

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**SURFACE MINING DOCKET NO. C17-0018-SC-59-C
APPLICATION FOR RENEWAL/REVISION/CONSOLIDATION/EXPANSION
PERMIT NO. 59, MARSHALL MINE, HARRISON AND PANOLA COUNTIES, TEXAS**

**PROPOSED ORDER APPROVING
APPLICATION FOR RENEWAL/REVISION/CONSOLIDATION/EXPANSION
AND ISSUANCE OF PERMIT NO. 59A**

Statement of the Case

The Applicant, Marshall Mine, LLC, P.O. Box 790, Marshall, Texas 75671, has applied to the Railroad Commission of Texas (Commission), Surface Mining and Reclamation Division (SMRD and/or Staff), for a permit application for approval of a five-year renewal/revision/expansion of Permit No. 59 and consolidation with Permit No. 57, for Marshall Mine, located in Harrison and Panola Counties, Texas. The permit renewal/revision/consolidation/expansion application (the "Application") was filed on July 31, 2017, with a requested five-year permit term. The Application was periodically supplemented during the review period to address concerns noted by commission review staff. The proposed permit area is subject to revision, renewal and expansion of Permit No. 59, and consolidation of Permit No. 57, Marshall Mine Facilities, and Permit No. 59, Marshall Mine.

The proposed permit area, as consolidated and expanded, encompasses approximately 3,025 acres. The subject acreage is located approximately 15 miles south of Marshall, Texas, north of the Sabine River and east of State Highway 59 in southern Harrison County and northern Panola County, Texas. The application and filing fee were submitted pursuant to the Texas Surface Coal Mining and Reclamation Act, Tex. Nat. Res. Code Ann. Ch. 134 (Vernon Supp. 2019) (Act) and the "Coal Mining Regulations," Tex. R.R. Comm'n, 16 Tex. Admin. Code Ch. 12 (Thomson West 2019) (Regulations).

The Application was declared administratively complete by the SMRD Director by letter dated August 7, 2017. Marshall Mine, LLC filed four supplements in response to comments made by Staff, and Staff filed a Technical Analysis (TA) and four (TA) addenda. After public notice of application, comments were made by the Texas Parks and Wildlife Department and Texas Historical Commission. In addition, landowners filed comments and a hearing was requested and held to determine party status. On September 20, 2018, a Prehearing Conference was held. An Order on Prehearing Motions that was issued on October 2, 2018, held, in part, that the docket was deemed unopposed. The previous administrative law judge (ALJ) on this docket determined that the docket was unopposed. Subsequently, on February 24, 2020, an Informal Conference was held for this docket at the request of the Applicant to discuss concerns relating to permit provisions recommended by the ALJ and issues related to the performance bond. Marshall Mine,

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LLC and Staff are the only parties to this proceeding and issues between the parties regarding the Application, as supplemented, have been adequately addressed. Marshall Mine, LLC's currently accepted bond for Permit No. 59 is in the amount of \$30,000,000. The current bond for Permit No. 59 is sufficient to cover all surface coal mining and reclamation operations proposed in this docket and will remain in place. The accepted bond for Permit No. 57 is in the amount of \$200,000 and all liability under this permit is transferred to the requested Permit No. 59 renewal/revision/consolidation/expansion. Accordingly, the current bond for Permit No. 57 is released.

Based upon the Application, as supplemented, evidence presented, and Staff's TA and addenda, all factual issues have been addressed as required by the Act and Regulations as set out in the Findings of Fact, Conclusions of Law and Permit Provisions (Appendix I) and the Soil Testing Plan (Appendix II), included as Appendix I and II to this Order. The proposed order was circulated to the parties, Marshall Mine, LLC and Staff, and both parties have filed waivers of the preparation and circulation of a proposal for decision. No exceptions were filed.

FINDINGS OF FACT

Based on the evidence in the record, the following Findings of Fact are made:

1. By letter dated July 31, 2017, Marshall Mining, LLC (Applicant), P.O. Box 790, Marshall, Texas 75671, submitted an application for renewal/revision/consolidation/expansion of Permit No. 59, in which it proposes to conduct mining activities for an additional five-year permit term commencing on the permit issuance date. Marshall Mine, LLC, a Delaware limited liability company, is listed as the Applicant, and Caddo Creek Resources Company, L.L.C. (CCRC), 3900 FM 1186, Marshall, Texas, 75672, is listed as the mine operator.
 - a. Marshall Mine, LLC proposes to renew and revise Permit No. 59, which consists of approximately 2,422.90 acres, to conduct mining activities.
 - b. Marshall Mine, LLC proposes to consolidate Permit No. 59 with the adjacent Permit No. 57, Marshall Mine Facilities, which covers approximately 132.4 acres, a portion of which currently overlaps as a part of both permit areas.
 - i. Permit No. 57 was issued by Order dated March 13, 2012, in Docket No. C11-0010-SC-00-A. By letter dated May 4, 2017, the Applicant requested that the Marshall Mine, LLC's application for renewal/revision of Permit No. 57 [Docket No. C17-0012-SC-57-C] for the Facilities Permit would be held in abeyance pending the filing of the renewal/revision/consolidation application of Permit No. 59.
 - ii. On July 31, 2017, the renewal/revision/consolidation/expansion application for Permit No. 59 was filed. The Director of Hearings issued an Order of Dismissal on August 8, 2017, dismissing without prejudice the application for renewal/revision of Permit No. 57 [Docket No. C17-0012-SC-57-C] due to the consolidation of the

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application into another pending docket for Permit No. 59 [Docket No. C17-0018-SC-59-C], making the issues in the application for Permit No. 57 moot.

- c. In addition to the proposed consolidation with Permit No. 57, Marshall Mine, LLC proposes to expand Permit No. 59 by the addition of approximately 872.8 acres located southwest of the original Permit No. 59 permit boundary, as indicated in the application. Marshall Mine, LLC proposes to remove from the existing permit area approximately 350.3 acres not disturbed by surface coal mining operations located in the northwest and northeast portion of the original Permit No. 59 boundary, as indicated in the application and as supplemented.
 - d. The proposed permit area for Permit No. 59, as revised, consolidated, expanded, and reduced, encompasses approximately 3,025 acres, as described in the published public notice.
 - e. The Application was filed pursuant to the Texas Surface Coal Mining and Reclamation Act, Tex. Nat. Res. Code Ch. 134 (Vernon Supp. 2019) (Act) and the Commission's "Coal Mining Regulations," Tex. R.R. Comm'n 16 Tex. Admin. Code Ch. 12 (Thomson West 2019) (Regulations).
2. In accordance with §12.106(b) of the Regulations, Marshall Mine, LLC's application was filed on July 31, 2017, at least 180 days prior to the expiration of the permit. Additionally, Marshall Mine, LLC proposes an expansion of the existing permit boundary which requires that the portion of the proposed permit area that is addressed in the application as new land area meets all standards applicable to a new permit. The application was properly filed at least eight months prior to the projected commencement of operations as set out in §12.106(b)(1). The Director of the Surface Mining and Reclamation Division (SMRD and/or Staff) declared the application administratively complete on August 7, 2017, and transferred it to the Hearings Division for processing, as required by §1.24 and §1.41 of the Commission's General Rules of Practice and Procedure. The initial application submitted on July 31, 2017, contains seven volumes. Supplement 1 submitted on March 14, 2019, contains three volumes, and Supplement 1a submitted on March 18, 2019, contains one volume. Supplement 2, submitted on July 18, 2019, contains one volume. Supplement 3, submitted on August 28, 2019, contains one volume. Supplement 4, submitted on September 9, 2019, contains one volume.
 - a. All information contained in the supplements has been submitted for the purpose of supplementation, clarification, limitation, or correction of data and information addressed in sections of the administratively complete application. The application and all supplements were appropriately placed on file for public inspection. The information contained in the supplemental documents does not constitute a material change to an application for which additional notice must be provided pursuant to §12.212(d) of the Regulations.

application filing fee. The appropriate application fee has been received by the Commission for the Application. Documentation of payment of this fee is contained in the Commission's files. [§12.108(a)].

5. Marshall Mine, LLC submitted an original affidavit and news clippings showing publication of notice of application in accordance with §12.123 of the Regulations. Proper notice of the Application was published once each week for four consecutive weeks in a newspaper of general circulation in the locality of the surface mining and reclamation operations as follows: on December 13, 20, and 27, 2017, and January 3, 2018, in *The Marshall News Messenger* (Harrison County) and *The Panola Watchman* (Panola County). Affidavits of publication with clippings were submitted. The notice of Application as published contains all information required by the Act and the Regulations. The notices contained all required information concerning the Applicant, the location and boundaries of the proposed permit area, the availability of the Application for inspection, and the address to which comments, objections, or requests for a public hearing or informal conference on the Application were to be sent. The supplements to the Application filed after notice was published do not result in any material effects on landowners or the environment that are greater than those initially proposed or that create need for any additional notice.
6. By letter dated December 20, 2017, the Commission mailed via first-class mail or intra-agency a complete notice of application to the Texas and Federal agencies listed in §12.207(c) of the Regulations and to local government agencies, including the required divisions of the following: Texas Commission on Environmental Quality (TCEQ); Texas Historical Commission (THC); University of Texas, Bureau of Economic Geology; Texas State Soil and Water Conservation Board; Texas Parks and Wildlife Department (TPWD); General Land Office; Natural Resources Conservation Service (NRCS); U.S. Department of Fish and Wildlife Service (USFWS); U.S. Office of Surface Mining Reclamation and Enforcement; and U.S. Department of the Army Corps of Engineers (USACE); as required by §12.207(c)(4) of the Regulations; and the Harrison and Panola County Judges and Clerk's offices. Two State agencies, TPWD and THC, filed comments with the Commission with regard to the proposed Application. The substance of the agency comments is addressed in Finding of Fact Nos. 20 and 38, and related findings, *infra*.
7. By letter dated December 20, 2017, the Commission mailed by first-class mail to the list of owners of interests in lands within the permit area and adjacent lands as identified in the application at the addresses indicated on that list.
 - a. In letters postmarked January 5, 2018, some area landowners (Ruby Brown Dietz; Terry Dietz; Terrie Gray; Callie May Jordan; and John Marsh) submitted adverse comments on the Application related to the renewal of Marshall Mine, LLC's Permit Nos. 57 and 59. By letter dated January 10, 2018, the prior administrative law judge (ALJ) responded to each landowner by letter, acknowledging their comments and informing them that the deadline to request a hearing on the Application was February

20, 2018. The record does not reflect, however, that a request for a hearing was received from any of the commenters addressed in the finding.

- i. The nature of the comments of the typewritten, variously signed or unsigned letters, allege that permit approval would negatively affect multiple families, and is summarized as follows: the proposed road closures would preclude the ability of the local families to continue living in the area; the activities would destroy the families' land and would release toxins and chemicals that would harm them and the local wildlife; would displace area wildlife and would take an undue length of time for the wildlife and their habitats to recover from the damage done as a result of the mining; and would constantly expose themselves and other residents in the larger area surrounding the proposed operations to harmful coal dust. In addition, each letter exclaimed that the commenter believed that the company was "cold-hearted," and that what the Applicant was proposing in this application was "unlawful."
 - ii. One commenter, Ms. Ruby Brown Dietz, also submitted a copy of an apparent joint letter that was sent to North American Coal Royalty Company in Bismarck, ND, signed by several members of the extended family, including Ms. Ruby Brown Dietz and Callie Mae Jordan. This letter contained a handwritten footnote indicating that the family members disagreed with an amendment of the coal lease (vol. 1001140, page 2198, file 11-3-2000), the nature of which was not specified. By statute, the Commission is proscribed from involvement in the adjudication of property-rights disputes. [see Act §134.012(d).]
 - iii. Some concerns alleged by the commenters are not within the jurisdictional frame of the Regulations for permit approval or denial, including purported alterations to individual's enjoyment of the rural environment by the proposed activities, and the "cold-hearted" nature of the company. Other alleged concerns are appropriately addressed in the Regulations, particularly with respect to the lawful nature of the proposed activities.
- A. Requirements for road closures are addressed under §12.152 of the Regulations. As set forth in section .152 of the Application, the Applicant proposes the temporary closure of Harrison County Road 1328 (Ponderosa Road), for which it will obtain the approval from the Harrison County Commissioners Court, which is the governmental entity having jurisdiction for the subject road closure, and has committed to provide to the Commission appropriate documentation necessary to demonstrate closure approval, including documentation of public notice effected by Harrison County prior to action on the approval. [Finding of Fact No. 48, *infra*].

8. By letter dated January 26, 2018, Mr. Charles F. Ferguson (Mr. Ferguson) mailed a letter to the Applicant expressing concern about the application related to Marshall Mine, Permit Nos. 57 and 59. In the letter, Mr. Ferguson indicated that he represented himself as “the independent Executor and Power-of-Attorney at my discretion of Henrietta Pipkins estate,” and had concerns regarding the condition of the land owned by the Pipkins estate.
 - a. By letter dated February 23, 2018, Marshall Mine, LLC forwarded the letter to the prior presiding ALJ, Marcy Spraggins (ALJ Spraggins). In the letter, the Applicant stated, in part, that Tract R00025822 is owned by Henrietta Pipkins and is located adjacent to Facilities Permit No. 57. In that letter, Marshall Mine, LLC indicated it had not disturbed the tract in the past or present and had no plans to disturb the tract in the future. Furthermore, Marshall Mine, LLC indicated in the letter that it was not aware of any damages or adverse impacts to the tract caused by the Facilities Permit or any other activities related to Marshall Mine. By letter dated March 28, 2018, ALJ Spraggins indicated that neither Ms. Pipkins nor her estate were included on the address list provided by the Applicant. ALJ Spraggins requested that the Applicant provide an updated address so that notice may be mailed to the estate/and/or Mr. Ferguson.

- b. By letter dated April 3, 2018, a subsequent ALJ, Steven Leary (ALJ Leary) was reassigned to this docket. By letter dated April 5, 2018, ALJ Leary determined that Mr. Ferguson did not receive timely notice of the application that was mailed to landowners by Commission policy and provided Mr. Ferguson with a copy of the notice of application at the updated address. ALJ Leary, at his discretion, extended the deadline, for Mr. Ferguson to submit public comment within 30 days from the mailing date of the letter and request a hearing on the application within 45 days from the mailing date of the letter as provided by §12.211(a) of the Regulations.
- c. By letter dated May 4, 2018, Mr. Ferguson submitted a list of damages to the Henrietta Pipkins Estate, consisting of the following: tort claim, irrigation wells, groundwater usage, pond and soil, contamination, and limited exploration. By letter dated May 15, 2018, ALJ Leary informed Mr. Ferguson that he had received his letter dated May 4, 2018, in which he, on behalf of the Henrietta Pipkins Estate, provided the listed comments in opposition to Marshall Mine, LLC's application, and that the comment letter is considered part of the record in the proceeding. In that letter, ALJ Leary stated that due to concerns regarding receipt of the notice of application that he sent by Commission policy, he would extend the deadline to request a hearing to Monday, May 21, 2018.
- d. By letter dated June 21, 2018, ALJ Leary informed the parties the he received correspondence from Mr. Ferguson alleging timely filing of a request for a hearing that was submitted via email dated May 19, 2018. In that letter, ALJ Leary determined that upon review, a public hearing was required, in part, to consider any challenges to party status.
- e. On August 7, 2018, at the request of the Applicant, an informal conference was held in Austin, Texas pursuant to §12.211(c). Staff and Marshall Mine, LLC participated in-person and Mr. Ferguson participated telephonically. During the informal conference, Mr. Ferguson agreed to SMRD Inspection and Enforcement Staff to conduct an inspection of the tract of land belonging to the estate of Henrietta Pipkins and SMRD committed to notifying Mr. Ferguson of the findings following the inspection.
- f. On August 14, 2018, Marshall Mine, LLC filed a Motion to Show Authority to request that Mr. Ferguson provide documents evidencing his claims that he serves as the executor of the estate of Henrietta Pipkins. On August 15, 2018, Staff also filed a Motion to Show Authority to request that Mr. Ferguson show documentation that he had legal authority to act on behalf of the estate of Henrietta Pipkins.
- g. By letter dated August 16, 2018, Staff indicated, in part, that it was concerned that its entrance to the property of the estate could be construed as trespassing. By letter dated August 22, 2019, ALJ Leary stated, in part, that SMRD was requested to obtain any necessary permissions without delay and conduct the inspection as scheduled.

By letter dated August 23, 2018, Staff responded that it could not obtain necessary permission to inspect the area of the estate of Henrietta Pipkins until SMRD knew who had authority to speak for the estate and grant permit to inspect the tract of approximately 46.5 acres. Furthermore, in that letter Staff indicated that counsel for SMRD has researched Panola and Harrison County records and the Texas Estate Code statutes and is unaware that Mr. Ferguson has the authority to grant permission or consent to an inspection of that tract and once it is clear who can speak for either the estate or that particular tract of property, and SMRD has permission from the appropriate person(s), SMRD will inspect soon thereafter.

- h. On September 20, 2018, a Prehearing Conference was held to determine, in part, whether Mr. Ferguson was legally authorized to file a request for a hearing on behalf of the Estate of Henrietta Pipkins as sought in the motions referenced in this Finding of Fact.
- i. Following the Prehearing Conference, ALJ Leary issued an Order on Prehearing Motions on October 2, 2018. In that Order, ALJ Leary summarized, in part, that the evidence admitted during the Prehearing Conference showed the following: the subject tract of land belonging to the Estate of Henrietta Pipkins adjoins the current permit boundary for Permit No. 59 and is located, at its nearest point, approximately 1,500 feet from the permit boundary; Henrietta Pipkins died in 1978; Martha Ferguson (Ms. Ferguson), the mother of Mr. Ferguson, was named as the executrix under the will of Henrietta Pipkins and she inherited an undivided interest in the subject tract; Ms. Ferguson is living and is 93 years old and has executed powers of attorney to Mr. Ferguson; Mr. Ferguson is not named in the will as an heir; and Mr. Ferguson has not been appointed as an executor to the Estate of Henrietta Pipkins. In that Order, ALJ Leary concluded that: Mr. Ferguson was not legally authorized to file a request for hearing on behalf of the Henrietta Pipkins estate; Ms. Ferguson did not file the hearing request and, furthermore, did not authorize it be filed; and that the evidence did not establish that Mr. Ferguson had authority to represent the estate or to request the hearing on its behalf. In that Order, ALJ Leary stated that "As no effective hearing request was filed, the Application in this case will be deemed unprotested".
- j. By letter dated November 2, 2018, Mr. Ferguson filed correspondence titled "Motion for Rehearing" seeking review of the ALJ's Order on Prehearing Motions dated October 2, 2018.
- k. By letter dated November 6, 2018, the ALJ Leary responded by explaining that a Motion for Rehearing is governed by §1.128 of the Commission's Procedure and Practice Rules¹ and that under the applicable law, the period for filing a Motion for Rehearing begins upon the signing of an order or decision by the Commission.

¹ Rule 1.128, Title 16, Texas Administrative Code, Chapter 1, Subchapter H.

Furthermore, ALJ Leary explained that Marshall Mine, LLC's application remained pending and had not been decided by the Commission. In that letter, ALJ Leary stated that Mr. Ferguson's correspondence filed on November 2, 2018, appeared to seek review of the Order on Prehearing Motions dated October 2, 2018, disposing of the party status issue, was considered to be an interim ruling in the proceeding and is not subject to Motions for Rehearing. ALJ Leary stated that interim rulings are governed by §1.38 of the Commission's Practice and Procedure Rules.² In that letter, ALJ Leary determined that Mr. Ferguson had filed an interim appeal; however, Mr. Ferguson's interim appeal was not timely filed and was not forwarded to the Commissioners, pursuant to §1.38(d)(1) of the Commission's Practice and Procedure.

- I. By letter dated April 9, 2019, a subsequent ALJ was reassigned to this docket, Veronica L. Ruberto (hereinafter referred to as ALJ).
9. By letter dated February 5, 2020, the parties were informed that based on the review of the record the ALJ would recommend permit provisions to the application. In that letter, the ALJ enclosed a table titled, *Administrative Law Judge's (ALJ) Attachment No. 1, Recommended Permit Provisions*, which listed each proposed permit provision recommended and the ALJ's analysis to support each permit provision. The recommended permit provisions included Staff's sponsored permit provisions provided in Staff's September 16, 2019 Technical Analysis Addendum 3 and the ALJ's newly proposed and modified Staff's sponsored permit provisions. Furthermore, in that letter the parties were informed of the Applicant's request for a negative determination for prime farmland based on historical use of the land and Staff concurrence of the Applicant's request, and that the ALJ would propose a finding of fact that "a negative determination for prime farmland for the expansion area is denied without prejudice." In the ALJ's letter, the parties were requested to review the ALJ's Attachment No. 1 and the proposed finding of fact and indicate whether any party considered the ALJ's recommended permit provisions and finding of fact adverse in the context of 16 Tex. Admin. Code §1.121.
- a. By letter dated February 11, 2020, Staff responded that it does not consider the ALJ's modifications to Staff's September 16, 2019, TA Addendum 3, sponsored permit provision adverse, and was agreeable to ALJ's newly proposed permit provisions. In addition, Staff responded that it does not consider the ALJ's Finding of Fact "a negative determination for prime farmland for the expansion area is denied without prejudice" to be adverse in the context of 16 Tex. Admin. Code §1.121. In that letter, Staff notes that a proposed permit in Staff's September 16, 2019, TA Addendum 3, was not included in the ALJ's Attachment No. 1. Staff indicated that it continues to sponsor that

² Rule 1.38, Title 16, Texas Administrative Code, Chapter 1, Subchapter C.

permit provision and should the ALJ propose this permit provision not be adopted, Staff considers such action adverse in the context of 16 Tex. Admin. Code §1.21.

- b. By letter dated February 12, 2020, Marshall Mine, LLC responded that it does not consider the provisions adverse, and requests that the matter proceed for the Commissioners' consideration at the March 31, 2020 Open Conference; however, Marshall Mine, LLC expressed concerns about a permit provision as currently drafted as it pertains to a 600-foot buffer zone and requested an informal conference to address this concern. Marshall Mine, LLC indicated that it would withdraw its request for an informal conference if it delayed that the application be considered at Open Conference and would accept the buffer zone permit provision to facilitate timely permit issuance in light of the fact that the area impacted by the buffer zone permit provision is located in an area that will not be disturbed during the proposed five year permit term. Marshall Mine, LLC stated that even if the request for an informal conference is withdrawn, it does not waive its right to raise the issue of the appropriate buffer zone approach with Staff in future applications. In that letter, Marshall Mine, LLC noted that it agreed with the ALJ's determination that a negative determination for prime farmland for the entire expansion area is premature and would seek to obtain such a determination at the appropriate time in the future.
 - c. By letter dated February 13, 2020, the ALJ granted the Applicant's request for an informal conference and provided the parties with scheduling dates. By letter dated February 13, 2020, Staff informed the ALJ that it had conferred with Marshall Mine, LLC and agreed to hold the informal conference on February 24, 2020. Both Staff and Marshall Mine, LLC filed waivers to the 10-day notice requirements for the February 24, 2020, informal conference.
 - d. On February 14, 2020, the ALJ issued the Notice of Informal Conference and by letter of the same date informed the parties that three proposed permit provisions would be addressed, which included the Sabine River buffer zone proposed permit provision, and a bond replacement issue.
 - e. By letter dated February 27, 2020, Staff filed TA Addendum 4, documenting response to Texas Parks and Wildlife Department's (TPWD) letter dated February 21, 2020.
10. An informal conference was held on February 24, 2020, and the parties agreed to the ALJ's proposed permit provisions and Marshall Mine, LLC committed to providing a written statement that the liability which has accrued against the permittee on the Permit No. 57 area will be transferred from the existing bond for Permit No. 57 to the existing bond for Permit No. 59, as it relates to the bond replacement issue. Exhibits were admitted at the informal conference.³ By letters dated February 25, 2020, the ALJ sent an initial and

³ Staff's Exhibit No. 1-Bond Map

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subsequent post-informal-conference letter memorializing the agreed language to three of the permit provisions and issues regarding the bond replacement.

