 2,900 to 3,300 feet below the ground surface and ranges in thickness about 1,000 feet in the vicinity of the proposed mine. The Reklaw Formation is approximately 300 feet thick and consists predominantly of shale with a few sand lenses that overlies the Carrizo-Wilcox Formation. The Queen City Sand aquifer overlies the Reklaw Formation and consists of medium-grained to fine-grained sand with interbedded clay and shale. Near the proposed permit area, the Queen City Sand is approximately 1,000 feet thick and the top of the aquifer ranges from 1,700 to 1,900 feet below ground surface. The Weches Formation overlies the Queen City Formation and is approximately 200 feet thick. The Sparta Formation overlies the Weches Formation and is approximately 50 to 75 feet thick in the vicinity of the SMECI mine area. The Cook Mountain Formation overlies the Sparta Formation and is approximately 500 feet thick. The Yegua Formation overlies the Cook Mountain Formation and is approximately 800 feet thick in the SMECI mine area. Sediments of the Jackson Formation overlie the Yegua Formation. Figure .128-1 illustrates the locations of the outcrop and downdip portions of the Carrizo-Wilcox, Queen City, and Sparta aquifers.
 - (b). The Texas Water Development Board (TWDB) has designated the Carrizo-Wilcox as a major aquifer of Texas, and the Queen City and Sparta as minor aquifers. Figure .128.1 illustrates the locations of the outcrop and downdip portions of the Carrizo, Queen City, and Sparta aquifers. The source of recharge to the Carrizo-Wilcox, Queen City, and Sparta aquifers is infiltration of precipitation falling on the formation outcrop. The amount of recharge to the aquifers in Atascosa County is about 1.8 inches per year based on carbon-14 dating and estimated volumetric flow rate for the Carrizo-Wilcox aquifer. The general direction of the groundwater flow in the major and minor aquifers in the general vicinity of the proposed permit area is to the southeast. In Atascosa County, reported hydraulic gradients for groundwater in the Carrizo aquifers are about thirty-three feet per mile. However, groundwater flow within the Carrizo Aquifer is also affected by heavy groundwater use in southeast Bexar County.
 - (c). There are no generally recognized aquifers within the zone of operations proposed by the Applicant.⁶³ However, there are shallow water-bearing units

⁶³ Application, p. 128-11; Testimony of E. Matzner, Vol. 1 at p. 70

present in the overburden and underburden. These units include alluvium sands of limited extent, sand lenses above the lignite, and sand units below the lignite. A detailed description of the lithology of these units is discussed in Section 12.127. These units, specifically Unit 22 (uppermost water-bearing zone in the underburden) and Unit 24, are not used as sources of drinking water in the vicinity of the proposed permit area. However, they have been studied to determine the baseline pre-mine water level and water quality conditions, as well as to assess if mining will affect the hydrological balance for the F, G and H Area.

- (d). SMECI began field investigations of the proposed permit area in September 2012 to evaluate the groundwater conditions within the proposed permit area. The groundwater investigation focused on the underburden Unit 22 sand and an Alluvium Unit associated with San Miguel Creek, which is in the southernmost portion of the proposed F, G and H Area Mine. The investigation included: (1) the installation of monitoring wells; (2) collection of quarterly water levels and groundwater samples; and (3) aquifer tests in three monitoring well locations. Three underburden Unit 22 monitoring wells, two Unit 22 piezometers, and two Alluvium Unit monitoring wells were installed in September 2012. There are no area-wide, saturated overburden sand units within the proposed permit area. However, the occurrence of isolated water-bearing alluvium and fluvial terrace material near San Miguel Creek has been identified (Alluvium Unit). The underburden Unit 22 sand is the first significant water-bearing zone encountered within the proposed F, G and H Area Mine. The Unit 22 sand (Unit 22) is encountered throughout the area and exhibits confined conditions.

Water level elevations measured in two monitoring wells installed in the Alluvium Unit indicate elevations well below the stream bed elevation of San Miguel Creek. No surface seeps and/or baseflow were expected or observed during the period of study in the Alluvium Unit. Some of the major anions/cations concentrations detected in the overburden Alluvium Unit wells during the baseline sampling events include: pH ranged from 6.88 to 7.16; total dissolved solids (TDS) ranged from 2,690 mg/L to 4,420 mg/L; total iron ranged from 5.73 to 216.00; total manganese ranged from 1.87 to 3.11; sodium ranged from 1,020 mg/L to 1,060 mg/L; chloride ranged from 675 mg/L to 13,000 mg/L; sulfate ranged from 671 mg/L to 1,240 mg/L; and, calcium ranged from 207 mg/L to 562 mg/L. The major anion/cation concentrations detected in the underburden Unit 22 wells during the baseline sampling event include the following: pH ranged from 6.87 to 8.16; TDS ranged from 5,070 mg/L to 14,600 mg/L; total iron ranged from 0.06 to 6.02; total manganese ranged from 0.14 to 0.56; sodium ranged from 1,080 mg/L to 3,630 mg/L; chloride ranged from 1,920 mg/L to 6,520 mg/L; sulfate ranged from less than 0.5 mg/L to 490 mg/L; and, calcium ranged from 111 mg/L to 259 mg/L.

Groundwater sampling results for general chemistry and trace metals are provided in Tables .128-4 and .128-5. Water levels and groundwater elevations are presented in Table .128-3. Laboratory reports are provided in Appendix .128-2. Figure .128-5 depicts the location of the underburden monitoring wells. Well construction specifications are summarized in Table .128-2. Soil boring logs and well construction summary forms for each well are provided in Appendix .128-A. A diagram of the typical well installation is shown on Figure .128-4.

- (e). An inventory of water wells within a one-mile radius of the proposed permit boundary was conducted in November 2013. Well records obtained from the Texas Water Development Board and the Texas Commission on Environmental Quality indicate six wells classified as domestic, irrigation or stock water wells exist outside the proposed permit boundary.⁶⁴ Three of the water wells in the search area were indicated to be flowing wells in the TWDB records and were classified as domestic, irrigation or stock water wells. SMECI provided a sample of flowing water from one of the wells denoted as SL-FW-01 for evaluating surface-water chemistry in Section 129 of the application. No significant seeps or springs were identified in the proposed permit area.⁶⁵
 - (f). Recharge to a water table flow system, similar to the Alluvium Unit, generally occurs through infiltration from precipitation or from recharge from streams or surface water bodies. Recharge to the Unit 22 sand results from infiltration from rainfall and from streams or rivers crossing over the outcrop. Given the relatively high evapotranspiration potential and annual rainfall in the area, recharge from precipitation is expected to be minimal.⁶⁶ Discharge from the Alluvium Unit is primarily governed by the evapotranspiration process. In the underburned Unit 22 sands, discharge likely occurs by leakage through confining beds into adjacent water-bearing zones and by movement downdip. The majority of discharge from Unit 22 is likely from upward migration as a result of increasing formation pressures down dip.⁶⁷
39. The surface water hydrology for the permit area is described in Section 129 of the application, as supplemented. Due to the low number of samples obtained during the baseline monitoring period and absence of information related to impoundments in the area, Permit Provision Nos. 14 and 15 are adopted to ensure the premine surface water is adequately characterized as required in §12.129 of the Regulations.
- (a). The proposed permit area is located within two major watersheds. Runoff from the area drains east to La Jarita Creek and its tributary, Hog Creek. Discharge from these streams combine with discharge from the Salt Branch, a tributary of La Jarita Creek located east of the permit boundary, and flow into San Miguel Creek south of the F, G and H Area. Runoff from the area drains west to an unnamed tributary of San Miguel Creek. Thus, all runoff from the proposed permit area eventually flows into San Miguel Creek. Discharge from San Miguel Creek flows into the Choke Canyon Reservoir about nine miles downstream of the proposed permit area.⁶⁸ The Choke Canyon Reservoir is a man-made lake located along the Frio River.
 - (b). SMECI monitored stream flow and water quality monthly from September 2012 through August 2013 at five monitoring stations within or near the proposed permit area. The sampling parameters include those specified in §12.129(2) of the Regulations.⁶⁹ Stations SLSW-1, SLSW-2 and SLSW-5 monitor areas

⁶⁴ See Applicant Exhibit No. 1 (Supplement I), Exhibit 128-1

⁶⁵ Applicant Exhibit No. 1, p. 128-16

⁶⁶ Id., p. 128-19

⁶⁷ Id., pp. 128-19 and 128-20

⁶⁸ Id., p. 129-7

⁶⁹ Id., Table 129-6

downstream of areas proposed to be disturbed by mining activities.⁷⁰ Stations SLSW-3 and SLSW-4 monitor areas upstream of the proposed permit area. As noted in Staff's review of the initial submittal,⁷¹ the data obtained during the monitoring period (September 2012 – August 2013) did not include adequate flow measurements to demonstrate seasonal variation in flow rates.⁷² Additionally, the samples that were analyzed for water quality were obtained from ponded water.⁷³ SMECI indicates that the initial monitoring period was an exceptionally dry period and that storm events that did occur during the period, identified by crest measurements and ponding observed at the monitoring stations,⁷⁴ were not sufficient in size and duration to sustain flow for more than a matter of hours.⁷⁵ A one-time sampling was obtained from the five monitoring stations on February 23, 2016 during a storm event. Water quality analysis of the samples obtained from the storm event was provided in Supplement No. 1.⁷⁶ Flow rates at these stations during the storm event were estimated to be greater than the maximum flow rate calculated for those specific surface water stations (i.e. > 300 cubic feet/second).⁷⁷

In response to Staff's review of the initial submittal, SMECI provided data from its existing surface water monitoring station (A-2) located upstream of the proposed permit area on La Jarita Creek in the E-Area of Permit No. 11G in order to characterize the water quantity and quality coming into the proposed permit area.⁷⁸ The data from station A-2 was submitted quarterly from 1990 through the first quarter of 2014 and includes three samples collected during the baseline period at this station.⁷⁹ Only seven total flow measurements were obtained at this station during the entire period of record.⁸⁰ No parameters were reported fifty times due to "Dry" (48 times) or "No Flow" (twice) conditions.⁸¹

SLSW-3 is located along San Miguel Creek immediately adjacent to USGS Gauging Station 08206700. When compared to other USGS monitoring stations, this station's watershed is the most representative of premine surface water conditions.⁸² The streamflow monitoring data from this station is available from February 1964 to the present and is provided in the application.⁸³ SMECI indicates the average discharge at the station from 1965 through 2012 was 50.5 cfs, with the highest instantaneous flow reading (29,500 cfs) recorded on

⁷⁰ Id., Table 129-5 and Exhibit 129-1

⁷¹ ALJ Exhibit No. 4, p. 6

⁷² SLSW-1: two flow measurements [four other measurements were obtained during extreme low-flow conditions (<0.01 cfs)]; SLSW-2: one measurement; SLSW-3, -4 & -5: no measurements [ALJ Exhibit No. 4 (Staff Deficiently Letter dated February 27, 2015), pp. 7 and 8]

⁷³ Applicant Exhibit No. 1, Appendix 129-B

⁷⁴ Id.

⁷⁵ See Testimony of Eric Matzner, Tr., Vol. 1, pp. 201-202

⁷⁶ Applicant Exhibit No. 1 (Supplement No. 1), Appendix 129-D and Tables 129-4 & 129-5

⁷⁷ Id., Tables 129-4 & 129-5

⁷⁸ ALJ Exhibit No. 4, p. 5; Applicant Exhibit No. 1 (Supplement No. 1), Appendix 129-H

⁷⁹ Applicant Exhibit No. 1 (Supplement No. 1), Appendix 129-H

⁸⁰ Id.

⁸¹ Id.

⁸² Applicant Exhibit No. 1, p. 129-17 and Figure 129-3

⁸³ Id., Appendix 129-F

September 10, 2002.⁸⁴ The application contains a summary of quarterly water quality data for general chemistry and metals obtained from this station.⁸⁵ However, water quality data from this station is not provided past 1983.⁸⁶

SMECI indicates that the area received above average rainfall during the spring and early summer of 2015;⁸⁷ however, no samples collected during this period are provided in the application.⁸⁸ Due to the limited amount of water quality data provided in the application, the ALJ recommends adoption of Permit Provision No. 15 as set out in Appendix I to this Order to ensure surface waters that enter and leave the proposed site are sufficiently characterized prior to mining. Permit Provision No. 15 is adopted.

- (c). Section 129 of the Regulations requires a permit application include the name, location, ownership, and description of all surface water bodies including impoundments, the location of any water discharge into any surface body of water in the proposed permit area, and information on the surface water quantity and quality.⁸⁹ SMECI initially identified the location, size and respective owners of eight naturally occurring or man-made impoundments within the proposed permit boundary.^{90 91} For three of these impoundments (Impoundment Nos. 1-3), SMECI provided analytical data of general chemistry and metals from a one-time sampling event that was conducted on February 13, 2014.⁹² Staff noted in its review of the initial submittal that baseline surface water information for Impoundment Nos. 4-8 had not been provided and, pursuant to §12.129(2), water data for sampling of all ponds, or adequate justification for not sampling some of the ponds, should be submitted for review.⁹³ Staff also noted that Exhibit 135-1 provided in Section 135 (Land-Use Information) of the initial submittal depicts 10 impoundments within the proposed permit area and that SMECI would need to revise the materials to be internally consistent or their apparent inconsistencies clarified.⁹⁴

In Supplement No. 1 regarding the absence of data for five of the eight permanent impoundments, SMECI indicates Permanent Impoundment Nos. 4 through 7 were not sampled because the ponds were dry during the monitoring period,⁹⁵ and Impoundment No. 8 is a lined pond containing groundwater from the Carrizo-Wilcox aquifer and is used as a reservoir for oil and gas production

⁸⁴ Id., p. 128-17; Supplement No. 1, p. 128-18

⁸⁵ Id., Table 129-11 and 129-12

⁸⁶ Id.

⁸⁷ Id., Errata at p.9

⁸⁸ Id., Section 129

⁸⁹ 16 TAC §12.129

⁹⁰ Applicant Exhibit No. 1, p. 129-11, Figure 129-1 and Table 129-4

⁹¹ Table 129-4 in the application describes the surface area measured in acres for the following eight impoundments: Impoundment 1, 3.3 acres; Impoundment 2, 0.6 acres; Impoundment 3, 0.2 acres; Impoundment 4, 0.7 acres; Impoundment 5, 2.1 acres; Impoundment 6, 1.9 acres; Impoundment 7, 0.4 acres; and, Impoundment 8, 3.3 acres.

⁹² Applicant Exhibit No. 1, Table 129-9 and Table 129-10

⁹³ ALJ Exhibit No. 4, p. 5

⁹⁴ Id.

⁹⁵ Applicant Exhibit No. 1 (Supplement 1), Errata at p. 7

activities.⁹⁶ In response to the discrepancies regarding the number of impoundments identified in the Sections 129 and 135 of the initial submittal, SMECI revised Figure 129-1 to include the additional impoundments identified on Exhibit 135-1.⁹⁷ However, Figure 129-1 depicts eleven impoundments,⁹⁸ while, as noted in Staff's review, Exhibit 135-1 identifies ten.⁹⁹

SMECI does indicate that there may also be natural depressions within the proposed permit area that were not identified during the land use survey that become ephemerally ponded with runoff.¹⁰⁰ However, SMECI has not provided ownership information related to the additional impoundments or explained the discrepancies between the number of impoundments identified in Sections 129 (Supplement 1) and 135-Alt of the application. Further, SMECI has not submitted additional data for the impoundments identified in Figure 129-1 or explained why they were not sampled despite indicating that during the spring and early summer of 2015 the area received above average rainfall.¹⁰¹ The ALJ recommends adoption of the Permit Provision No. 14 set out in Appendix I to this Order to ensure compliance with §12.129. Permit Provision No. 14 is adopted.

- (d). No seeps or springs have been mapped or identified within the proposed permit area. Seeps have previously been documented in several of the tributaries to San Miguel Creek upstream of the Study Area; however, if these seeps continue to discharge, the volume is insufficient to sustain flow in San Miguel Creek.¹⁰² A flowing artesian well (SL-FW-01) was identified during the groundwater investigation. Flow from this well enters La Jarita Creek between surface water monitoring stations SLSW-1 and SLSW-5.¹⁰³ A single sample of discharge from SL-FW-01 was analyzed for various parameters indicative of water quantity and quality as required under the Regulations.¹⁰⁴
40. SMECI identifies alternative water supplies that could be used to replace existing water sources that may be affected by the proposed operations as required by Section 12.130 of the Regulations. The most widespread and abundant source of water is the Carrizo-Wilcox aquifer system. In addition, the Queen City formation is also considered a source of groundwater in the region [Finding of Fact 38, *supra*]. SMECI indicates that water supplies that may be impacted by mining operations will be mitigated or an alternate supply will be provided.¹⁰⁵ Potential sources for replacement water include one or more of the following: construction of stock ponds; drilling of wells; furnishing of water

⁹⁶ SMECI also noted that Impoundment No. 8 is constructed with elevated embankments and does not capture overland flow, nor does it have any surface water outputs [Applicant Exhibit No. 1 (Supplement No. 1), p. 129-11].

⁹⁷ Applicant Exhibit No. 1 (Supplement 1), Errata at p. 7

⁹⁸ The three additional impoundments depicted on revised Figure 135-1 (Supplement 1) are located in the H Area (Permanent Impoundment Nos. 9 and 10) and the G Area (Permanent Impoundment No. 11).