11. A verbatim transcript was made of the informal conferences and prehearing conference addressed in this finding. Audio recordings were made of the informal conferences. The prehearing conference was transcribed by a certified court reporter. The Commission maintains a complete record of all settings related to the docket.
12. On March 13, 2020, the Governor declared a State of Disaster in all Texas counties related to the novel coronavirus (COVID-19). By order dated March 17, 2020, the Director of the Hearings Division issued COVID-19 EMERGENCY RESPONSE ORDER. By letter dated March 19, 2020, the parties were informed that the Open Conference scheduled for Tuesday, March 31, 2020, had been cancelled due to the ongoing concerns for the health and safety of those appearing before the Commission, and of Commission employees, and that presentation of the subject matter to the Commissioners would be proposed at the next available scheduled conference. Subsequently, by letter dated March 21, 2020, Marshall Mine, LLC requested the ALJ grant approval to continue mining activities beyond the current permit term. By order dated March 23, 2020, the Director of the Hearings Division issued AMENDED COVID-19 EMERGENCY RESPONSE ORDER. By letter dated March 24, 2020, the ALJ remanded Marshall Mine, LLC's request to SMRD to determine whether the request was a revision, and if so, it may be approved administratively. By letter dated March 31, 2020, the SMRD Director determined that Marshall Mine, LLC's request did not constitute a significant departure from the approved operation plan in accordance to §12.226. In that letter, the SMRD Director approved a 3.3-acre area, as depicted for illustration purposes as Exhibit 139-1, *Mine Plan Detail Map Detail Map 90 Day Projection*, submitted with its request to continue uninterrupted coal production met the requirements of §12.139, and approved Marshall Mine, LLC's request to continue coal mining operations.
13. The Application includes the information required under §12.116 of the Regulations to show business organization, ownership-or-control information, a listing of current officers and directors and their addresses, and updated regulatory compliance information, and a listing of other mining permits held by the Applicant.
 - a. Marshall Mine, LLC provided a certification statement indicating that the Application includes updated ownership-or-control information. Marshall Mine, LLC acknowledges

Staff's Exhibit No. 2-Letter regarding Replacement Bond
Staff's Exhibit No. 3-Permit Provision Revision Recommendation
ALJ's Exhibit No. 1- Franchise Tax dated Feb. 21, 2020-Marshall Mine, LLC
ALJ's Exhibit No. 2- Franchise Tax dated Feb. 21, 2020-CCRC
ALJ's Exhibit No. 3- Final Order Docket No. C18-0011-SC-59-C dated March 26, 2019
ALJ's Exhibit No. 4- TDI Printout Insurance Marshall Mine, LLC dated February 20, 2020

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the requirement of §12.116(a)(1)(C) that ownership-or-control information be updated, as needed, after approval but prior to issuance of the permit. The information provided in the Application has been compared with the information contained in the Applicant/Violator System (AVS) database. The AVS database has been updated, as needed, in accordance with the changes indicated in the Application. The AVS database is operated by Office of Surface Mining Reclamation and Enforcement (OSM) to identify violators across the country. The AVS database has been queried to determine whether Marshall Mine, LLC or any of its controllers, and/or CCRC, the mine operator, or any of its controllers, identified in the Application or found in the database, currently has any outstanding violations at owned or operated coal mines in the United States. No outstanding or unabated violations were identified. This finding also indicates that there are no records of nonpayment of Abandoned Mine Land (AML) fees. Marshall Mine, LLC and CCRC are current in payment of required franchise taxes.

- b. Marshall Mine, LLC, the Applicant, is a Delaware limited liability company formed to mine reserves in, upon and underlying the lands covered by the Application which Marshall Mine, LLC has leased and/or owns in fee. The Application includes Marshall Mine, LLC's address, telephone number, employer identification number, and information of its resident agent. Marshall Mine, LLC is a wholly owned subsidiary of Cabot Norit Americas Inc., which is a wholly-owned subsidiary of Norit Americas Holdings Inc., which in turn is a wholly owned subsidiary of Cabot Corporation. The ownership-or-control information for Marshall Mine, LLC and its affiliated companies is provided in the Application.
- c. Marshall Mine, LLC has contracted with CCRC, which is listed as the mine operator, to permit, design, develop, construct, equip, and operate a surface lignite mine to supply lignite to Marshall Mine, LLC and to do all lawful things necessary to carry out said purpose. CCRC is a Nevada limited-liability company and is a wholly owned subsidiary of The North American Coal Corp., which in turn is a wholly owned subsidiary of NACCO Industries, Inc. Included in the Application is information provided regarding ownership-or-control of each of the noted companies, permit history and/or pending applications, name and address of owners of record within and/or contiguous to the proposed permit area, MSHA numbers, and violation information for each company.
- d. Marshall Mine, LLC has provided the name and address of the owners of lands to be mined and of the owners of most properties contiguous to the proposed permit area. Marshall Mine, LLC refers to Table 117-1 as the location of the names and addresses of these property owners. The column located to the far right of the table is labeled *Location of Tract* with the options of *Inside* or *Outside*. As depicted on Exhibit 117-1 (Supplement 2), Marshall Mine, LLC has not identified all of the owners of tracts contiguous to the proposed permit area. None of the areas within the proposed permit

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area for which contiguous ownership information is lacking have any new mining or mining-related activities proposed in the renewal permit term.

- i. A permit provision is necessary for compliance with the Regulations to provide all required property interest information for adjacent property tracts. This information appropriately may be provided, reviewed, and approved by the Commission in accordance with §12.226 of the Regulations.
- ii. The Commission adopts new **Permit Provision No. 1**, as set forth in Appendix I to this Order, as follows:

Marshall Mine, LLC shall, within 120 days of permit issuance, submit a revision application to identify and provide contiguous ownership information in accordance with §12.116(d)(2) of the Regulations, to include at a minimum, contiguous ownership information for the following tracts within the permit area: Tract 001D, Tract R00035425, and Tract R00007878. This revision shall also include an updated Exhibit 117-1, *Land Tracts*, to include depiction of all tracts contiguous to any part of the permit area. This revision application shall be submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations.

- e. The information contained in Marshall Mine, LLC's Application, as supplemented, is satisfactory to address the requirements of §12.116, with adoption of Permit Provision No. 1.
14. The Application, as supplemented, includes the information to comply with the requirements of §12.117 of the Regulations with the adoption of a permit provision for documentation of claimed right-of entry and operation information.
- a. The proposed permit area encompasses 44 land tracts, as depicted in the Application, as supplemented, a revised Exhibit 117-1, *Land Tracts*, which shows tract numbers, right of entry, and the proposed permit boundary. Marshall Mine, LLC provided Table 117-1, *Right-of-Entry Information for Proposed Permit Area*, in which the tract numbers, names, and addresses for each owner of surface property within (and adjacent to) the proposed permit area is listed, along with deed recordation and right-of-entry information. The proposed permit area encompasses 41 land tracts, as depicted on Exhibit 117-1, *Land Tracts* (Supplement 2). Of these 41 tracts, Marshall Mine, LLC wholly owns 17 tracts, owns an undivided percentage of 5 tracts, holds leases on 11 tracts, and does not have a right to enter 8 tracts. Marshall Mine, LLC has acknowledged that mining operations will only be conducted on land tracts that it has demonstrated right of entry, as indicted in Table 139-2. It is noted here that Tract 013A

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is mislabeled on Exhibit 117-1 (Supplement 2) as Tract 031A, which should be corrected in any future iterations of this exhibit.

- b. Marshall Mine, LLC does not identify any leasehold interests on properties that it proposes to mine, although it has mined through several oil and gas wells that were plugged and abandoned prior to mining. The proposed permit term contains one well within the area to be mined. This well is also shown to have already been plugged and abandoned. Although not included in the supplemented Application, permittees must demonstrate right of entry to mine through areas controlled by leasehold interests through identification of an accommodation agreement or other right-of-entry documentation. Marshall Mine, LLC did not provide this demonstration. However, because no active wells or unplugged boreholes exist at present within the proposed permit term disturbance area, the right-of-entry information contained in section .117 of the supplemented Application is sufficient for the proposed permit term. If a new well is installed ahead of mining in any future mine blocks, Marshall Mine, LLC will need to revise the approved premine (and possibly postmine) land use and provide the required right-of-entry demonstration prior to any mining or mining-related disturbance of the established well pad and access road.
- c. A new permit provision is necessary to comply with the Regulations that the applicant must demonstrate right of entry and provide baseline information prior to any disturbance of the areas within the requested permit area for which a demonstration has not been made. The Application indicates that Marshall Mine, LLC has requested a negative determination for prime farmland based on historical use of the land and Staff concurred with Marshall Mine, LLC's request, however a Finding of Fact will nevertheless be proposed in which "a negative determination for prime farmland for the expansion area is denied without prejudice". A negative prime farmland determination may be made by the Commission if the applicant submits sufficient proof that the tract or portion of the tract containing prime farmland soils has not been used as cropland for five or more of the ten years prior to acquisition of the tract for mining purposes pursuant to §12.3(85) and §12.138 of the Regulations. Therefore, such negative determination is premature in this Application given the applicant has not demonstrated a right to enter and begin activities on the tracts for which it requests a negative determination, as set forth in Finding of Fact No. 32, *infra*. As with the requirements to provide right-of-entry information and baseline information prior to disturbance, adequate information to support a negative prime farmland determination will also need to be provided along with a request for such determination prior to disturbance. A new permit provision is necessary to comply with the Regulations that the Applicant must demonstrate right of entry and provide baseline information prior to any disturbance of the areas. Staff recommended and the ALJ modified the language of this permit provision for greater clarity regarding the processing of the revision application. The Commission adopts new **Permit Provision No. 2**, as set forth in Appendix I to this Order, as follows:

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Marshall Mine, LLC shall not conduct any surface coal mining and reclamation operations on any tract(s) for which it has not demonstrated right of entry and/or provided required baseline information until a revision application(s) is submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations, containing:

1. documentation of right-of-entry pursuant to §12.117 for all tracts within the permit area for which a demonstration of right-of-entry to conduct mining activities has not been provided, including Tracts R00007690, R00017843, R00035425, GLO, R00014469, R00007895, R00007878, and R00007896; and
 2. cultural resources survey information pursuant to §12.125(2) of the Regulations, vegetative information pursuant to §12.132 of the Regulations, and fish and wildlife information pursuant to §12.133 of the Regulations, including Tracts R00039132, R00007690, R00017843, and R00035425.
- d. The information provided in Marshall Mine, LLC's Application, as supplemented, is satisfactory to address the requirements of §12.117, with adoption of Permit Provision No. 2.
15. The Application, as supplemented, has met the requirements of §12.118(a), (b), and (c) of the Regulations. The permit area is not within an area designated as unsuitable for surface mining activities under §§12.78 - 12.85 of the Regulations, and not within any area under study for designation in an administrative proceeding. Marshall Mine, LLC does not claim an exemption under §12.118(b). Marshall Mine, LLC will not conduct surface mining activities within 300 ft of an occupied dwelling.
16. The Application, as supplemented, includes information in compliance with §12.119 of the Regulations for the life of mine and §12.125(1) for the size, sequence, and timing of sub-areas of the mine. Areas proposed for mining during the proposed five-year permit term and for the life-of-mine area have been included in the Application. Marshall Mine, LLC indicates that the proposed term for this permit renewal is five years from the date of Commission approval. The proposed permit area includes approximately 3,025 acres and a description of the mining activities is found in the Application, which includes the estimated number of acres of lignite to be mined and tons of lignite mined, total disturbed acres, and graded and leveled acres for the permit term. The estimated acres to be revegetated and the estimated number of acres proposed to be released from Phase III reclamation liability during the permit term is found in section .145. Future permit terms

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anticipated for the life-of-mine are shown on Exhibit 125-1. Table 125-2 includes information for the proposed permit term and life-of-mine disturbance acreages.

Year	Acre of Lignite to Be Mined, Area A	Tons of Lignite to be Mined	Total Disturbed Acres	Graded and Leveled Acres
2018	53.8	240.0	60.3	54.9
2019	55.0	240.0	69.5	56.3
2020	80.6	360.0	131.8	79.6
2021	78.1	360.0	69.8	83.0
2022	75.7	360.0	50.7	77.4
2018-2022	343.2	1,800.0	382.1	351.2
2023-2027*	313.0	1,800.0	543.6	282.5
2028-2032*	323.2	1,800.0	322.3	332.3
2033-2037*	358.5	1,800.0	348.1	407.9
2038-2042*	232.7	1,800.0	160.6	362.6
Through year 2042	1,570.6	8,760.0	1,756.7	1,736.5

* Denotes out years.

17. The Application, as supplemented, provides information that complies with §12.120 of the Regulations for personal injury and property damage insurance. By memorandum dated October 14, 2019, the Commission's Office of General Counsel (OGC) reviewed and determined that Marshall Mine, LLC's submission of insurance coverage for Permit Nos. 57 and 59 indicate that it has obtained liability insurance for bodily injury and property damage in accordance with the requirement of §12.311. For each permit, Marshall Mine, LLC provided a certificate of insurance (Form SMRD-41C) signed by a person authorized to sign on behalf of Marshall Mine, LLC. Certificates of insurance (Form SMRD-41C) for each permit were provided and, respectively, indicate that: (1) Old Republic Insurance Company, Policy No. MWZY 314164-19, provides coverage for Marshall Mine, LLC Facilities, Permit No. 57 from October 1, 2019, through October 1, 2020; and (2) Old Republic Insurance Company, Policy No. MWZY 31416-19, provides coverage for Marshall Mine, LLC, Permit No. 59, from October 1, 2019, through October 1, 2020. The liability insurance provides for coverage of bodily injury and property damage in an amount adequate to compensate all persons injured or whose property is damaged as a result of surface coal mining and reclamation operations associated with each Marshall Mine, LLC permit, including damages resulting from the use of explosives and damage to water wells, and that said coverage is not less than the following minimum required amounts: Bodily injury, \$500,000 (each occurrence), \$1,500,000 aggregate and property damage, \$500,000 (each occurrence), \$1,000,000 aggregate.
18. The Application, as supplemented, meets the requirements of §12.121. Marshall Mine, LLC has included identification of other licenses and permits required in accordance with §12.121 to address all areas proposed for inclusion in the proposed permit area and provided Table .121-1, *Identification of Other Licenses and Permits*, as follows:

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Type of Permit	Issuing Authority	ID Number
Mine Identification Number	Mine Safety and Health Administration	MSHA 41-04864, 3/29/11
Coal Exploration Notice	Railroad Commission of Texas (RRC)	Notice No. 345E, Expired 4/22/18
Wastewater Discharge	Texas Commission on Environmental Quality (TCEQ)	No. WQ0004987000, Expiring 4/1/21
Water Rights Exemption	TCEQ	Texas Water Code Chapter 11 Exemption
Storm Water Notice of Intent for Construction Activities	TCEQ	General Permit No. TXR150000
Stormwater General Permit for Industrial Activities	TCEQ	Multi Sector General Permit No. TXR05DF25
Industrial Solid Waste Registration	TCEQ	Registration No. 95917, EPA ID No. TXR000083456
Clean Water Act Section 404 Permit	U.S. Army Corps of Engineers (USACE)	Pending, Project No. SWF-2017-00215
Section 404 Permit, Letter of Permission (LOP-3)	USACE	Project No. SWF-2010-00246, Issued 2/19/12
Floodplain Construction Authorization	Office of the County Clerk	Pending
Scientific Research Permit	Texas Parks and Wildlife Department (TPWD)	Jeremiah McKinney, SPR-0510-80, 5/1/10
Threatened and Endangered (Species) Relocation Permit	U.S. Fish and Wildlife Service (USFWS)	Jeremiah McKinney, SPR-0510-80, 5/1/10

Staff notes that Marshall Mine, LLC consultant Jeremiah McKinney's permit, SPR-0510-080, Status 5/1/10, is listed as the permit identification number for both a TPWD Scientific Research permit and as a USFWS Threatened and Endangered Species Relocation Permit as Application Deficiency 121-1; however, Marshall Mine, LLC clarified that the ID number SPR-0510-080 is Jeremiah McKinney's consultant number. Jeremiah McKinney will be consulted if either a TPWD Scientific Research permit or a USFWS Threatened and Endangered Species Relocation Permit is required.

19. Marshall Mine, LLC has provided the location of the public offices where the Application, as supplemented, was filed in accordance with §12.122 of the Regulations, listing itself as the Applicant, and including the location and boundaries of the proposed permit area, the location where copies of the Application are available for inspection, and the address to which comments were to be sent. A copy of the Application, as supplemented, was filed

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for public review in the offices of the Harrison and Panola County Clerks; copies were also filed with the Railroad Commission of Texas in Austin, Texas.

20. The information contained in the Application, as supplemented, meets the requirements of §12.124 of the Regulations by providing a description of the existing premining environmental resources within the proposed permit area and adjacent areas that may be affected or impacted by the proposed surface mining activities by reference to the information contained in sections .125 through .138 of the Application.
21. The information in the Application, as supplemented, meets the requirements of §12.125 and §12.151, with the adoption of a permit provision.
 - a. To address requirements of §12.125(1), Marshall Mine, LLC provided Table 125-2, *Annual Mining Acres and Tonnage*, and Exhibit 125-1, *Life of Mine Map* (Supplement 1). In Table 125-2, Marshall Mine, LLC describes the size, sequence and timing for mining during the proposed permit term, which has been subdivided into one-year mine blocks. Marshall Mine, LLC also describes the anticipated size sequence and timing of mining for future permit terms in Table 125-2, listing acreages for five-year mine blocks, and anticipates that mining will continue for this permit until Year 2042, with future renewals. The mine blocks identified in Table 125-2 are delineated on Exhibit 125-1, *Life of Mine Map*. In Supplement 1, Marshall Mine, LLC updated Exhibits 125-1 and 139-1 to show an accurate and consistent anticipated mine-pit progression. Marshall Mine, LLC plans to mine 360 tons of lignite per year during the life-of-mine period. The five one-year mine blocks in the proposed permit term are each approximately 80 acres in size. Marshall Mine, LLC anticipates that mining will continue for four additional five-year permit terms.
 - b. To address requirements of §12.125(2), Marshall Mine, LLC provided Table 125-1, *Identified Cultural Resources*, Exhibit 125-2, *Cultural Resources*, Appendices 125-1 through 125-5, and Attachments 125-1 and 2 in the initial Application for the proposed 3,025-acre consolidated and expanded permit area.
 - i. In early 2010, Marshall Mine, LLC's cultural resources consultant, Prewitt and Associates, Inc., conducted a file search at the Texas Archeological Research Laboratory (TARL) and used the Archeological Sites Atlas to obtain information about previously recorded sites in the area. This research revealed that only one site, Site 41HS269, known as the Caddo Village and Cemetery Site, was located within the approved Permit No. 59 area. Based on this file search and its topographic setting, three parts of the Permit No. 59 area were considered to have a high potential for the presence of prehistoric Native American sites—elevated landforms along Taylor Branch in the western portion of the proposed permit area, elevated landforms along an unnamed tributary flowing through the eastern portion

of the proposed permit area, and the Pleistocene terrace edge near the southern limit of the proposed permit area.

- ii. Marshall Mine, LLC referenced historic maps and aerial photographs dating back to 1863 that show the potential for historic sites. Based on these sources (1863, 1913, 1937, 1949, and 1958 maps, and 1935, 1939, 1949, 1954, 1960, 1974, 1989, 1995, 2004, 2005, 2009, 2010, 2012, 2014, 2015, 2016 aerials, see Appendix 138-2), 38 potential historic localities were identified, 30 of which date back to 1949 or earlier. Staff noted that although numerous historic localities exist, there are no publicly owned parks within the proposed permit area.
- iii. Cultural resources information provided in this application section includes the initial baseline and updated current information required under §12.125(2) and treatment and protection plan elements required under §12.151. Marshall Mine, LLC has indicated in section .125 of the Application that it has worked closely with the State Historic Preservation Officer (SHPO) at the THC to identify and evaluate historic and archaeological resources and will continue to do so in the future, including implementation of appropriate assessment, protection, and data recovery measures for archaeological sites and historic resources eligible for listing on the National Register of Historic Places (NRHP) as required at §12.125(2). Marshall Mine, LLC revised application section .125 in Supplement 2 to clearly indicate that the text of this section is referring to the cultural resources for the entire consolidated and expanded permit area.
- iv. By letters dated September 12, 2018, and August 13, 2019, the THC commented on the initial and supplemental submittals.
 - A. The THC noted that seven cultural resource sites identified by Marshall Mine, LLC, Sites 41HS269, 41HS949, 41HS958, 41HS959, 41HS991, 41PN291, and 41PN296, warranted further testing, given their unknown eligibility status for listing on the NRHP, to help determine whether some form of mitigation is needed prior to ground disturbance activities. The THC requested that such testing “take place prior to any mine-related ground-disturbing activities on the revised Proposed Permit Area” (August 13, 2019, letter from the THC, third paragraph). Marshall Mine, LLC has committed to either avoid these seven sites or conduct further assessments of, and mitigation efforts on, these sites if avoidance is not feasible. In addition, Marshall Mine, LLC also identified, in Table 125-1, 14 houses and other farm structures associated with Sites 41HS945 (Resources 1A through 1H) and 41HS948 (Resources 2A through 2F) that have been determined to be eligible for listing on the NRHP (Table 125-1, initial Application).

- B. The THC commented that "Tracts 5 and 12" (Attachment 125-1, Figure 1.1, initial Application) had not been surveyed. These tracts are coincident with Tracts 005 and 012 delineated on Exhibit 117-1, *Land Tracts*, in Supplement 2. Marshall Mine, LLC resolved this concern to THC's satisfaction by modifying the proposed permit boundary to remove the tracts, which have not been disturbed and are not proposed for future disturbance. These two tracts are no longer proposed to be included within the permitted area. Two parcels adjacent to Tract 012, identified as Tracts 022 and 023, are undisturbed by mining and are also proposed for removal from the existing permit area. These parcels contain the identified NRHP-eligible Resources 1A through 1H (on Tract 023) and 2A through 2F (on Tract 022).
- C. The THC further commented that 210 acres comprising portions of the expansion area had also not been surveyed. This area is identified in the THC letters as "Tracts 3 and 4" as depicted on Figure 1 in the cultural resources pedestrian survey report contained in Attachment 125-2 in the initial Application. The subject area comprises portions of the areas shown on Exhibit 117-1 as Parcel 3, Parcel 4, and Tract 021D. In its comment letters, THC further noted that other areas adjacent to these tracts had also not, as yet, been surveyed, specifically the areas south and west of "Tracts 3 and 4" within the proposed expansion area, as shown on Exhibit 125-2, styled as the area "between the surveyed Expansion Area [*i.e., the proposed disturbance boundary*] and the revised Proposed Permit Boundary." Marshall Mine, LLC has indicated that the lack of a survey to date for "Tracts 3 and 4" is due to not yet having obtained right of entry (ROE) to conduct the required survey activities. In addition, no survey activities have been conducted in the area between the expansion permit boundary and the future mine-plan disturbance boundary because no disturbance is planned currently in this area and none are anticipated to occur in the future. Marshall Mine, LLC proposes no mining and disturbance activities within the proposed expansion area during the five-year term (Exhibit 125-1). In Supplement 2, Marshall Mine, LLC revised Exhibit 125-2 to depict Tracts 3 and 4 and the area between these tracts and the proposed permit boundary as unsurveyed.
- D. The presence of unsurveyed areas within the proposed permit area is permissible in accordance with §12.151(b) and is consistent with longstanding Commission practice. This rule and practice allow for a dynamic schedule for surveying, wherein only portions of large proposed permit areas may need to be surveyed and an assessment of the cultural resource sites identified therein, including mitigation where necessary, prior to permit approval. Such allowance is conditioned on the requirement that cultural resource treatment actions (completion of surveying, assessment of the immediate area of the identified site, site mitigation as necessary) must occur and written approval for

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disturbance obtained from the Commission for each site, prior to conducting any mining or mining-related disturbance of each site. The Commission is the appropriate regulatory agency having approval authority for such disturbance activities within a surface coal mining permit area in Texas. Marshall Mine, LLC commits (Supplement 1, page 125-3) to conduct pedestrian survey activities for the permit-area unsurveyed areas prior to any disturbance and to provide the results to the THC for evaluation of any identified resources.

- E. Marshall Mine, LLC does not include in its proposed plan a commitment to obtain Commission approval, written or otherwise, prior to disturbance of any protected cultural resources site, including the seven sites described in paragraph 20.b.iv.A. above, and any site identified during later surveys of the currently unsurveyed areas. A new permit provision is necessary to identify all cultural resource sites, given that various areas within the proposed permit boundary have not yet been surveyed, and to ensure that those sites that may be eligible for listing on the NRHP are not disturbed prior to a determination of that eligibility.
- F. The Commission adopts new **Permit Provision No. 3**, as set forth in Appendix I to this Order, as follows:

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, including Sites 41HS269, 41HS949, 41HS958, 41HS959, 41HS991, 41PN291, and 41PN296, shall not be disturbed by mining and/or mining-related activities. Copies of all correspondence items, including all attachments, between Marshall Mine, LLC and the Texas Historical Commission shall concurrently be provided to the Surface Mining and Reclamation Division.

- c. The information contained in Marshall Mine, LLC's Application, as supplemented, is satisfactory to address the life-of-mine mining plan information requirements of §12.125(1). The information contained in Marshall Mine, LLC's Application, as supplemented, is satisfactory to address the cultural resources identification requirements of §12.125(2) and cultural resources protection plan requirements of §12.151, with adoption of Permit Provision No. 3.
22. The Application, as supplemented, provides an adequate description of the general hydrology and geology of the proposed permit area and adjacent areas as required by §§12.126 - 12.127 of the Regulations. The information contained in this section of the Application, as supplemented, is satisfactory to meet the requirements of §12.126 and §12.127.

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- a. Marshall Mine, LLC satisfies the requirements at §12.126, §12.127(a)(1), and §12.127(a)(2) to describe the general geology and geologic structure of the proposed permit and adjacent areas via its text description and geologic cross sections. Marshall Mine, LLC provides Geologic Cross Sections A-A' through G-G' in the initial submittal. In Supplement 1, Marshall Mine, LLC provided seven cross sections and an additional geologic cross section (Cross Section H-H') created using available geophysical logs. Cross Section H-H' was requested by and is satisfactory to Staff to facilitate overburden characterization in the southernmost portion of the mine-plan area within or adjacent to the Sabine River floodplain.
- b. Marshall Mine, LLC has further satisfied the requirements at §12.127(a)(2), as indicated by Staff, in its description of the structural geology of the proposed permit and adjacent areas on page 127-2 (depicted on Figure 127-2) and by including Figure 127-5, *Top of A Lignite Contour Map*.
- c. Marshall Mine, LLC meets the requirements at 12.127(a)(3) to identify and describe the occurrence, availability, movement, quantity, and quality of potentially impacted surface and ground waters by reference to information contained in application sections .128, .129, and .146.
- d. In its review of the requirements of §12.127(b), Staff requested that an additional core be drilled to the base of oxidation near the northernmost shore of Wattle Duck Pond. Marshall Mine, LLC indicated that it did not believe that an additional core in this area was immediately necessary. Staff's evaluation of the proposal in Supplement 2 concluded that Marshall Mine, LLC had scaled back the proposed five-year mine block, and no longer includes disturbance of the northernmost shore area of Wattle Duck Pond, which is characterized as being a high-value habitat avoidance area for this term; therefore, Staff concurs that an additional core is not necessary at this time. Staff notes, however, that because the distance of approximately 5,500 ft between two of Marshall Mine, LLC's baseline continuous cores (Cores CC-5-10 and CC-01-15) is too great to adequately characterize the overburden, Marshall Mine, LLC will need to install an additional core drilled to the base of oxidation near the northernmost shore of Wattle Duck Pond prior to any future mining in the proposed expansion area, including the Wattle Duck Pond area.
- e. Marshall Mine, LLC provides suitability assessments for analytes in each continuous core summary diagram in Appendix 127-C, *Continuous Core Summary Diagrams* (Supplement 2). These diagrams reflect the depth in the area represented by each core that Marshall Mine, LLC considers to be overburden material suitable for placement in the postmine top four feet. Staff noted that the materials and depths considered suitable are consistent with the topsoil/subsoil-substitution suitability assessment provided in Appendix 145-5 of the supplemented Application.

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23. The groundwater and associated information contained in the Application, as supplemented, is sufficient to meet the requirements of §12.128.
 - a. Marshall Mine, LLC addresses the groundwater hydrology for the proposed permit area and adjacent area by describing the baseline groundwater hydrology of the life-of-mine (LOM) area and by providing completion information for the baseline monitoring wells, typical well construction diagrams, well locations, geophysical well logs, quarterly groundwater levels and overburden and underburden potentiometric maps. [§12.128(a)(1)].
 - b. Marshall Mine, LLC describes the lithology and thickness of the aquifers and addresses this requirement by referencing a TWDB Publication, *Ground-Water Resources of Harrison County, Texas* (Broom and Myers, 1966). [§12.128(a)(2)].
 - c. Marshall Mine, LLC describes the location and ownership of existing wells, springs, and other ground-water resources. An adequate and up-to-date water-well inventory for the proposed permit and adjacent area has been provided in Supplement 1 in Table 128-3, with locations depicted on Figure 128-6 and identifying 88 wells, of which the majority are used for rig supply and industrial purposes. Staff compared the oil and gas well information in Appendix 128-E with the information available in the Commission's Oil and Gas Division records and determined that the oil and gas well inventory contained in the Application is complete. [§12.128(a)(3)].
 - d. Section 12.128(a)(4) requires that seasonal quality and quantity of groundwater and usage be described. Water quality descriptions need to include, at a minimum, total dissolved solids (TDS) or specific conductance corrected to 25 degrees C, pH, total iron and total manganese, approximate rates of discharge and depth to water in relation to the lignite seam, identifying each potentially impacted water-bearing stratum above and below the lignite seam. Marshall Mine, LLC met this requirement by providing quarterly baseline groundwater chemistry of wells in the LOM Permit Area in Tables 128-4 and 128-5 and analytical reports in Appendix 128-D. Chemical characteristics of the monitoring-well waters are described via a trilinear diagram (Figure 128-8). [§12.128(a)(4)].
 - e. Marshall Mine, LLC provides a description of groundwater recharge and discharge in the LOM area. Marshall Mine, LLC also described groundwater movement in the overburden and underburden. Data from seven pumping tests and two slug tests, together with the geologic description in the Application are adequate to characterize the ability of the aquifers in and adjacent to the permit area to hold and transmit groundwater. [§12.128(b)].

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- f. To comply with §12.128 for the expansion area in this Application, Marshall Mine, LLC provides clarity by revising page 128-1 to change the term "original permit boundary" to "original Permit 59 boundary" and "proposed expansion area" to "proposed Permit 59 expansion area." Marshall Mine, LLC also provides revised Figures 128-3 through 128-8. Marshall Mine, LLC's proposed plan is to verify the well depths for wells that will be impacted by mining activities prior to plugging these wells in accordance with the well-plugging procedures outlined in section .145(b)(8) of the Application. Additionally, Marshall Mine, LLC added a footnote to Table 128-3 indicating that it will verify the depths of wells that need to be plugged prior to plugging.
24. The Application, as supplemented, meets the surface-water information requirements of §12.129. The proposed permit and adjacent area (also termed the "study area" by the Applicant), is located within the hydrographic boundaries of Taylor Branch and an unnamed tributary of Caddo Creek. Taylor Branch is a tributary of Eight Mile Creek, and Eight Mile Creek and Caddo Creek are tributaries of the Sabine River. Marshall Mine, LLC indicates on page 129-1 that the Sabine River is located less than one mile southwest of the proposed study area. The watersheds located within the study area are shown on Figure 129-1, *Baseline Surface Water Monitoring Station Locations*, and their respective sizes are provided in Table 129-1. A summary description of the proposed permit area watersheds is as follows:

Watershed	Drainage Area (mi²)	Drainage Area Within Proposed Permit Boundary (mi²)
Taylor Branch ¹	5.1	1.2
Unnamed Tributary of Caddo Creek ²	2.9	1.6

¹ Watershed delineated to Eight Mile Creek confluence.

² Watershed delineated to Caddo Creek confluence.

- a. To adequately characterize the study area, a baseline-sampling program was implemented by Marshall Mine, LLC at selected monitoring locations on receiving streams. The sampling program included the measurement of streamflow and collection of monthly samples from surface-water monitoring Stations SW-1, SW-2, SW-3 and SW-4. Additional data were collected from one rain gauge, fourteen impoundments, and five springs. The crest gauge at Station SW-1 was installed in August 2010. Stations SW-2 and SW-3 were installed in April 2010. The study-area rain gauge was installed in May 2010. The locations of the surface-water monitoring stations and rain gauge are shown on Figure 129-1. Table 129-8 provides the acreage for each monitored watershed and the watershed areas are delineated on Figure 129-1. Photographs of each monitoring station are included in Appendix 129-B and monthly streamflow data are provided in Appendix 129-C. A description of the surface-

water monitoring stations is provided on pages 129-5 through 129-7. A summary description of the baseline monitoring stations follows:

Monitoring Station	Stream Name	Description	Watershed Area (ac)
SW-1	Unnamed Tributary of Taylor Branch	Crest Gage Station	248
SW-2	Taylor Branch	Crest Gage Station	2,989
SW-3	Unnamed Tributary of Caddo Creek	Continuous Stage Station	1,411
SW-4	Unnamed Tributary of Caddo Creek	Water Quality Station	492

- i. Two stage and crest gauge stations (Stations SW-1 and SW-2) and one continuous stage recorder (Station SW-3) were installed to assess the monthly streamflow conditions of the study-area watersheds. Each site was visited on a monthly basis and discharge, instantaneous stage height, and stage crest were measured. Field measurements of pH, electric conductivity (EC), and dissolved oxygen (DO) were also collected at this time. Flow conditions were only observed at Stations SW-2 and SW-3 during an April 2010 sampling event. The data in Table 129-10 show that stagnant, ponded or dry conditions were observed during the other recorded sampling events, and the data also suggest that the study-area streams (Taylor Branch and an unnamed tributary of Caddo Creek) do not have sufficient baseflow contributions to sustain flow for significant periods between precipitation events.
- ii. Water-quality samples were collected from the four surface-water monitoring stations in conjunction with discharge measurements for twelve consecutive months between April and August 2010. A discussion pertaining to the surface-water data collected from study area streams between April and August 2010 is provided on page 129-6 of the Application. As mentioned above, Marshall Mine, LLC collected water-quality samples in conjunction with discharge measurements to incorporate a baseline record of the expansion area of the permit for twelve consecutive months between November 2015 and October 2016. Surface-water samples were collected even if stagnant water conditions were observed. A range of values for TDS, pH, TSS, acidity and dissolved iron and manganese are provided. Available continuous stage data are provided in Appendix 129-D and a complete list of surface-water quality parameters is provided in Table 129-9. Analytical data for the monthly sampling events are provided in Tables 129-10 and 129-11, and laboratory analytical reports are provided in Appendix 129-E.
- iii. A rain gauge is also located within the watershed of the unnamed tributary to Caddo Creek (Figure 129-1). The rainfall and continuous stream-stage measurements collected during the baseline sampling period were used to calculate empirical CN values. Three storm events recorded in 2010 (occurring on June 9, July 6-7 and November 25) were used to develop general rainfall-runoff relationships for the unnamed tributary of Caddo Creek. Runoff hydrographs were

developed for these storms where discharge in cubic feet per second (cfs) was plotted against time in days, as shown in Appendix 129-D, *Continuous Monitor Hydrograph*. Using this plot, the total volume of runoff for the storm events was calculated in cubic feet. By converting the runoff volume to acre-feet and dividing this volume by the watershed size in acres, the runoff can be expressed as feet or inches of runoff. Using this volume and the total rainfall for the storm event, Marshall Mine, LLC calculated an average runoff curve number (CN) value of 73. With this curve number, Marshall Mine, LLC calculated the predicted runoff and volume of discharge for this watershed for the storm events described in the table on page 129-10, as follows:

Unnamed Tributary of Caddo Creek (above Station SW-3)			
Storm Event	Rainfall (in.)	Runoff (in.)	Volume (acre-feet)
2-yr/24-hr	3.65	1.26	148
5-yr/24-hr	5.30	2.49	293
10-yr/24-hr	6.35	3.35	394
25-yr/24-hr	7.85	4.64	546
100-yr/24-hr	10.40	6.95	817

- b. At the request of the Commission, Marshall Mine, LLC established a baseline surface-water monitoring station on April 21, 2010 (Station SW-5) on a minor tributary of the Sabine River, as depicted on Figure 129-1 in the Application. The station is located in the floodplain of the Sabine River in an area that is prone to flooding and backwater effects from the nearby Sabine River. Marshall Mine, LLC indicates that the watershed boundary for Station SW-5 is not clearly defined due to the flat topography within the floodplain. Above the floodplain the upper reaches of the watershed extend into an area that has already been impacted by mining activities. Surface-water runoff in this area is being diverted to the final discharge pond. Marshall Mine, LLC indicates that the entire area surrounding Station SW-5 was flooded for extended periods in 2015 and 2016; the site was inaccessible for monitoring during these flood events. Existing tables and appendices have been updated with information collected from Station SW-5 for the 12-month period between November 2015 and October 2016.
 - i. The water quality at Station SW-5 is similar to the water quality collected from other baseline monitoring stations at the Marshall Mine, LLC, as provided in Application Tables 129-10 and 129-11.
 - ii. Flow conditions range from "dry" to "flooded." Instantaneous flow measurements were collected during each sampling event and provided in Table 129-10 and in Appendix 129-C. Representative photographs are provided in Appendix 129-B. Although a continuous recorder was established at Station SW-5, the data did not prove to be useful in this hydrologic setting due to several factors, including its

location proximal to the floodplain of the Sabine River, backwater effects, uncertainty of watershed delineation, etc.

- iii. The tributary of Station SW-5 appears to be ephemeral and only flows for a short period of time following rain events. During the 12-month baseline monitoring period, Marshall Mine, LLC made a concerted effort to monitor Station SW-5 following significant rain events, when the tributary was flowing. Marshall Mine, LLC indicates that collecting samples from additional impoundments was anticipated; however, no impoundments exist in the watershed of Station SW-5.
 - iv. Marshall Mine, LLC provides a list of morphometric parameters for the watersheds of Taylor Branch and the unnamed tributary of Caddo Creek in Table 129-2. An explanation for each of the parameters is provided on pages 129-1 through 129-3, and calculations are summarized in Tables 129-3 and 129-4. Streamflow estimates are based on USGS gauging station data, the locations of which are depicted on Figure 129-2. Statistics and pertinent information regarding these USGS gauging stations are summarized in Table 129-5, and tabulated monthly discharges are provided in Appendix 129-A. The mean annual discharge volume per unit area for each of these USGS stations is provided in Table 129-6. Extrapolated monthly streamflow volumes for these stations are also provided in Table 129-6.
 - v. Marshall Mine, LLC used calculated average unit discharges for the USGS-gauged watersheds to estimate annual streamflow ranges for the study-area watersheds due to their similar characteristics. The drainage areas of Taylor Branch and the unnamed tributary of Caddo Creek are 5.1 mi² and 2.9 mi², respectively. The drainage areas of the USGS-gauge stations are an order of magnitude greater than the drainage areas that will be affected by mining activities. Additionally, the study-area watersheds are low-relief headwater streams with no known springs contributing to baseflow. The calculated streamflow volumes for the study-area watersheds are provided in Table 129-7, but Marshall Mine, LLC indicates that these streamflow volumes are liberal estimates because the watersheds monitored by the USGS stations likely have multiple baseflow components.
- c. On page 129-8, Marshall Mine, LLC indicates that approximately 30 naturally-occurring or man-made impoundments exist within the proposed expanded permit area. The locations of these impoundments, along with a listing of their property owners, are depicted on Figure 129-4, *Study Area Impoundments*. Marshall Mine, LLC also indicates that there may be small natural depressions in the area that were not detected by the aerial photography of the study area. The man-made impoundments, which primarily serve as livestock or farm ponds, are dispersed throughout the proposed permit area. The impoundments were constructed using earthen embankments in order to impound runoff from intermittent streams in the headwaters of the drainage basins in the proposed permit area. A representative

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population sampling of 14 ponds located within the proposed permit area was obtained. These ponds are shown on Figure 129-1.

- d. Marshall Mine, LLC discusses seeps and springs on pages 129-8 of the Application. Five springs/seeps were sampled by Marshall Mine, LLC in the proposed permit area in February 2011. All five springs/seeps are located in the southwest portion of the proposed permit area within the Sabine River floodplain. Marshall Mine, LLC indicates that the nature of the discharges from each spring/seep were diffused. The average field pH for the springs is 6.3 s.u., ranging from 5.8 to 6.6 s.u. TDS concentrations for the spring discharge range from 158 to 576 mg/L. Dissolved iron concentrations range from 0.6 mg/L to 5.2 mg/L, dissolved manganese concentrations range from 0.1 mg/L to 0.6 mg/L, and acidity concentrations range from <10 mg/L to 151 mg/L.
25. Marshall Mine, LLC addressed the alternative water supply information requirements of §12.130 of the Regulations in the initial Application in a document titled, *Section 12.130, Alternative Water Supply Information, Marshall Mine, LLC, Permit No. 59, Application for Renewal/ Revision/Consolidation, Harrison and Panola Counties, Texas*, which was prepared by Mr. Keith A. Wheeler, a licensed professional geoscientist in the State of Texas. The TCEQ Water Rights Master File was reviewed by Mr. Wheeler to see if any new water rights exist downstream of the proposed Marshall Mine, LLC permit area in Harris and Panola Counties that had not been previously identified. No additional or new water rights were identified in the Application as a result of this review.
 - a. Marshall Mine, LLC provides a list of alternative water sources that could be used should downstream users be determined to be impacted by activities within the proposed permit area. Alternative water sources identified by Marshall Mine, LLC include: impoundments; water wells from deep water-bearing sands in the Wilcox Formation below the lignite; and the local rural water supply system.
 - b. Eighty-six (86) private groundwater wells are identified within the proposed permit area. The wells are primarily for rig supply and are generally completed to depths of 200-400 ft (see Table 128-3, initial Application) in Wilcox Group sands below the lowest mineable lignite seam.
 - c. Marshall Mine, LLC has acknowledged its responsibility to provide an alternative water supply should users in the vicinity of the current and proposed permit area are impacted. The information contained in the Application meets the alternative water-supply information requirements of §12.130.
26. The Application, as supplemented, meets the requirements of §12.131 of the Regulations. Marshall Mine, LLC provides in section .131 of the Application a document titled, *Section 12.131, Climatological Information, Marshall Mine, LLC, Permit No. 59, Application for Renewal/Revision/Consolidation, Harrison and Panola Counties, Texas*, which was prepared by Mr. Keith A. Wheeler, a licensed professional geoscientist in the State of

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Texas. Mr. Wheeler indicates that the proposed permit area lies in the subtropical humid climatic region of Texas, as depicted on Figure 131-1 (initial Application).

- a. Mean monthly and total annual precipitation data are based on available data collected at the National Weather Service (NWS) station in Longview, Texas (cooperative NWS Station 415342), located about 20 miles west/northwest of the proposed permit area, for the period 1902 through 2009 (Table 131-1, initial Application). The mean annual precipitation is reported as 48.9 inches per year. Marshall Mine, LLC indicates that historically an extended wet season occurs from October through June and the driest months are typically July and August. Marshall Mine, LLC indicates that a rain gauge was installed about 0.5 mile southwest of the proposed permit area within the watershed of an unnamed tributary to Caddo Creek, as depicted on Figure 129-1 (initial Application). Monthly precipitation data collected at this station and the nearby South Hallsville No. 1 Mine (Permit No. 33H) from January 2010 through March 2011 are provided in Table 131-2. Marshall Mine, LLC acknowledges (Table 131-2 footnote that the precipitation data for January and February 2011 at the Marshall Mine, LLC represent partial data due to a rain-gauge malfunction. Staff noted a concern in its review that Table 131-2 needed to be replaced by a table containing data for a longer period of record in order to reflect multi-year seasonal variations and allow correlation with the data in Table 131-1, and also indicated that it was unclear whether the rain totals in Table 131-2 were from the same rain gauge as used for Table 131-3. Marshall Mine, LLC revised section .131 in Supplements 1 and 2 to update Tables 131-2 and 131-3 with additional information and also to note that monitoring of the rain gauge for these data was discontinued in 2010 and re-established in a nearby location in 2012, which explained why the revised precipitation totals in Table 131-3 were separate from those in Table 131-2.
- b. The monthly low and high temperatures for the period of record (1902 through 2009) are also provided in Table 131-1. Marshall Mine, LLC indicates that the hottest months of the year are July and August, while December and January are the coldest. The 50 percent probability of occurrence of the last spring and first fall frost (March 20 and November 12, respectively) were obtained from a cooperative NWS station in Marshall, Texas, located about 15 miles north of the proposed permit area.
- c. Gross lake-surface evaporation data for the region were compiled from the Texas Water Development Board (TWDB) files for gross monthly evaporation and are also provided in Table 131-1 (initial Application). The TWDB evaporation data provided are from TWDB Quadrangle 513, which has a gross annual evaporation of 48.89 inches.
- d. The NWS station located in Lufkin, Texas, about 75 miles south of the proposed permit area, was used to obtain wind speed and direction data. Seasonal wind speed and direction frequencies are based on weather observations for the period 1961-1980 and seasonal wind roses are provided on Figures 131-2 through 131-5. From these

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figures, the windiest season is spring, and the most frequent wind direction is south based on the 16-point compass.

27. The Application, as supplemented, meets the requirements of §12.132 of the Regulations, with the adoption of a permit provision. The Application in section .132 contains baseline vegetative information for the proposed permit area.
- a. Marshall Mine, LLC describes vegetation communities on pages 132-3 through 132-7 and pages 132-13 through 132-15. Sampling methodology for the floristic survey (conducted in 2010 through 2011 and supplemented from 2014 through 2016) and a description of the criteria measured are contained on pages 132-7 through 132-10. A representative listing of vascular plant species stemming from these floristic surveys and that are typical of the vegetation of the area, is provided in Table 132-2.
 - b. Marshall Mine, LLC describes on pages 132-11 through 132-17 the results of the floristic survey. A total of 235 species in 187 genera representing 86 families of vascular plants were documented within the proposed permit area. Marshall Mine, LLC indicates the species encountered are representative of the flora of the Pineywoods region of Texas.
 - c. Exhibit 132-1 and Table 132-1 delineate the twelve primary vegetation communities identified within the proposed permit area, listed as follows:

Community Type	Areal Extent (Acres)	Percent of Total Area
Mixed Hardwood/Pine Forest	1,279.9	42.3
Pine Plantation	638.8	21.1
No Entry Tracts	283.3	9.4
Clear-cut Regrowth	235.4	7.8
Floodplain Forest	212.7	7.0
Improved Pasture	199.4	6.6
Disturbed	70.0	2.3
Seasonal Swamp	34.6	1.1
Hydric	26.9	0.9
Stream Terrace	16.6	0.5
Riparian Forest	15.6	0.5
Aquatic	8.6	0.3
Cypress Slough	1.8	0.1
Total	3,023.6	100.0

Marshall Mine, LLC acknowledges that it has not yet obtained ROE to approximately 283.3 acres within the proposed permit area; hence, these 283.3 acres were not accessible at the time of the 2014 to 2016 surveys. Staff notes in its TA that any areas

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for which ROE is subsequently attained must be surveyed for baseline land use and floristic data prior to any mining activities.

- d. On pages 132-10 and 132-11, Marshall Mine, LLC discusses the known rare, threatened, and endangered species and communities of interest for the general area. The earth fruit (*Geocarpon minimum*), Neches River rose-mallow (*Hibiscus dasycalyx*) (NRRM), Texas trillium (*Trillium texanum*), Warner hawthorn (*Crataegus warneri*), panicked false indigo (*Amorpha paniculata*), and the water oak-willow oak (*Quercus nigra-Quercus phellos*) series community all potentially occur within the proposed permit area.
 - i. Marshall Mine, LLC indicates that TPWD identified earth fruit within the general vicinity of the proposed permit area, but that no appropriate habitat was found in the proposed permit area itself, nor was any encountered during any of the vegetation surveys. Marshall Mine, LLC indicates that there is a lack of suitable habitat, and therefore earth fruit is unlikely to occur within the proposed permit area. Staff noted that Marshall Mine, LLC did not indicate when the established population was identified, or what distance the identified population was from the proposed permit area. Staff also noted that Marshall Mine, LLC did not indicate when its survey for earth fruit within the proposed permit area was conducted. Since earth fruit is only detectable in late winter or early spring around the time that it produces flowers (February through March), Staff concluded that Marshall Mine, LLC needed to provide details regarding the potential habitat locations and dates for this plant survey or conduct a survey in areas of potential habitat for earth fruit in February through March. In response to the noted concerns, Marshall Mine, LLC revised the description on page 132-16 to indicate that no suitable habitat for earth fruit was identified within the proposed permit area and that the closest observed population, identified by TPWD in 2009, was 2,400 ft west of the proposed permit area. This information satisfied Staff's concerns.
 - ii. Marshall Mine, LLC indicates that appropriate habitat for the NRRM occurs in the general vicinity of the proposed permit area, but has not been identified within the proposed permit area itself. Because habitat suitable for the NRRM will be encountered within the permit area as mining progresses, Marshall Mine, LLC surveyed for the NRRM in mid-July through late August in 2015 and 2016. The NRRM was not observed during the surveys. Marshall Mine, LLC indicated in the initial Application that it planned to survey for the NRRM in 2017 also. In Supplement 1 to the Application, Marshall Mine, LLC revised the text on page 132-16 to include a summary of the results of the 2017 NRRM survey.
 - iii. An area of potential habitat for Texas trillium occurs in the proposed permit area. Marshall Mine, LLC surveyed in mid-March and mid-April of 2015 and 2016. No

colonies or individuals were observed during the surveys; however, Marshall Mine, LLC indicates that an occurrence within the proposed permit area is possible.