⁹⁹ The most recent submittal of Exhibit 135-1 was provided in Supplement No. 6. In Trial Amendment No. 1, SMECI submitted Exhibit 135-1-Alt. Both exhibits depict ten permanent impoundments within the proposed permit area.

¹⁰⁰ Application, p. 129-11

¹⁰¹ Applicant Exhibit No. 1 (Supplement No. 1), Errata at p.9

¹⁰² Applicant Exhibit No. 1, p. 129-11

¹⁰³ Id., pp. 129-11 and 129-12

¹⁰⁴ Id., Table 129-9 and Table 129-10

¹⁰⁵ Id., Section 130

produced by the mining operation; and/or, other options mutually agreed upon by SMECI and the affected landowner. The extent to which the proposed surface mining activities may result in contamination, diminution or interruption of an underground or surface source of water which is used for domestic, agricultural or industrial use is addressed in Section 146 of the application [Finding of Fact No. 56, *infra*].

41. The application, as supplemented, contains climatological information related to the proposed permit area as required in §12.131 of the Regulations. Due to uncertainty regarding the availability of data that may be more representative of the proposed permit, Permit Provision No. 5 provided in Appendix I of this Order is adopted to require SMECI to submit additional precipitation data that is representative of the proposed permit area prior to the commencement of SMRD's midterm review of the permit.
- (a). The proposed permit area is located east of the 100th meridian west longitude. The proposed permit area lies in the Subtropical Subhumid climatic region within the Modified Marine climatic zone.¹⁰⁶ [*This Finding of Fact amends the PFD issued on May 2, 2018 that incorrectly identified the area as west of the 100th meridian and misstated the major source of water for the area.*]
 - (b). The National Weather Service (NWS) station located at the Cotulla Airport near Cotulla, Texas, approximately 50 miles south-southwest of the proposed permit area, was used to provide wind speed and direction data. Seasonal wind and direction frequencies are based on weather observations for the period of record (1995 through 2004) and are summarized on Table 131-4. The most frequent annual wind direction is east-northeast, east, east-southeast, and southwest with a combined frequency of 53.1%. The highest frequency value for a given direction is 16.5% for the ESE direction. Winds out of the northwest feature the highest mean speed (8.7 knots), attributed to frontal systems accompanied by strong winds.
 - (c). Regional long-term temperature averages were obtained from the NWS cooperative weather station at Charlotte and Karnes City, Texas. The monthly low and high temperatures are based on the period of record (1971 through 2000) and are presented in Table 131-3. The mean annual low temperatures for Charlotte, Poteet, Choke Canyon, and Karnes City are 59, 57, 59, and 58 degrees Fahrenheit, respectively. The mean annual temperatures are 71, 69, 71, and 70 degrees Fahrenheit, respectively.¹⁰⁷ The hottest months of the year are July and August, while December and January are the coldest. In Supplement No. 1, SMECI revised page 131-7 to indicate the average first and last frost dates for Tilden, Texas, are February 21, and December 3, respectively.
 - (d). The application, as supplemented, contains the data that is representative of the average seasonal precipitation of the proposed permit area.
 - (1) In the initial submittal, the Applicant submitted monthly averages observed at four National Oceanic and Atmospheric Administration (NOAA) climate stations located in Poteet, Charlotte, Choke Canyon, and Karnes City, Texas and a SMECI rain gauge station located in the

¹⁰⁶ Applicant Exhibit No. I (Supplement No. I), p. 131-6

¹⁰⁷ Id., Section 131

southern portion of Area E within the Permit No. 11G area.¹⁰⁸ The average annual precipitation of the proposed permit area based on the data provided amount to 26.54 inches per year.¹⁰⁹

- (2) Staff's review of the information provided in the initial submittal noted that the four NOAA stations cited were located approximately 29.1, 26.0, 44.4 and 19.1 miles away from the centroid of the proposed permit area. Further, Staff noted that data is available from eight other NOAA stations that exist or previously existed within 15 miles of the proposed permit area. These stations were not evaluated by SMECI and, according to Staff in 2015, none of the stations report an average in excess of 26 inches per year over their respective periods of record. Staff provided the average annual rainfall from three stations in Calliham, Cross and Tilden located 14.2, 2.0 and 13.5 miles from the centroid of the proposed permit area, respectively.¹¹⁰
- (3) In Supplement No. 1, SMECI provided data from twelve total stations. The submittal included eight NOAA stations located in Calliham, Charlotte, Cross, Fowlerton, Jourdanton, Tilden, Whitsett and Pleasanton, Texas. SMECI also provided data from four rain gauge stations located within the adjacent Permit No. 11G area. The average annual rainfall based on the twelve total stations is 26.25 inches. Regarding the eight NOAA stations that were previously referenced by Staff, the three stations that were specifically cited (Calliham, Cross and Tilden) were the only NOAA stations provided in Supplement No. 1 that are located within a 15-mile radius of the proposed permit area. Additionally, the only NOAA stations in Supplement No. 1 that averaged more than 26.0 inches per year were located north [Jourdanton (27.09 inches per year (in./yr.) and Pleasanton (32.02 in./yr.)], northwest [Charlotte (26.86 in./yr.)] or northeast [Whitsett (27.24 in./yr.)] of the proposed permit area. These stations lie approximately 27 miles (Charlotte), 23 miles (Jourdanton), 17 miles (Whitsett) and 25 miles (Pleasanton) away from the proposed permit area.¹¹¹ During the hearing on the merits, no witness could attest to the availability of data from NOAA stations located within 15 miles north of the proposed permit area.¹¹²
- (4) The average annual rainfall based on the four SMECI rain gauge stations located within the Permit No. 11G area amounts to 25.81 in./yr.¹¹³ The average annual rainfall based on the four SMECI stations and the three NOAA stations within a 15-mile radius of the proposed permit area (Calliham, Cross and Tilden) amounts to 25.5 in./yr.¹¹⁴ If the NOAA station located in Pleasanton (32.02 in./yr.) is excluded from the data set provided in Supplement No. 1, the average annual rainfall based on the

¹⁰⁸ Id., Section 131

¹⁰⁹ See Id., Tables 131-1 and 131-2

¹¹⁰ ALJ Exhibit No. 4, pp. 6-7

¹¹¹ Applicant Exhibit No. 1 (Supplement No. 1), p. 131-6

¹¹² See Testimony of SMECI Witnesses Eric Matzner, Tr. Vol. 1, pp. 192; and Tim Walter, Tr., Vol. 3, p. 159

¹¹³ Testimony of Eric Matzner, Tr., Vol. 1, pp. 185-186

¹¹⁴ Id., pp. 184-185

other 11 stations provided amounts to 25.73 in./yr.¹¹⁵ However, there is nothing in the record to support excluding the data obtained from the NOAA station located in Pleasanton.¹¹⁶

- (5) During the hearing on the merits, a SMECI witness and multiple Staff witnesses could not confirm accuracy of the statement in Staff's initial review.¹¹⁷ No witness could attest to the source of information Staff used to author its comment or specify where the information may be obtained.¹¹⁸
- (6) Regarding its review of the information provided in Supplement No. 1, Staff testified during the hearing on that merits that it assumed that by providing eight additional NOAA stations, SMECI had provided the eight NOAA stations previously noted in its review of the initial submittal.¹¹⁹ Staff later testified that because the data provided in Supplement No. 1 is in the range of 26.0 inches, it considered other factors including the topsoil handling plan ("haulback" method) proposed by the Applicant, the climatological data previously approved for the Permit No. 11G, and the presumed preference of landowners.¹²⁰ However, an analysis of §12.131, or its impact on a §12.306(b) determination, does not include the additional factors considered by Staff.¹²¹ ¹²² Neither the Regulations or the Act afford the Commission the leeway to consider anything other than representative data that is necessary to ensure compliance.
- (7) During the hearing on the merits, a SMECI witness testified that there is no impactful difference between a 5-year Extended Responsibility Period (ERP) and a 10-year ERP. The basis of this position is that SMECI must meet the revegetation requirements set out in §12.395 prior to bond release under either ERP, which will ultimately be determined by the Commission, and the only significant variable is when the groundcover data may be submitted.¹²³ This contention ignores the primary basis for the requirement that an applicant complete an ERP as it relates to revegetation of an area. The Regulations require a permittee to complete an ERP prior to bond release to assure sufficient time has elapsed to be able to accurately determine if revegetation has been established as required. The amount of rainfall an area receives logically impacts the amount of time it takes for vegetation to grow and will influence whether the Commission is able to verify if vegetation has been reestablished as

¹¹⁵ Id., pp. 186-187

¹¹⁶ See Id., pp. 189-190

¹¹⁷ See Testimony of SMECI Witnesses Eric Matzner, Tr. Vol. 1, pp. 179 and 189; and, SMRD Witnesses Xiaoyan Dai, Tr. Vol. 4, pp. 252-253; and Tim Walter, Tr., Vol. 3, p. 159

¹¹⁸ See SMRD Witnesses Xiaoyan Dai, Tr. Vol. 4, p. 253; and Tim Walter, Tr., Vol. 3, pp. 159

¹¹⁹ Testimony of Xiaoyan Dai, Tr. Vol. 4, pp. 254-256

¹²⁰ Id. at Vol. 5, pp. 8-10; SMRD Written Closing dated December 20, 2017

¹²¹ 16 TAC §12.131

¹²² Section 12.306(b) of the Regulations sets out, in its entirety, that "the period of liability shall continue in areas with more than 26.0 inches average annual precipitation, for not less than 5 years and in areas of 26.0 inches or less average annual precipitation for not less than 10 years." [16 TAC §12.306(b)]

¹²³ Testimony of Jeremiah McKinney, Tr., Vol. 5, pp. 58-60

required for its intended use. Accordingly, the length of the ERP is longer for arid regions of the state.

- (8) The “15-mile radius” referred to by Staff in its initial review is not founded in the Regulations or any Commission guidance. However, §12.131 requires a “statement of the climatological factors that are *representative* of the proposed permit area...”¹²⁴ Staff’s initial deficiency letter indicates that data available from different NOAA stations would be more representative of the proposed permit area and this data suggests a 10-year ERP is appropriate based on the plain language of the Regulations. Given the inability to either confirm or disconfirm the accuracy of Staff’s previous statement in the current proceeding, the ALJ proposes adoption of Permit Provision No. 5 as follows:

60 days before the commencement of SMRD’s midterm review of the permit conducted pursuant to §12.225(a) of the Regulations, SMECI shall submit additional seasonal precipitation data that is representative of the permit area. If the SMRD Director determines during its midterm review that a 10-year extended responsibility period (ERP) is appropriate pursuant to §12.306(b), SMECI shall submit a revision to the permit that addresses all required changes to the permit based on a 10-year ERP and shall submit a supplemental or replacement bond application, if necessary, within 60 days of receiving notification of the SMRD Director’s determination that a 10-year ERP is required.

Permit Provision No. 5 is adopted.

42. All required vegetative resource information for the proposed permit area is included in Section 12.132 of the application, as supplemented, and is sufficient to describe premine vegetation important for fish and wildlife habitat, and sufficient to predict the potential for the re-establishment of vegetation during reclamation.
- (a). The proposed permit area is located in the South Texas Plains vegetation region of Texas. The south Texas region encompasses approximately 18 million acres, predominately rangeland and thornscrub vegetation.¹²⁵ In the initial submittal, SMECI provided results from quantitative sampling studies conducted in October and November 2012 and May 2013.¹²⁶ After consulting with Staff in July 2015,¹²⁷ SMECI collected data representative of spring species due to above average rainfall that occurred in the spring and early summer of 2015. The additional sampling studies took place in July, October and November 2015.¹²⁸ The application, as supplemented, contains the results of the vegetative studies

¹²⁴ 16 TAC §12.131(a) (*emphasis added*)

¹²⁵ Applicant Exhibit No. 1 (Supplement 1), p. 132-1

¹²⁶ Applicant Exhibit No. 1, p. 132-13

¹²⁷ Applicant Exhibit No. 1 (Supplement 1), Appendix 132-21

¹²⁸ *Id.*, p. 132-8 and Errata, p. 9

conducted in and around the proposed permit area, including the following: a color aerial photograph with depictions of the vegetation and habitat types, topography, and vegetation transects;¹²⁹ a cumulative checklist of the vascular plant species that were observed;¹³⁰ a list of the areal extent of the vegetative communities identified;¹³¹ and, a summary description of the vegetative communities.¹³²

- (b). SMECI identifies one plant species of greatest conservation need (Elmendorf onion) and three native plant communities (Guajillo series, Blackbrush series, and Cane bluestem-False rhodesgrass series) based on stated and federal listings.¹³³ While the Guajillo and Blackbrush series have been noted within the proposed permit area, these plant communities are common and widespread; therefore, the proposed operations do not pose a significant adverse effect to the plant communities. There is potential habitat within the proposed permit area for the Cane bluestem-False rhodesgrass series, a vulnerable plant community at both State and global levels, and the Elmendorf onion, considered rare at both State and global levels. However, the Cane bluestem-False rhodesgrass plant community and Elmendorf onion were not noted within the proposed permit area during the survey and are not expected to occur on the mine site.¹³⁴ Additionally, the Black lace cactus, a likely State and federally-endangered species, was discovered in within or near the proposed permit boundary 2014.¹³⁵ The presence of the Black lace cactus and proposed protections of the species are addressed in Finding of Fact Nos. 43 and 54, respectively.
43. Adequate fish and wildlife resource information is included in the application, as supplemented, with the current status of state and federal threatened and endangered species and with information to provide an accounting of premine wetlands and waters of the U.S. pursuant to § 404 of the Clean Water Act in the mitigation plan for jurisdictional waters contained in Section .144. The information provided includes appropriate scope and level of detail to enable the design of a protection and enhancement plan for fish and wildlife required by §12.144 of the Regulations, including site-specific resource information to address listed or proposed endangered or threatened species or their critical habitats or other habitats of unusually high value for fish and wildlife in accordance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). The information meets the requirements of §12.133 of the Regulations.
- (a). Information was gathered from literature review, previous works from adjacent mine areas, and site-specific studies. Field investigations were conducted of fish and wildlife resources and their habitats in October 2012 and July 2015. Field data was supplemented and/or compared with information collected during previous studies of the Permits 11 and 52 areas. Fish and wildlife resource studies were conducted concurrent with studies of vegetation, soils, wetlands,

¹²⁹ *Id.*, Exhibit 132-1

¹³⁰ Applicant Exhibit No. 1 (Supplement 2), Appendix 132-1

¹³¹ Applicant Exhibit No. 1 (Supplement 1), Table 132-2

¹³² Applicant Exhibit No. 1, pp. 132-14 through 132-19

¹³³ Applicant Exhibit No. 1 (Supplement 1), pp. 132-11 and 132-12

¹³⁴ *Id.*, p. 132-19

¹³⁵ Applicant Exhibit No. 1 (Supplement 2), pp. 133-10 and 133-11

geology and other natural resources. Information from the other studies was used to evaluate fish and wildlife within the area. Regional influences were also considered as part of the overall study. Habitats were evaluated for wildlife potential, condition and productivity. The habitat types and sample sites are depicted on Exhibit 133-1.¹³⁶ The vegetation habitat, Exhibit 132-1, shows vegetation community delineations that parallel habitat communities in the study area. Table 133-1 demonstrates the areal extent of fish and wildlife habitat.¹³⁷ Documentation related to contacts with federal and state officials regarding the presence of endangered and/or threatened species is provided.¹³⁸

- (b). Threatened and endangered species with the potential to occur in or near the proposed permit area are included in the following table¹³⁹ along with their protected status and record of occurrence:

Terrestrial Wildlife Species	Group and Protected Status	Record of Occurrence/ Likelihood of Occurrence
Plants		
Black Lace cactus	Endangered- Federal and State	Found in baseline/ Present
Mollusks		
Golden orb	Candidate- Federal, Threatened- State	Not found in baseline/ Unlikely
Amphibians		
Black-spotted newt	Threatened- State	Not found in baseline/ Likely
Reptiles		
Reticulate collared lizard	Threatened- State	Not found in baseline/ Likely
Texas horned lizard	Threatened- State	Found in baseline/ Present
Texas indigo snake	Threatened- State	Found in baseline/ Present
Texas tortoise	Threatened- State	Found in baseline/ Present
Birds		
American Peregrine Falcon	Threatened- State	Not found in baseline/ Unlikely
Interior Least Tern	Endangered- Federal and State	Not found in baseline/ Likely
Whooping Crane	Endangered- Federal and State	Not found in baseline/ Unlikely
Wood Stork	Threatened - State	Not found in baseline/ Unlikely
Mammals		
Black bear	Threatened- State	Not found in baseline/ Unlikely
Gulf coast jaguarundi	Endangered- Federal	Not found in baseline/ Unlikely
Ocelot	Endangered- Federal and State	Not found in baseline/ Unlikely
Red wolf	Endangered- Federal and State	Extirpated in Texas/ Unlikely

- (c). SMECI conducted surveys in and around the proposed permit area from the early fall of 2012 through the late summer of 2013, the summer and fall of 2015 and winter of 2015-16. Data collected during the surveys were reported for each

¹³⁶ Applicant Exhibit No. I (Supplement 2)

¹³⁷ Id., p. 133-4

¹³⁸ Id., Appendices 133-14 through 133-16

¹³⁹ Staff Exhibit No. I, p. 38

major habitat type to compile overall and habitat-specific species information. The application contains a description of the various methods employed for each survey performed.¹⁴⁰ The results from the individual surveys are provided in Appendices 133-1 through 133-10(a)¹⁴¹ and Appendix 133-18.¹⁴²

- (d). A survey of the proposed permit area to identify potentially jurisdictional waters and wetlands of the U.S. was conducted in March 2013.¹⁴³ The results are incorporated into the Jurisdictional Waters Map that includes the designations of (1) streams by flow regime (perennial, intermittent, or ephemeral) and 2) wetlands by vegetation type (emergent or forested) as required by guidelines set by the U.S. Army Corps of Engineers.¹⁴⁴ The map also depicts off-channel stock ponds and erosional features, the surface area of which comprises 15.56 acres of the proposed permit area, that are not waters of the U.S.¹⁴⁵
 - (e). SMECI's protection and enhancement plan regarding fish and wildlife is set out in Finding of Fact No. 54.
44. The information required by §12.134 of the Regulations for soil resources information is included in the application, as supplemented.
- (a). The proposed permit area soil survey, based on the Natural Resources Conservation Service (NRCS) mapping of McMullen County, is provided on Exhibit 134-1, Distribution of Soils. Twelve soil map units, representing 13 soil series, were delineated in the proposed permit area. Map units, associated acreage, and areal extents are provided in Table 134-1. Current NRCS Official Soil Series Descriptions for the native soils at the SMECI mine are included in Appendix 134-A. Taxonomic classification of the 13 soil series represented in the proposed permit area is provided in Table 134-2. Current NRCS Official Soil Series Descriptions for the native soils at the SMECI mine are included in Appendix 134-A. Appendix 134-B provides numerous soil interpretation tables for the area soils.
 - (b). Samples were collected for chemical and physical characterization from all map units except for the Hindes map unit. The Hindes map unit was only analyzed for coarse fragments in the topsoil interval due to the stony nature of the soil. The data from the Hindes unit is included in the overall coarse fragment analysis, but was not used in calculating other analytical parameters. In response to Staff's review of the initial submittal and Supplement No. 1, SMECI conducted additional soil sampling to adequately characterize the baseline soils of the proposed permit area. Ten additional samples from 9 different soil series were collected in 2016. Soil sampling locations are depicted on Exhibit 134-1 in Supplement No. 2. Topsoil and subsoil intervals have been mathematically composited to 48" for presentation of weighted means, minimum and maximum values, and frequency distributions. The depth-weighted mean values for the permit area are presented

¹⁴⁰ Applicant Exhibit No. I (Supplement 2), pp. 133-19 through 133-26

¹⁴¹ Applicant Exhibit No. I (Supplement 1)

¹⁴² Applicant Exhibit No. I (Supplement 3)

¹⁴³ Applicant Exhibit No. I (Supplement 2), p. 133-7

¹⁴⁴ Id., Exhibit 133-2

¹⁴⁵ Id., Exhibit 133-2 and Table 133-3

on an areally-weighted basis on Table 134-7 in Supplement No. 2. The analytical results were provided in Appendices 134-C, 134-D and 134-E of Supplement No. 2.

45. The application, as supplemented, contains information related to the condition, capability, and productivity of the land within the proposed permit area in compliance with Section 12.135 of the Regulations.
- (a). Premine land use for proposed permit area was determined through analysis of aerial orthophotography flown in 2010. Field surveys to verify and refined interpretations made through aerial photography analysis were conducted during the summers of 2012 and 2013.¹⁴⁶
 - (b). The following six premine land use categories were identified within the proposed permit area, along with the corresponding surface acreage for each land use and percentage of the proposed 2,698.1-acre permit area they comprise: Fish and Wildlife (F&W), 1328.6ac/49.2%; Recreation, 789.9ac/29.3%; Pastureland, 422.0ac/15.6%; Industrial/Commercial (I/C), 133.5ac/4.9%; Residential, 6.4ac/0.2%; and, Developed Water Resources (DWR), 17.7ac/0.7%.¹⁴⁷ The preceding figures, submitted in Trial Amendment No. 1, revise the totals contained in Supplement No.1 regarding the amount of F&W (1350.0ac) and I/C (112.1ac).¹⁴⁸ The premine land uses within the proposed permit area are depicted on Exhibit 135-1-Alt.¹⁴⁹ Previous land uses with the proposed permit area that existed within five years of the anticipated date of the beginning of the proposed operations are described as required under §12.135(a)(1) of the Regulations.¹⁵⁰
 - (c). The necessary information for land capability and productivity is provided in Sections 132 through 134 of the application, as supplemented, pursuant to §12.135(a)(2).
 - (d). Based on available information from the Bureau of Economic Geology and available county records, the proposed permit area has not been previously mined as defined under §12.3(101).
 - (e). There are no existing land uses or land use classifications under local law for the proposed permit area and adjacent areas.¹⁵¹
46. SMECI submitted adequate information to comply with the requirements of §12.136 of the Regulations. Pursuant to §12.136(5), an application must identify the location of surface and subsurface man-made features within, passing through, or passing over the proposed permit area. In its review of the initial submittal, Staff requested ownership information be provided for several structures, including pipelines, identified in Exhibit

¹⁴⁶ Applicant Exhibit No. 1A, p. 135-1-Alt

¹⁴⁷ Id., Table 135-1-Alt

¹⁴⁸ Applicant Exhibit No. 1 (Supplement 1), Table 135-1

¹⁴⁹ Applicant Exhibit No. 1A

¹⁵⁰ Applicant Exhibit No. 1, Section 135; Supplement No. 1, Section 135

¹⁵¹ Applicant Exhibit No. 1A, p. 135-5-Alt

135-1.¹⁵² Traditionally, ownership information of oil and gas operators within a proposed permit area has been required on an ad-hoc basis under §12.136(12). SMECI responded to Staff's comment that all pipelines and power lines on the exhibit had been identified and pipeline ownership information was collected from RCT Oil & gas Division online records.¹⁵³ Under the Regulations, ownership interest of record is defined as the owner and address as shown in the tax records of the Texas Assessor-Collector of taxes for the county where the property is located. However, all interest holders the applicant and/or Commission are aware of, including those not reflected in the county tax records, are provided notification per Commission policy. Following an inquiry from the ALJ by letter dated March 24, 2017 prior to Notice of Application performed by the Commission, SMECI submitted a revised Exhibit 135-1 and provided well operator information and corresponding mailing addresses for the oil and gas structures identified thereon.¹⁵⁴ Following mailed Notice of Application of May 4, 2017, SMECI filed another revision of Exhibit 135-1 and included an "Oil and Gas Well Inventory" (Inventory) as Appendix 135-1 that lists pertinent information for each well within the proposed permit area.¹⁵⁵ SMECI indicated the Inventory would be used in concert with the revised exhibit to coordinate future well plugging activities within the mine area as operations advance.¹⁵⁶ On October 4, 2017, SMECI submitted Exhibit 135-1-Alt and Appendix 135-1-Alt, effectively supplementing the application with respect to these materials.¹⁵⁷ The information provided in the application, as supplemented, to meet the requirements of §12.136 is summarized as follows:

SECTION	SUBJECT	LOCATION
12.136(1)	All boundaries of lands and names of present owners of record of those lands, both surface and subsurface, included in or contiguous to the permit area.	Exhibit 116-1, Tables 116-2 and 116-4
12.136(2)	The boundaries of land within the proposed permit area upon which the applicant has the legal right to enter and begin surface mining activities	Exhibit 116-1, Table 116-2; Section 117
12.136(3)	The boundaries of all areas proposed to be affected over the estimated total life of the proposed surface mining activities, with a description of size, sequence, and timing of the mining of sub-areas for which it is anticipated that additional permits will be sought	Exhibit 139-1, Exhibit 139-1-Alt, Section 125 and Section 125-Alt
12.136(4)	The location of all buildings on and within 1,000 feet of the proposed permit area, with identification of the current use of the buildings	Exhibit 135-1-Alt

¹⁵² ALJ Exhibit No. 4, p. 17

¹⁵³ Applicant Exhibit No. 1 (Supplement 1), Errata at pp. 23-24

¹⁵⁴ With the submission of Exhibit 135-1 by letter dated March 31, 2017, SMECI effectively filed a supplement to the Application (Supplement No. 4). However, Supplement No. 4 did not contain the necessary SMRD I-C form, certification required under §12.107(g), and Exhibit 135-1 was not submitted as required. An identical Exhibit 135-1 was submitted by letter dated April 7, 2017 (Supplement No. 5) that complies with all form requirements under the Regulations. Supplement No. 5 did not include the well operator information. Supplement No. 5 effectively supplemented the application.

¹⁵⁵ Applicant Exhibit No. 1 (Supplement 6)

¹⁵⁶ Applicant Exhibit No. 1 (Supplement 6), Cover Letter

¹⁵⁷ Applicant Exhibit No. 1A

SECTION	SUBJECT	LOCATION
12.136(5)	The location of surface and subsurface man-made features within, passing through, or passing over the proposed permit area, including, but not limited to major electric transmission lines, pipelines, and agricultural drainage tile fields	Exhibit 135-1-Alt
12.136(6)	The location and boundaries of any proposed reference areas for determining the success of revegetation	None Proposed
12.136(7)	The locations of water supply intakes for current users of surface water flowing into, out of, and within a hydrologic area defined by the Commission, and those surface waters which will receive discharges from affected areas in the proposed permit area	Exhibits 129-1, 148-1 and 148-Alt
12.136(8)	Each public road located in or within 100 feet of the proposed permit area	Exhibits 135-1 and 152-1
12.136(9)	Location of public parks, cultural, historical, or archeological sites	Plate 125-2
12.136(10)	Location of cemeteries and Indian burial grounds in or within 100 feet of the permit area	None
12.136(11)	Land in the National System of Trails or Wild and Scenic River System	No specially designated national lands are in the immediate area.
12.136(12)	Other relevant information required by the Commission	None

47. The information provided in the application, as supplemented, is sufficient to meet the requirements of §12.137 of the Regulations. The information is summarized as follows:

SECTION	SUBJECT	LOCATION
12.137(a)(1)	Elevations and locations of test borings and core samples	Figure 127-3, Exhibit 139-1 and Exhibit 139-1-Alt
12.137(a)(2)	Elevations and locations of monitoring stations used to gather data for water quality and quantity, fish and wildlife, and air quality, if required, in preparation of this application	Figure 128-3, Exhibit 133-1, Exhibit 129-1, Exhibit 139-1 and Exhibit 139-1-Alt

SECTION	SUBJECT	LOCATION
12.137(a)(3)	Nature, depth, and thickness of the coal seams to be mined, any coal or rider seams above the seam to be mined, each stratum of the overburden, and the stratum immediately below the lowest coal seam to be mined	Exhibit 127-1 and Figure 127-4
12.137(a)(4)	All crop lines and the strike and dip of the coal to be mined within the proposed permit area	Exhibit 127-1
12.137(a)(5)	Location and extent of known workings of active, inactive, or abandoned underground mines, including mine openings to the surface within the proposed permit and adjacent areas	No known underground mines within the proposed permit area
12.137(a)(6)	Location and extent of subsurface water, if encountered, within the proposed permit and adjacent areas	Figure 128-5
12.137(a)(7)	Location of surface-water bodies such as streams, lakes, ponds, springs, constructed or natural drains, and irrigation ditches within and the proposed permit and adjacent areas	Exhibit 129-1
12.137(a)(8)	Location and extent of existing or previous surface-mined areas within the proposed permit area	No known existing or previous surface mines within proposed permit area.
12.137(a)(9)	Location and dimensions of existing areas of spoil, waste, and noncoal waste disposal, dams, embankments, other impoundments, and water-treatment and air pollution control facilities within the proposed permit area	None
12.137(a)(10)	Location, and depth if available, of gas and oil wells within the proposed permit area and water wells in the permit area and adjacent area	Exhibit 128-1, Exhibit 135-1-Alt and Appendix 135-1-Alt
12.137(a)(11)	Sufficient slope measurements to adequately represent the existing land surface configuration of the proposed permit area	Exhibit 139-1 and Exhibit 139-1-Alt
12.137(b)	Location of Certifications	Individually stamped, as necessary

48. The information required by Section 12.138 of the Regulations for the demonstration of a negative determination is included in the application, as supplemented. SMECI presented evidence that based on a soil survey of McMullen County conducted by the U.S. Natural Resources Conservation Service in 2011 that irrigation is required in order for any soils map units identified within the proposed permit boundary to be considered prime or important farmland.¹⁵⁸ Based on an inventory of water wells in and around the proposed permit area, only two wells were used for irrigation.¹⁵⁹ These wells existed

¹⁵⁸ Applicant Exhibit No. I (Supplement 2), Section 138

¹⁵⁹ Applicant Exhibit No. I, Appendix 128-D

approximately one mile south of the proposed permit boundary between 1944 and 1954 and were owned and located on a different landowner's property. Accordingly, it is not likely these wells were used as irrigation sources for property within the proposed permit boundary and no sufficient evidence to contest SMECI's position is in the record. The Commission approves a negative determination of prime farmland for all tracts within the proposed permit boundary.

49. The application, as supplemented, contains all required materials to document its proposed operations plan for both the Original Mine Plan and the Alternative Mine Plan in accordance with §12.139 of the Regulations and as set out in the permit provisions contained in Appendix I. The Original Mine Plan is set forth in the initial submittal and Supplement Nos. 1 and 2. The Alternative Mine Plan is addressed in Trial Amendment No. 1¹⁶⁰ that was admitted into the evidentiary record during the hearing on the merits. Both plans were supplemented through testimony received during the hearing.

(a). SMECI proposes to conduct a surface coal mining operation within the San Miguel Lignite Mine Areas F, G and H to recover lignite from three to four lignite seams (A, 1 ft thick; B, 2.5 ft thick; C, 1.9 ft thick; and, D, 2.9 ft thick) present in one zone that is continuous over the entire mine area. Once removed, the lignite will be hauled to the San Miguel Electric Cooperative, Inc. Power Station (Power Station). The Power Station is constructed to process the low-grade lignite available in the SMECI mine area; therefore, SMECI does not have the ability to augment supply from outside sources.¹⁶¹ The life-of-mine is 5 years as no mining is anticipated past the requested 5-year permit term. The total projected average annual lignite supply for the life-of-mine to the Power Station is approximately 3,250,000 tons. A portion of this 3,250,000 tons will come from the proposed mining operations and a portion from the Permit No. 11G area with an estimated total of either 9.7 million tons¹⁶² (Original Mine Plan) or 9.4 million tons¹⁶³ (Alternative Mine Plan) to be produced during the five-year permit term from the proposed permit area. No production is anticipated from SMECI's Permit No. 52 mine area past January 2018.¹⁶⁴ There is no planned expansion of the proposed permit area, but SMECI does anticipate filing a separate application to recover reserves in the Franklin Ranch area west of Highway 16 in order to deliver lignite to the Power Station through 2032.¹⁶⁵

(b). The proposed general location, mine progression and pit layout of the mine blocks for the Original Mine Plan¹⁶⁶ and Alternative Mine Plan¹⁶⁷ are depicted. The proposed number of acres to be mined and disturbed under both plans is addressed in Finding of Fact No. 29. Lignite removal will commence in Area F in Year 2 under the Original Mine Plan¹⁶⁸ and Year 1 of the Alternative Mine Plan.¹⁶⁹

¹⁶⁰ Applicant Exhibit No. 1A

¹⁶¹ Testimony of David Burris, Tr., Vol. 3, p. 12

¹⁶² Applicant Exhibit No. 1 (Supplement 2), Table 139-I

¹⁶³ Testimony of David Burris, Tr., Vol. 3, p. 11

¹⁶⁴ Id., p. 10

¹⁶⁵ Id.

¹⁶⁶ Applicant Exhibit No. 1 (Supplement 1), Exhibit 139-I

¹⁶⁷ Applicant Exhibit No. 1A, Exhibit 139-I-Alt

¹⁶⁸ Applicant Exhibit No. 1 (Supplement 2), Table 139-I

¹⁶⁹ Applicant Exhibit No. 1A, Table 139-I-Alt

- (c). As discussed in Finding of Fact No. 46 and other findings, oil and gas pipelines are present within the proposed permit area. Section 12.382(2) requires a surface mining operator to visibly mark the location of pipeline at 200-foot intervals throughout the permit area. The Commission has required pipelines be marked at lesser intervals in previous dockets.¹⁷⁰ Given the issues presented in this Docket, Permit Provision No. 12 in Appendix I to this Order is proposed to require SMECI mark oil and gas pipelines within 200 feet of mining-related activities with high-visibility markers every 25 feet for the entire length of the disturbance, extending 200 feet in both directions and to the outside of where mining-related activity ends. Permit Provision No. 12 is approved.
- (d). SMECI indicates that a dragline and mobile equipment will be utilized as the primary overburden stripping equipment and other equipment may also be used when conditions dictate. A list of equipment planned for use in mining and reclamation during the proposed permit term is included for the Original¹⁷¹ and Alternative Mine Plans.¹⁷²
- (e). Clearing and grubbing will precede approximately eight pits ahead of active mining and four pits ahead of TCO pits.¹⁷³ In Tables 139-2 (Original Mine Plan) and 139-2-Alt (Alternative Mine Plan), SMECI indicates the time schedule and estimated acres to be cleared during the proposed permit term. Additional areas to be cleared include topsoil stockpile locations, haulback and construction-material stockpile locations, roads located outside the mine-block areas, pond embankment areas, sediment pool areas, and power-line corridors.
- (f). A combine topsoil and subsoil depth of 48 inches is characterized as the native soil baseline [Finding of Fact No. 44, *supra*]. Topsoil will be removed to a minimum depth of 6 inches and an average depth of 1.2 feet. Following topsoil removal, haulback material will be removed to a depth of four feet from the original topsoil surface to ensure a minimum of four feet of replacement material. SMECI surveyors will assure the proper depth of material is removed as required in the minesoil monitoring plan [Appendix II]. Topsoil and haulback material will either be stored in temporary stockpiles or distributed directly on prepared regraded areas. Topsoil and haulback materials will be stored separately and within the individual mine blocks where the material originated for replacement. Topsoil and haulback removal and replacement volumes are calculated under both operation plans.¹⁷⁴ Topsoil and haulback stockpiles will be established, marked, and maintained utilizing 3H:1V or flatter slopes, and may contain more than one lift. Stockpiles near boxcut placement areas will remain in place until final reclamation. Under both plans, SMECI provides topsoil and haulback stockpile designations, approximate capacities, and anticipated year of construction for each stockpile.¹⁷⁵ Topsoil and haulback stockpile locations are depicted in Supplement No. 1 for the Original Mine Plan and in Trial Amendment

¹⁷⁰ See e.g. Docket No. C9-0018-SC-04-C

¹⁷¹ Supplement No. 2, p. 139-30

¹⁷² Applicant Exhibit No. 1A, p. 139-30

¹⁷³ Applicant Exhibit No. 1 (Supplement 2), p. 139-3

¹⁷⁴ Applicant Exhibit No. 1 (Supplement 2), Section 139; Applicant Exhibit No. 1A, Section 139-Alt

¹⁷⁵ Id.