- iv. Marshall Mine, LLC indicates that while Warner hawthorn was not observed during the vegetation surveys, an occurrence within the proposed permit area is possible.
- v. Surveys for Panicked false indigo occurred in May and June of 2015 and 2016, resulting in a finding of two colonies. The first colony, consisting of four plants, was found within the understory of a mixed hardwood-pine forest adjacent to a pond. The second colony, consisting of 30-40 stems, was found within a well-established pine plantation. The location of these populations is provided on Exhibit 132-1. Protective measures for Panicked false indigo are described in section .144, Appendix 144-1 of the Application.
- vi. As described by Staff, water oak and willow oak series is a natural plant community that occurs in bottomland hardwood vegetation types. Marshall Mine, LLC states that although water oak and willow oak both occur within the proposed permit area, they were found as components of the mesic mixed hardwood-pine forest vegetation type, and not found as a dominant species in a bottomland or riparian situation. No evidence for the occurrence of water oak-willow oak series was found within the proposed permit area.
- vii. TPWD noted by comment letter that in April 2019, the agency made changes to its lists of threatened and endangered species. Sections .132, .133, and .144 have not been updated to reflect these changes. The additional species added to TPWD's Harrison County list need to be added to the baseline information.
- viii. Marshall Mine, LLC indicates that it had no ROE to approximately 283.3 acres of the proposed permit area at the time of the 2014 through 2016 field surveys and therefore was unable to conduct surveys for rare, threatened and endangered species in this area. Additionally, Marshall Mine, LLC indicates that this area was not included in the previous 2010 through 2011 surveys because it was not located within the permit area proposed at that time.
- ix. A new permit provision is necessary to ensure compliance with the Regulations that require detailed protection plans for rare, threatened, and endangered species occurring in the area of the proposed operations. Staff recommended this permit provision and the ALJ modified the language for greater clarity regarding the processing of the revision application. The Commission adopts new **Permit Provision No. 4** as set forth in Appendix I to this Order, as follows:

Within 120 days of permit issuance, Marshall Mine, LLC shall submit a revision application to the Director of the Surface Mining and

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Reclamation Division to update sections .132, .133, and .144 to reflect the current Texas Parks and Wildlife Department list of rare, threatened, and endangered species for Harrison County. This revision application shall be submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations.

- e. As indicated, Marshall Mine, LLC portions of the proposed permit area were not included in the previous surveys for rare, threatened, and endangered species because it was not located within the permit area proposed at that time. Staff noted in its review of section .132 that areas for which ROE has not been demonstrated must be surveyed for general baseline vegetative information in addition to rare, threatened, and endangered species prior to any mining activities once ROE is obtained. The information provided in Marshall Mine, LLC's Application, as supplemented, is satisfactory to address the requirements of §12.132, with adoption of Permit Provision No. 4.
28. The Application, as supplemented, meets the requirements of §12.133 of the Regulations. In section .133 of the Application, Marshall Mine, LLC describes the rare, threatened and endangered fish and wildlife species that have potential to occur in Panola and Harrison Counties on pages 133-4 through 133-9 (Supplement 2). Migratory birds, bald eagles, game species, and species of greatest conservation need and their potential to occur within the proposed permit area are described on pages 133-9 and 133-10. Marshall Mine, LLC indicates on page 133-9 that numerous migratory bird-species are known to travel through Harrison and Panola Counties given its proximity to the Central and Mississippi flyways. Observation and comparison data for all bird species with a reasonable potential to occur within the proposed permit area are provided in Table 133-4 (Supplement 1).
- a. Based on the information in Table 133-3 in the Application (Supplement 2), and the USFWS and TPWD lists of threatened and endangered species for Harrison and Panola Counties, following is Staff's summary of information about threatened and endangered species with potential to occur in or near the proposed 3,023.6-acre permit area:

Species	Protected Status	Record of Occurrence
Fish		
Blackside Darter	State-Threatened	None recorded in the proposed permit area, and not likely to occur due to being outside of its known range.
Bluehead Shiner	State-Threatened	None recorded in the proposed permit area, and not likely to occur due to being outside of its known range.

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Species	Protected Status	Record of Occurrence
Creek Chubsucker	State-Threatened	None recorded in the proposed permit area, but an occurrence is possible due to proximity of the Sabine River.
Paddlefish	State-Threatened	None recorded in the proposed permit area, but it does occur in the Sabine River, which runs along the proposed permit area.
Reptiles		
Alligator Snapping Turtle	State-Threatened	None recorded but it may occur in the aquatic habitat within the proposed permit area, and likely occurs in the Sabine River.
Northern Scarlet Snake	State-Threatened	None recorded in the proposed permit or adjacent areas, but an occurrence is possible due to presence of marginal habitat.
Timber Rattlesnake	State-Threatened	Observed within the proposed permit area. Future occurrences are likely due to presence of suitable habitat.
Birds		
American Peregrine Falcon	State-Threatened	None recorded in the proposed permit or adjacent areas, but possible migrant, and an occurrence is possible due to the proximity of the Sabine River.
Peregrine Falcon	State-Threatened	None recorded in the proposed permit or adjacent areas, but possible migrant, and an occurrence is possible due to the proximity of the Sabine River.
Bachman's Sparrow	State-Threatened	Observed within the proposed permit area.
Bald Eagle	State-Threatened	Observed within the proposed permit area. Future occurrences are likely due to presence of suitable habitat and close proximity to the Sabine River.
Interior Least Tern	State and Federally-Endangered	None recorded in the proposed permit or adjacent areas, but a possible migrant.
Piping Plover	State and Federally-Threatened	None recorded in the proposed permit or adjacent areas, but a possible migrant.
Red-Cockaded Woodpecker	State and Federally-Endangered	None recorded in the proposed permit or adjacent areas and unlikely to occur due to limited habitat.
Wood Stork	State-Threatened	None recorded in the proposed permit or adjacent areas, but an occurrence is possible due to presence of suitable habitat.

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Species	Protected Status	Record of Occurrence
Mammals		
American Black Bear	State-Threatened	None recorded in the proposed permit or adjacent areas, no recent sightings in Harrison County, but an occurrence is possible due to presence of suitable habitat.
Louisiana Black Bear	State-Threatened	None recorded in the proposed permit or adjacent areas, but an occurrence is possible due to presence of suitable habitat.
Rafinesque's Big-Eared Bat	State-Threatened	None recorded in the proposed permit or adjacent areas, but an occurrence is possible due to presence of suitable roosting habitat.
Red Wolf	State and Federally-Endangered	Extirpated; no longer occurs in Texas.
Mollusks		
Louisiana Pigtoe	State-Threatened	None recorded in the proposed permit area, but it does occur in the Sabine River, which runs along the proposed permit area.
Sandbank Pocketbook	State-Threatened	None recorded in the proposed permit area, but an occurrence is possible due to proximity of the Sabine River.
Southern Hickorynut	State-Threatened	None recorded in the proposed permit area, but it does occur in the Sabine River, which runs along the proposed permit area.
Texas Heelsplitter	State-Threatened	None recorded in the proposed permit area, but it does occur in the Sabine River, which runs along the proposed permit area.
Texas Pigtoe	State-Threatened	None recorded in the proposed permit area, but it does occur in the Sabine River, which runs along the proposed permit area.
Plants		
Neches River rose-mallow	Federally-Threatened	None recorded in the proposed permit or adjacent areas, but an occurrence is possible due to presence of marginal habitat.
Earth fruit or Tinytim	State and Federally-Threatened	None recorded in the proposed permit area, unlikely to occur due to lack of suitable habitat.

- b. Marshall Mine, LLC surveyed for birds using the variable strip transect (VST) method, road-cruise surveys, and general birding methodology, as described on pages 133-11 and 133-12 (Supplement 2). VST and general birding data were collected from September 21 through 25, 2015, and April 25 through 29, 2016, for the fall and spring surveys, respectively. The bird species of highest concern with potential to occur are the Bald Eagle and Bachman's Sparrow. Marshall Mine, LLC conducted a combined winter bird survey and eagle nest survey from February 22 through 26, 2016, to obtain further absence/presence information on these species. The survey was conducted using general birding methodology at Transects B1 through B6 (Exhibit 133-1, Supplement 1) and covered the clear-cut and pine plantation habitats. Marshall Mine, LLC indicates that for the fall, spring, and winter bird surveys, sites were visited twice with a day between visits. A pedestrian-style survey was conducted for eagle nests during the rest days of the winter bird survey. The winter bird survey and eagle survey were conducted during leaf-off conditions. Habitats surveyed for eagle nests included the seasonal swamp and floodplain forest where tree sizes were adequate, and surveying was conducted by two staff personnel experienced in the identification of eagle nests walking a switchback transect pattern with approximately 50 meters between transects. These surveys were initiated 30 minutes after sunrise until adequate coverage of the habitats was obtained.
- c. Small to medium-sized mammal information was obtained through live trapping, and camera stations and night road-cruise surveys provided information on medium to large mammals. On page 133-12 and 133-13 (Supplement 2), Marshall Mine, LLC indicates that live trapping was conducted for three nights in both the fall 2015 (September 21 through 25, 2015) and spring 2016 (April 27 through May 1, 2016). Eleven trap lines were variously placed in the floodplain forest (three traps), pine plantation (three traps), clear-cut regrowth (three traps), and seasonal swamp habitats (two traps) within the 589.5-acre surveyed portion of the expansion area. Five camera stations were placed throughout the 589.5-acre surveyed portion of the proposed expansion area and were monitored from September 7 through November 30, 2015, and February 22 through May 1, 2016. Trap and camera station locations are depicted on Exhibit 133-1 (Supplement 1).
- d. Bat information was gathered using a general roosting/cavity survey. Marshall Mine, LLC indicates in its methodology description on page 133-13 (Supplement 2) that although no manmade above-ground structures or caves were found within the site, suitable roosting trees are common, and a single large culvert is also located along the primary access road. The roosting/cavity survey was conducted from April 4 through 8, 2016, by three experienced staff. Further information on bat presence/absence was obtained through an acoustic survey. Acoustic data were collected from April 4 through 12, 2016.

- e. Information on reptiles and amphibians was collected through a combination of visual encounter surveys (VES), general road-cruise observations, live-trapping, and chorus-call surveys. VES surveys were conducted from September 19 through 23, 2015, and April 11 through 15, 2016, as described on pages 133-14 and 133-15 (Supplement 2). Chorus call surveys were conducted on March 16 through 20, 2015, and April 11 through 14, 2016. Live trapping for turtles and amphibians was conducted from April 22 through 25 and September 12 through 16, 2016. Six turtle-trapping sites were established. Each trap was set for a minimum of four nights per season and checked daily. Five snake-trapping sites were also established. Each trap was monitored on weekly basis during the survey period which included May 1 through December 1, 2015, and March 16 through November 9, 2016.
- f. Surveying for fish, including backpack electrofishing, boat electrofishing, and seining, occurred at two sampling events, one in fall 2015 and the other in spring 2016. Seven sites were sampled after a relatively dry summer, on September 21 through 23, 2015, and thirteen sites were sampled in wetter conditions in the spring 2016, as described on pages 133-15 through 133-18 (Supplement 2). Macro-invertebrates were surveyed using five-minute kick-net samples and sediment-grab samples, as described on pages 133-18 and 133-19 (Supplement 2). Freshwater mussels were surveyed using hand and eye methods in the fall of 2015. Marshall Mine, LLC indicates on page 133-19 that areas in and around the quickly drying water sources were searched for mussel shells. The survey methods used were not species-specific but were adequate to determine absence/presence potential for mussels that are State-listed as threatened.
- g. Marshall Mine, LLC discusses the results of the various surveys on pages 133-19 through 133-24 (Supplement 2). On page 133-19, Marshall Mine, LLC indicates that survey efforts within the proposed permit area resulted in the detection of 111 avian species. An updated index of birds that have been documented in the proposed permit area is provided in Table 133-4 in the Application. Table 133-5 contains habitat-specific data from the avian VST. Table 133-6 is a list of the avian species observed during these surveys. Marshall Mine, LLC indicates on page 133-19 of the Application that while no eagles or eagle nests were observed during the surveys, the potential for occurrence still exists given the presence of suitable habitat and documented observations at the nearby Rusk Mine. Marshall Mine, LLC also indicates that although no Bachman's sparrows were observed, areas within the clear-cut regrowth and pine plantation provide marginal habitat and, therefore, occurrence is possible.
- h. On page 133-20, Marshall Mine, LLC indicates that 26 mammal species were observed within the proposed permit area during the 2015 through 2016 surveys (Table 133-7). It further indicates that live trapping resulted in 1,650 small mammal trap nights and 264 medium mammal trap nights. Camera monitoring stations collected a total of 451 images. While numerous cavity trees were observed and inspected during the survey, no bat roosts or cavities were observed within the

proposed permit area. Marshall Mine, LLC indicates on page 133-21 that bats were observed in flight on four different occasions at dusk prior to the start of spring chorus calls. Acoustic data identified seven different bat species. Marshall Mine, LLC notes that no occurrences of Rafinesque's big-eared bat were recorded but, nevertheless, an occurrence could be possible given the presence of suitable habitat and the difficulty in detecting the species using acoustic equipment.

- i. In the initial Application, Marshall Mine, LLC indicated that the Louisiana Black Bear was listed federally as threatened, but did not indicate that the mammal was also State-listed. In Supplement 2, Marshall Mine, LLC corrected the text to indicate that the Louisiana black bear (*Ursus americanus luteolus*) is also State-listed as threatened. Marshall Mine, LLC also indicated in the initial Application that there was a lack of suitable habitat for the species. It revised the text in Supplement 2 to indicate that, per the TPWD and Staff, this species occurs in bottomland hardwoods and on large tracts of inaccessible forested areas and that, as such, there is not a lack of suitable habitat within the proposed permit area for this species.
- j. As described on page 133-21 (Supplement 2), the 2015 through 2016 herptile surveys resulted in a detection of 37 herptile species. Two turtle species, one snake, and three anuran species were observed using live traps near aquatic sites. Snake trapping resulted in an observance of 60 individuals of 12 different species of snakes. Three timber rattlesnakes were captured in the fall of 2016 under a valid TPWD-issued Species Handling Permit. VES and chorus call surveys resulted in the observation of 30 herptile species, with the greatest species diversity in forested floodplain habitat and the highest total number of individuals observed or captured in the hydric habitats and cypress slough. Snakes and anurans were the most common herptile species groups detected.
- k. As described on pages 133-21 and 133-22 (Supplement 2), 6,050 individual fishes of 42 species were collected in and around the proposed permit area (Table 133-15, initial Application). No fish species of concern were observed during the 2015-2016 surveys. Marshall Mine, LLC indicates on page 133-22 that the western sand darter is considered the primary species with a potential to occur due to the presence of suitable habitat and its known distribution within the Sabine River and the presence of species within the proposed permit area which are known to occupy similar habitats. Nevertheless, no western sand darters were observed.
- l. Marshall Mine, LLC indicates on page 133-23 that 2,250 individual macroinvertebrates representing 147 different taxonomic groups were identified. As a result of the 2015 survey for mussels, two recently dead valves of Fragile Papershell (*Leptodea fragilis*), and one long-dead Yellow Sandshell (*Lampsilis teres*) were located on or near the proposed permit area. Other shells found were several recently dead Pondhorn (*Unio merus tetralasmus*) located in a dry stream bed approximately 0.5 miles

southeast of the expansion area. As a result of the 2016 survey for mussels, two additional recently-dead shells of Fragile Papershell and six live Texas Lilliput (*Toxolasma texasense*) were observed. Marshall Mine, LLC indicates on page 133-24 that no fresh-water mussel species of concern were observed during the 2015 through 2016 survey events. Based on the results of these surveys and the highly ephemeral nature of the proposed permit area surface waters, Marshall Mine, LLC believes it is unlikely that any threatened mussels occur in the area.

- m. Marshall Mine, LLC discusses habitats of unusually high value for fish and wildlife on pages 133-24 and 133-25. Marshall Mine, LLC indicates that there are no designated critical habitats within the project area. Marshall Mine, LLC further indicates that impacts to waters of the United States within the approved permit area are authorized under USACE Project No. SWF-2010-00246, and adds that a Preliminary Determination of Jurisdiction (PDJ) for the proposed permit area is currently being prepared for submittal to USACE and will be included in Appendix 133-3 upon USACE verification. In Supplement 2, Marshall Mine, LLC includes excerpts from the PDJ currently in preparation. Marshall Mine, LLC's consultation with TPWD indicated that the Water Oak-Willow Oak (WA-WI) plant community, colonial water bird rookeries, Paddlefish habitat, and mussel sanctuaries are potentially present due to their presence within and surrounding the Sabine River. An active water bird rookery was observed approximately 730 meters to the south of the proposed permit area. Additionally, from Toledo Bend to the Panola/Rusk County line, the Sabine River is identified by TPWD as an ecologically significant stream section. The Sabine River provides habitat for the State-listed threatened paddlefish and several State-listed threatened fresh-water mussel species. Marshall Mine, LLC indicates on page 133-25 that it does not currently intend to impact the Sabine River and, therefore, impacts to these species or their associated habitats is not likely.
- n. Marshall Mine, LLC indicates on page 133-1 that site-specific information was obtained through a detailed literature review and onsite surveys from the fall of 2009 through the fall of 2016. Due to lack of ROE to a large portion of the expansion area, only 589.5 acres of the proposed 872.8-acre expansion area were surveyed; 283.3 acres were not surveyed.
- o. The proposed permit area is located within Harrison and Panola Counties within the Pineywoods ecoregion of Texas. Tables 133-1 and 133-2 contain the same information as Tables 132-1 and 132-2, respectively, described in Finding of Fact No. 26.c., *supra*, to support Staff's and Marshall Mine, LLC's discussions regarding fish and wildlife baseline information requirements.
- p. On page 133-1, Marshall Mine, LLC indicates that detailed site-specific fish and wildlife survey information collected for the original Permit No. 57 and Permit No. 59 applications, including survey methodologies, is contained in the respective approved

permits. The results from those surveys, which were conducted by consultant HF & Associates, Inc. (HFA) from 2009 to 2011, were provided in this Application in Tables 133-3 through 133-18. Environmental consultant Blackland Environmental, LLC (Blackland) conducted the surveys in the 589.5-acre accessible portion of the expansion area.

- q. Wildlife surveys and methods employed for the proposed permit area are described on pages 133-10 through 133-19 (Supplement 2). These surveys were conducted from 2009 through 2011 and 2014 through 2016. Marshall Mine, LLC indicates on page 133-10 that the 2009 through 2011 surveys gathered information on protected species only, and the 2014 through 2016 surveys targeted general species groups as well as rare, threatened or endangered species (species of concern). Surveys from 2014 through 2016 covered the above-described 589.5 acres within the expansion area to which it had access. Marshall Mine, LLC further indicates that where a general survey protocol was not adequate to obtain information on a species of concern, a species-specific survey was conducted.
29. The Application, as supplemented, addresses the requirements of §12.134 of the Regulations. Marshall Mine, LLC provided adequate soil survey information for the permit area consisting of: a map delineating different soils; soil identification; soil description; and present and potential productivity of existing soils. The applicant proposed to use selected overburden materials as a supplement or substitute for topsoil, the application shall include results of the analyses, trials, and tests required under §12.335 of the Regulations. Marshall Mine, LLC provided soil-resources information for the proposed 3,025-acre permit area in section .134 of the initial Application. Consultant Edward F. Janak, CPSSC, P.G., prepared section .134 (soil information) of the Application.
 - a. Marshall Mine, LLC identifies the soil map units (SMUs) in the permit area, as delineated using the NRSC WebSurvey website for Harrison and Panola Counties, on Exhibit 134-1. Also shown on Exhibit 134-1 are 18 native soil baseline sample locations (one for each soil series), the soil baseline boundary, public roads, and prime-farmland soils. In the Exhibit 134-1 legend, Marshall Mine, LLC identifies each SMU. Based on the acreage total in Table 134-1, the soil-baseline boundary is congruous with the proposed permit boundary.
 - b. Detailed descriptions of each SMU are provided in the section of Appendix 134-1 titled "Map Unit Descriptions." Properties of the soils are described in the sections of Appendix 134-1 titled "Engineering Properties," "Soil Features," "Water Features," "Physical Soil Properties" and "Chemical Soil Properties." Data and suitability ratings relevant to these descriptions and discussions are presented in tables following each section.

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- c. Marshall Mine, LLC provides potential productivity data for selected crops, native grasses, pasture grasses, and common trees in the tables following each of the sections of Appendix 134-1 titled "Land Capability Classification and Irrigated and Nonirrigated Yields," "Forestland Productivity" and "Rangeland and Forest Vegetation Classification, Productivity and Plant Composition." These productivity data represent both present and potential yields under a high level of management.
- d. Marshall Mine, LLC indicates (page 134-2) that results of the analyses, trials, and tests required under §12.335 for any proposed use of selected overburden materials as a substitute for topsoil are provided in Application section .145(b)(4). Marshall Mine, LLC adds (pages 134-1 and 2) that physiochemical data for samples collected from native soils throughout the proposed permit area (one sample for each of the 18 soil series) are included in Appendix 134-2. Data in Appendix 134-2 include depth, collection data, results of the tests (both chemical and physical properties), and chain of custody forms. Energy Laboratories, Inc. performed all soil analyses. The Eastwood SMU sample is outside the proposed permit area. This affects the native soil baseline and proposed postmine soil performance standards.
- e. Marshall Mine, LLC includes permit-area frequencies and cumulative frequencies for pH, acid/base accounting, clay content, and sand content. The worksheets used to generate these frequencies and cumulative frequencies are included in Appendix 134-3 as Worksheets 1 through 6. Worksheets 1 through 5 provide a step-by-step description of the procedure used to calculate permit-area frequencies and cumulative frequencies for pH, acid/base accounting, clay content, and sand content, and Worksheet 6 is the worksheet used to calculate frequencies and cumulative frequencies for comparisons of native topsoil and subsoil to proposed substitute materials. These worksheets were compiled from the data in Appendix 134-2 based on the acreage represented by each soil series (as determined using Table 134-1 and Appendix 134-1 in the Application).
- f. Marshall Mine, LLC meets the requirement at §12.134(a)(1) by providing the NRCS Soil Surveys of Harrison and Panola Counties, Texas, in Appendix 134-1, and depicting the soil map units on Exhibit 134-1. Marshall Mine, LLC satisfies the requirements at §12.134(a)(2) in Table 134-1 and on Exhibit 134-1, by depicting the distribution and extent of each soil map unit, and by providing the soil taxonomic classifications in Table 134-2. Marshall Mine, LLC meets the requirements at §12.134(a)(3) by providing soil descriptions in Appendix 134-1. Marshall Mine, LLC meets the requirements at §12.134(a)(4) by providing tables in Appendix 134-1, showing the present and potential productivity data for selected crops, native grasses, pasture grasses, and common trees.
- g. Marshall Mine, LLC indicates that native soil baseline samples were collected within the approved permit area, and that the native soil baseline boundary and the proposed

- h. Marshall Mine, LLC indicates that native soil baseline samples were collected within a revised Native Soil Baseline (NSBL) Area consisting of the approved Permit Nos. 57 and 59, and the proposed expansion area. Marshall Mine, LLC also states that the native soil acreages for the revised NSBL Area were applied to the native soil baseline data in Appendix 134-2 to generate the baseline frequency distributions in Appendix 134-3. As determined by Staff, the soil baseline information contained in the supplemented Application meets the requirements of §12.134.
30. The Application, as supplemented, contains a statement of the condition, capability, and productivity of the land, including a map and supporting narrative of the uses of the land existing at the time of the filing of the Application as required by §12.135 of the Regulations. If the premine use of the land was changed within five years before the anticipated date of beginning the proposed operations, the historic use of the land must also be described. The narrative of land capability and productivity must include an analysis of the land use as described under this section in conjunction with other environmental resources information required under §§12.124-12.138 of the Regulations. The narrative specifically shall provide analyses of: (1) the capability of the land before any mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover and the hydrology of the proposed permit area, and; (2) the productivity of the proposed permit area before mining, expressed as average yield of food, fiber, forage, or wood products from such lands obtained under high levels of management. The land productivity is to be determined using yield data or estimates for similar sites based on current data from the U.S. Department of Agriculture, Texas agricultural universities, or appropriate Texas natural resource or agricultural agencies. Section 12.135(b) of the Regulations requires that an applicant identify in the application whether the proposed permit area has been previously mined, and, if so, include the following information, if available: (1) the type of mining method used; (2) the coal seams or other mineral strata mined; (3) the extent of coal or other minerals removed; (4) the approximate dates of past mining; and (5) the uses of the land preceding mining. Section 12.135(c) of the Regulations requires that an application contain a description of the existing land uses and land-use classifications under local law, if any, of the proposed permit and adjacent areas.
- a. Marshall Mine, LLC provides a description of the premine land uses that occur in the 3,025-acre proposed permit area. Premine land uses were determined through analysis of aerial imagery, and verified via field surveys in 2010, 2011, and 2016.