No. 1 for the Alternative Mine Plan. Typical haulback placement operations proposed under both plans are depicted in the application, as supplemented.¹⁷⁶

- (g). SMECI does not propose to use a dragline or mobile equipment for selective handling of overburden during the requested term.
- (h). Overburden removal is scheduled to occur 24 hours per day, five to seven days per week. Generally, a dragline will employ the simple side cast method to remove overburden material. SMECI also proposes to employ chop-cutting and spoil side stripping methods. When dragline stripping capacity is exceeded, auxiliary mobile equipment stripping will be utilized to supplement the dragline fleet.¹⁷⁷ Overburden is generally between 20 ft and 110 ft deep within the proposed permit area. The expected dragline advance is depicted under both plans.¹⁷⁸ SMECI has provided required information for slope stability during mining including geotechnical studies, previous mining history, and a previously used method successful in Permit No. 11G in removing overburden and lignite. A bench is positioned in the spoil to reduce the overall spoil slope angle and to reduce loading conditions on the pit floor. Three final end pits will occur under both proposed plans. SMECI proposes to use coal combustion products as fill in the final pits and end pits to achieve postmine topography as required. Reclamation of end pits will occur as follows: (1) dozers will push remaining dragline peaks towards the pit and grade them to the proposed postmine contours; (2) the remaining pit in Area F will be backfilled with coal combustion products to approximately 5 feet below the proposed postmine contours (spoil material from stockpiles may be used for additional fill)¹⁷⁹; and, (3) haulback and topsoil will be replaced using mobile equipment with material from existing and future stockpiles.
- (i). Boxcuts or the initial cuts in the proposed F, G, and H Area will be required. Overburden material will be removed with mobile equipment and placed on in-situ ground that has had topsoil and haulback material removed. Under the Original Mine Plan, this material will be used to create stockpiles OB-1 and OB-2 as depicted on Exhibit 139-1 in Supplement No. 1.¹⁸⁰ Under the Alternative Mine Plan, five overburden stockpiles (OB-1, OB-2, OB-3a, OB-3b and OB-4) are depicted on Exhibit 139-1-Alt contained in Trial Amendment No. 1.¹⁸¹ However, Staff notes that the corresponding text indicates only OB-1 and OB-2 will be created when making box cuts under this plan.¹⁸² Permit Provision No. 6 to ensure the text of the Alternative Mine Plan corresponds to the operations as depicted on the Exhibit 139-1-Alt. Silt fencing and berms will be used to control sediment under both plans.
- (j). Continuous surface miners will extract and load lignite utilizing front-end loaders for support. Front-end loaders are used at pit ends and other areas where

¹⁷⁶ Applicant Exhibit No. 1 (Supplement 2), Figures 139-1 and 139-2

¹⁷⁷ Applicant Exhibit No. 1 (Supplement 2), Section 139; Applicant Exhibit No. 1A, Section 139-Alt

¹⁷⁸ Applicant Exhibit No. 1 (Supplement 1), Exhibit 139-1; Applicant Exhibit No. 1A, Exhibit 139-1-Alt

¹⁷⁹ See Finding of Fact Nos. 49(n) and 55(c), *infra*

¹⁸⁰ Applicant Exhibit No. 1 (Supplement 2), p. 139-17

¹⁸¹ Applicant Exhibit No. 1A

¹⁸² Staff Exhibit No. 3

continuous surface miners cannot work. Lignite will be loaded into bottom dump or end dump trucks and transported to the SMECI Power Station. Temporary coal transfer piles are anticipated near the top of the pit ramps within surface water control. These piles are not expected to be larger than 20,000 tons nor last longer than two months.¹⁸³

- (k). The transportation system will consist of travelways for mobile equipment and supervisory personnel within the immediate mining area or areas controlled by sedimentation ponds. Roads outside of surface-water control are addressed in Section 154 of the application, as supplemented [Finding of Fact No. 63, *infra*]. Travelways will be regularly inspected and will be maintained to ensure safe reliable transportation systems. When no longer needed, travelways will be removed unless the landowner requests that they be kept. In such a case, SMECI will request approval from the Commission for road reclassification. In-pit ramps and travelways are constructed from locally available material.
- (l). A walkway will be constructed within the immediate mining area for the dragline to walk between the alternate mining areas. The alignment for the walkway is depicted on Exhibit 139-1 in Supplement No. 1 (Original Mine Plan) and on Exhibit 139-1-Alt (Alternative Mine Plan). SMECI proposes to construct five primary and three ancillary roads within the proposed permit boundary. The main haulroad will be utilized to transport lignite, ash, equipment and personnel from the mining area to the power plant and will adjoin the existing haulroad in Area E of Permit No. 11G near the intersection of the FM 791. This road will continue to be used throughout the permit term. Ancillary roads will be constructed by removing topsoil and compacting the subgrade. SMECI does not anticipate base course material will be required for construction of ancillary roads. The path of any future ancillary roads to ponds or other areas outside of the approved surface-water control will be cleared, topsoil removed and the subgrade compacted; any plan to construct a road outside of the immediate mine area will be submitted to the Commission as a permit revision.
- (m). There will be two phases to spoil grading. Rough leveling will entail flattening spoil peaks and filling valleys, and final spoil grading will establish drainage patterns and other land features to obtain the approximate original contour as depicted on Exhibit 145-4 in Supplement No. 1. The distance and time for each reclamation activity is depicted on Figures 139-1 and 139-2, respectively.¹⁸⁴ SMECI requests a variance for time and distance requirements for contemporaneous backfilling and regrading in Supplement No. 2 (Original Mine Plan) and in Trial Amendment No. 1 (Alternative Mine Plan) pursuant to §12.384(a)(3) of the Regulations. However, during the hearing on the merits testimony was admitted that SMECI does not request a variance as stated in the application.¹⁸⁵ Given that SMECI proposes to allow spoil peaks to remain standing for greater than 180 days and the varying distances due to planned TCO's during the proposed term discussed in Finding of Fact No. 49(p), the ALJ recommends the adoption of Permit Provision No. 8 as further addressed in Finding of Fact No. 55(c)(3).

¹⁸³ Applicant Exhibit No. 1 (Supplement 2), Section 139; Trial Amendment No. 1, Section 139

¹⁸⁴ Applicant Exhibit No. 1 (Supplement 2), Section 139

¹⁸⁵ Testimony of David Burris, Tr., Vol. 3, pp. 41-44

- (n). SMECI proposes to use a mixture of fly ash and scrubber sludge,¹⁸⁶ and bottom ash [hereafter referred to as “Coal Combustion Products” (CCP)] for filling in mined-out areas. By letters dated June 6 and June 20, 2014, SMECI sought a concurrence from the Waste Permit Division (WPD) of the Texas Commission on Environmental Quality (TCEQ) that its CCP products be excluded from the definition of a solid waste under Title 30 Texas Administrative Code §335.1(138)(H). By letters dated July 10 and July 16, 2014, the WPD concluded SMECI’s CCP proposed for use within the proposed permit area is exempt from the definition of solid waste based on the information provided in SMECI’s request.¹⁸⁷

SMECI proposes to place CCP in active pits after lignite is extracted or in valleys between spoil peaks. A final cover of at least 3.75 feet of haulback material plus 0.75 feet of topsoil will be placed over the CCP following disposition. SMECI will submit a map depicting the CCP placement operation and list of affected land tracts annually to the Commission by the end of the first quarter of the year following placement. The map will clearly indicate the extent of actual placement of the CCP, an estimate of the volume and thickness of the ash material placed in each disposal cell or pit, the extent of areas where final ash grade has been met, and the extent of areas where the cover over the ash has been placed as required.¹⁸⁸

All reclamation is proposed to be accomplished according to the timetable set forth on Table 145-1 in Supplement No. 2, while the timing of CCP placement in final pits is specified in Tables 145-1a (Original Mine Plan) and 145-1a-Alt (Alternative Mine Plan).

- (o). The handling and disposal of non-coal wastes for the requested permit term is described in the application, as supplemented.¹⁸⁹ Trees and brush from clearing and grubbing operations will be stacked and burned (practice currently approved as agricultural burning by the TCEQ) and the remnants spread or placed in the mine pits. The material could also be pushed into an open mine pit and buried. Non-coal wastes generated at the facilities are disposed of by using a private waste disposal company, which transports the waste off-site to an approved disposal site.
- (p). SMECI indicates that the mine blocks in proposed Areas F, G, and H will be mined by alternating the pit advance, as necessitated by coal removal operations. A temporary cessation of operations (TCO) will be required for 30 days or more in one pit as the dragline walks to the alternate pit and begins mining. The Commission will be notified according to §12.397(b) when a TCO is necessary. When mining operations leave a pit, regrade operations will continue to ensure that no more than three spoil peaks will remain. The distances and times indicated on Figures 139-1 and 139-2 for reclamation activities will not be met for the areas included in the TCO. Activities such as water treatment and

¹⁸⁶ a.k.a Flue Gas Desulfurization material

¹⁸⁷ Applicant Exhibit No. 1 (Supplement 1), Appendix 139-1

¹⁸⁸ Applicant Exhibit No. 1 (Supplement 2), p. 139-23; Applicant Exhibit No. 1A, p. 139-23-Alt

¹⁸⁹ Applicant Exhibit No. 1 (Supplement 2), pp. 139-25 and 26; Applicant Exhibit No. 1A, pp. 139-25-Alt and 26-Alt

environmental monitoring will continue during temporary cessations as required.¹⁹⁰

- (q). SMECI requests approval to conduct surface mining operations within 100 ft of the buffer zone of FM 791 and Exxon Road as addressed in Finding of Fact No. 61. SMECI also requests approval to conduct surface mining operations within 100 ft of La Jarita Creek. Operations will include construction of a haul road, bridge, reclamation, regrade, erosion control, maintenance, mowing and haying activities, grazing, vegetation clearing, and lignite removal.
 - (r). Water-control structures, consisting of sedimentation ponds, evaporation ponds and control ditches, will be constructed during the proposed permit term. The structures will be constructed as permanent impoundments or will be removed according to the schedules depicted in Section 148 of application, as supplemented. Dams, embankments and other impoundments will be inspected quarterly to assure compliance with regulations and design standards. Ditches will be maintained to assure that an unrestricted flow of water will occur during rainfall events. Abandonment plans for water-control structures will be formulated to assure that the postmine land meets the intended land use.
 - (s). Electrical distribution facilities (power line and substations) are proposed for construction during the requested term. The location of the mine facilities is shown on Exhibits 139-1 (Original Mine Plan) and 139-1-Alt (Alternative Mine Plan). All electrical distribution facilities are proposed to be removed when no longer required. All salvageable materials will be removed for applicable disposal and non-salvageable material will be disposed in approved disposal areas or by licensed disposal contractors. Topsoil will be redistributed and the areas vegetated in accordance with the permit and this Order.
50. The Applicant does not propose the use of existing structures as defined in §12.3(63) of the Regulations in conjunction with the proposed mine operations [§12.140].¹⁹¹
51. No blasting is proposed under the Original or Alternative Mine Plan [§12.141].¹⁹²
52. The application, as supplemented, meets the requirements of §12.142 of the Regulations. SMECI identifies the maps, plans and cross sections submitted to satisfy the requirements of this section of the Regulations. SMECI's response is summarized as follows:

SECTION	SUBJECT	LOCATION
142(1)	Lands affected and changed by the proposed operations	Exhibits 139-1 and 139-1-Alt
142(2)	Show the location of the following:	
142(2)(A)	Buildings, utility corridors, and facilities	Exhibits 135-1, 139-1, 139-1-Alt
142(2)(B)	Area of land to be affected by mining and reclamation	Exhibits 139-1 and 139-1-Alt
142(2)(C)	Area of land to be bonded	Supplement No. 1, Appendix 145-3, Exhibit 1

¹⁹⁰ Applicant Exhibit No. I (Supplement 2), p. 139-26; Applicant Exhibit No. IA, p. 139-26-Alt

¹⁹¹ Applicant Exhibit No. I, p. 140-I

¹⁹² Id., p. 141-I

SECTION	SUBJECT	LOCATION
142(2)(D)	Coal storage, cleaning and loading areas	Exhibits 139-1 and 139-1-Alt
142(2)(E)	Topsoil, spoil, coal waste, and non-coal waste storage areas	Exhibits 139-1 and 139-1-Alt
142(2)(F)	Water diversion, collection, conveyance, treatment, storage, and discharge facilities	Exhibits 139-1, 139-1-Alt and 148-1
142(2)(G)	Air pollution collection and control facilities	None proposed
142(2)(H)	Source of waste and waste disposal facilities relating to coal processing or pollution control	Exhibits 139-1, 139-1-Alt and 148-1
142(2)(I)	Fish and wildlife enhancement and protection	Exhibit 144-1
142(2)(J)	Explosive storage and handling facilities	None proposed
142(2)(K)	Location of each sediment pond, permanent impoundment, coal processing waste dam and embankment, and fill area for the disposal of excess spoil	Exhibits 139-1, 139-1-Alt and 148-1
142(3)	Certification by a qualified registered professional engineer or geologist	Maps, plans and cross sections are individually certified
142(4)	Description of and plans and drawings for support facilities	None proposed

53. The application, as supplemented, meets the requirements of §12.143 of the Regulations. No air quality monitoring plan must be filed in that the permit area is not located west of the 100th meridian west longitude and no other factors exist which result in the need for monitoring. A plan for fugitive dust control practices is included in the application that will adequately control fugitive dust resulting from mining and reclamation operations as required by §12.143(b)(2). The plan includes watering of haulroads by water trucks, confining traffic to specific roads to the extent possible, stabilizing road surfaces by grading or removing dust-forming debris, stabilizing and vegetating right-of-way areas and adjoining roads, controlling vehicular speeds, minimizing disturbed areas, and regrading, topsoiling and revegetating areas as soon as practical, and adhering to TCEQ guidelines regarding burn practices.
54. The application, as supplemented, includes a protection and enhancement plan in accordance with §§12.144 and 12.380 of the Regulations to minimize disturbances and adverse effects on fish and wildlife, habitat, and related environmental values during the proposed operations and reclamation consistent with the information contained in Section 12.133 of the application discussed in Finding of Fact No. 43.
- (a). The plan includes a description of minimization and protective measures for threatened and endangered species, migratory birds, and other species in accordance with TPWD and USFWS requirements and consultation. SMECI has included Table 144.1 in Supplement No. 2 that lists rare, threatened and endangered species of concern based on the information presented in Sections 132 and 133 of the application. If threatened or endangered species are encountered within the permit area, they will not be disturbed and SMECI will report the occurrence(s) to the Commission, TPWD and USFWS.
- (b). Protective measures are included to minimize impacts related to the proposed operations plan addressed in Section 139 of the application. SMECI will clear in

an incremental strip progression, and when feasible will clear outside of March through August to minimize impacts to migratory bird nesting sites. If clearing is to take place during March through August, a survey will be conducted prior to the clearing. If an active nest is located during the survey, a buffer zone will be established around the nest. Structures such as powerlines, roadways, diversions, and ponds will be constructed and designed to function in a manner to minimize impact to fish and wildlife species. SMECI will utilize "Reducing Avian Collisions with Power Lines (2012 APLIC)" and "TPWD Recommendations for Electrical Transmission/Distribution Line Design and Construction" when constructing powerlines. SMECI will also avoid the use of erosion control matting when feasible. If SMECI is unable to avoid using erosion control matting, SMECI will utilize erosion control matting products that contain no netting or contain loosely woven, natural fiber. SMECI will minimize disturbance activities and protect native vegetation, use erosion and sediment control measures (e.g., cover crops) throughout the mining process, employ speed limits to help ensure equipment operators can avoid wildlife in road ways, and educate all mine employees and contractors on the proper identification, protected status and avoidance of threatened and endangered species. Employees will report any sightings of threatened and endangered species to their supervisors, who will report to environmental staff who will determine if additional protection is warranted. Excavations created on site will be covered when feasible. Excavations left open overnight will be inspected the following morning for wildlife and if any State-listed are trapped, they will be removed by TPWD-permitted personnel. SMECI will handle, store and dispose of chemicals such as fuels, persistent pesticides, fertilizers, and herbicides in a manner to minimize impact to fish and wildlife. SMECI will implement fire suppression and control measures. Prescribed burns, initiated on a rotational schedule to ensure blocks of standing cover persist throughout the year, will be conducted during the winter months to minimize impacts to ground nesting species.¹⁹³

- (c). SMECI will implement the following enhancement measures: pond and diversion construction, topsoil handling and revegetation, planting arrangements, management techniques, buffer zones, supplemental cover, perch structures and nest boxes, wetland mitigation, and research. Management techniques include invasive species management, strip diking and shredding, cover management, prescribed fire, predator control, and management techniques described in the SMRD guidance document "Normal Husbandry Practices for Surface-Mined Lands in Texas" (2006).¹⁹⁴
- (d). The mitigation plan for jurisdictional waters of the U.S. and for non-jurisdictional waters, meets the requirements of §§ 12.144 and 12.380 of the Regulations. The plan includes protective measures during active mining, mining in narrow bands to lessen impacts, and enhancement measures including restoration of streams and other wetlands, and construction of ponds and impoundments. The jurisdictional wetlands are delineated in Section 133 of the application. SMECI is pursuing a U.S. Army Corps of Engineers (USACE) Individual Permit authorization and mitigation plan. SMECI will provide copies of all USACE permitting documents related to USACE authorization for work in jurisdictional

¹⁹³ Applicant Exhibit No. I (Supplement 2), pp. I44-6 through I44-11

¹⁹⁴ Applicant Exhibit No. I (Supplement 2), pp. I44-11 through I44-16

waters within the proposed permit area to the Commission as they become available. Should this permit differ from the proposed wetlands impact plan contained in the application, as supplemented, SMECI must file an application for revision with the Commission. Loss of wetlands will be mitigated.

- (e). SMECI indicates that it will actively support research by an accredited university aimed at conservation of the threatened and endangered species of the area.¹⁹⁵ SMECI does not indicate the specific research it will be supporting. Staff requested it be notified of the specific research that will be supported once it has been determined.¹⁹⁶ The ALJ proposes Permit Provision No. 10 be adopted to require SMECI notify the Commission once SMECI determines the specific research it will be supporting and provide separate notification to the Commission once SMECI commits as indicated. Permit Provision No. 10 is adopted.
 - (f). A threatened and endangered species protection plan is included in the application to address those species that have the potential to occur within the proposed permit area as identified in Section 133.¹⁹⁷ Regarding the Black lace cactus, an endangered species at the state and federal levels, SMECI will avoid the species when feasible and if avoidance is not feasible the plants will be transplanted onsite or donated to South Texas Botanical Gardens & Nature Center (STBG). SMECI will monitor the transplanted cacti for three years. Monitoring will occur every six months for one year, and then annually for the second and third year. Transplanted cacti that show degradation will be donated to the STBG, and the Commission and USFWS will be notified within 30 days. SMECI will also conduct annual surveys during the blooming period in undisturbed areas that are the most suitable habitat. Additionally, regular maintenance of the proposed La Jarita Creek crossing culverts will be conducted in order to minimize indirect impacts to the Black lace cactus. Regarding threatened reptile species that are observed to be in imminent danger from mine-related activities, SMECI will translocate individuals into a suitable habitat within one mile of the capture site. Additionally, SMECI will notify the Commission and TPWD Texas Natural Diversity Database of any rare, threatened, or endangered species that is observed onsite.
55. The application, as revised and supplemented, contains a reclamation plan for the proposed permit area that includes all required information in accordance with §12.145 of the Regulations, including a detailed reclamation timetable, a detailed estimate of the costs of reclamation, a plan showing the final surface configuration of the permit area, a topsoil and subsoil replacement plan, and a plan for revegetation. A soil-testing plan, measures to maximize the use and conservation of the coal resource, measures to adequately cover all acid and/or toxic-forming materials, measures to meet requirements for sealing or managing all drillholes, exploration holes, boreholes, wells, and other openings within the permit area, and measures to comply with air and water quality laws are also provided pursuant to §12.145.
- (a). A detailed timetable for the completion of each major step remaining in the reclamation plan for the permit area is included in the application, as

¹⁹⁵ Id., p. 144-16

¹⁹⁶ Staff Exhibit No. 1, p. 58

¹⁹⁷ Id., Appendix 144-1

supplemented, in accordance with §12.145(b)(1). The timetable is provided in Table 145-1 (Supplement No. 2). The timeline for reclamation is initiated by final coal removal from the pit. The overall period proposed for reclamation is approximately 11 years. Temporary vegetation may be planted when seasonal conditions prevent planting permanent cover. Applications for Phase II or III release will be submitted between 60 days following the average last frost date and 60 days prior to the average first frost date. Initiation of the Extend Responsibility Period (ERP) and timing of bond release applications assumes a 5-Year ERP.

- (b). A detailed estimate of the cost of reclamation required to be covered by the performance bond is contained in the application, as supplemented, in accordance with §12.145(b)(2).
- (1) SMECI included a reclamation cost estimate according to the disturbance categories delineated on the bond map¹⁹⁸ and listed in Section 145 of the application.¹⁹⁹ SMECI's estimate, \$26,886,318,²⁰⁰ includes costs for the following: overburden spoil leveling, subsoil haulback, disturbed area leveling, topsoil distribution, soil preparation, revegetation, and maintenance. Details for individual category estimates are contained in the application; supporting data for equipment and materials and productivity factors are also included.²⁰¹ Staff's reclamation cost estimate, contained in its TA, is in the amount of \$27,897,396.²⁰² Staff's calculation is based on \$14,985/acre for the mined rate, \$8,546/acre for the disturbed rate, and \$945/acre for the ancillary rate.²⁰³ SMECI and Staff's reclamation cost estimates were calculated based on a 5-year ERP. The rates utilized by Staff for all disturbance categories exceed those contained in the application. The Staff estimate is in a higher amount; Staff's more conservative reclamation cost estimate is a more appropriate amount for use should reclamation be performed by a third-party at the direction of the Commission and is approved.
 - (2) By letter dated April 3, 2017, SMECI submitted a self-bond with third-party guarantee and indemnity agreement by National Rural Utilities Cooperative Finance Corporation in the amount of \$30,000,000. A determination on acceptance of this bond instrument and third-party guarantee is to be considered in a separate docket (Docket No. C18-0002-SC-00-D).
 - (3) SMECI did not perform a separate reclamation cost analysis for the Alternative Mine Plan. Since the proposed disturbance area is smaller under the Alternative Mine than the Original Mine Plan, upon which SMECI based its analysis provided in supplement No. 2, Staff's estimate is sufficiently conservative to cover the operations proposed under both

¹⁹⁸ Applicant Exhibit No. I (Supplement 2), Exhibit Appendix I 45-3

¹⁹⁹ Id., Table I 45-1

²⁰⁰ Id., *Reclamation Cost Determination*, Table I on p. 8

²⁰¹ Id.

²⁰² Staff Exhibit No. I, Appendix II

²⁰³ Id., *Summary of Estimated Reclamation Costs*, Table I on p. 59

plans.

- (c). The application, as supplemented, in accordance with §12.145(b)(3) includes a plan that shows the final surface configuration of the proposed permit area.
- (1) SMECI has provided maps depicting pre- and postmine slopes.²⁰⁴ Maps depicting pre- and postmine topography are also provided in the application.²⁰⁵ A comparison of the premine and postmine drainage patterns indicates that there will not be a significant change and the postmine drainage patterns will be similar to watersheds present in the premine condition. The spoil along with backfilled material (including haulback and topsoil) will be regraded along the contour to minimize erosion potential.
 - (2) Coal Combustion Products (CCP) will be used as backfill material in the final end pits [See Fining of Fact No. 49(n), *supra*]. For the Area F final pit, it will require 2.2 million cubic yards (CYs) of ash to reach final ash grade. The Area G final pit will require 1.9 million CYs of ash to reach final ash grade. The Area H final pit will require 0.9 million CYs of ash to reach final ash grad. The Power Plant produces 1.6 mill CYs of ash annually on average.²⁰⁶
 - (3) As discussed in Finding of Fact No. 49(m) of this Order, SMECI does not requests a variance for time and distance requirements for contemporaneous backfilling and regrading based on testimony received during the hearing on the merits despite the request being contained in the application. The ALJ recommends the adoption of Permit Provision No. 8 that sets out timeframes for both haulback and topsoil placement so that the time frames from backfilling and regrading through haulback of subsoil and placement of topsoil will be clear. The operations proposed by SMECI justify the following variance set forth in Permit Provision No. 8: SMECI must complete rough backfilling and grading within 480 days and 980 feet, as measured from the toe of the active highwall. Haulback material placement must be completed within 119 days following rough backfilling and regrading and within 1,268 feet, as measured from the toe of the active highwall. Topsoil placement must be completed within 71 days following haulback material placement and within 1,408 feet, as measured from the toe of the highwall. An additional 60 days may be added for completion of haulback material placement and topsoil placement in areas within an active Temporary Cession of Operations Area.
- (d). SMECI has included information to meet the requirement of §12.145(b)(4) for a plan for removal, storage, and redistribution of topsoil and subsoil, to meet the requirements of §§12.334-12.338 of the Regulations as required by §12.145(b)(4). SMECI has provided a soil-handling plan that is acceptable as a method to prevent the presence of acid- and/or toxic-forming materials in the top

²⁰⁴ Applicant Exhibit No. I (Supplement 1), Exhibits I45-1 and I45-2

²⁰⁵ Id., Exhibit I39-1; Supplement No. 3 Exhibit I47-1

²⁰⁶ Applicant Exhibit No. I (Supplement 2), p. I45-5

four feet of reclaimed soils. A plan for the salvage of topsoil and haulback of subsoil to reclaim the top four feet of postmine soils is included in the application, as supplemented.²⁰⁷ The minimum topsoil removal and replacement thicknesses will be 6 inches thick. If the topsoil layer is less than 6 inches thick, a 6-inch layer that includes the topsoil and unconsolidated materials immediately below the topsoil will be removed and redistributed as the topsoil. SMECI calculated volumes of topsoil to be removed using a 0.9-foot average thickness.²⁰⁸ SMECI calculated haulback volumes using an average removal thickness of 3.25 feet. SMECI characterized combined topsoil and subsoil depth of 48 inches in its native soil baseline provided in Section 134 of the application [Finding of Fact No. 44, *supra*]. Regraded land will be scarified prior to replacement of topsoil to eliminate slippage and to promote root penetration.

- (e). As set out in §12.145(b)(5) of the Regulations, the application, as supplemented, includes a plan for revegetation as required by §§12.390-12.393 and 12.395. SMECI proposes a plan for revegetation in the application satisfactorily addressing the elements contained in §12.145(b)(5)(A – G).
- (1) SMECI proposes to seed and plant permanent vegetation and, if needed, temporary vegetation. The reclamation activity schedules are provided in Table 145-1 (Supplement No. 2). SMECI does not intend to plant from late May to early August due to vegetation failures that resulted from planting during this time at other SMECI mines. Fall planting of permanent vegetation will be dependent upon seasonal weather patterns (rainfall and temperature). The application includes species planting lists for use in the proposed permit area.²⁰⁹ The following four native species are of special concern: rattlebush, ground cherry, silverleaf nightshade, and little barley. These species are not listed on the federal or state noxious plant lists, but do appear on the Texas A&M toxic plant database. Due to the low potential for toxicity problems and the high potential for negatively affecting wildlife benefits, SMECI proposes these four native species only as volunteer plants. SMECI will use the following planting and seeding methods within the proposed permit area: coastal bermudagrass will be planted using a sprig planter; grass seed is planted with a grass drill and a grain drill with a grass seed attachment; and, seed may also be introduced into the stand from mulching operations. All temporary vegetation will be planted by an acceptable broadcast method.
- (2) SMECI will utilize mulching techniques to aid moisture conservation, promote germination and/or enhance soil stabilization. In Supplement No. 2, SMECI proposes to use residues from annual or perennial species, sprigs, straw or hay. Sprigs are planted at rates ranging from 20-30 bushels per acre depending on moisture conditions, slope, and sprig quality. A hybrid bermudagrass sod may be used as mulch in special conditions warranting immediate stabilization of rills and gullies in accordance with NRCS sod-mulching guidelines. Mechanical hay mulch spreaders will be used for uniform distribution of straw or hay. The need

²⁰⁷ Applicant Exhibit No. 1 (Supplement 1), pp. 139-5 through 139-12

²⁰⁸ Id., Table 139-3

²⁰⁹ Id., Tables 145-2 through 145-6

for irrigation of the revegetated area is not considered as part of the overall plan in extended responsibility areas (ERAs). Irrigation will only be used on a short-term, temporary basis when lack of sufficient rainfall threatens the establishment or maintenance of trees in habitat features and is not considered part of the overall revegetation plan in areas where the extended responsibility period has been initiated. Pesticides, including herbicides and insecticides, will be administered on an as needed basis for reducing competition in the establishment or maintenance of a ground cover. SMECI has committed to apply pesticides in strict compliance with Chapter 76 of the Texas Agricultural Code.

- (3) To determine the success of revegetation, SMECI will follow standards set out in the Commission's *Procedures and Standards for Determining Revegetation Success on Surface-Mined Lands in Texas* (December 2014). SMECI will adhere to forage production standards that were developed by the Natural Resource Conservation Service (NCRS) for the proposed mine area.²¹⁰ Under these standards, at least 90% ground cover and productivity must be obtained. Productivity will be measured through a combination of hay harvest records, field clipping of standing forage, and/or grazing use records.
- (4) The application, as supplemented, includes a soil-testing plan in accordance with §12.145(b)(5)(G) for evaluation of the results of topsoil and subsoil replacement that will be adequate to detect any acid-forming and/or toxic-forming materials (AFM/TFM) in the postmine top four feet of reclaimed soils. The plan specifies postmine soil sampling on 5.7-acre grids, how smaller grids will be sampled, the identification of data, and density of sampling. Samples will be collected in the following intervals: (1) surface to replaced depth of topsoil, and (2) replaced depth of topsoil to 48 inches. Soil testing procedures are included. The sampling of (1) will include pH, depth of placement, and plant available nitrate-nitrogen, phosphorus, and potassium, and for (2) pH and depth of placement. Additional specifications are included in the plan, including minesoil monitoring reports, augmentation sampling, and a contingency plan if the sampling identifies AFM/TFM including an alternate monitoring program in four increments with submission of the results of sampling and a map showing the impacted areas. The replacement of the top four feet of native soils results in the required soil medium. The Commission approves the postmine soil testing plan as set out in Appendix VII of Staff's TA included in this Order as Appendix II.
- (f). Measures are included to maximize the use and conservation of the coal resource as required in §12.356 in accordance with §12.145(b)(6). SMECI will conduct surface mining so that the best technology currently available is used to minimize future re-disturbance and to recover all economically mineable seams. SMECI indicates that lignite will be recovered to the maximum depth feasible and proposes to mine seams greater than 6 inches thick.²¹¹

²¹⁰ Applicant Exhibit No. I (Supplement I), Appendix I 45-2

²¹¹ Supplement No. 2, p. I 45-30

- (g). The application, as supplemented, includes a plan to ensure that all debris is covered or adequately disposed of, and that all acid-forming and toxic-forming materials and other materials required to be covered are covered with a minimum of four feet of non-toxic and non-acid-forming materials in accordance with §12.145(b)(7). In Supplement Nos. 2 and 3, SMECI included an alternate soil-testing plan for use if problems are encountered with concentrates of tested parameters during soil testing.
 - (h). As required by §12.145(b)(8), SMECI will seal all bore holes, abandoned water wells, monitoring wells, dewatering wells, and oil and gas wells in accordance with the following, as applicable: Coal Mining Regulations, 16 TAC §§12.331-333; Texas Department of Licensing and Regulation, 16 TAC Part 4, §76.1004, *et seq.*; and 16 TAC Part 1, §3.14 (as approved by the Commission). In the unlikely event that oil or gas strata are encountered during coal exploration drilling, such strata will be isolated with a cement plug. The Commission's Austin office will be notified five working days prior to any hole-plugging operations. Prior to use of any hole abandonment/plugging material other than cement, SMECI will provide the type and manufacturer of the proposed abandonment/plugging material to the Commission and obtain written approval for such use. Hole abandonment/plugging materials will only be used in accordance with the manufacturer's directions. SMECI will submit a report of any plugging using an alternative plugging material to the Commission within 30 days following plugging, which shall include documentation to demonstrate that the annulus area of the plugged hole has been adequately sealed. All plugged boreholes and wells shall have a cement surface plug placed, at a minimum, from 3 ft to 13 ft below ground surface.
 - (i). SMECI has included in the application, as supplemented, a description of steps to be taken to comply with requirements for air quality and water quality laws in accordance with §12.145(b)(9). SMECI will monitor and report water discharges as set out in the application, as supplemented, and will meet the terms, conditions, and effluent limitations set out in the TCEQ TPDES (Texas Pollutant Discharge Elimination System) permits. The information provided is sufficient to indicate that SMECI will comply with the Clean Air Act (42 U.S.C. §7401 *et seq.*) and the Clean Water Act (33 U.S.C. §1251 *et seq.*).
56. The application, as supplemented and in conjunction with Permit Provision No. 9, includes a description as required by §12.146 of measures to be taken to protect the hydrologic balance of the surface water and groundwater systems within the permit area and adjacent areas and to prevent damage outside the permit area, to meet water quality laws and to protect groundwater and surface water users as set out below and in these Findings of Fact. This includes SMECI's determination of probable hydrologic consequences (PHC) set out in Section 146 of the application, as supplemented, including a long-term groundwater monitoring plan (LTGM), a long-term surface water monitoring plan (LTSM), alternate water supply information, operational procedures and Staff's Cumulative Hydrologic Impact Assessment (CHIA) as required by §§12.146 (c) and (d) of the Regulations. The CHIA supports SMECI's assertion that operations are designed to prevent material damage to the hydrologic balance within and outside the permit area.
- (a). Alternative water supplies are identified in Section 130 of the application, as

supplemented [Finding of Fact No. 40, *supra*]. Should impacts to water supplies occur as a proximate result of surface mining operations, SMECI will replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source.