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Marshall Mine, LLC's Application, Table 135-1 (initial Application), contains the following premine land-use acreage for the proposed permit area:

Premine Land Use	Area Acres	Percent of Total
Forestry	2,737.1	90.5%
Pastureland	202.1	6.7%
Industrial/Commercial	59.4	2.0%
Developed Water Resources	26.4	0.9%
Total	3,025.0	100.0%

- i. Premine forestry land use consists primarily of loblolly pine on upland sites and hardwoods on bottomland sites. Marshall Mine, LLC indicates that site-specific surveys indicated Wattle Duck Pond has a forestry premine land use and is not an actual pond.
- ii. Pastureland areas contain primarily Bermudagrass and Bahiagrass;
- iii. Areas of industrial/commercial land use are comprised of oil and gas wells and public (county) roads;
- iv. Areas of developed water resources land use consist of several small-to-medium size impoundments primarily used for recreational fishing; and
- v. Marshall Mine, LLC has adequately provided a statement of the condition, capability, and productivity of the land within the proposed permit area, and included an exhibit depicting the premine land uses. In its September 16, 2019, TA Addendum 3, Staff identified an additional concern, stemming from its review of an August 14, 2019, comment letter from TPWD, regarding the categorization of premine lands within the proposed permit area. Large areas are depicted on Exhibit 135-1 and listed in Table 135-1 (both in Supplement 1) as forestry premine land use; however, much of the area categorized by Marshall Mine, LLC as forestry does not meet the definition at §12.3(99). These areas are more appropriately depicted as having a premine land use of undeveloped. The ALJ notes that, although Staff did not propose to include a requirement to update Table 135-1 along with Exhibit 135-1, the information in both are integrally related. Staff's proposed permit provision is therefore modified for clarity and to include the requirement to update related Table 135-1 along with a revised Exhibit 135-1, which may be provided in accordance with §12.226 of the Regulations. The Commission adopts **Permit Provision No. 5**, as set forth in Appendix I to this Order, as follows:

Within 120 days following the date of permit issuance, Marshall Mine, LLC shall revise Exhibit 135-1, *Premine Land Use*, and Table 135-1,

Premine Land Use, for consistency with the vegetation baseline, including identification of areas meeting the definition of “undeveloped land use” at §12.3(99) of the Regulations, depicted on Exhibit 132-1, *Vegetation Communities and Sampling Locations*, as riparian forest, seasonal swamp, hydric, stream terrace, floodplain forest, and cypress slough. This revision application shall be submitted for review and approval in accordance with §12.226 of the Regulations.

- b. Marshall Mine, LLC's Application contains an acreage list of the premine soil map units in the permit area. Appendix 134-1 contains the NRCS productivities and land capabilities. On Exhibit 134-1, *Premining Soils*, Marshall Mine, LLC identifies the locations of the soil map units within the proposed permit area.
 - c. Marshall Mine, LLC indicates that the proposed permit area does not contain any known prior underground or surface coal mines, nor are there any local land-use plans or classifications.
 - d. The oil/gas wells that comprise the premine industrial/commercial land use are depicted on Exhibit 136-2 in Application section .136. The following wells, depicted on Exhibit 136-2 (Supplement 1), are missing on Exhibit 135-1 (Supplement 1): White Heirs Well #1; Delta Drilling Company, Giles White Well #1; XTO Energy Allie Marie Hogg Well #12H; Hurley Petroleum Holcombe Well #5; Sonat Exploration Lecta Holcombe Well #2; and Sonat Exploration Holcombe Well #1C. The premine land uses for these well areas are depicted as the land use existing prior to well installation.
 - e. Staff indicates that the information provided in Marshall Mine, LLC's supplement Application has been reviewed and determined to be adequate to address the requirements of §12.135 with adoption of a permit provision. [Finding of Fact No. 29.a.v., *supra*, Permit Provision No. 5].
31. The Application, as supplemented, and in conjunction with Permit Provision No. 1, meets the requirements of §12.136 of the Regulations. The Application includes maps showing: (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; (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; (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; (4) the location of all buildings on and within 1,000 ft of the proposed permit area, with identification of the current use of the buildings; (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; (6) the location

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and boundaries of any proposed reference areas for determining the success of revegetation; (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 mine plan area; (8) each public road located in or within 100 ft of the proposed permit area; (9) the boundaries of any public park and locations of any cultural or historical resources listed or eligible for listing on the National Register of Historic Places, and known archeological sites within the mine plan or adjacent areas; (10) each public or private cemetery or Indian burial ground located in or within 100 ft of the proposed permit area; (11) any land within the proposed mine plan area and adjacent area which is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act; and (12) other relevant information required by the Commission.

- a. Marshall Mine, LLC describes the maps and drawings intended to meet the requirements of §12.136 of the Regulations. Additionally, Marshall Mine, LLC provides Table 136-1, *Maps: General Requirements*, to cross-reference the requirements of §12.136 with the corresponding maps provided in the Application. Section .136 also includes Exhibit 136-1, *Civil Features*, Exhibit 136-2, *Oil & Gas Map*, and Appendix 136-1, *Pipeline Buffer Zone Letters*.
 - i. Staff had noted several inconsistencies between Table 136-1 and the narrative response to the requirements of §12.136 of the Regulations. In addition, with respect to §12.136(10), Marshall Mine, LLC did not indicate in Table 136-1 that there are no known public or private cemeteries and no Native American burial sites located in or within 100 ft of the permit area. Marshall Mine, LLC corrected Table 136-1 and modified the entry for Regulation §12.136(10) in Table 136-1 to reflect that there are no Native American burial sites within the proposed permit area and therefore this Regulation is not applicable.
 - ii. Exhibit 136-1, *Civil Features*, is a map which shows the current permit boundary, the proposed permit boundary, the locations of public roads adjacent to the permit area, natural gas pipelines within the permit area, and electrical transmission lines within the permit area. Marshall Mine, LLC provided a revised civil-features map to include the locations of buildings on and within 1,000 ft of the proposed permit area. Exhibit 136-2, *Oil and Gas Map*, shows the Permit No. 59 permit boundary, the proposed permit boundary, mine block and disturbance boundaries, oil and gas leases within the proposed permit area, the locations of gas pipelines within the proposed permit area, and the locations and names of oil and gas wells within the proposed permit area.
 - iii. Marshall Mine, LLC's map revisions are adequate to meet §12.136(5) regarding the requirement that the permit include maps showing surface and subsurface

- iv. Appendix 136-1, *Pipeline Buffer Zone Letters*, contains a letter from Classic Hydrocarbons, Inc. providing consent for Marshall Mine, LLC to make a cut within 100 ft of a 4-in. diameter gas line located in the proposed permit area, provided that Marshall Mine, LLC complies with a number of conditions listed in the letter. The letter is provided so that the Commission may grant a variance to §12.382(4) of the Regulations, a rule which disallows cuts within 100 ft of an oil or gas pipeline unless the operator is granted a variance in accordance with §12.382(7).
 - b. The information provided in Marshall Mine, LLC's Application, as supplemented, addresses all map and plan requirements of §12.136 of the Regulations.
32. The Application, as supplemented, contains a list to identify the location of cross sections, maps, and plans in revised Table 137-1 [Supplement 2] as required by §12.137 of the Regulations.
 - a. The Application, as supplemented, meets the requirements of §12.137(a)(1)-(11) by providing the following information on pages 137-1 and 137-2: elevations and locations of test borings and core samplings are shown on Figure 127-4 [§12.137(a)(1)]; air monitoring stations are not required [§12.137(a)(2)]; geologic cross-sections contain lithologic information that is based on the interpretation of the geologist at the time that the sections were constructed [§12.137(a)(3)]; lignite crop lines and the structure for the A seam are shown on Exhibit 127-5 [§12.137(a)(4)]; there are no known abandoned underground mines located within 500 ft of the proposed permit or adjacent area [§12.137(a)(5)]; the location and extent of subsurface water within the proposed permit area are shown on Figures 128-1, 128-4 and 128-5. [§12.137(a)(6)]; all surface-water resources within the proposed permit area are shown on Figures 129-1 and 129-4 [§12.137(a)(7)]; the Marshall Mine Permit No. 59 permit area overlaps with approximately 55.9 acres of the Marshall Mine Permit No. 57 Facilities Permit area as shown on Exhibits 125-1 and 139-1, and there are no mining disturbance is currently present in that area. [§12.137(a)(8)]; no spoil or coal waste storage areas will be utilized in the proposed permit area and Marshall Mine, LLC indicates that it does not operate or plan to establish air-pollution control facilities because there are not and will be no stationary sources of particulate emissions within the proposed

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permit area [§12.137(a)(9)]; the location of all known oil and gas wells within the proposed permit area are shown on Figure 128-7, and all water wells located within the proposed permit area are shown on Figure 128-6 [§12.137(a)(10)]; and, premining slope measurements and corresponding acreages are contained in Table 145-2, with premining slope categories shown on Exhibit 137-1. Premining topography is depicted on Exhibit 139-1, and there are no previously mined areas within the proposed permit area [§12.137(a)(11)].

- b. Marshall Mine, LLC indicates that all maps, plans, and cross-sections included in the Application have been prepared under the direction of and certified by a Registered Professional Engineer or Professional Geologist in accordance with §12.137(b).
 - c. Staff indicates that the information provided in the supplemented Application is adequate to address the requirements of §12.137.
33. Negative prime farmland determinations have been made for the approved Permit Nos. 57 and 59 areas based on historical land-use affidavits in accordance with §12.138 of the Regulations [Docket Nos. C11-0010-SC-00-A and 12-0001-SC-00-A]. Marshall Mine, LLC requests a negative prime farmland determination for the proposed expansion area, which cover approximately 872.8 acres. In support of the request, a pre-application investigation soil-survey was conducted during 2016 and 2017 in the proposed expansion area – concluding that four prime-farmland soil map units cover 51.0 acres within the proposed expansion area [Table 134-1 and Exhibit 134-1]. A negative prime farmland determination may be made by the Commission if the applicant submits sufficient proof that the tract or portion of the tract containing prime farmland soils has not been used as cropland for five or more of the ten years prior to applicant's *acquisition* of the tract for mining purposes [§§12.138(b)(1) and 12.3(85)(A)]. To demonstrate the 51.0 acres within the proposed expansion area do not qualify as prime farmland based on historical use as defined by the Regulations, Marshall Mine, LLC submitted historical aerial photographs in Appendix 138-2; however, the Applicant has not demonstrated a right to mine in the proposed expansion area (i.e., *acquired* the right to conduct activities on the subject area). Therefore, a negative determination for the 51.0 acres is premature given historical use is measured from the date of acquisition, which has not occurred, and the Commission denies a negative determination for the proposed expansion area. This denial is without prejudice and Marshall Mine, LLC may re-file a request for a negative determination of prime farmland for the expansion area with Commission. By letter dated February 12, 2020, the Applicant indicated it does not contest a denial of the requested negative prime farmland determination for the entire proposed permit area after receiving the adverse letter from the ALJ addressed in Finding of Fact No. 9.b., *supra*.
34. The Application, as supplemented, meets the requirements of §12.139 of the Regulations by providing a description of the mining operations to be conducted during the life of the mine within the proposed permit area.

- a. Marshall Mine, LLC provides a narrative description of the type and method of coal mining procedures and proposed engineering techniques, anticipated annual and total production of coal by tonnage, and the major equipment to be used for all aspects of the operation in the Application. Marshall Mine, LLC is designed to provide lignite to Cabot Norit Americas to be used to produce activated carbon. The mine plan is delineated on Exhibit 125-1 with additional details for the permit term on Exhibit 139-1. All mining during the proposed permit term will occur in Area A. Mining will advance from the southeast to the northwest. It is a single-seam mining operation. The depth to the one minable seam varies from 40 to 110 ft below ground surface. Marshall Mine, LLC indicates in Table 125-2 that approximately 1.8 million tons of lignite will be mined during the proposed permit term (360,000 tons per year). Typical highwall and spoil angles will measure approximately 50-55 degrees and 35 degrees, respectively. No overburden dewatering is planned or needed during the proposed five-year term. A list of the major equipment to be used is provided in Table 139-1. The information in Table 139-2 indicates that Marshall Mine, LLC has right-of-entry to all land tracts that will be disturbed during the proposed permit term.
- b. Marshall Mine, LLC provides a narrative explaining the construction, modification, use, maintenance, and removal of facilities. Marshall Mine, LLC provides the locations of sediment ponds and impoundments within the proposed permit area, which are shown on Exhibits 125-1 and 139-1. The schedule for construction and reclamation for planned sedimentation ponds is provided in Table 148-1, *Sediment Pond Design and Construction Schedule*, on pages 139-10 through 139-12. [§12.139(2)(A) dams, embankments and impoundments]. Marshall Mine, LLC provides a description of overburden and topsoil handling and storage areas and structures temporary overburden stockpiles locations as shown on Exhibit 139-1, *Mine Plan Detail Map*. Temporary overburden stockpiles will be used for topsoil or overburden storage proposed within the permit term. No permanent stockpiles are proposed. Some temporary overburden stockpiles may be constructed during development of the box cut, will be located within the active mine block, and will be removed by the dragline as part of the reclamation process. Longer-term stockpiles of suitable oxidized material will be stored in the stockpile areas delineated on Exhibit 139-1. Material stored at these locations will be removed and re-spread on the graded spoil later. The stockpiled material will be replaced approximately to the original ground contours and the area will be graded and blended into the surrounding topography, as described on pages 139-12 and 139-13. [§12.139(2)(B), overburden and topsoil handling and storage areas and structures]. Marshall Mine, LLC provides the dragline; a truck/shovel or dozer fleet will remove the overburden to within one foot of the top of the lignite. Crawler dozers and other mobile equipment will remove the remaining overburden material. A Surface Miner or other mobile equipment will load the lignite into end-dump haulers or over-the-road trucks from the active pit. The end-dump haulers will take the lignite to the truck dump area using approved primary haul roads.

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Over-the-road trucks will directly haul the lignite to the activated carbon plant. No lignite preparation areas or cleaning facilities are operated by Marshall Mine, LLC, nor are any proposed, as stated on pages 139-13 and 139-14. [§12.139(2)(C), coal removal, handling, storage, cleaning and transportation]. No lignite processing waste facilities are proposed. No excess spoil disposal facilities are planned or proposed. Areas used to store non-coal waste for short-term periods are identified on Exhibit 139-1 and described on pages 139-14 and 139-15. [§12.139(2)(D), spoil, coal processing waste and non-coal waste removal, handling, storage, transportation and disposal areas]. Mine facilities are identified on Exhibit 139-1 and described on page 139-15 [§12.139(2)(E), mine facilities]. Marshall Mine, LLC will use sediment ponds to minimize contributions of sediment to stream flow or runoff outside the permit area. Additional water treatment facilities will be installed if necessary to meet effluent limitations. The treatment facilities, if used, would add chemicals for iron removal, pH adjustment, or would add flocculants to enhance sediment removal. Marshall Mine, LLC references sections .139(2)(A) and .148 of the Application for details regarding the surface-water control plan. There are no lignite preparation facilities, dryers, crushers, breakers or conveyors operated by the Marshall Mine, LLC, which removes stationary point sources for dust. Marshall Mine, LLC will apply water sprays, chemical suppressants, and slow-curing liquid asphalt to the haul roads to minimize fugitive dust, as described on pages 139-15 and 139-16. [§12.139(2)(F), water and air pollution control facilities].

35. The Application meets the requirements of §12.140 and §12.217 of the Regulations regarding existing structures. Marshall Mine, LLC states that it does not plan to use, modify, or reconstruct any structures or facilities for which construction began prior to approval of the State program as defined at §12.9 of the Regulations.
36. The Application meets the requirements of §12.141 of the Regulations. Marshall Mine, LLC indicates that it does not plan to conduct blasting within the proposed permit area.
37. The Application, as supplemented, meets the requirements of §12.142 of the Regulations. The Application contains a list that identifies the location of maps and other information provided, including location of the diversions, existing permanent impoundments, and sedimentation ponds that may be used to protect and enhance fish and wildlife and related environmental values. Approved Permit No. 57 contains existing Permit Provision No. 1, which reads as follows: "Marshall Mine, LLC must revise the permit by providing a location map of and receiving approval from the SMRD Director, prior to storing any topsoil-substitute materials, spoil, coal waste, and non-coal waste in the permit area." Staff indicates that this existing Permit Provision No. 1 was addressed in Revision No. 1 to permit No. 57, approved by letter dated September 9, 2012. Staff recommends that Permit Provision No. 1 not be retained because the information provided in the Application contains the information needed to meet the requirements of §12.142. Existing Permit Provision No. 1 of Permit No. 57 is not retained.

38. The Application meets the requirements of §12.143 of the Regulations. Staff indicates that an air-pollution control plan is not required because the proposed permit area is located east of the 100th meridian and, therefore, §12.143(a) of the Regulations does not apply. Marshall Mine, LLC's proposed fugitive-dust control plan pursuant to requirements of §12.143(b) includes minimizing the dumping height of material and using water sprays, chemical suppressants, and/or slow-curing liquid asphalt on haul roads and in equipment work areas. Removal of coal, rock, soil, and other dust-forming debris from roads will also be employed; unpaved roads will be scraped and compacted to stabilize the road surface. Marshall Mine, LLC will restrict the travel of unauthorized vehicles on established roads. The plan indicates that by minimizing the area of disturbed land, fugitive dust will also be minimized. The promptness of re-establishment of vegetation on regraded lands will restrict the creation of fugitive dust. The plan incorporates restricting activities that cause fugitive dust during periods of air stagnation, and reducing the period between initially disturbing the soil and revegetating or other surface stabilization and promptly mulching and crimping bare-ground areas as needed before and during high wind periods. Staff believes that the fugitive-dust control plan described in the Application will be sufficient to control air pollution attendant to erosion and will meet the performance standards of §12.389 of the Regulations.
39. The Application, as supplement, meets the requirements of §12.144 of the Regulations, with adoption of the permit provisions described in the findings of fact in this Order. Marshall Mine, LLC provided fish and wildlife resources information which includes relevant information on the protected species and plant communities within the proposed permit boundary. Marshall Mine, LLC also provides a list of threatened, endangered, and species of greatest conservation need that have the potential to occur within the mine. Marshall Mine, LLC indicates that temporary loss of habitat from mining and mining-related activities will be the primary impact to local fish and wildlife species.
 - a. Marshall Mine, LLC's Application incorporates a number of protective measures to minimize impacts to fish and wildlife resources from mining-related activities, which are detailed in section .144 of the Application, as supplemented. Marshall Mine, LLC's plan has been developed to supplement the primary fish and wildlife plan contained in section .144 to provide additional protective measures and enhancements to rare, threatened and endangered species of potential occurrence at the Marshall Mine. As noted in Application section .133 and listed in Table 144-1, a number of both listed species and species of greatest conservation need have a potential to occur. Detailed information on each of the species listed in Table 144-1 is provided in section .133. Marshall Mine, LLC provides employee education, notification and reporting, relocation protocol, transplant/donation protocol, research and outreach, and pre-disturbance surveys.

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- b. Marshall Mine, LLC discusses protection measures and will implement incremental mining to ensure native cover remains intact for as long as possible. Other protection measures include facility/structure construction and design considerations, undisturbed blocks, temporary stabilization using cover crops for erosion and sediment control, employee education, speed limits, responsible chemical handling, fire suppression and control, excavation covering to avoid inadvertently trapping, exclusion fencing, and erosion-control matting as fish and wildlife protection measures. Additionally, Marshall Mine, LLC indicates that it will follow the *Reducing Avian Collisions with Power Lines* guidance from the Avian Power Line Interaction Committee (APLIC) when constructing powerlines and other transmission facilities.
- c. Marshall Mine, LLC discusses enhancement features that are proposed to be employed in pond and diversion construction, and fish and wildlife habitat land-use areas, including use of native species, planting arrangements (e.g., herbaceous corridors, well-spaced trees, mottes), management techniques, buffer zones, supplemental cover, perch structures, and nest boxes. Management techniques to be employed will also consider the following: invasive species management, strip disking and shredding, selective thinning, rotational removal of standing hay, prescribed burning, grazing, and predator control.
- d. Marshall Mine, LLC proposes the use of buffer zones for protected species. Marshall Mine, LLC proposes buffer zones for bird nests as follows: ≥ 50 meters for songbirds; > 100 meters for wading birds; and > 180 meters for terns, skimmers and birds of prey.
- e. The Application contains a table entitled, *Species for Revegetation in Fish and Wildlife Habitat Postmine Land Use*, in which Marshall Mine, LLC identifies the specific perennial grasses, forbs, vines, trees, shrubs, and hydric species that would be planted within areas of fish and wildlife habitat land use. Marshall Mine, LLC also provides Figure 144-1, *Potential Sedimentation Pond Enhancement Features*, which illustrates the potential features of a sedimentation pond such as forested riparian buffers, native grass filter strips, flooded timbers, wood duck boxes, shallow areas for emergent vegetation, and deep-water habitat.
- f. Marshall Mine, LLC provides Exhibit 144-1, *Fish and Wildlife Enhancement Features*, on which it depicts areas of fish and wildlife postmine land use, sedimentation pond locations, and potential locations of wood duck boxes. Protection measures are discussed on pages 144-4 through 144-6. Marshall Mine, LLC will employ incremental mining methods to ensure native cover remains intact for as long as possible. Other protection measures include clearing outside the migratory bird nesting season, as feasible, facility/structure construction and design considerations, undisturbed blocks, temporary stabilization with cover crops for erosion and sediment control, employee education, speed limits, responsible chemical handling, fire suppression and control,

excavation covering to avoid inadvertently trapping, exclusion fencing, and erosion control matting as fish and wildlife protection measures.

- g. Marshall Mine, LLC discusses enhancement measures on pages 144-6 through 144-9. The following enhancement measures are proposed: ponds and diversion construction, fish and wildlife habitat land use, use of native species, planting arrangements (e.g., herbaceous corridors, well-spaced trees, mottes), management techniques, buffer zones, supplemental cover, perch structures, and nest boxes. Management techniques to be employed include invasive species management, strip disking and shredding, selective thinning, rotational removal of standing hay, prescribed fire, grazing, and predator control. All species planted will be selected from those listed in Table 144-2, *Species for Revegetation in Fish and Wildlife Habitat Postmine Land Use*, which is a list of the specific perennial grasses, forbs, vines, trees, shrubs, and hydric species that will be planted within areas of fish and wildlife habitat land use.
- h. Marshall Mine, LLC briefly discusses 404 mitigation on page 144-9 of the Application (Supplement 1). Marshall Mine, LLC provides USACE permit number SWF-2010-00246 for the approved permit area. Marshall Mine, LLC indicates in the errata that impacts to jurisdictional Waters of the U.S. (WOTUS) within the expansion area are not proposed until year 2023 and that an application for USACE authorization is being prepared and will be submitted at least one year prior to initiation of impacts to WOTUS within the proposed expansion area. Marshall Mine, LLC commits to including the Section 404 authorization for the proposed expansion area in Appendix 144-2 upon USACE approval.
- i. A discussion of the potential impacts to fish and wildlife species is contained in section .144 in the Application (Appendix 144-1, Supplement 1) that addresses protection and enhancement measures that will be implemented to protect rare, threatened, and endangered species. The plan includes employee education to ensure mine staff and contractors are aware of protected species. All mine employees are instructed to report the sightings of protected species to their supervisor immediately, who will report to environmental staff. Upon a sighting of any listed species, work within the immediate area will cease until the Commission, USFWS and/or TPWD have been consulted. If a new listed species is sighted, or if repeat occurrences of a protected species are observed, the fish and wildlife plan may be revised to include additional protective measures.
- i. Marshall Mine, LLC indicates in Appendix 144-1 that the Commission will be notified within 48 hours of sighting an endangered species. Marshall Mine, LLC initially indicated that it would provide notification of sightings of threatened species within 30 days of the first calendar-year observation. After consultation with Staff,

Marshall Mine, LLC revised Appendix 144-1 to include a commitment to notify the Commission of any threatened species within 48 hours of the observance.

- ii. Marshall Mine, LLC indicates that an annual report will be provided to the Commission and to the TPWD Texas Natural Diversity Database, describing the information that will be provided in this report. Marshall Mine, LLC indicates in the errata that USACE documentation regarding the LOP-3 (Letter of Permission, an alternative to an Individual Permit needed to meet Section 404 mitigation requirements) for Permit No. 59 is provided to the Commission annually by way of a courtesy copy of the annual USACE compliance report. Marshall Mine, LLC also indicates that the USACE determined that there were no impacts to WOTUS for Permit No. 57. A copy of the USACE approval letter dated June 10, 2010, for Permit No. 57 is contained in Appendix 144-2.
- iii. Marshall Mine, LLC added protection plans for Bald Eagles, Migratory Birds, and Game Species, and also committed to minimizing clearing activities during the peak nesting season. In its Bald Eagle protection plan, Marshall Mine, LLC proposes to conduct annual pre-disturbance surveys. Marshall Mine, LLC added protective measures for the Southeastern myotis bat and Rafinesque's big-eared bat that includes a prohibition from clearing during pup-rearing season for these species. Marshall Mine, LLC does not anticipate any impacts to aquatic species because, prior to any floodplain disturbance, it will construct the A2 Pond and levee, which will prevent aquatic species from entering and leaving the mine area due to flooding events.
- iv. Pre-disturbance surveys and relocation and avoidance plans, as in approved Permit No. 59, Marshall Mine, LLC commits to conducting pre-disturbance surveys in areas that are undisturbed and contain suitable habitat for threatened species of potential occurrence. Pre-disturbance survey results will be provided to the Commission within thirty days of completion of the survey.
- v. Relocation protocols for the timber rattlesnake, norther scarlet snake, and alligator snapping turtle were provided as part of the protection plan for these species when the specimen is in imminent danger. Relocation will be conducted by a qualified, permitted individual.
- vi. A transplant/donation protocol is also provided for relocation of the Panicked false indigo. Addressing minimization of impacts to this rare plant, Marshall Mine, LLC proposes to salvage any plants, propagules, and seeds and donate them to TPWD or another entity involved in conservation of the species.

- j. Marshall Mine, LLC does not propose dewatering of any State waters when water is present, and indicates that in the event dewatering is needed, Marshall Mine, LLC will consult with TPWD to ensure that any needed permits have been acquired.
- k. Marshall Mine, LLC commits to restoring bottomland forests, wetlands, and floodplain hydrology along the Sabine River. The 245.6 acres or more of the existing floodplain forests around the Sabine River are areas of conservation concern. Marshall Mine, LLC states in the errata that it has committed in section .147 to utilizing fish and wildlife habitat postmine land-use in areas of premine floodplain forest. Marshall Mine, LLC also indicates that the planting lists have been approved by the NRCS, TPWD, and USFWS and provide a wide variety of bottomland hardwood species, grasses, and forbs that will be utilized in revegetation, and floodplain forests and other native habitat protections include maintaining undisturbed blocks when feasible. Marshall Mine, LLC has also committed to complying with all 404 mitigation requirements for protected jurisdictional wetlands.
- l. Approved Permit No. 59 contains existing Permit Provision No. 1, which addresses the need to conduct pre-disturbance surveys for the Neches River rose-mallow in portions of the permit area and report its findings to the Commission within a specified time period. This permit provision also established compensatory mitigation ratios for the permit area, should any jurisdictional waters be disturbed. For the proposed permit area in this Application, including the proposed expansion area, Marshall Mine, LLC proposes to incorporate by reference its 404 compensatory mitigation plan contained in the as yet unapproved USACE permit, based on discussions of the issues in filings by Marshall Mine, LLC by letter dated October 15, 2019, and Staff by letter dated October 30, 2019.
 - i. In its TA dated September 6, 2018, Staff proposed that existing Permit Provision No. 1 be retained with modifications. By letter dated October 15, 2019, Marshall Mine, LLC specifically disagreed with Staff's proposed Permit Provision No. 1, Part B, stating that it was "beyond the Commission jurisdiction and unnecessary." By letter dated October 30, 2019, Staff provided a response to Marshall Mine, LLC's October 15 letter, indicating that it was proposing a revised proposed Permit Provision No. 1, Part B, to include a requirement to incorporate the USACE "conceptual mitigation plan" in the permit immediately, and to remove a proposed requirement that Marshall Mine, LLC concurrently provide copies of all correspondence with the USACE to the Commission.
 - ii. By letter dated February 5, 2020, the ALJ proposed to modify Staff's proposal of existing Permit Provision No. 1 to two separate permit provisions and requested whether any party was adverse to the permit provision modification as proposed by the ALJ. By letter dated February 11, 2020, Staff responded that it did not consider the ALJ's modification to be adverse, but recommended a change to the

language of the permit provision for greater accuracy. By letter February 12, 2020, Marshall Mine, LLC responded that it also did not consider the permit provisions recommendation to be adverse.

- iii. At an informal conference held on February 24, 2020, the parties agreed to the ALJ's subsequent proposed permit provision as read into the record. By letter dated February 25, 2020, the ALJ sent a letter subsequent to the Informal Conference memorializing the agreed-to permit provisions. The Commission adopts two separate permit provisions addressing the issues of concern in existing Permit Provision No. 1, as **Permit Provision Nos. 6 and 7**, which are modified from Staff's initial proposals but agreed to by the parties as not adverse, as set forth in Appendix I to this Order, in the following:

Permit Provision No. 6

Marshall Mine, LLC shall conduct pre-disturbance surveys in areas proposed to be affected by mining activities during the next permit term for the Neches River rose-mallow in areas of suitable habitat, during the last year of the permit term, and report its findings to the Commission within 90 days following survey completion, and, in addition, if a Neches River rose-mallow is found, notify the Director of the Surface Mining and Reclamation Division within seven days of such discovery for coordination on any immediate protection measures to be implemented. The surveys shall be conducted during the species' most active flowering season.

Permit Provision No. 7

Marshall Mine, LLC shall use the compensatory mitigations ratios in the following table for jurisdictional wetland areas approved for disturbance during the permit term. Within 30 days following permit issuance or, if not yet received from the U. S. Army Corps of Engineers (USACE), within 30 days of receipt of USACE approval, Marshall Mine, LLC shall submit for addition to Appendix 144-2 of the permit the approved USACE 404 mitigation plan for the approved permit area, and a copy of the USACE approval letter.

Waters of the U.S.	Minimization (On-site) Ratio ¹	Compensatory Mitigation Ratio ¹	Composite ² Mitigation Ratio ¹
Forested Wetlands	1.0:1.0	1.0 to 1.0	2.0:1.0

Non-forested Wetlands	1.0:1.0	0.5 to 1.0	1.5:1.0
Ponds	1.0:1.0	---	1.0:1.0
Streams	1.0:1.0	---	1.0:1.0

¹ Ratios represent acres of mitigation to acres of impact. For example, a 1.0 to 1.0 ratio is expressed as 1.0 acre of mitigation required for 1.0 acre of impact.

² Composite ratios include both minimization and compensatory mitigation.

- m. By letter dated October 25, 2017, TPWD provided initial comments to the Commission on the initial Application. Staff's responses to these comments were provided in TA Addendum 2. In its letter, TPWD expressed several concerns regarding the adequacy of the fish and wildlife protection plan.
 - i. By letter dated August 14, 2019, TPWD reiterated and reemphasized its principal concern that being that Marshall Mine, LLC proposes to directly impact a significant area of river floodplain that TPWD has identified as being of greatest conservation need and that Marshall Mine, LLC had not proposed a restoration/protection plan incorporating diverse bottomland forests, wetlands, and a floodplain hydrology that restores the premine hydrology to this area.
 - ii. TPWD included other additional specific comments, which were described in Appendix III of Staff's TA Addendum 3. Another specific concern of TPWD is the protection of the proposed permit area immediately adjacent to the Sabine River, for which TPWD recommended establishing "a large buffer" of non-disturbed area. TPWD has identified the area adjacent to this segment of the Sabine River as meriting protection due to its ecological significance and the great diversity of beneficial use of this habitat by wildlife and its support of State-listed threatened fish and freshwater mussel populations.
 - iii. By letter dated February 21, 2020, TPWD provided comments regarding its principal concerns with the extent of impacts to floodplain forests and wetland habitats associated with the Sabine River and the proximity of the disturbance boundary and prospective future end lakes to the Sabine River. Additionally, TPWD attached two citations as enclosures to its comment letter.
- n. In TA Addendum 3, Staff acknowledged the importance of TPWD's concerns, reconsidered TPWD's recommendations, and reassessed Marshall Mine, LLC's proposed fish and wildlife plan with respect to these concerns. Staff recommended, in accordance with §12.144 and §12.380 of the Regulations, a proposed permit provision requiring Marshall Mine, LLC to maintain a minimum of a 600-ft, premine-vegetated buffer adjacent to the Sabine River during the life of mine, reclaim the mined area of the floodplain to its premine land uses, or, if acceptable to the landowner, to a

fish and wildlife habitat land use, and reclaim the area such that the approximate original contours mimic the topography and hydrology of the premine floodplain. Staff's proposed permit provision also would require that Marshall Mine, LLC coordinate with TPWD and Staff for the details of the final reclamation plan for this area.

- i. In its October 15, 2019, letter, Marshall Mine, LLC specifically disagreed with Staff's proposed permit provision, stating that it was "premature and inappropriate" because no reclamation plan had yet been provided or proposed for approval for the proposed permit area within the floodplain. In its October 30, 2019, response letter, Staff disagreed, indicating that because Marshall Mine, LLC was proposing the addition of areas within the floodplain and directly adjacent to the Sabine River in this Application, potentially affecting portions of the permit area once approved, limitations imposed by permit provision were appropriate and necessary for protection of fish and wildlife in accordance with §12.144 and §12.380 of the Regulations. By letter dated February 5, 2020, the ALJ proposed to modify Staff's proposed new permit provision and requested whether any party was adverse to the permit provision modification as proposed by the ALJ. By letter dated February 11, 2020, Staff responded that it did not consider the ALJ's modification to be adverse. By letter February 12, 2020, Marshall Mine, LLC responded that it also did not consider the permit provision modification adverse but, nevertheless, had concerns about the permit provision as to the 600-ft buffer zone, and requested an Informal Conference to consider the propose permit provision.
- ii. At the Informal Conference held on February 24, 2020, Staff and Marshall Mine, LLC conferred on the details of the permit provision language. Marshall Mine, LLC indicated that it was unclear on some of the definitions and terms used in the permit provision but would clarify those concerns with Staff; however, it reiterated that the area impacted by the buffer zone is located in an area that will not be disturbed during the proposed five-year permit term. Marshall Mine, LLC also indicated at the Informal Conference that appropriate consultation with landowners would occur, as it is required by the Regulations, and was unsure why it was included in the permit provision. In addition, at the Informal Conference held on February 24, 2020, the parties agreed to modify the permit provision as read into the record. Marshall Mine, LLC stated that, while it accepts this permit provision for the proposed Application, it does not waive its right to contest retention of Permit Provision No. 8 in subsequent future renewals of the permit. By letter dated February 25, 2020, the ALJ memorialized the agreed-to permit provision via a post-Informal Conference letter. The Commission adopts **Permit Provision No. 8**, as set forth in Appendix I to this Order, as follows:

If Marshall Mine, LLC is approved to conduct surface coal mining and reclamation operations in the Sabine River floodplain, it shall, prior to

conducting such activities, submit a revision application containing a detailed protection and reclamation plan to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations. Such application shall include, at a minimum, the following protection and reclamation plan elements unless otherwise specifically addressed in the approved U.S. Army Corps of Engineers (USACE) mitigation plan:

- (1) maintain a minimum of a 600-ft, premine-vegetated buffer adjacent to the Sabine River during the life of mine, measured perpendicularly from the northeast edge of the river at bankfull width;
- (2) reclaim the area to its premine land uses (including specific plant species) or, entirely to fish and wildlife habitat land use, and at least as protective as the USACE mitigation plan;
- (3) reclaim so that approximate original contours mimic the topography and hydrology of the premine floodplain, as determined in a final reclamation plan submitted and approved for this area after coordination with the Texas Parks and Wildlife Department (TPWD) and Staff; and
- (4) Marshall Mine, LLC shall not begin disturbances associated with construction of structures in the floodplain prior to obtaining approval of such structures from the Director of Surface Mining and Reclamation Division in accordance with §12.226 of the Regulations and with consultation of TPWD.

- o. By letter dated February 27, 2020, Staff filed TA Addendum 4, in which it summarized and evaluated the February 21, 2020, letter received from TPWD. The information provided in the supplemented Application is adequate to meet the requirements of §12.144, with adoption of Permit Provision Nos. 6, 7 and 8.

40. The Application, as supplemented, contains a reclamation plan of the lands within the proposed permit area that meets the requirements of §134.092 of the Act and §12.145 of the Regulations.
 - a. Marshall Mine, LLC indicates that it has a reclamation plan for the proposed permit area that includes all information required by §§12.146 through 12.154, and the plan describes how the Marshall Mine, LLC will comply with the Regulations as required by §12.145(a).

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- b. Marshall Mine, LLC provided a detailed timetable for the completion of highwall-side stripping and spoil-side stripping that includes all information required by §§12.145(b)(1). Marshall Mine, LLC provided timetables of sufficient detail to meet the requirements of §12.145(b)(1). The Application includes reclamation timetables in Table 145-1A for highwall-side stripping operations using a dragline, and Table 145-1B for spoil-side stripping operations using a dragline, with sequences illustrated in Figure 145-1 for each of these stripping methods. Marshall Mine, LLC states that Tables 145-1A and 145-1B depict the major milestones of the reclamation plan and that the timetables represent the entire mining block, including final pits. Marshall Mine, LLC further indicates that any area planted with temporary vegetation in the summer months will be monitored during winter months to ensure that adequate ground cover exists to control erosion. Marshall Mine, LLC states that cool-season temporary vegetation and/or mulching will be used to ensure adequate erosion control. Marshall Mine, LLC also states that applications for Phase II and III release of reclamation liability will be submitted between February 1st and October 1st of any given year. The reclamation timetables (Figures 145-1A and 145-1B) provided for highwall-side stripping and spoil-side stripping are contained in the initial Application and include time frames for the following:

Coal removal – The timeline for reclamation is initiated by final coal removal from the pit.

Backfilling and grading – For highwall-side stripping, following coal removal, backfilling and grading will be completed within the 18 months or 680 ft from the highwall toe as described in section .145(b)(3). For spoil-side stripping, following coal removal, backfilling and grading will be completed within 24 months or 910 ft from the highwall toe as described in section .145(b)(3). However, for both highwall-side and spoil-side stripping, backfilling and grading of ramp could extend an additional 800 ft from the existing highwall toe to a width of 1,000 ft.

Placement of suitable material – For highwall-side stripping, following backfilling and grading, placement of suitable material will be completed within 30 months or 1,180 ft from the highwall toe. For spoil-side stripping, following backfilling and grading, placement of suitable material will be completed within 36 months or 1,410 ft from the highwall toe. However, for both highwall-side and spoil-side stripping, placement of suitable material in and around ramps, in deep cover, could extend an additional 1,000 ft from the existing highwall. This time frame allows for seasonally variable site conditions that make it impractical to promptly redistribute substitute materials as required at §§12.336 and 12.337; yet provides a time frame suitable for contemporaneous revegetation required under §12.392.

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Revegetation – Seeding and planting of disturbed areas will be conducted during the first normal period for favorable planting conditions with 60 days after placement of suitable material.

Temporary vegetation – Will be planted when seasonal conditions prevent planting of permanent cover. Temporary cover is typically planted from July through February for as climatic conditions permit and warrant.

Permanent vegetation – Warm-season grasses are typically planted during March through June on all land uses. Trees and shrubs are typically planted from December through February into established ground cover.

Extended Responsibility Period (ERP) – Marshall Mine, LLC will submit a request to begin the ERP no later than October 12th of each year following augmented seeding, fertilizing, irrigation or other work excluding normal husbandry practices. The smallest unit to be placed into ERP will be an individual land tract. An area must be in the ERP prior to submittal of any data intended to demonstrate revegetation establishment and success.

Bond release – A request for Phase I, Phase II, and Phase III release will be submitted no later than October of each year. Marshall will only submit a request for Phase II release after SMRD approval of groundwater and stem-count data for the requested release area. A request for Phase III release will be submitted by October of the year following the expiration of the five-year term for ERP.

Marshall Mine, LLC has provided reclamation timetables which describe time schedules and distance limits for various reclamation milestones.

Milestone	Table 145-1A Highwall-Side Stripping	Table 145-1B Spoil-Side Stripping
Rough Backfilling and Grading		
Time	18 months after coal removal	24 months after coal removal
Distance	680 ft from highwall toe	910 ft from highwall toe
Placement of Suitable Material		
Time	30 months after coal removal	36 months of coal removal
Distance	1,180 ft from highwall toe	1,410 ft from highwall toe
Seeding and Planting	within 60 days of suitable-material placement	within 60 days of suitable-material placement
Temporary vegetation:	July through February	July through February

Milestone	Table 145-1A Highwall-Side Stripping	Table 145-1B Spoil-Side Stripping
Permanent vegetation	Grasses - March through June Trees & shrubs - December through February in areas with established permanent grass cover	Grasses - March through June Trees & shrubs - December through February in areas with established permanent grass cover
ERP	No later than October 12 th of year following augmented seeding, fertilizing, irrigation of permanent cover	No later than October 12 th of year following augmented seeding, fertilizing, irrigation of permanent cover
Bond Release Submittal Date		
Phase I	By October following augmented seeding, fertilizing, irrigation of permanent cover	By October following augmented seeding, fertilizing, irrigation of permanent cover
Phase II	By October following SMRD approval of groundcover and stem-count data	By October following SMRD approval of groundcover and stem-count data
Phase III	By October of year following 5-yr ERP expiration	By October of year following 5-yr ERP expiration

- c. A detailed estimate of the cost of reclamation required to be covered by the performance bond is contained in the Application, in accordance with §12.145(b)(2).
- i. Marshall Mine, LLC provided a revised detailed reclamation cost estimate in Section .145, in Appendix 145-1, *Reclamation Bond Cost Analysis*, in Supplement 2. Marshall Mine, LLC's reclamation estimate of \$26,502,399 includes costs for three disturbance categories: mined areas (the active pit, any area where spoil is deposited, and any highwall reduction areas), disturbed areas (areas where topsoil is removed but the area is not mined), and ancillary areas (areas that are disturbed, but where topsoil has not been removed and upon which soil preparation and seeding are the only reclamation activities). Staff noted that the equipment costs Marshall Mine, LLC, used to calculate the reclamation cost appeared to be outdated (2016 vintage). The estimate provided in the Application, as supplemented, was calculated using the area-bonding method and accounts for reclamation of all areas previously disturbed and bonded under Permit Nos. 57 and 59 and all areas proposed for disturbance during the requested term. All areas of land required to be covered by the reclamation performance bond are depicted on Exhibit 145-3, *Bond Areas*, as required by §12.142(2)(C), in Supplement 3. Staff indicates that Marshall Mine, LLC has updated equipment costs such as were used in Revision No. 19 approved by letter dated April 1, 2019; however, the equipment costs have since been updated (July 2019) and the updated costs were sent to industry on July 5, 2019.

- ii. Staff conducted an independent reclamation cost estimate based on the latest equipment operating costs (July 2019), as presented in Appendix II of TA Addendum 3. Staff's reclamation cost estimate is \$28,630,098, which is greater than Marshall Mine, LLC's estimate of \$26,502,399, as shown in Table 145-1-1 of Supplement 2. The Commission finds 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 adopts Staff's reclamation cost estimate as the minimum bond amount required for the requested permit pursuant to §12.304.
 - iii. Permit No. 59 is currently bonded by a surety bond, No. SUR0027682, issued by Argonaut Insurance Company in the amount of \$30,000,000, accepted by Commission Order dated March 26, 2019 [Docket No. C18-0011-SC-59-E]. Permit No. 57 is currently bonded by a surety bond, No. 105219329, issued by Travelers Casualty & Surety Company of America in the amount of \$200,000, accepted by Commission Order dated March 12, 2012 [Docket No. C12-0010-SC-00-D]. The accepted \$30,000,000 bond for Permit No. 59 alone exceeds the minimum required bond amount adopted in this Order and will remain in place. Further, as addressed in Finding of Fact No. 54.b., *infra*, the Commission may release the existing \$200,000 bond for Permit No. 57.
- d. Marshall Mine, LLC's reclamation plan in the Application, as supplemented, meets the requirements of §12.145(b)(3) by providing a plan for backfilling, soil stabilization, compacting, and grading, with contour maps or cross sections that show the anticipated final surface configuration of the proposed permit area, in accordance with §§12.384-12.389 of the Regulations. Marshall Mine, LLC indicates that rough backfilling and grading (RBG) operations will primarily be performed using dozers, including the dragline, truck/shovel combination, or scrapers, as indicated on pages 145-2 through 4, in Tables 145-1A and 1B, and on Figure 145-1, which depicts additional time and distance to complete RBG operations and surface mining (SM) placement in areas mined with a dragline as follows:
 - i. In areas mined with a dragline in highwall-side stripping, an additional 18 months, or 680 ft from the toe of the highwall, to complete RBG operations, and 30 months and 1,180 ft to complete SM placement.
 - ii. In areas mined with a dragline in spoil-side stripping, an additional 24 months, or 910 ft from the toe of the highwall, to complete RBG operations, and 36 months and 1,410 ft to complete SM placement.
 - iii. The additional time and distance to complete SM placement is needed to allow for seasonal variable conditions. An additional 800 ft is required where there are ramps (1,480 ft from the highwall), and that the variance area for each ramp needs

to be 1,000 ft wide. Marshall Mine, LLC explains that reclamation of the ramps must lag normal spoil leveling activities because the ramps are constructed from the reclamation surface to the bench 80 ft below at a grade of 8% - which requires 1,000 ft - and that the ramps are advanced every 4 pits - which requires another 480 ft. This means ramps reach back 1,480 ft from the highwall toe, which is 800 ft further than the 680-foot variance request for RBG roughing backfilling and grading operations for highwall-side mining. Marshall Mine, LLC explains that a 1,000-foot wide swath is required for each ramp to ensure there is sufficient material to reclaim each ramp.

- iv. Section 12.384(a)(3) of the Regulations requires rough backfilling and grading for cyclical strip mining to be completed within 6 months following coal removal and not more than four spoil ridges behind the pit being worked. The reclamation timetables proposed by Marshall Mine, LLC exceed both the time and distance limits stipulated by this rule. However, §12.384(a)(3) also allows the Commission to grant additional time and/or distance for rough backfilling and grading if the permittee demonstrates in detail that additional time and/or distance is necessary. Staff indicates that Marshall Mine, LLC provided detailed descriptions to justify its need for additional time and distance to complete RBG for both highwall-side and spoil-side stripping when using a dragline. Staff supports the time and distance variance requests for dragline stripping. Staff states that, in its opinion, the requested variances for time and distance to complete RBG operations in areas mined with a dragline (680 ft for highwall-side stripping and 910 ft for spoil-side stripping) and for ramps (1,480 ft for a 1,000-foot wide swath) meet the requirements of §12.145(b)(3) and §12.384(a)(3). The Commission grants the variances requested relating to backfilling and grading pursuant to §12.384(a)(3) of the Regulations.
- v. Existing Permit Provision No. 3 (Permit No. 59) states as follows: "Marshall Mine, LLC must complete rough backfilling and grading activities within 18 months after coal removal or 680 ft from the highwall toe and placement of suitable oxidized material to be completed within 30 months after coal removal or 1,180 ft from the highwall toe as described in the highwall side stripping scenario." Staff recommends that this permit provision not be retained because the Application contains a time-and-distance variance request for RBG operations for highwall-side stripping; therefore, existing Permit Provision No. 3 of Permit No. 59 is no longer needed. The Commission does not re-adopt existing Permit Provision No. 3.
- vi. Marshall Mine, LLC provides postmining topography for Area A in Exhibit 145-1. Marshall Mine, LLC provides premining slopes in Exhibit 137-1 and postmining slopes in Exhibit 145-2. Marshall Mine, LLC provides a comparison of premining slopes to postmining slopes in Table 145-2.