- (b). Topsoil replacement and subsoil haulback and appropriate soil testing will identify acid-forming and/or toxic-forming materials (AFM/TFM), and SMECI has included an alternative testing plan after treatment or re-handling to ensure that all AFM/TFM are placed below the top four feet of reclaimed soils.
- (c). Impacts to groundwater levels may occur in the vicinity of mining from groundwater seepage to the pit; these impacts are likely to be limited to the areas closest to the pit. SMECI estimates that the seepage will be insignificant. SMECI will control this water as a part of its water control plan. Advanced dewatering of the overburden is not proposed. Significant overburden sand units do not exist in the proposed permit area; however, an alluvium unit in the southern portion of the F Area near San Miguel Creek sometimes contains small amounts of groundwater. Substantial drawdown of groundwater in this alluvial unit is not anticipated, though water levels are likely to decline slightly. Depressurization of the underburden Unit 22 Sand may be required as mining advances. The impacts from depressurization of the unit are expected to be highly localized and short-lived. There are no current users of the Unit 22 Sand within the proposed permit area. Additionally, the TDS concentrations of the groundwater in this unit are high, and it is not a desirable water source or fit for human consumption. Given the limited volume of water in the overburden observed during pre-mine conditions, post-mine spoil will resaturate slowly. SMECI contends that precipitation will likely be the most significant contributor to resaturation of the spoil. Based on observed groundwater levels in reclaimed spoil at other SMECI mines, groundwater to surface water seeps are not expected to develop.
- (d). SMECI proposes a LTGM plan that will provide sufficient information to ensure the protection of the groundwater hydrologic balance. SMECI will incorporate the two (2) overburden monitoring wells and three (3) underburden monitoring wells installed as part of the baseline groundwater monitoring for this permit (Section 128) into its LTGM plan. SMECI proposes to install three (3) additional spoil wells in areas where mining is proposed. These wells will be installed within one year of backfilling and regrading. The locations of the wells are depicted on Figure 146(d)-1 in the application. Quarterly samples will be taken and reported to the Commission for the parameters listed in Table 146(d)-1 of the application that include a list of field parameters (electrical conductivity, pH, and temperature), general chemical parameters (total alkalinity, carbonate and bicarbonate, and total dissolved solids), major ions (calcium, sodium, potassium, magnesium, sulfate, and chloride), inorganic non-metals (boron, nitrate nitrogen, and fluoride), and metals (total dissolved iron, and total dissolved manganese). Each LTGM well will be sampled for trace elements on an annual basis. The proposed LTGM plan does not propose to monitor for or report groundwater levels²¹² as required under §12.146(b)(1) of the Regulations. To ensure the groundwater monitoring program

²¹² Applicant Exhibit No. I, Table 146(d)-I

complies with this requirement, the ALJ proposes the adoption of Permit Provision 9 as set out in Appendix I to this Order. Permit Provision No. 9 is adopted.

- (e). The application, as supplemented, includes appropriate surface water information, modeling of potential impacts on surface water quantity and quality, and a long-term surface water monitoring (LTSM) plan sufficient to detect concentrations of required effluent parameters.
- (1) The application includes a flow schematic for the two watersheds (UT-SMC and LJC) that will be impacted by the proposed mining activities. SMECI's modeling effort conservatively addresses mining proposed for 10-year/24hour (10-yr/24-hr), 25yr/24-hr and 100-yr/24-hr storm events for the pre- and postmine conditions and for conditions during mining. The results are based on rainfall depths corresponding to 24/hr storm events as indicated on rainfall depth maps published in *Atlas of Depth-Duration Frequency of Precipitation Annual Maxima for Texas* (Asquith, 2004).²¹³ Peak flow and runoff volumes are predicted to remain near baseline levels following mining. The results are provided in Table 146(d)-3 of the application and are summarized in Staff's Technical Analysis as follows:

Description	Premine Condition		Active Mine Condition		Postmine Condition	
	Runoff Volume (ac-ft/ac)	Peak Flow (cfs)	Runoff Volume (ac-ft/ac)	Peak Flow (cfs)	Runoff Volume (ac-ft/ac)	Peak Flow (cfs)
UT-SMC	428.7	462.0	533.6	560.0	514.7	550.0
LJC	1,782.3	1,760.0	1842.7	1,771.0	1,797.1	1,763.0

Watersheds were mapped and soils and land use data, topography, cover, and other characteristics were assigned to the watersheds and incorporated into a hydrologic model. Evaporative and consumptive losses were estimated for the postmine scenario as 170.6 acre-feet per year using approximately 14 acres of postmine impoundments (Table 146-12, life-of-mine). This compares to 110.2 acre/feet per year for 21 acres of premine impoundments (Table 146-12). The increase in evaporative loss is approximately 0.4% of the discharge of the San Miguel Creek.²¹⁴ Sediment yields were predicted using the 10-year/24-hour design storm event.²¹⁵ All disturbed surface water will be routed through approved sedimentation ponds, which will be operated to maintain compliance with TCEQ effluent limitations. SMECI predicts total dissolved solids (TDS), total suspended solids (TSS), total iron (Fe), and total manganese (Mn) concentrations may increase from the premine phase during the mining period. Based on data obtained from similar lignite mines, SMECI contends concentration of these constituents will decrease to approximately premine levels within one year. SMECI also anticipates that runoff water quality from disturbed areas will fall within the acceptable limits for pH, Fe and Mn.

²¹³ Id., p. 146(d)16

²¹⁴ Applicant Exhibit No. 1 (Supplement I), p. 146(d)-23

²¹⁵ Id., Table 146(d)-4

- (2) Measures will be taken, during and after the proposed surface mining activities, to minimize additional contributions of sediment to surface waters, so that discharges into receiving streams will meet applicable federal and State water quality laws and regulations in accordance with water quality permit requirements. Sediment ponds and impoundments will detain water and thereby decrease the contribution of TSS in discharges in accordance with the TCEQ NPDES permit requirements. SMECI will design discharge structures using standard engineering design procedures. Additional methods, such as the use of flocculants, may be employed to ensure that TCEQ effluent limitations are met. In the event that pond embankments and roads are constructed prior to establishment of surface-water control, SMECI will ensure compliance with effluent limitations as described in its TPDES permit and best management practices will be employed. The best practical technology will be utilized in design and construction of ponds.
- (3) SMECI proposes a LTSM plan that will provide sufficient information to ensure the protection of the surface water hydrologic balance. SMECI will monitor discharges from final sedimentation impoundments or treatment impounds to measure the performance of both active-mining and post mining impact mitigation. The impoundments will be monitored in accordance with the TPDES permit and the Commissions requirements. Watersheds will also be monitored at stream sampling stations that will be located appropriately to compare results of sampling of upstream and downstream of the LJC and UT-SMC watersheds. The five (5) monitoring stations described in Section 129 of the application will be utilized in LTSM program. SMECI also plans to incorporate data from LTSM Station A2 established for the adjacent Permit No. 11G area. Monitoring will occur quarterly and annually for flow, electrical conductivity, total dissolved solids (TDS), pH, total iron, total manganese, total suspended solids (TSS), major ions, and trace elements. If no-flow conditions are present, a ponded water sample will be collected and it will be documented that the sample was collected under no-flow conditions. Monitoring results will be reported to the Commission quarterly (including the previous quarter's data) within 30 days after the calendar quarter. SMECI has committed to survey and update the cross-sections and rating curves after each 10-yr/24-hr storm event or annually, whichever is sooner.²¹⁶
- (4) As required by §12.146(d) of the Regulations, the application, as supplemented, adequately addresses the items essential to a description of the groundwater and surface water PHC determination for the life-of-mine period as addressed in the Findings of Facts contained in this Order.
- (5) Pursuant to §12.146(e), a cumulative hydrologic impact assessment (CHIA) of all anticipated life-of-mine lignite mining activities within a cumulative impact area (CIA) in the Nueces River Basin was provided by Staff. Both surface water and groundwater impacts are assessed. The CHIA, dated May 10, 2017, is set out in Staff's TA (Appendix 1). Staff's review includes life-of-mine activities proposed for SMECI's existing mine

²¹⁶ Id, pp. 146(d)-23 through 27

areas permitted as Nos. 11G and 52A, and those proposed by the application. A previous CHIA document was prepared for the initial San Miguel Lignite Mine, Area C application on March 18, 2008 (Permit No. 52), in Docket No. C7-0008-SC-00-A ("2008 CHIA"). The 2008 CHIA was limited to the life-of-mine operations anticipated at the time, the effects of which did not include the areas for mining proposed in the application. Hence, the CHIA prepared for the application, as supplemented, serves to update life-of-mine activities within the Nueces River Basin. The CIA is approximately 366 square miles.

Staff's assessment includes the bases on which it evaluates whether there is potential for the occurrence of material damage due to aquifer drawdown and decline, the potential for material damage due to physical changes within spoil areas, and water quality effects on spoil area groundwater and the potential for material damage based on potential effects to water quality of area streams. The CHIA finds that projected drawdown and decline due to activities at the mines will be limited to depressurization due to low quantity of groundwater in the overburden. Drawdown from depressurization activities will be negligible because the underburden units are isolated from the overlying units. Physical changes in the spoil are not anticipated to be significant. The mining process is expected to increase meteoric water infiltration, producing a spoil water quality slightly better than the original water quality. Staff anticipates increases in TDS may be observed in stream baseflow, but notes the anticipated increases will be well below applicable stream segment standards.

TDS was used as the indicator parameter in a mass-balance analysis to project changes to the chemical quality of surface water. The largest projected increase will occur nearest the mine boundaries, as may be expected. At Mass-Balance Location No. 2 (USGS Gauging Station No. 08208000, located on the Atascosa River downstream of Metate Creek and La Parita Creek), a potential increase in TDS concentration of 8.0 percent is projected (from 567 mg/L to 613 mg/L). This projected postmine concentration (613 mg/L) is significantly below the threshold TDS concentration of 1,500 mg/L for TCEQ Stream Segment No. 2107. At Mass-Balance Location No. 5 on the Frio River below the Choke Canyon Reservoir dam, the cumulative effects from the southwestern portion of the San Miguel Mine (Permit No. 11G) will be negligible (1.9% increase) due to the high baseline TDS concentration of San Miguel Creek waters and the dilution effects of the reservoir. The predicted increase in TDS concentration at the downstream node of the cumulative impact drainage area (CIDA) at the confluence of the Frio River and the Nueces River is also negligible (0.8% increase), indicating that negligible effects will occur at this point. The cumulative impacts are insignificant, primarily the result of high baseline TDS concentration and the large dilution effects from substantial runoff within the Nueces River Basin drainage area. TDS concentrations in the postmine period are predicted to be comparable to those of the premine period. The attenuation of storm runoff and increase in sustained flows are anticipated due to physical changes within the reclaimed areas. However, this is insignificant when compared to the amount of storm runoff originating within the CIDA. Additionally, Staff notes

that after mining and reclamation, runoff increases are slight due to changes in land uses proposed by SMECI [(grazingland to managed land uses (pastureland and wildlife habitat)].

57. The application, as supplemented contains SMECI's postmine land use plan. SMECI provided adequate information to comply with the requirements of §§12.147 and 12.399 of the Regulations.

- (a). Appendix 147-1, as revised in Supplement No. 1, contains copies of SMECI's consultation notice letters to landowners of land tracts within the proposed permit as required. There are no state and local government agencies other than the Commission that would need to initiate, implement, approve, or authorize the proposed postmine land uses.
- (b). SMECI has committed that where applicable to the restoration of waters of the U.S., including wetlands, it will reclaim disturbed land to its premine land uses.²¹⁷
- (c). Supplement No. 1 (Table 147-1) contains the following postmine land-use acreage for the proposed five-year disturbance boundary:

Land-Use Category	Premine Acres (% Area)	Postmine Acres (% Area)
Fish and Wildlife Habitat	730 (36.3%)	1,460 (72.5%)
Pastureland	415 (20.6%)	463 (23%)
Industrial/Commercial (I/C)	76 (3.8%)	76 (3.8%)
Developed Water Resources	13 (0.6%)	13 (0.6%)
Recreational	778 (38.6%)	0 (0%)
Residential	3 (0.1%)	3 (0.1%)
TOTAL	2,015 (100%)	2,015 (100%)

- (d). The primary change for the areas proposed for alternative land uses is that recreational is to be reclaimed as fish and wildlife habitat.
- (e). The plan contains a description of the reclamation activities that SMECI will perform to achieve its postmine land-use plan, including backfilling and grading to approximate original contour, selective handling of approved soil materials, and revegetation. The Commission's guidance document, *Procedures and Standards for Determining Revegetation Success on Surfaced Mined Lands in Texas* (2014) will be used for success standards when planting woody and herbaceous plantings. Prescribed burning may be utilized to reduce accumulations of biomass in areas reclaimed to Pastureland and as a management tool in fish and wildlife habitat. All prescribed burning will be performed in accordance with the standards and specifications of a Soil and Water Conservation Plan to be prepared by the USDA Natural Resources Conservation Service (NRCS) and will be coordinated with local fire control authorities. Fire lanes will be established as needed throughout reclaimed areas

²¹⁷ Applicant Exhibit No. I (Supplement I), p. I47-3

- (f). The proposed land uses are compatible with adjacent land uses and are consistent with surface owner plans. The reclamation timetable and reclamation procedures included in the application, as supplemented, indicate how the postmine land uses will be achieved in a manner that will not cause unreasonable delays in reclamation. The postmine land use plan has been certified, as required, by a registered professional engineer.
 - (g). The Applicant will be required to submit an adequate reclamation performance bond prior to issuance of the permit.
 - (h). The alternative land uses proposed will not result in undue delay in reclamation or any hazard to public health or safety or threat of water-flow diminution or pollution.
 - (i). SMECI has demonstrated that the alternative land use is economically viable, of beneficial use to the landowners, and that disturbed areas will be reclaimed to conditions capable of supporting the uses they were capable of supporting before mining.
 - (j). Appropriate agencies were provided the opportunity to review the application and to provide comments.
 - (k). No cropland alternative land uses are proposed for which other requirements would be applicable.
58. The application, as supplemented and in conjunction with Permit Provision No. 11, provides adequate information to demonstrate compliance with §12.148 of the Regulations.
- (a). SMECI's surface-water control plan, as supplemented, for the proposed permit term includes the following four temporary impoundments (ponds): F-1, G-1, G-2 and H-1. General design plans were submitted as required by the Regulations for each pond that is approved in this Order. Detailed design plans were provided for F-1, G-1 and G-2. The ponds are designed to contain a 10-yr/24-hr storm event as required. Under the Original Mine Plan, SMECI has met all requirements for approval and, upon permit issuance, may begin construction of the impoundments for which the detailed design plans are approved in this Order assuming all other applicable provisions have been satisfied. SMECI may not commence construction of Pond H-1 until detailed design plans are submitted and approved by the Commission in a separate application. Under the Alternative Mine Plan, SMECI proposes minor revision to the plan and profile of Pond G-2 to avoid creating a cut or excavation activities within 100 feet of DCP's pipeline. SMECI did not provide a demonstration through various modeling methods that the proposed design would function as required under the Regulations.²¹⁸ To ensure the alternative design of Pond G-2 meets all requirements under the Regulations, the ALJ proposes adoption of Permit Provision No. 11 that requires SMECI to demonstrate, through all acceptable means, that the alternate design of Pond G-2 proposed in Trial Amendment No. 1 will meet the requirements under the Regulations prior to

²¹⁸ Staff Exhibit No. 3, Section 148

approval and construction of the pond. Permit Provision No. 11 is adopted. The detailed design plans as submitted in Trial Amendment No. 1 are not approved in this Order.