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- vii. A review of the premine and proposed postmine contours and slopes, provided in the Application, indicates that the postmine surface will result in similar surface drainage patterns. A comparison of the updated premine and proposed postmine slopes are presented in the following table, which includes the proposed expansion of permitted area:

Slope Categories	Updated Premine Slope Area*		Proposed Postmine Slope Area		Proposed Change	
	Area (Acres)	Percent of Total Area (%)	Area (Acres)	Percent of Total Area (%)	Area (Acres)	Percent of Total Area (%)
0-3%	2,428.2	80.3%	2,388.4	79.0%	-39.8	-1.3%
3-5%	325.4	10.8%	299.7	9.9%	-25.7	-0.9%
5-10%	213.5	7.1%	240.9	8.0%	27.4	0.9%
10-15%	31.9	1.1%	55.9	1.8%	24.0	0.7%
15-20%	10.8	0.4%	15.1	0.5%	4.3	0.1%
Over 20%	15.3	0.5%	25.0	0.8%	9.8	0.3%
Total	3,025.0		3,025.0			

* Updated to reflect a net proposed expansion of permitted area

Slope Categories	Approved Premine Slope Area		Updated Premine Slope Area*		Proposed Change
	Area (Acres)	Percent of Total Area (%)	Area (Acres)	Percent of Total Area (%)	Percent of Total Area (%)
0-3%	1,820.7	75.1%	2,428.2	80.3%	5.2%
3-5%	354.8	14.6%	325.4	10.8%	-3.8%
5-10%	214.5	8.9%	213.4	7.1%	-1.8%
10-15%	24.0	1.0%	31.9	1.1%	0.1%
15-20%	6.1	0.3%	10.8	0.4%	0.1%
Over 20%	2.7	0.1%	15.3	0.5%	0.4%
Total	2,422.8	100.0%	3,025.0	100.0%	

* Updated to reflect a net proposed expansion of permitted area

Slope Categories	Approved Postmine Slope Area		Proposed Postmine Slope Area		Proposed Change
	Area (Acres)	Percent of Total Area (%)	Area (Acres)	Percent of Total Area (%)	Percent of Total Area (%)
0-3%	1,973.7	81.5%	2,388.4	79.0%	-2.5%
3-5%	250.0	10.3%	299.7	9.9%	-0.4%
5-10%	178.1	7.4%	240.9	8.0%	0.6%
10-15%	15.7	0.6%	55.9	1.8%	1.2%
15-20%	2.9	0.1%	15.1	0.5%	0.4%

Slope Categories	Approved Postmine Slope Area		Proposed Postmine Slope Area		Proposed Change
	Area (Acres)	Percent of Total Area (%)	Area (Acres)	Percent of Total Area (%)	Percent of Total Area (%)
Over 20%	2.4	0.1%	25.0	0.8%	0.7%
Total	2,422.8		3,025.0		

- viii. The proposed postmining contours show that slopes between 10 and 15% will increase by 40.2 acres when compared to the currently approved postmine slopes, slopes between 15 and 20% increase by 12.2 acres, and slopes greater than 20% increase by 22.6 acres. However, as reflected in the foregoing premine slope comparison, the aggregate acreage of premine slopes greater than 15% has substantially increase from 8.8 to 26.1 acres, indicating that the proposed expansion area has steeper slopes than are seen in the currently approved Permit No. 59 area. As shown in the foregoing table comparing proposed premine to proposed postmine slopes, the aggregate areal percentage of premine slopes above 15% (0.9% of area) compares favorably to the aggregate percentage of proposed postmine slope greater than 15% (1.3% of area). The steep slope areas are located along drainages, much like they are prior to mining, and the drainages patterns approximate the general nature of the premine topography.
- ix. Descriptions of Marshall Mine, LLC's proposed plans for seedbed preparation, revegetation, and revegetation maintenance, management, and monitoring are found on pages 145-4 and 5. The mitigation of unsuitable excess exchangeable acidity is also described.
- x. Marshall Mine, LLC indicates that it does not anticipate a need for mitigation of acid-forming material (AFM) or toxic-forming material (TFM) problems in the top four feet of reclaimed soils; however, measures are in place to mitigate excess exchangeable acidity in the proposed substitute material. Marshall Mine, LLC describes the mitigation measures on page 145-5, is to either cover AFM or TFM material with suitable material, remove the unsuitable material and backfill with suitable material, or incorporate lime using the cut-side and fill-side methods. As described in Staff's assessment of Marshall Mine, LLC's plan for addressing the presence of AFM/TFM, the information related to the proposed backfilling and grading plan as contained in the Application is adequate to meet the requirements of §12.145(b)(3), §12.384, and §12.385.
- e. Marshall Mine, LLC provided information in the Application, as supplemented, for a plan for the removal, storage, and redistribution of topsoil, subsoil, and other material to meet the requirements of §§12.334-12.338 of the Regulations, as required by §12.145(b)(4).

- i. A premining soil sampling program was implemented during 2010 to provide native soil baseline (NSBL) information for the project area. Marshall Mine, LLC references the soil and overburden sampling program on page 145-6 as described in section .134. Frequency distributions of native soil pH, acid-base accounting (ABA), clay and sand content presented in Worksheets 1-6 in Appendix 134-3. Postmine performance standards are presented in Appendix 145-4 – Soil Testing Plan (page 4).
 - ii. Marshall Mine, LLC described in the Application the methods for identification and planning for handling suitable material and material unsuitable for placement in the top four feet of mine reclamation areas including: premine overburden analyses; premine oxidized material sampling and modeling; field staking and verification; training of supervisory and operating personnel; verification of material placement; and the minesoil monitoring program.
 - iii. Marshall Mine, LLC revised its soil-handling plan to describe how it will provide suitable material for the top four feet of reclaimed land when conducting the cyclical mining operation (Supplements 3 and 4). In Supplement 3, Marshall Mine, LLC adjusted the five-year permit term mine blocks on Figure 145-3, *Soil Handling Plan*, to create a 115-acre pre-strip area for salvaging suitable topsoil substitute material should mining cease during the fifth year of mining (Year 2022). In Supplement 4, Marshall Mine, LLC revised Figure 145-3 again to remove a table on the drawing which contained information conflicting with the soil handling plan description contained in section .145(b)(4) of the Application. Marshall Mine, LLC indicates on page 145-7 (in Supplement 3) that it will stockpile 3,063,720 cubic yards of oxidized material suitable for placement in the top four feet of reclamation. Marshall Mine, LLC also provides calculations to demonstrate that the revised soil-handling plan will assure that there is sufficient suitable material to provide 4.3 ft of cover for all disturbed areas should mining cease during the permit term, and to have a buffer of approximately 615,000 cubic yards of suitable material should mining cease in Year 2022 (the worst-case scenario). Staff indicates that it is confident that the soil handling plan, as modified and described in Supplements 3 and 4, will allow for enough suitable overburden material to be set aside to cover all reclaimed subgrade areas with four feet of topsoil substitute material should the mine cease operations during the five-year permit term.
- f. The Application, as supplemented, meets the requirements of §§12.145(b)(5)(A)-(F) of the Regulations to provide a revegetation plan as required by §§12.390-12.393 and §12.395 of the Regulations. The plan contains a description of a revegetation schedule, planting methods, mulching techniques, irrigation practices, pest and disease control measures, and the standards to be used for determination of revegetation success.

- i. Marshall Mine, LLC addresses the requirements of §12.145(b)(5)(A) by providing a revegetation schedule by proposing to plant temporary vegetation within 60 days of placing suitable material on the regarded landscape, depending on the season to plant permanent vegetation, as indicated in Tables 145-1A and 1B (reclamation timetables). Marshall Mine, LLC indicates on page 145-4 that approximately 30% of the regraded areas will be stabilized with temporary cover prior to planting permanent vegetation. Warm season grasses are typically planted from March through June on all land uses, and trees and shrubs are typically planted December through February into established ground cover. Marshall Mine, LLC will apply for ERP initiation and Phase I release of reclamation liability for approximately six to seven years after coal removal, Phase II release approximately 8-12 years after coal removal, and Phase III release during the 11th or 12th year after coal removal, having endured the extended responsibility period (ERP) for at least the minimum required five years.
- ii. Marshall Mine, LLC addresses the requirements of §12.145(b)(5)(B) by describing the planting methods by selecting and establishing species from Appendix 145-2 in areas where erosion control and ground cover are the objective. Species from Table 144-1 will be selected for fish and wildlife postmine land-use areas, and species from Appendix 145-2 where industrial/commercial, pastureland, forestland or grazingland is the postmine objective. Plants listed in both Appendix 145-2 and Table 144-1 may be used in combination in wildlife enhancement areas located alongside major drainageways, ponds, roads, and/or fence lines as features within a given land use. The plant species listed in Appendix 145-2 and Appendix 145-3 are recommended for revegetation in the Pinewoods vegetation region of Texas by the NRCS, Texas Parks and Wildlife and the U.S. Fish and Wildlife Service (USDA, NRCS and USDI, USFWS 1981). Marshall Mine, LLC recognizes that bahiagrass, Bermudagrass, kleingrass, tall fescue, and black willow are not approved for fish and wildlife enhancement. Marshall Mine, LLC indicates on page 145-11 that herbaceous species mixtures will be seeded at rates designed to provide a minimum of 40 pure live seeds per square foot. Marshall Mine, LLC presents planting rates in Table 145-5.
- iii. Marshall Mine, LLC addresses the requirements of §12.145(b)(5)(C) by committing to apply nutrients and soil amendments to the redistributed surface soil layer in the amount determined by soil tests so that it supports the approved postmine land use and meets the revegetation requirements. Chisel plows and disc-harrow combinations are expected to be the primary tillage equipment used. Offset discs and/or bog harrows and chisel plows may be used to break up compaction, incorporate fertilizer and lime, or prepare a seedbed. Compaction detected below 18 inches will be alleviated to a depth of three feet using ripper attachments or subsoiling implements. A list of the general reclamation and revegetation

Land Use	Stand Type	Standard
Forestry	Pine Plantations	450
Forestry	Mixed Pine and Hardwood	450
Forestry	Hardwood	250
Fish and Wildlife	Mixed Pine and Hardwood	100

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Marshall Mine, LLC provides thinning-based forestry criteria (1 through 6) on pages 145-14 and 15, and the thinning-based forestry standards are contained in Appendix 145-6.

- vii. Marshall Mine, LLC includes a soil-testing plan in the Application, as supplemented to meet requirements of §12.145(b)(5)(F) of the Regulations for evaluation of the results of soil handling and reclamation procedures related to revegetation. Postmine performance standards are addressed in Table 145-1, which contains the areally-weighted frequency distribution values against which postmine samples will be measured to determine compliance. Appropriate select material placement is proposed to be verified by soil testing in accordance with the *Soil Testing Plan* contained in Appendix 145-4 in Marshall Mine, LLC's Supplement 4. The ALJ proposes to use the iteration of this plan as proposed by Staff in TA Addendum 3, titled *Soil Testing Plan and Postmine Performance Standards*, with a few changes, including a corrected reference to the wrong applicant, clarification of the component labels in the postmine-soil performance standards tables, and correction of some misspelled terms. The Commission approves the *Soil Testing Plan and Postmine-Soil Performance Standards* (Soil Testing Plan) as provided in Appendix II to this Order.
- viii. Approved Permit No. 59 contains existing Permit Provision No. 2 (Permit No. 59), which reads as follows: "The maximum allowable value for sand content in the 0-1 ft depth interval of postmine soils is 80%. This 80% limit shall be the postmine soil performance standard for sand in the postmine 0-1 ft depth interval." As summarized in Staff's TA, Marshall Mine, LLC now provides postmine soil performance standards for sand content in the 0-1 ft depth interval in the Application; as supplemented; hence, Permit Provision No. 2 (Permit No. 59) is no longer needed and is not retained.
- ix. Marshall Mine, LLC provided sufficient information to meet the requirements of §12.145(b)(6) of the Regulations, providing a description of the measures to be used to maximize the use and conservation of the lignite resources as required at §12.356. Marshall Mine, LLC indicates that the mine is designed and operated to recover and use the lignite resource within the available reserve area so that re-affecting the land by future surface mining will be minimized. The recoverable resource is determined using a minimum thickness of 1.25 ft (depending on overburden depth); weathering depth; and a maximum overburden depth of approximately 140 feet. In Staff's assessment, the lignite recovery information contained in the Application is adequate to meet the requirements of §12.145(b)(6).
- g. The information provided, as supplemented, is sufficient to meet the requirements of §12.145(b)(7) of the Regulations by providing a description of measures to be

employed to ensure that all debris, acid-forming material (AFM) and toxic-forming material (TFM), and materials constituting a fire hazard are disposed of in accordance with §12.375 and §12.386. The requirements of §12.145(b)(7) are found on pages 145-15 and 16 and include a reference to Marshall Mine, LLC's responses to the requirements of §12.139(2)(D) [related to the short-term and long-term methods of storing and disposing of non-lignite wastes], §§12.139(1) through 12.139(2)(D) and §§12.145(b)(3) and §12.145(b)(4) [compliance with §12.386], §12.139(2)(D) [discussion of handling non-coal wastes]. Marshall Mine, LLC provides a description of the contingency plans which have been developed to preclude sustained combustion of such materials. Marshall Mine, LLC indicates its rationale and methodology for compliance with §12.386 as discussed in the operation plan in Application section .139 and reclamation plan in Application section .145. A discussion of the design, construction, storage, handling, use, and disposal of any combustible equipment, structures, and supplies utilized in the mining process is provided to prevent uncontrolled combustion and to minimize the effects of any such combustion. Flammable fluids, or any other unused materials classified as toxic or hazardous by the TCEQ or by other regulatory authorities are registered, transported, stored, labeled, and handled in such a manner so as to meet applicable regulatory requirements and ensure that leachate and surface runoff do not degrade surface or groundwater. AFM or TFM will not be buried or stored in proximity to a drainage course so as to cause or pose a threat of water pollution. Open stockpile storage of mine-run lignite will only occur to a limited extent. Combustion of lignite in the active pits or beyond the margins of active pits is highly unlikely, but these areas will be monitored regularly. A description of the potential methods of extinguishing burning material is provided. Staff indicates that the methods described in the Application for disposal of debris, acid-forming and toxic forming materials, and fire hazard materials are adequate to meet the requirements of §12.145(b)(7).

- h. The information provided, as supplemented, is sufficient to meet the requirements of §12.145(b)(8) of the Regulations for drill hole casing and sealing. Marshall Mine, LLC indicates that it will seal and abandon all boreholes, water wells, monitoring wells, dewatering wells, and oil and gas wells in accordance with the following, as applicable: Coal Exploration Regulations, §12.331-333, the Texas Department of Licensing and Regulation, and 16 Texas Admin. Code §76.104. The plan as proposed in the Application, as supplemented, is sufficient and complies with §§12.331-12.333 of the Regulations.
- i. Marshall Mine, LLC states that currently there are no known underground openings. Oil and gas wells and pipelines have been identified and will be removed or maintained as necessary according to standards set in the relevant sections. Water wells located within the disturbance area and completed below the depth of mining will be plugged in accordance with §12.331 and §12.333 using a cement-bentonite grout. Water wells completed above the depth of mining will be removed with

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mining. Wells are identified in Table 128-3 (section .128). Details on the identification of gas wells are provided in Appendix 128-C (section .128) where each well's status is also given. Any future transfer of wells will be done following §12.333 and §12.351.

- ii. Marshall Mine, LLC indicates that coal exploration activities will occur within the permit boundary and will be limited to drilling 300 ft from the surface. Coal exploration activities will be conducted in a manner as to minimize disturbance and will include recontouring and revegetation when needed to prevent erosion. Exploration holes will be plugged within two days of their completion using a hole-plugging device set at 13 ft below ground surface (bgs), cement plug from 13 to 10 ft from surface, and native soil in the top 3 feet. The site will be marked by a 0.5" PVC pipe inserted into the cement plug to help locate the site and verify the cement plug. If flowing groundwater, oil or gas, distinct groundwater zones, the base of the minable sequence or the usable water table are encountered, the borehole will be plugged using a cement plug and tremie pipe to isolate the variable conditions (flowing medium, changes in aquifers). Although not specifically stated by Marshall Mine, LLC, it needs to be aware that, by Regulation, exploration activities can only be conducted in areas covered by the performance bond.
 - A. All monitoring wells will be constructed with an annular seal around the casing above the gravel pack placed between the well screen and the formation. This seal will be made of cement grout with four to six percent bentonite addition. When plugging wells where casing is left in place, the inside of the casing will also be filled with cement-bentonite grout as described above. Grouting placed in the annular space, around the casing, and inside the casing will be placed using a tremie pipe to assure that all voids are filled. Oil and gas wells to be mined through will be plugged in accordance with 16 Tex. Admin. Code §3.14. The Austin Inspection and Enforcement Office will be notified five working days prior to any hole-plugging operations.
 - B. Monitoring and dewatering/depressurizing wells no longer in use will be abandoned according to 16 Tex. Admin. Code §76.101, §76.102 and §76.109 if they are completed below the depth of mining. Monitoring wells located outside of active mining areas will be cased in compliance with 16 Tex. Admin. Code §76.72, §76.101 and §76.109. Marshall Mine, LLC will provide the Commission documentation from the certified well driller who plugged the wells that the annulus around the casing had been adequately sealed.
- i. The information provided, as supplemented, is sufficient to meet the requirements of §12.145(b)(9) of the Regulations for compliance with the Clean Air Act, Section 404 of the Clean Water Act, and other regulations which pertain to surface mine operations regarding air, water quality, and health and safety standards. Marshall Mine, LLC states that a discussion of the procedures to ensure compliance is discussed in detail in

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sections .139, .143, .144, and .146. Staff indicates that the information provide has been reviewed and has been determined to adequately address all requirements of §12.145(b).

41. Marshall Mine, LLC addresses the groundwater monitoring and protection requirements of §12.146(a) and (b), and the groundwater probable hydrologic consequences (PHC) determination requirements of §12.146(d) of the Application in a document titled, *Section 12.146, Probable Hydrologic Consequences Determination, Marshall Mine, LLC, Permit 59, Application for Renewal/Revision/ Consolidation, Harrison and Panola Counties, Texas*. Mr. Keith A. Wheeler of consulting firm Pastor, Behling & Wheeler (PBW), a licensed professional geoscientist in the State of Texas, prepared the document, which he signed and sealed on June 21, 2017. The Application, as supplemented, meets the groundwater monitoring and protection requirements of §12.146(a) and (b) of the Regulations and the groundwater PHC determination requirements of §12.146(d) of the Regulations.
 - a. Marshall Mine, LLC has provided a groundwater hydrologic reclamation plan in accordance with regulatory requirements at §12.146(a) of the Regulations. Marshall Mine, LLC indicates that it will conduct surface mining activities in a manner that will minimize changes to the prevailing hydrologic balance and will use accepted practices to control water pollution. Such practices will include land shaping, runoff diversion, achieving quickly germinating and growing strands of temporary vegetation, regulating channel velocity of water, lining drainage channels with rock or vegetation, mulching, selectively placing waste materials in backfill areas, and ensuring that the placement of acid-forming and toxic-forming materials are four feet or greater below the final graded surface. Where necessary to prevent upward migration of salts, to prevent exposure by erosion and formation of acid or toxic seeps, to provide an adequate depth for plant growth, or to otherwise meet local conditions, a thicker cover may be used. Disturbed materials may be selectively hauled and if necessary, recompactd to prevent leaking. These materials (spoil) will be placed to prevent, minimize and control the contamination of groundwater systems.
 - i. Acid-forming and toxic-forming materials have been identified during the baseline studies and their selective handling and placement during the mining and reclamation process is described on pages 139-5 through 9. Via this selective handling, Marshall Mine, LLC anticipates that the potential for deleterious groundwater seepage will be minimized.
 - ii. Marshall Mine, LLC will replace the water supply of property owners who obtain all of or part of their water from underground or surface sources where the water supply has been substantively affected by mining and mining-related activities.
 - b. A satisfactory long-term groundwater monitoring (LTGM) plan has been provided in accordance with §12.146(b) of the Regulations. Marshall Mine, LLC's proposed LTGM

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plan consists of fifteen wells: seven overburden wells, five underburden wells, and three spoil monitoring wells, as listed in Table 146-1. Water quality and water levels will be monitored on a quarterly basis in the wells listed in Table 146-1. Well locations are depicted on Figure 146-1, *Proposed Long-Term Groundwater Monitoring (LTGM) Locations*.

- i. Proposed LTGM wells were selected to monitor the groundwater conditions in the areas downgradient from the mining activities, adjacent to domestic water supply wells, and recharge and discharge areas. Proposed spoil monitoring wells will be installed within 180 days of completion of backfilling and grading in the vicinity of the proposed well locations unless Marshall Mine, LLC and the Commission agree on a longer time period due to reclamation issues in those areas. LTGM wells proposed for monitoring areas outside of and adjacent to the current proposed five-year mine block area that have not yet been installed will be installed prior to commencement of mining. Quarterly samples from LTGM wells are proposed in the Application, as supplemented, to be collected and analyzed for the parameters as listed in this finding of fact below (A through C), and include changes requested by Staff regarding monitored parameters. The analytical data and measurements will be submitted to the Commission in digital format within 30 days following the end of the quarter in which the data were collected and samples analyzed. Marshall Mine, LLC has proposed to provide paper copies of the laboratory reports with the digital data.
 - A. For each approved LTGM well, quarterly samples will be obtained and analyzed in the laboratory for total dissolved solids (TDS), sulfate (SO_4), chloride (Cl), total and dissolved iron (Fe), and total and dissolved manganese (Mn). Field measurements will also be obtained for electric conductivity (EC), pH, temperature, and water level.
 - B. For each approved and installed LTGM spoil monitoring well, annual samples will also be obtained, analyzed, and reported for the following trace elements: aluminum (Al), arsenic (As), boron (B), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), molybdenum (Mo), nickel (Ni), selenium (Se), and zinc (Zn).
 - C. If a new well or replacement well is installed during the permit term, this well will be sampled once for major ion water-quality parameters, as follows: bicarbonate (HCO_3^-), calcium (Ca^{+2}), carbonate (CO_3^{-2}), magnesium (Mg^{+2}), nitrate as nitrogen ($\text{NO}_3\text{-N}$), potassium (K^+), and sodium (Na^+).
- ii. Of the fifteen wells, four wells (two overburden and two underburden LTGM wells) are located in areas proposed to be incorporated into the permit area, referred to as the expansion area floodplain. Two LTGM wells, Well MW-5-OB-10 and Well

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MW-5-UB-10, are located in an area which is proposed to be excluded from the permit area. (In Supplement 1, Marshall Mine, LLC indicated that it owns the property tract upon which these wells are installed and thus maintains access to the wells for monitoring needs.) In addition, Staff further noted that by the end of the proposed five-year mining term, both LTGM Well MW-3-OB-10 and LTGM Well MW-3-UB-10 will have been mined through and thus removed from the LTGM plan. The same scenario is expected to occur in a future mining term for LTGM Wells MW-2-OB-10 and MW-2-UB-10.

- iii. Because of the changes that will occur to the LTGM plan as a result of mining through wells that are a part of the plan, Staff requested in its TA that an additional pair of overburden(OB)/underburden(UB) LTGM wells be installed in or near coordinates 2,977,000E, 261,500N (North American Datum 1927, State Plane Zone TX-NC), in the northern portion of the proposed expansion area. Marshall Mine, LLC subsequently proposed in Supplement 1 to install two new wells as future replacement wells, identified as Wells MW-P1-OB and MW-P1-UB, to replace existing Wells MW-2-OB-10/MW-2-UB-10 for monitoring native overburden/underburden units adjacent to the mine blocks in the postmine period, and included these wells on revised Figure 146-1 and in revised Table 146-1 (Supplement Nos. 1 and 2). Staff also requested that a second LTGM well pair (OB/UB) be installed at or near coordinates 2,975,000E/257,000N, west of the levee/slurry wall that will be constructed along the perimeter of the proposed expansion area east of the Sabine River. Staff explained that this second pair of LTGM wells is also needed to adequately evaluate the effects of the future levee/slurry wall on the hydrology in the immediate vicinity. Marshall Mine, LLC agreed in its written errata for Supplement 1 that this second requested well pair would be installed in the future no later than the same quarter that existing wells are taken out of service. Based on Marshall Mine, LLC's proposal, Staff indicated in TA Addendum 2 that the existing wells were adequate for groundwater monitoring for the proposed permit renewal term. Staff continues to caution in TA Addendum 1, however, and the Commission concurs, that baseline groundwater conditions will need to be adequately described via additional well data before the future levee/slurry wall is approved for construction by the SMRD Director or the Commission. Staff evaluated the need for existing Permit Provision No. 5 (Permit No. 59), which reads "*LTGM wells located in proposed mine blocks shall be replaced prior to destruction of that groundwater monitoring well. The location of any replacement well(s) must be submitted under separate revision application 90 days prior to planned destruction of the existing well and approved by the Director of the Surface Mining and Reclamation Division in accordance with §12.226 of the Regulations.*" As described in this Finding of Fact, Marshall Mine, LLC agreed in the errata for the Application Supplement 1 that replacement wells would be needed and that it has committed to install these wells; however, Marshall Mine,

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LLC has not described a process by which it would revise its permit in a timely fashion to allow Staff to evaluate the adequacy of a proposed well location.

- A. Therefore, Staff has proposed that existing Permit Provision No. 5 be retained with minor modification to ensure that such changes are timely submitted. The Commission retains Permit Provision No. 5 in this proceeding, modified to include Staff's recommended change from 90 to 180 days for submittal prior to planned destruction, the ALJ's recommended change with regard to processing of the revision application, and existing the permit provision. The existing permit provision is necessary and consistent for compliance with the Regulations by providing missing required property interest information which may be provided in a post-issuance revision application. Staff recommends a change to existing Permit Provision No. 5 to increase the time frame for submittal prior to planned destruction from 90 to 180 days, allowing sufficient time to approve LTGM plan changes prior to new well installation and plugging of existing well prior to mining. The ALJ also proposes changes with regard to inclusion of language addressing processing of the revision application in accordance with §12.226 of the Regulations.
- B. By letter dated February 5, 2020, the ALJ proposed to modify Staff's proposal of existing permit provision and requested if any party was adverse to the permit provision modification as proposed by the ALJ. By letter dated February 11, 2020, Staff responded that it does not consider the ALJ's modification to be adverse. By letter February 12, 2020, Marshall Mine, LLC responded that it does not consider this permit provision recommendation to be adverse. Permit Provision No. 5 is renumbered and modified in accordance with this Order. The Commission adopts this renumbered provision as **Permit Provision No. 9**, as set forth in Appendix I to this Order, as follows.