- (b). All structures approved for the requested permit term will be bonded appropriately. The ponds meet the requirement of certification by a qualified, registered professional engineer experienced in the design and construction of impoundments, stability, slope protection with riprap, vegetation or otherwise in accordance with accepted design principles. The proposed permanent impoundments' size and configuration will be adequate as temporary impoundments and discharges will not degrade the quality of receiving water below applicable water quality standards.
 - (c). All ponds are depicted in Supplement No. 1. The alternate design of Pond G-2 is depicted in Trial Amendment No. 1.
 - (d). Tables 148-1 and 148-2 revised in Supplement No. 1 present the temporary sedimentation ponds design characteristics, their approximate construction dates and approximate removal dates.
 - (e). None of the ponds are of sufficient size to be subject to MSHA requirement under 30 CFR Part 77.216.
 - (f). A 100-year flood plain study was prepared for the San Miguel and La Jarita Creeks to determine the impacts of proposed operations. No activities are proposed within the San Miguel Creek 100-year flood plain. The dam for Pond F-1 and the haul road in proposed haul road will encroach into the La Jarita Creek flood plain. The structures were designed to minimize the impacts to the flood plain and to have no impact where the flood plain leaves the permit area. A copy of the study was provided in the Application (Appendix 148-4). SMECI submitted a copy to the McMullen County flood plain administration in conjunction with its flood plain development permit application. SMECI has committed to provide the Commission with a copy of the flood plain development permit upon approval from the McMullen County.
 - (g). No coal processing waste banks, dams and embankments will be constructed during the permit term. No evaporation ponds and no dust suppression ponds are proposed with this application. Water for dust suppression will be obtained from one or more of the sedimentation ponds.
59. SMECI indicates on page 149-1 of the application that there are no known underground mines within the proposed permit area or within 500 ft of the proposed permit boundary. SMECI has provided adequate information to demonstrate compliance with §12.149.
60. The application, as supplemented and in conjunction with Permit Provision No. 11, provides adequate information to demonstrate compliance with §12.150 of the Regulations.
- (a). In Section 148 of the application, as supplemented, SMECI requests approval of the following eleven (11) diversions as components of its surface-water control plan: Ditches F-1, F-2, F-3, F-4, G-1, G-2, G-3, G-4, H-1 and H-2 and the Clean

Water Diversion (CWD). General design plans were submitted as required by the Regulations for each diversion that is approved in this Order. Detailed design plans were provided for all diversions except for those associated with Pond H-1 (Ditches H-1 and H-2). Under the Original Mine Plan, SMECI has met all requirements for approval and, upon permit issuance, may begin construction of the temporary diversion for which the detailed design plans are approved in this Order, assuming all other applicable provisions have been satisfied. SMECI may not commence construction of Ditches H-1 and H-2 until detail design plans are submitted and approved by the Commission in a separate application. Under the Alternative Mine Plan, SMECI proposes minor revision to the plan and profile of Ditch G-3, Ditch G-4 and the CWD to avoid creating a cut or excavation activities within 100 feet of DCP's pipeline. In the areas where these structures cross the pipeline, a berm is to be constructed at ground level on either side of the diversion to contain flow as required under the Regulations.²¹⁹ SMECI did not provide a demonstration through various modeling methods that the proposed designs would function as required under the Regulations.²²⁰ To ensure the alternative designs of Ditch G-3 and Ditch G-4 meet all requirements under the Regulations, the ALJ proposes adoption of Permit Provision No. 11 that requires SMECI to demonstrate, through all acceptable means, that the alternate design of Ditch G-3 and G-4 proposed in Trial Amendment No. 1 will meet the requirements under the Regulations prior to approval and construction of the diversions. Permit Provision No. 11 is adopted. The detailed design plans as submitted in Trial Amendment No. 1 are not approved in this Order.

- (b). The application, as supplemented in conjunction with Permit Provision No. 11, includes required information for miscellaneous flow diversions (all diversions of flow other than from intermittent or perennial streams) in accordance with requirements of §12.341, subsection (a) that they minimize adverse impacts to the hydrologic balance within the permit area and adjacent areas to prevent material damage outside the permit area and to assure the safety of the public, and subsection (c) that their design, location, construction, maintenance, and removal will be sufficient to meet the performance standards of §12.341(a), and that they are designed so that the combination of channel, bank, and floodplain configuration is adequate to safely pass the peak runoff from a 10-yr/24-hr storm event. Staff determined that the design plans meet requirements of the Regulations.
- (c). The temporary diversions as described under the Original Mine Plan meet the requirements of §12.150 for temporary diversions related to descriptions, maps, and cross sections. The diversions will be stable, will protect against flooding, and related damage, and will prevent additional contributions of suspended solids to streamflow outside the permit area using the best technology currently available. The diversions will comply with local, state, and federal laws and regulations. Diversion designs incorporate appropriate channel linings, energy dissipators at discharge points where necessary, and other erosion protection measures. Temporary diversions will be removed when they are no longer needed. Diversions are designed to have a velocity of flow that is nonerosive.²²¹

²¹⁹ Testimony of Wayne Godsey, Tr. Vol. 2, p. 142

²²⁰ Staff Exhibit No. 3, Section 148

²²¹ Testimony of Wayne Godsey, Tr. Vol. 2, p. 143

- (d). All diversions are designed to incorporate appropriate slope of banks, use of concrete or grass linings, measures to ensure safe transition of flow and energy dissipation, and use of erosion control measures, as applicable.
 - (e). SMECI is not required to produce documentation of an agreement to cross DCP's right of way at the surface with respect to the diversions discussed in this finding [See Finding of Fact No. 27, *supra*].
 - (f). Pursuant to §12.402, SMECI is required to conduct operations in manner which will minimize the damage, destruction, or disruption of services provided other operators, including pipelines, that are active within the permit area. A variance to this requirement may only be granted by the Commission if agreed to by the owner of the pipeline. However, SMECI is not required to produce an agreement with DCP prior to constructing or using the structures as proposed in the Alternative Mine Plan. Evidence in the record supports that SMECI will conduct operations as required under the Regulations with respect to DCP's Pipeline.²²² SMECI is not required to develop a contingency plan prior to permit issuance based on mining operations that may interfere with third-party operators. Should SMECI need to alter operations, as approved, due to unforeseen issues related to other entities described in §12.402, a revision application proposing all necessary changes to the permit would have to be submitted and subsequently approved by the Commission.
 - (g). All diversions will be appropriately bonded.
61. SMECI, in conjunction with Permit Provision No. 7, has met the requirements for closure or relocation of public roads in accordance with §12.152 of the Regulations.
- (a). SMECI requests approval of a haulroad and buffer zone variances for activities within 100 feet of the right-of-way line of two public roads related to coal haulage.
 - (1) SMECI proposes to construct a haulroad that will cross under an overpass to be constructed on FM 791. In Supplement No. 1, SMECI indicated that it was attempting to obtain a Highway Crossing Agreement with the Texas Department of Transportation (TxDOT) to cross under an over pass on FM 791 and committed to provide a copy of the agreement to the Commission once it had been obtained. However, testimony was received during the hearing on the merits that an agreement has been reached and TxDOT has commenced construction of the overpass.²²³ A copy of the agreement is not in the record. Additionally, the application proposes that a temporary dragline walkroad will cross FM 791 east of the proposed haulroad²²⁴ and will cross FM 140 at an unspecified location.²²⁵ The temporary dragline walkroad is depicted on Exhibits 139-1 and 139-1-Alt.²²⁶ Based on SMECI's representation during the hearing, a new dragline is being constructed within the proposed permit area that

²²² Staff Exhibit No. 3, Section 148

²²³ Testimony of Wayne Godsey, Tr., Vol. 2, p. 145

²²⁴ Supplement No. 1, Section 139 (Overburden removal)

²²⁵ Applicant Exhibit No. 1 (Supplement 1), p. 154-3

²²⁶ Applicant Exhibit No. 1 (Supplement 1); Applicant Exhibit No. 1A

will alleviate the need to cross FM 791 at this location.²²⁷ Permit Provision No. 7 is proposed to ensure the necessary approval is obtained from the designated authority (TxDOT) prior to approving operations within 100 feet of FM 791.

- (2) The proposed haulroad will cross Exxon Road, a county road, at the eastern boundary of Area G. Additionally, SMECI proposed to relocate Reyes Road, prior to commencing operations, outside of the proposed permit boundary. Both roads are county roads. SMECI provided the minutes from a McMullen County Commissioners Court meeting that took place on December 12, 2016 at which the County approved the proposed crossing and relocation.²²⁸
 - (b). SMECI provided public notice of the variances requested in the Notice of Application as required. The haulroad crossing and buffer zone variances are approved in conjunction with Permit Provision No. 7.
62. SMECI proposes that all spoil will be utilized as addressed in Section 147 of the application, as supplemented. Accordingly, disposal of excess spoil requirements under §12.153 of the Regulation are inapplicable.
63. The application, as supplemented and in conjunction with Permit Provision Nos. 7 and 13, provides adequate information to demonstrate compliance with §12.154 of the Regulations.
- (a). SMECI requests approval of eight (8) temporary roads for the permit term. Table 154-1 in Supplement No. 1 lists the roads, type and approximate construction and reclamation dates. The following are primary roads requested for approval: Area F, G & H Haulroad ("Haulroad"); Ramp Road 1F; Ramp Road 2F; Ramp Road 1G; and, Ramp Road 2G. The three ancillary roads requested for approval consist of Dragline Walkways 1 through 3. General design plans were submitted as required by the Regulations for each road that is approved in this Order. SMECI estimates that all roads will be reclaimed by 2031. As discussed in Finding of Fact No. 61, SMECI requests a variance for conducting operations within 100 feet of the right-of-way line of FM 791 and FM 140.
 - (b). Under the Original Mine Plan, detailed design plans, with associated culverts, in compliance with §§12.400-12.403 were submitted for the Haulroad in Supplement No. 1. The plans meet all requirements under §12.154. SMECI demonstrated that at least six feet of compacted material will exist between the Haulroad and DCP's pipeline in the area where the road will cross over the pipeline as required by §12.382(3).²²⁹ SMECI demonstrated that the drainage structures for the primary roads will safely pass at least the minimum 10-year/six-hour design storm event [§12.401(4)(A)].²³⁰ The detailed design plans provided in Supplement No. 1 meet all requirements for approval and, upon permit issuance, SMECI may begin construction of the temporary Haulroad according to the plans

²²⁷ Testimony of Wayne Godsey, Tr., Vol. 2, p. 146

²²⁸ Applicant Exhibit No. 1 (Supplement 2), Appendix 152-1

²²⁹ Applicant Exhibit No. 1, Exhibit 154-3

²³⁰ Applicant Exhibit No. 1 (Supplement 1), Tables 154-4 and 154-5

as described in the initial submittal, as revised in Supplement No. 1. However, construction may not begin within 100 feet of FM 791 and FM 140 until SMECI has satisfactorily addressed Permit Provision No. 7. Additionally, SMECI may not conduct any activities (construction of roads, diversion, etc.) within 100 feet of DCP's pipeline until it provides a demonstration that satisfactorily addresses Permit Provision No. 1.

- (c). In Trial Amendment No. 1, SMECI proposes minor revisions to the plan and profile of the Haulroad to avoid creating a cut or excavation activities within 100 feet of DCP's pipeline. In these areas where the road crosses the pipeline, no excavation will occur within the 200-foot buffer pursuant to §12.382(4) of the Regulations.²³¹ SMECI has demonstrated that at least 6 feet of compacted material will be between the Haulroad and DCP's pipeline in compliance with §12.382(3).²³² However, SMECI did not provide a demonstration through various modeling methods that the proposed designs would function as required under the Regulations for this portion of the Haulroad.²³³ To ensure the alternative design of the Haulroad meets all requirements under the Regulations, the ALJ proposes adoption of Permit Provision No. 13 that requires SMECI to demonstrate, through all acceptable means, that the alternate design of the Haulroad proposed in Trial Amendment No. 1 is sufficient. SMECI may not commence construction of the Haulroad according to the design proposed under the Alternative Mine Plan until approval is obtained from the Commission pursuant to Permit Provision No. 13 in Appendix I to this Order. Permit Provision No. 13 is adopted.
- (d). Dragline Walkroad 2 is to be constructed to provide access between areas F and G within the proposed permit area. This road will not cross DCP's pipeline. Detailed design plans for Dragline Walkroad 2 were submitted in Supplement No. 1. The plans, with associated culverts, meet all the requirements set out in §§12.154(a)(1)-(6) and 12.400-12.403. SMECI may begin construction of Dragline Walkroad 2 upon permit issuance. The detailed design plans for Dragline Walkroad 2 are approved.
- (e). Under the Original and the Alternative Mine Plan, Dragline Walkroad 3 joins the Haulroad in the far western portion of Area G where DCP's pipeline exists.²³⁴ The detailed design plans submitted for the Haulroad demonstrate that at least 6 feet of compacted material will be between the Haulroad and DCP's pipeline.²³⁵
- (f). Pursuant to §12.402, SMECI is required to conduct operations in a manner which will minimize the damage, destruction, or disruption of services provided other operators, including pipelines, that are active within the permit area. A variance to this requirement may only be granted by the Commission if agreed to by the owner of the pipeline. However, SMECI is not required to produce an agreement with DCP prior to constructing or using the structures as proposed in the Alternative Mine Plan. Evidence in the record supports that SMECI will conduct

²³¹ Applicant Exhibit No. 1A, Exhibit 154-I-Alt

²³² Applicant Exhibit No. 1A, Exhibit 154-4-Alt

²³³ See Applicant Exhibit No. 1A

²³⁴ Applicant Exhibit No. 1 (Supplement 1), Exhibit 154-I; Applicant Exhibit No. 1A, Exhibit 154-I-Alt

²³⁵ Applicant Exhibit No. 1A, Exhibit 154-4-Alt

operations as required under the Regulations with respect to DCP's Pipeline.²³⁶ SMECI is not required to develop a contingency plan prior to permit issuance based on mining operations that may interfere with third-party operators. Should SMECI need to alter operations, as approved, due to unforeseen issues related to other entities described in §12.402, a revision application proposing all necessary changes to the permit would have to be submitted and subsequently approved by the Commission.

- (g). SMECI is not required to produce documentation of an agreement to cross DCP's right of way at the surface with respect to the roads discussed in this finding [See Finding of Fact No. 27, *supra*].
 - (h). The Haulroad will cross La Jarita Creek in Area F. The crossing at La Jarita Creek was designed to minimize adverse impacts to the 100-yr floodplain and to have no adverse effects where the floodplain leaves the permit area at FM 971 (approximately 1,000 feet north of the haul-road crossing). As discussed in Finding of Fact No. 58(f), SMECI prepared a 100-year flood plain study to determine the impact of the proposed operations on the respective flood plains. A copy of the study was provided in the application (Appendix 148-4). SMECI submitted a copy to the McMullen County flood plain administration in conjunction with its flood plain development permit application. SMECI has committed to provide the Commission with a copy of the flood plain development permit upon approval from the McMullen County.
64. The application, as supplemented, meets the requirements of §§134.065-134.066 of the Act and §12.216 of the Regulations as set out below and as included in the Findings of Fact.
- (a). The application, as supplemented, is accurate and complete and all requirements of the Act and Regulations have been met in the application as supplemented, with the inclusion of the permit provisions contained in Appendix I, the postmine Soil Testing Plan and Postmine Performance Standards contained in Appendix II, and as approved by the Commission.
 - (b). SMECI has demonstrated that the mining and reclamation operations can be feasibly accomplished under the operations plan.
 - (c). The CHIA has been completed, and the operations proposed by the application, as supplemented, and as approved by the Commission, have been designed to prevent damage to the hydrologic balance outside the proposed permit area.
 - (d). The proposed permit area is not included in an area designated unsuitable for surface coal mining operations, is not under study for designation, and, with the permit provisions contained in Appendix I, the proposed permit will not adversely affect any publicly-owned parks or places included in or eligible for listing in the National Register of Historic Places. The application, as supplemented, does not propose activities within a National Park, is not within 100 feet of a cemetery or of any public road (except for access roads as allowed in the Regulations and other

²³⁶ Id.

roads addressed in this Order), and proposed operations will not occur within 300 feet of an occupied dwelling, public building, school, church, community, or institutional building.

- (e). The proposed operations will not affect any properties listed on or eligible for listing on the NRHP except as approved in accordance with the Findings of Fact and permit provisions set out in Appendix I.
 - (f). SMECI has submitted all information required for documentation of right of entry.
 - (g). All compliance information has been provided. SMECI has paid all reclamation fees and has no violations that have not been corrected or are in the process of being corrected in accordance with § 12.215 of the Regulations. SMECI does not control and has not controlled mining operations with a demonstrated pattern of willful violations or intent not to comply with the Act and Regulations.
 - (h). The Commission may issue the permit as set out in §12.215(d) upon acceptance of a sufficient reclamation performance bond. A bond has been submitted for acceptance in a related docket, Docket No. C18-0002-SC-00-D.
 - (i). Operations will not be inconsistent with any other surface mining operations in adjacent areas.
 - (j). There are no alluvial valley floors to be considered pursuant to §12.202 of the Regulations. SMECI has, with respect to prime farmland, satisfied the requirements of §12.201 of the Regulations.
 - (k). The proposed postmining land uses are approved in accordance with this Order.
 - (l). All specific approvals required under Subchapter K of this Chapter have been made, with adoption of the proposed permit provisions contained in Appendix I.
 - (m). The proposed activities will not affect the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat.
 - (n). SMECI has satisfied the requirements for approval, as applicable, of a long-term, intensive agricultural postmining land use in accordance with §12.390.
65. The application was processed in accordance with the procedures contained in the Commission Practices and Procedures and in accordance with the Administrative Procedure Act.

Based upon the above Findings of Fact, the following Conclusions of Law are made:

CONCLUSIONS OF LAW

1. The Commission has jurisdiction under §134.051 of the Act and §12.216 of the Regulations to approve this application for permit as contained in this Order, and as set out in Appendices I and II to this Order.
2. Proper notice of the application was provided in accordance with the requirements of the Act, Chapter 134 of the TEX. NAT. RES. CODE (Vernon Supp. 2017), the Regulations, 16 TEX. ADMIN. CODE CH. 12, the Commission's *Practice and Procedure*, 16 TEX. ADMIN. CODE §1.1 *et seq.* and the Administrative Procedure Act (APA), TEX. ADMIN. CODE CH. 2001 (Thomson West 2017). A public hearing was held in accordance with the Act and Regulations. Open meeting notice has been made as required.
3. Based upon the Findings of Fact, the application for permit was submitted to the Commission by SMECI and was processed, circulated, and reviewed in accordance with requirements that ensure public participation and that comply with the Act, Regulations, the Commission's *Practice and Procedure*, and the APA.
4. The existence of pending litigation does not preclude a surface mining applicant from meeting the requirements of §12.117.
5. Section 12.117 requires an applicant to demonstrate right of entry in areas it proposes to enter and begin surface mining activities. SMECI has satisfied this requirement under the Alternative Mine Plan with respect to DCP's pipeline.
6. Pursuant to §12.127(c), the Commission may require an applicant to submit additional information based on information provided to meet the requirements of §§12.139 and 12.145; however, the information provided to meet the requirements of §§12.139 and 12.145 does not influence an initial determination of compliance with §§12.127(a) and (b). SMECI's application, in conjunction with Permit Provision No. 4, satisfies the requirements of §12.127.
7. The application, as supplemented, with the permit provisions, soil-testing plan, and postmine soil performance standards set out in this Order, complies with the reclamation standards set out in the Act and Regulations.
8. The Commission may issue the permit as set out in §12.215(d) upon acceptance of a sufficient reclamation performance bond.

IT IS THEREFORE ORDERED BY THE RAILROAD COMMISSION OF TEXAS that the Findings of Fact and Conclusions of Law, permit provisions, and Soil Testing Plan contained in this Order are hereby adopted;

IT IS FURTHER ORDERED that this application for a permit for surface coal mining and reclamation operations is approved as set out in this Order; and

IT IS FURTHER ORDERED that the permit is hereby numbered Surface Mining and Reclamation Permit No. 60; and

IT IS FURTHER ORDERED that issuance of Permit No. 60 is contingent upon acceptance by the Commission of a reclamation performance bond that meets the requirements of the Act and Regulations; and

IT IS FURTHER ORDERED by the Commission that this order shall not be final and effective until 25 days after the Commission's Order is signed, unless the time for filing a motion for rehearing has been extended under Tex. Gov't Code §2001.142, by agreement under Tex. Gov't Code §2001.147, or by written Commission Order issued pursuant to Tex. Gov't Code §2001.146(e). If a timely motion for rehearing is filed by any party at interest, this order shall not become final and effective until such motion is overruled, or if such motion is granted, this order shall be subject to further action by the Commission. Pursuant to Tex. Gov't Code §2001.146(e), the time allotted for Commission action on a motion for rehearing in this case is 100 days from the date the Commission Order is signed.

SIGNED this 24th day of April, 2018.

RAILROAD COMMISSION OF TEXAS

Christi Craddick

CHAIRMAN CHRISTI CRADDICK

Ryan Sitton

COMMISSIONER RYAN SITTON

Wayne Christian

COMMISSIONER WAYNE CHRISTIAN

ATTEST:

Kathy Way
Secretary, Railroad Commission of Texas

APPENDIX I PERMIT PROVISIONS

1. No surface mining activities are approved that propose to make a cut within one hundred feet or one times the depth of the cut (whichever is greater) of the pipeline owned by DCP Sand Hills Pipeline, LLC (DCP) that currently lies in Areas G and H of the permit area. Surface mining activities that propose to make a cut within one hundred feet or one times the depth of the cut (whichever is greater) of DCP's pipeline shall only be approved upon submission of sufficient documentation to demonstrate right of entry within the area occupied by DCP's pipeline and any other required information. The sufficiency of SMECI's right of entry demonstration regarding this area shall be determined by the Commission's Office of General Counsel and the SMRD Director. SMECI will be authorized to proceed with operations that propose to make a cut within one hundred feet or one times the depth of the cut (whichever is greater) of DCP's pipeline only upon approval as indicated by the Office of General Counsel and the SMRD Director after confirmation of the pipeline's decommission and/or relocation by the Field Operations Division of the Commission's Oil and Gas Division. The language set forth in Permit Provision No. 2 does not apply to the area or entity identified in this provision.
2. SMECI has not demonstrated right of entry to disturb any oil well, gas well or pipeline, and their associated facilities; therefore, no disturbance activities are approved within 100 feet of any oil well, gas well, or pipeline, and their associated facilities. Approval of disturbance activities within 100 feet of any oil well, gas well, or pipeline, and their associated facilities, must be obtained through submittal of adequate documentation of right of entry and approval thereof by the Commission's Office of General Counsel and the SMRD Director. If right of entry to disturb an oil or gas well or pipeline, or their associated facilities, cannot be obtained, a revision to the permit shall be submitted, if necessary, no later than 180 days prior to conducting operations as proposed in the revision. This revision may be approved administratively by the SMRD Director if deemed a non-significant revision pursuant to §12.226 of the Regulations.
3. All cultural resource sites within the permit boundary, identified during or subsequent to baseline surveys, for which eligibility for nomination to the National Register of Historic Places has not been determined or for which mitigation has not been completed, shall not be disturbed by mining and/or mining-related activities. Copies of all correspondence items, including all attachments, between SMECI and the Texas Historical Commission shall concurrently be provided to the Commission for Section 125 of the permit.
4. Haulback operations are the only handling plan approved for reconstruction of the top four feet of the reclaimed surface. Any change from a haulback operation to a soil substitution operation or any other handling plan will require submittal of a revision application under §12.226. Such revision application shall include all required information pursuant to §12.134(c) and §12.335(e) and, if determined by the Director not to be significant revision pursuant to §12.226, may be reviewed administratively and approved by the Director. Implementation of such a soil substitution or any other handling plan shall be applicable only to areas disturbed after approval of that handling plan revision.
5. 60 days before the commencement of SMRD's midterm review of the permit conducted pursuant to §12.225(a) of the Regulations, SMECI shall submit additional seasonal precipitation data that is representative of the permit area. If the SMRD Director

determines during its midterm review that a 10-year extended responsibility period (ERP) is appropriate pursuant to §12.306(b), SMECI shall submit a revision to the permit that addresses all required changes to the permit based on a 10-year ERP and shall submit a supplemental or replacement bond application, if necessary, within 60 days of receiving notification of the SMRD Director's determination that a 10-year ERP is required.

6. Within 45 days following permit issuance, SMECI shall submit all supplemental information related to the approved application that was provided subsequent the submittal of Supplement No. 6. This includes the contents of Trial Amendment No. 1 and all evidence admitted into the proceeding. Additionally, inaccurate references noted in Staff Exhibit No. 3 (pre-filed testimony in response to Trial Amendment No. 1) are to be corrected by SMECI and incorporated into the permit. All supplemental information submitted pursuant to this permit provision is to be compiled in a single volume titled "Trial Amendment Volume" to be placed with the approved application.
7. SMECI may not commence mining activities within 100 feet of FM 791 or FM 140 until requisite approval to close or relocate the road from the designated authority is obtained and a copy of all requisite approvals and notices are submitted to the SMRD Director and approved.
8. SMECI must complete rough backfilling and grading within 480 days and 980 feet, as measured from the toe of the active highwall. Haulback material placement must be completed within 119 days following rough backfilling and regrading and within 1,268 feet, as measured from the toe of the active highwall. Topsoil placement must be completed within 71 days following haulback material placement and within 1,408 feet, as measured from the toe of the highwall. An additional 60 days may be added for completion of haulback material placement and topsoil placement in areas within an active Temporary Cession of Operations Area.
9. SMECI will monitor the depth of groundwater, as measured from the surface, in all LTGM wells. These data will be submitted to the Commission on a quarterly basis and in the same format as all other quarterly monitoring parameters are reported under the approved LTGM plan. Additionally, if a new or replacement well is installed, SMECI will conduct one-time sampling for all of the quarterly and annual parameters within 30 days of completion of the well and report the results of the one-time sampling to the Commission within 30 days of the sampling date.
10. SMECI will notify SMRD of the specific research and accredited university it will actively support regarding the conservation of the threatened and endangered species of the area at least 15 days prior to committing its support to an accredited university. SMECI will also notify SMRD within 15 days after the research has commenced and will submit a report to the Commission of the results of the research 45 days after its completion.
11. Prior to commencing construction of Pond G-2, Ditch G-3 and Ditch G-4 as described in Trial Amendment No. 1, SMECI shall demonstrate, in accordance with the Regulations, that the proposed designs will function as required under the Regulations as determined by the Commission in accordance with §12.226.
12. SMECI shall mark oil and gas pipelines as follows: When mining-related activities are conducted within 200 feet of an oil or gas pipeline as measured from the centerline of the pipeline nearest to mining-related construction activities, SMECI must visibly mark the

pipelines using high-visibility markers every 25 feet for the entire length of the activity. This marking interval must also be extended another 200 feet in both directions and to the outside of where the mining related activity ends.

13. Prior to commencing construction of the Area F, G and H Haulroad as described in Trial Amendment No. 1, SMECI shall demonstrate, in accordance with the Regulations, that the proposed designs will function as required under the Regulations as determined by the Commission in accordance with §12.226.
14. Within 30 days of permit issuance, SMECI shall explain the discrepancies regarding the number of impoundments depicted on Figure 129-1 in Supplement No. 1 and Exhibit 135-1-Alt in Trial Amendment No.1, and submit a revised Table 129-4 identifying the size, location and ownership of each impoundment based on the current number of impoundments within the permit area. Prior to commencing clearing and grubbing activities, SMECI shall obtain a minimum of one sample from each impoundment identified within the permit area, conduct an analysis of the samples for all parameters utilized in the approved baseline surface water characterization and submit the results of the analysis as a revision to the permit to be incorporated into the baseline surface water characterization. Sampling of the impoundments is not to commence until the first sentence of this provision has been complied with and acknowledged by letter from the SMRD Director. Samples obtained prior to permit issuance may not be submitted or referenced to demonstrate compliance with this provision. The impoundment identified as "Impoundment No. 8" in the approved permit is not subject to the sampling requirements set out in this provision. SMECI shall submit a revision to revise all required text, tables, appendices and maps to correspond with the samples obtained and analyzed pursuant to this permit provision.
15. Upon permit issuance, SMECI will conduct additional sampling for all parameters utilized in the approved baseline surface water characterization at stations SLSW-1, SLSW-2, SLSW-3, SLSW-4, SLSW-5 and A2 as identified in the application. Samples shall be collected and submitted monthly. The additional sampling required by this revision shall continue until SMECI begins to remove overburden material at a depth greater than four feet, as measured from the surface. In a revision to the permit, SMECI shall revise all required text, tables, appendices and maps to correspond to the sampling obtained pursuant to this provision and the results shall be incorporated into the baseline surface water characterization.

APPENDIX II – SOIL TESTING PLAN

(Appendix VII to Staff's Technical Analysis)

SOIL TESTING PLAN AND POSTMINE PERFORMANCE STANDARDS

F, G and H Area will be monitored on 5.7-acre grids (500' x 500'). A grid map (Exhibit 145-3) is provided showing the 5.7-acre grids, and includes the following:

1. Limits of all projected mine related disturbance;
2. The 5.7-acre grids within the F, G and H Area mine blocks;

Native Soil Haulback Monitoring Plan

Area F, G and H consists of re-spread native topsoil over native subsoil obtained from premine depth increments of 0"-TSD (Topsoil Depth) and TSD-48". A combined topsoil and subsoil depth of 48" is characterized in the native soil baseline (Section 12.134) to ensure that a minimum of four feet of reconstructed native soil material is replaced on leveled spoil and to allow for settling. Initial, one-time soil sampling will consist of composite samples from each 5.7-acre grid as may be delineated by the advance of spoil leveling. The samples will be collected, analyzed and the results reported to the Commission within two years of rough backfilling and grading and prior to submitting a request for Phase I release, except where noted in the section entitled *Partially Reclaimed Grids*. Adjacent soil samples will be taken with no less than 200 feet between them. Six soil samples per grid will be mixed to make one composite sample per depth increment. Composite samples will be representative of the 0"-TSD and TSD-48" depth intervals of the postmine soil. If a grid is less than 0.5 acre in size, it may be combined with an adjacent grid for reporting purposes without additional sampling. If a grid is greater than 0.5 acres but less than 2.0 acres, it may be sampled with an adjacent grid for sampling purposes, and sampling will be conducted on 200-ft centers. Topsoil and subsoil thickness for each individual core sampled for analysis will be provided. Samples will be collected under the direction of an agronomist or soil scientist using standard techniques for sampling soils and overburden. All samples will be prepared and shipped to the laboratory for analysis immediately after collection or otherwise immediately stored in a manner appropriate to sufficiently minimize any biological or geological changes. Grids will be monitored as follows:

1. Standard soil testing procedures for the 0"-TSD increment will be used for:
 - a. pH
 - b. plant-available nitrate-nitrogen
 - c. plant-available phosphorus
 - d. plant-available potassium
 - e. depth of placement
2. Standard soil testing procedures for the TSD-48" increment will be used for:
 - a. pH
 - b. depth of placement

Analytical procedures will be in accordance with RCT Advisory Notice ER-BA-127(b), dated May 10, 2010 and Texas Agricultural Extension Service - Soil Testing Procedures, dated March 1980, for plant-available nutrients. The analytical results and a map showing the area requested by each composite sample will be submitted to the RCT in electronic and paper formats.

Additional Elements of the Soil-Testing Plan

Maps

The soil monitoring report will include a map of the area monitored to date, including the area under review in paper and electronic formats. The map will be at a scale of 1" = 2000' or larger and will illustrate the following information:

- a. A grid system of the mine area consisting of 5.7-acre grids,
- b. Index marks identifying the Texas coordinate numbering system, and an isopach map of the top four-ft haulback removal area and cross sections for the replacement areas will be supplied on 1,000-ft centers, perpendicular to the pit alignment, by the end of the first quarter of the year following removal/replacement. The depth of haulback will be checked by surveying at every pit advance (i.e., 120 ft) the surface before and after haulback placement.

Augmentation Sampling

The 0"-TSD interval will be sampled for fertilizer augmentation and analyzed for pH, nitrate-nitrogen, and plant-available P, and K, according to the methods for plant-available nutrients found in RCT overburden parameters and procedures list, at the end of the growing season in the year prior to the first year of productivity (November to January) assessment and during the first and second years of productivity assessment. Samples will be collected and analyzed for nutrients during the dormant season prior to both the first and second years of productivity assessment when the years of assessment are nonconsecutive. Analytical results and a map showing the area involved will be provided to the RCT by the end of the first quarter of the year following each reporting period.

Sub-samples will be collected from areas of like land use and management (management units) within ERA's at a rate of approximately one sub-sample per 10 acres. Composite sub-samples will represent management units no larger than 100 acres for sampling and monitoring purposes. Management units larger than 100 acres will be subdivided where practical for sampling and monitoring purposes, each part being no larger than 100 acres. A grid line or natural boundary, such as a road or an obvious land use change, will serve as the dividing line for separating sampling units.

Partially Reclaimed Grids

Partially reclaimed grids adjacent to areas with approved variances from contemporaneous backfilling and grading and/or temporary cessation of operations, or which contain temporary structures, will be sampled as a complete grid or partial grid upon reclamation of the entire grid or partial grid and analyzed according to the approved soil testing plan. If an entire grid or partial grid is included in a variance or is composed of a temporary structure, samples will be collected to the depth of disturbance or to a maximum depth of four feet. Survey data will be utilized to construct an isopach map of any area with less than four feet of disturbance to verify that less than four feet of soil was disturbed.

Final Sampling

During the fourth year of the ERP, a random 10 percent of the 5.7-acre grids (or approved larger size grids) will be sampled and analyzed according to the initial sampling requirements. The

analysis results and a map showing the grids sampled will be provided to the RCT no later than the end of the first quarter of the fifth year of the ERP.

Demonstration of Soil Suitability

Demonstration that the reconstructed minesoil has comparable root development qualities as the premine material will be based on productivity assessment. Soil suitability will be based on the following:

POSTMINE SOIL PERFORMANCE STANDARDS WITH RESPEAD TOPSOIL OVER
PREMINE MATERIAL FROM TOPSOIL DEPTH TO FOUR FEET MONITORED ON 5.7-ACRE
GRIDS
pH 5.0 - 8.4

Soil Depth (inches)	% area
0 - Topsoil (TSD)	100
TSD - 48	100

Depth of Placement

Depth of placement (ft) will be provided for postmine intervals:

- 0" to Topsoil Depth
- Topsoil Depth to four feet

Contingency Plan

In the event the postmine soil monitoring program identified problems, an alternative soil monitoring plan will be initiated. Soil samples will be collected from the 0 to Topsoil Depth (TSD), TSD-24, 24-36, and 36-48 depth increments, or other intervals, as appropriate, based on topsoil and subsoil depths, at a density of one sample per acre for each affected grid and will be analyzed for those parameters identified by the SMRD and/or SMECI in the postmine monitoring program as a potential problem. All samples taken as part of a contingency or remediation plan will not be composited. All remediation efforts to correct problems in postmine soils will be submitted in a proposed plan for review by the SMRD prior to any remediation. This intensified sampling scheme will assist in identifying the extent of the soil problem. SMECI will notify the Commission of its re-sampling schedule to allow members of the Commission Staff to be present during this sampling. Splits of each sample taken during the re-sampling effort will be procured upon sample processing (after drying and grinding) and one provided to the Commission. The results of these analyses and a remediation plan will be submitted to the Commission. Once SMECI remediates the affected area, post-remediation samples will be collected and analyzed the same as the pre-remediation samples. SMECI will submit results and a map showing the impacted areas to the Commission to verify the successful correction of any soil problems previously identified in the postmine-soil monitoring program.