Each long-term groundwater monitoring (LTGM) plan well(s) located in proposed mine blocks shall be replaced prior to destruction of the monitoring well. The location of the replacement well(s) must be submitted as a revision application 180 days prior to planned destruction of the existing well(s), and include all information required under the Regulations to allow for the replacement well(s) to be incorporated into the approved LTGM plan. This revision application shall be submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations.

- iv. Staff also evaluated the continued need for existing Permit Provision No. 4 (Permit No. 59), which reads *"Proposed LTGM wells located outside the mine area must be installed and monitoring must begin within 180 days of issuance*

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of the permit. Revisions to the LTGM plan must be approved by the Director of the Surface Mining and Reclamation Division in accordance with §12.226 of the Regulations.” This permit provision was adopted in approved Permit No. 59 to ensure that LTGM Well MW-7-OB-12 would be installed in a timely manner. Marshall Mine, LLC installed this well in 2012 in accordance with the approved permit. Staff does not recommend that existing Permit Provision No. 4 be retained because it is no longer needed. Existing Permit Provision No. 4 is not retained.

- v. In its TA, Staff indicated that the proposed spoil LTGM plan was inadequate, in that an additional spoil-monitoring well needed to be proposed to be installed south of the location of currently existing LTGM Wells MW-2-OB/MW-2-UB. These additional spoil wells were needed to adequately monitor postmine spoil resaturation in the area proposed for disturbance in the five-year renewal term. In Supplement 2, Marshall Mine, LLC proposed to install two additional spoil LTGM wells, Well MW-11-R located in the northern portion of the life-of-mine mine blocks, and Well MW-12-R located in the expansion area within the Sabine River floodplain. The exact locations of these spoil LTGM wells have not been identified at this time because these locations remain to be identified in a renewal application for a future permit term.
- vi. In Table 128-1 of the Application, Marshall Mine, LLC provided completion information for all existing baseline monitoring and LTGM wells, and depicted a schematic diagram of typical monitoring well construction on Figure 128-2. Completion data for each monitoring well installed during the proposed permit term are proposed to be submitted to the Commission within 30 days following the end of the quarter in which the well is installed.
- vii. Marshall Mine, LLC provided revised Table 146-1 and Figure 146-1 to show two future proposed wells. As described in a footnote to the table, these two wells (Overburden/Underburden Wells MW-P-1-OB/MW-P-1-UB) will replace existing Wells MW-2-OB-10/MW-2-UB-10 if these two wells get mined through, plugged, or destroyed during the permit term. Replacement wells will be installed no later than the same quarter existing wells are taken out of service.
- x. The proposed LTGM program is designed to monitor mining impacts to groundwater during the current permit term and has been expanded in this permit renewal/revision/ consolidation/expansion for proposed and anticipated mining activities in future mine blocks. Marshall Mine, LLC’s general plan for protection of the groundwater hydrologic balance is determined to be adequate to protect groundwater resources and monitor the effects of mining activities in the proposed permit and adjacent area during the proposed second five-year term.

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- c. The proposed groundwater probable hydrologic consequences (PHC) determination has been evaluated by Staff and found to meet regulatory requirements to provide a reasoned assessment of the anticipated effects of the mining operations on the hydrologic balance, having implemented the proposed measures for protection of groundwater quality in the proposed permit area for the proposed five-year permit renewal term. Staff described the groundwater PHC determination in Marshall Mine, LLC's Application as follows:
 - i. Advance dewatering of the overburden and depressurization of the underburden is not anticipated for the Marshall Mine because saturated sands within the proposed permit and adjacent areas are limited in thickness and are discontinuous. Marshall Mine, LLC's assessment predicts that during the mining operation, water levels will decline in the overburden units adjacent to the mined area. A gravity-induced potentiometric gradient toward the mine pit will develop in the adjacent unmined overburden as the overburden material is excavated. Overburden water levels will thus decline as a result of seepage into the pit. The extent of the water-level decline is a function of the geometry and hydraulic properties of the water-bearing units, the magnitude of the change in hydraulic gradient, the depth and sequence of mining, and the presence of any hydrologic boundaries in the area. Marshall Mine, LLC has determined based on past experience at mines completed in similar hydrogeologic settings, the five-foot drawdown due to pit inflow may extend a maximum of about 2,000 ft beyond the open mine pits. Marshall Mine, LLC depicts this extent of projected five-foot drawdown for the life of mine as a contour line on Figure 146-3 (Supplement 1). During the mining process, some incidental underburden depressurization may occur as the overburden material is removed and excess pressures in the underburden are lessened. The impacts from this depressurization phenomenon are expected to be localized and short-lived.
 - ii. The extent of overburden drawdown will be significantly restricted by the geometry of the sand bodies and hydraulic conductivity of the sediments surrounding the open pit. As shown on Figure 146-3 and listed in Table 146-3 of the Application, 27 private water wells are identified within the predicted overburden five-foot drawdown contour. The water levels in these wells are predicted to be impacted by surface coal mining and reclamation activities. The wells most likely to be impacted are those located nearest the mine area that are screened in the same interval proposed to be dewatered. Wells screened at depths greater than about 200 ft below ground surface (bgs) will likely not be impacted by mining activities because of the confining strata that hydraulically separate the mined interval from these underlying sands. LTGM-well groundwater-level data and associated graphs are provided in Appendix 146-F of the Application.

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- iii. The mining process will eliminate any seeps or springs presently located within the proposed permit and adjacent areas where significant water-level declines occur. Baseflow contributions to streams from these groundwater discharge sources in the areas adjacent to mining are expected to be reduced until the overburden resaturates during the reclamation period. Following overburden resaturation, the interrelationship between the postmine groundwater systems and surface-water systems should be similar to the premine systems, but the location of some groundwater discharge areas could change. A number of variables will determine whether a seep or spring forms in the postmine landscape; thus, it is not possible to predict where postmine seeps or springs will form and whether they will occur as distinct discharge points or as diffuse leakage into stream beds. The total amount of groundwater discharged to the streams is not expected to increase in the postmine regime and should actually decrease in clay-rich spoil because the bulk transmissivity of the reclaimed overburden will be lower.
- iv. Mining operations will remove the lignite deposits and eliminate the lateral continuity of the overburden strata. The reclaimed areas consist of mixed overburden material (spoil) with initial porosities and vertical permeabilities that are greater than in the original stratified overburden system. These characteristics should decrease with compaction and settlement of the spoil mass, with the decreases less in sandy sediments than in clayey material. The overall transmissivity of the spoil will be less than in the original overburden aquifer.
- v. During mining, the water table will be lowered near the open mining pits due to the temporary hydraulic gradient that will develop toward the pit. Baseline studies at the Marshall Mine have demonstrated that the groundwater elevations and flow directions in the premine overburden are strongly influenced by the topography, particularly the drainage features. Overburden groundwater flows from topographically high areas toward the stream valleys. These stream valleys act as local groundwater divides for the shallow overburden groundwater flow system. A similar postmine flow regime is anticipated to be established within the spoil mass following resaturation, with groundwater flowing from topographic high areas toward the reestablished stream valleys.
- vi. In its TA, Staff noted several concerns regarding documentation of Marshall Mine, LLC's basis for its pit-inflow drawdown estimate. These concerns included a lack of description of the analytical model used by Marshall Mine, LLC to determine the maximum extent of drawdown of overburden aquifer waters, failure to consider LTGM data in validating the predictions of the current groundwater PHC determination, and need for a more robust explanation of the interplay of the Sabine River and the drawdown effects from the mining excavation. In Supplement 1, Marshall Mine, LLC explained that it modeled the pit inflow and drawdown using the Unified Facilities Criteria (2004) equation, wherein its estimate

was determined from a model of the pit as the maximum extent of influence from a well (zero-foot drawdown). Staff considers wells within this zero-foot drawdown contour as having the potential to experience a temporary adverse effect due to mining. Staff's indicated in its TA Addendum 1 that, in its opinion, use of a well model as contemplated by Marshall Mine, LLC was not a good analog model for an open pit because it represented a point approximation with zero area, i.e., having only one dimension (the screened interval), whereas a pit clearly has a significant area exposed to groundwater flows in three dimensions. Staff suggested that a better analog model would be to use analytical equation 4-1(4) in UFC (2004), in that this modeling equation considers drawdown under gravity flow from a slot, not a well. Staff also suggested that other analytical models, such as that described in a section entitled *Predictive Analysis of Groundwater Inflows into Excavations* in the reference book titled, *Groundwater* (Freeze and Cherry, 1979), would be more appropriate. Nevertheless, Staff indicated a concluding belief that the need for a more robust model as described in Staff's TA Addendum 1 will be needed as the mining approaches closer to the Sabine River and Eightmile Creek, but is not essential to have at this time.

- vii. Possible impacts to groundwater quality will likely be limited to slight to moderate increases in TDS concentrations over premine conditions due to increasing concentrations of iron, magnesium, sulfate, and chlorides. Impacts such as acid groundwater and trace element mobility are not expected to occur. The pH conditions will likely remain neutral to slightly acidic.
- viii. The chemistry of the spoil-area groundwater is expected to evolve during the resaturation period, with the TDS concentration increasing, followed by a reduction in TDS concentration as the flow regime becomes established and continued flushing occurs. The lower confining beds (underclays) should restrict vertical movement and promote the establishment of horizontal flow. Although small volumes of waters having high TDS concentrations may migrate from the resaturated spoil into adjoining overburden aquifer units, the expected total volume is insignificant relative to the larger volume of natural waters within the formation sands. Therefore, only minor effects to overburden groundwater quality are expected and should be restricted to just a few hundred feet from the mined area. In some cases, minor water-quality changes could occur in private wells located adjacent to mining due to water-level changes or changes in groundwater flow direction, resulting in mixing of different water types in water-bearing zones intercepted by the domestic well. Underburden groundwater quality is not expected to be materially affected by the mining activities. Low-permeability clay strata exist immediately below the lowest mined seam in most of the permit and adjacent area and will prevent movement of any waters from the spoil mass into the underburden aquifer units. In those places where the confining clay strata are

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thin or absent, movement of this water may occur but will be restricted as a result of the low transmissivities of the native underburden sands in the region.

- ix. Marshall Mine, LLC used a mass-balance approach to predict the water-quality impacts of spoil groundwater on the adjacent overburden aquifer. The approach assumes that, following resaturation of the spoil, some spoil water will mix with the groundwater in the adjacent unmined overburden aquifer. TDS concentrations were used in this analysis as the main indicator of water quality, since at other mine sites TDS concentration has historically been the parameter that is most consistently different between native and spoil ground water.
 - A. The water quality of the overburden aquifer was assigned the median TDS concentration from the baseline study (568 mg/L).
 - B. Because no spoil water-quality data are as yet available at the mine site, Marshall Mine, LLC used the median TDS concentration of spoil groundwater (713 mg/L) from the nearby, hydrologically similar Martin Lake Mine.
 - C. LTGM-well groundwater sampling results and time-series graphs for TDS and sulfate are contained in Application Appendix 146-G (Supplement 1).
 - D. Marshall Mine, LLC summarizes the input parameters for the steady-state mass-balance model in Table 146-5. The results shown in Table 146-5 indicate a predicted postmine increase in TDS concentration of about 1 percent over baseline values in the overburden aquifer adjacent to the mined-out area, from 568 to 574 mg/L, a change which will be imperceptible to groundwater users.
 - E. In the event that the TDS concentration of the resaturated spoil is higher than predicted, mixing outside the unit areas adjacent to the mines is expected to further dilute the spoil groundwater, resulting in minimal impacts to groundwater users in the proposed permit and adjacent area.
 - d. The Application, as supplemented, is satisfactory to meet the requirements of §12.146(a), (b) and (d) for groundwater, with adoption of Permit Provision No. 9.
42. Marshall Mine, LLC addresses the surface-water monitoring and protection requirements of §12.146(a) and (c), and the surface-water PHC determination requirements of §12.146(d) of the Application in the same document addressing groundwater monitoring and PHC determination (titled, *Section 12.146, Probable Hydrologic Consequences Determination, Marshall Mine, LLC, Permit 59, Application for Renewal/Revision/Consolidation, Harrison and Panola Counties, Texas*). The Application, as supplemented, meets the surface-water monitoring and protection requirements of §12.146(a) and (c) of

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the Regulations and the surface-water PHC determination requirements of §12.146(d) of the Regulations.

- a. Marshall Mine, LLC has provided a surface-water hydrologic reclamation plan in accordance with regulatory requirements at §12.146(a) of the Regulations. As described by Staff in its TA and TA addenda, Marshall Mine, LLC indicates in the hydrologic reclamation plan contained on pages 146-1 and 2 of this Application that its mining and reclamation operations will employ accepted best practices to control water pollution and minimize changes to the hydrologic balance. All surface-water runoff from disturbed areas will pass through detention ponds before discharging from the permit area. Perennial streams will not be disturbed during pond construction, and surface-water runoff into disturbed areas will be minimized. Discharge structures will be planned using the best practical technology in its engineering procedures to design and construct ponds to optimize sediment removal, minimize short-circuiting, and prevent erosion. Discharge from the sedimentation pond and diversions will be controlled to prevent deepening or enlargement of stream channels. Marshall Mine, LLC proposes to disturb only the smallest practicable area at any one time. To avoid AFM/TFM drainage, Marshall Mine, LLC will identify, bury, and/or treat (if necessary) spoil that might adversely affect water quality. Backfilled materials may be selectively hauled and compacted to prevent leaching.
- b. Marshall Mine, LLC indicates that contamination of surface water by acid and toxic-forming overburden materials will be avoided by identifying, treating, and burying contaminated spoil where it may adversely affect the hydrologic system. Marshall Mine, LLC also indicates that acid-forming and toxic-forming materials will be covered with a minimum of four feet of suitable material. Backfill materials may be selectively hauled and compacted, if necessary, to prevent leaching.
- c. The proposed long-term surface-water monitoring (LTSM) plan for the Marshall Mine consists of: (1) monitoring point-source discharges from final sedimentation or treatment impoundments; and (2) monitoring selected disturbed-area and undisturbed watersheds during mining and reclamation. A detailed description of the proposed LTSM plan is contained on pages 146-6 through 8 and summarized in Tables 146-2 and 146-3 of the Application.
 - i. On pages 146-6 through 8, Marshall Mine, LLC reports that the water-quantity and quality data from final discharge points will be collected in accordance with TCEQ requirements. These data will be provided to the Commission within 30 days following the end of the calendar quarter. Outfalls will be sampled weekly and composited by flow-weighted averaging of data from each pond within the outfall. Effluent grab samples will be obtained at the outlet discharge structure of each pond sampled, preserved on ice, and stored at the proper temperature until they arrive at the mine lab. The samples will be analyzed for pH and settleable solids

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due to short sampling holding times. Marshall Mine, LLC indicates that the different types of ponds and the corresponding effluent parameters will be sampled once per week while a pond is discharging. In Table 146-3, Marshall Mine, LLC outlines the different types of ponds and the corresponding constituents that will be analyzed under this TPDES point-source monitoring program. On page 146-7, Marshall Mine, LLC indicates that ponds having discharges that exceed effluent limits for required constituents will be reported to the Commission within five days of becoming aware of the discharge violation.

- ii. On page 146-8, Marshall Mine, LLC indicates that the stream monitoring plan will allow it to compare LTSM data from disturbed and undisturbed stations on a mine-wide basis; however, this comparison will have limited value because the undisturbed baseline data only represent the conditions observed during the short-term baseline period and do not reflect the wide range of conditions captured over the long-term monitoring period (disturbed). The locations of these monitoring stations are shown on Figure 146-2 and listed below:

Station ID	Description of Long-Term Surface Water Station
SW-1	Undisturbed on Taylor Branch
SW-2	Disturbed on Taylor Branch
SW-3	Disturbed on Unnamed Tributary of Caddo Creek downstream of A-1 Final Discharge Pond
A-2*	Effluent from A-2 Final Discharge Pond

* Pond A-2 has not yet been constructed; monitoring will begin the first quarter after the pond becomes active.

- iii. Samples and flow data are proposed to be collected at the monitoring stations. Station rating curves will be developed for each station and will be submitted to the Commission during the first quarterly sampling submittal. LTSM data will be reported to the Commission (in both paper and electronic format) within 30 days following the end of each calendar quarter. Marshall Mine, LLC will maintain the monitoring of the sites during regular site visits and will update the rating curves following 10-year flood events or if any changes in channel geometry are observed. Updates to the rating curves will be submitted to the Commission with the quarterly monitoring reports. In Table 146-2, Marshall Mine, LLC indicates that the monitoring stations will be analyzed and reported quarterly for total dissolved solids, total suspended solids, pH, total and dissolved iron, and total and dissolved manganese.
 - A. On page 146-8, Marshall Mine, LLC indicated that "If the creek does not flow" then "no flow" would be documented during quarterly sampling. Marshall Mine, LLC also indicated that samples would not be collected if the stream was not flowing. In this region of Texas, Staff anticipates that creeks upon which LTSM

stations are established should flow year-round to be justified for placement of a monitoring point under §12.146(c)(2). Marshall Mine, LLC had indicated that it would sample during the quarter; however, it was unclear to Staff how frequently sampling was proposed to be conducted within a given quarter. Staff has interpreted Marshall Mine, LLC's plan to mean it would visit the LTSM stations once per quarter, calling into question whether the sampling frequency is adequate to meet requirements at §12.146(c)(2). Staff has indicated that in the area of Texas where Marshall Mine, LLC is located, low-flow events on streams where LTSM stations are established should be very rare, and yet the most recent sample data from LTSM Stations SW-1, SW-2, and SW-3 submitted by letter dated July 16, 2018, show "no flow" for all three stations during the second quarter of the year in an area receiving an average of nearly 50 inches of annual rainfall, according to section .131 of this Application. Based on the sampling date and recorded rainfall, the monitored creeks should have been flowing, and an effort should have been made to collect flow measurements and water-quality samples more than once per quarter, returning to a site later if necessary because safe access was not available during the storm event. Staff indicated that these sample data are necessary to support future applications for release of reclamation liability, and that a simple recording of "no flow" will impede Staff's ability in the future to make findings concerning water quantity. Staff indicated that it is currently working with several permittees to rectify concerns with recorded no-flow events, and a State-wide evaluation is being conducted to address concerns with LTSM data sampling frequency (Staff September 6, 2018, TA, p. 123).

- B. Marshall Mine, LLC proposed LTSM Stations SW-1 and SW-2 for the Taylor Branch watershed and Station SW-3 for an unnamed tributary of the Caddo Creek watershed as a part of its LTSM plan for the five-year renewal term. LTSM Station SW-3 is located downstream of the proposed mining areas, and Staff requested in its TA that a LTSM station also be proposed upstream of the proposed mining area within this watershed. In Supplement 1, Marshall Mine, LLC proposed to install new LTSM Station SW-6 upstream of the proposed mining disturbance in the watershed of this unnamed tributary.
- C. Staff also noted in its TA a concern that Marshall Mine, LLC did not propose any LTSM stations within the Wattle Duck Pond watershed. In fact, Marshall Mine, LLC indicated that the outlet of the A-2 Pond would be used as a LTSM station during the same quarter that the pond is activated. Staff noted that there was no timetable for A-2 Pond construction and, therefore, a gap in the period of record for surface-water data in the area would be created. Staff concluded that until A-2 Pond was constructed and certified, Marshall Mine, LLC needed to continue monitoring at the SW-5 baseline station. In Supplement 1, Marshall Mine, LLC committed (revised pages 146-7 and 8 and

on revised Figure 146-2) to continue monitoring the SW-5 baseline station until the same quarter that the pond is activated. Staff indicated its concurrence with this plan, but cautioned Marshall Mine, LLC that if water data obtained from the discharge point of A-2 Pond is treated, as defined at §12.3(111), then reclaimed portions of the watershed area of A-2 Pond would not be eligible for Phase II or III release of reclamation liability. The Commission concludes from this assessment that analyses of treated water may not be used for demonstrations that a permittee has met water-quality protection requirements needed for Phase II or Phase III release of reclamation liability.

- D. In that the record as described in this Finding of Fact supports that the proposed LTSM plan is sufficient to meet regulatory requirements at 16 Texas Admin. Code §12.146(c), but is deficient with regard to supporting future findings on protection of water quantity necessary for release of reclamation liability.
- E. By letter dated February 5, 2020, the ALJ proposed a permit provision regarding surface-water monitoring and requested whether any party was adverse to the permit provision as proposed by the ALJ. By letter dated February 11, 2020, Staff responded that it does not consider the ALJ's permit provision adverse. By letter February 12, 2020, Marshall Mine, LLC responded that it does not consider the permit-provision recommendation to be adverse. The Commission adopts **Permit Provision No. 10**, to ensure timely revision of the permit following completion of Staff and Industry's State-wide evaluation, as set forth in Appendix I to this Order, as follows:

Within 120 days following completion of the State-wide evaluation to address concerns with long-term surface-water monitoring (LTSM) data sampling frequency and "no-flow" events, but no later than 1 year after issuance of the permit, Marshall Mine, LLC shall submit to the Director of the Surface Mining and Reclamation Division (SMRD) a revision application to modify its LTSM plan to obtain sampling data supportive of required findings necessary to demonstrate protection of water quantity prior to release of Phase II and III reclamation liability. Analyses of treated water may not be used for demonstrations that Marshall Mine, LLC has met water-quality protection requirements necessary for Phase II or Phase III release of reclamation liability. This revision application shall be submitted to the Director of the SMRD for review and approval in accordance with §12.226 of the Regulations.

- iv. Marshall Mine, LLC proposes a plan for protection of surface-water users, wherein it 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, if the water supply has been adversely affected by the activities of the mining operation (see Application section .130). Marshall Mine, LLC will provide alternative sources of water in accordance with §12.130 and §12.352 where protection of used water sources cannot be assured.

- d. The proposed surface-water probable hydrologic consequences (PHC) determination has been evaluated by Staff and found to meet regulatory requirements to provide a reasoned assessment of the anticipated effects of the mining operations on the hydrologic balance, having implemented the proposed measures for protection of surface-water quality in the proposed permit area for the proposed five-year permit renewal term. Staff described the surface-water PHC determination in the Application as follows:
 - i. Marshall Mine, LLC's indicates that its surface-water PHC determination addresses the life-of-mine period. From the summary provided in Staff's September 6, 2018 TA, four watersheds are located within the proposed permit area shown on Figure 146-2, *Surface Water PHC Watershed Boundaries & Proposed Long-Term Surface Water Monitoring Locations*. Drainage for the proposed permit area is encompassed within the watersheds of Taylor Branch and an unnamed tributary of Caddo Creek, Wattle Duck Pond, and an unnamed tributary of Eightmile Creek. Taylor Branch is also a tributary of Eightmile Creek. Likewise, Eightmile Creek, Caddo Creek, and the Wattle Duck Pond are tributaries to the Sabine River. The proposed permit area, therefore, is located entirely within the Sabine River watershed.
 - ii. Mining and reclamation activities will result in disturbance of the native soil conditions. Stratified overburden materials will be removed and replaced in an unstratified and unconsolidated condition. During this process the overburden material expands in volume and becomes initially more porous with vertical permeability greater than in its premine state. During mining, runoff from bare soil surfaces is expected to be greater than in premine or postmine reclaimed conditions. Before the reclamation vegetation is established, the bare soil left by the backfilling and grading operations will produce a substantially large sediment load in the surface-water runoff. During the mining and reclamation phases, the runoff will be detained and treated in sedimentation ponds. As vegetation is being reestablished peak flow and runoff volumes will likely return to premine conditions in some areas once vegetation has been permanently reestablished. Other areas may experience a slight increase in runoff due to less vegetative cover and lower evapotranspiration rates caused by a change in vegetation from primarily undeveloped woodland and pastureland to predominantly pastureland as to the

reclaimed land use, as described by Marshall Mine, LLC on pages 146(d)-17 and 18 (Supplement 3).

- iii. On page 146-15 (Supplement 3), Marshall Mine, LLC indicates that land-use and soil-mapping data have been provided for the areas within the proposed permit boundary. Land-use information is in sections .135 and .147 and soil information is in section .134.
- iv. On pages 146-16 through 146-19 (Supplement 3), Marshall Mine, LLC summarizes its watershed modeling using SEDCAD4 (Appendix 146-B) performed to determine the changes in peak flows and runoff volumes. These results are summarized in Table 146-7, *Predicted Storm Event Runoff Volumes, Marshall Mine, LLC Permit No. 59 – Application for Renewal/Revision/Consolidation*. Model results show that, for the three modeled storm events, 10-yr/24-hr, 25-yr/24-hr, and 100-yr/24-hr, peak flow and runoff volumes are expected to climb in the active-mine phase, then decrease to near baseline levels in the postmine phase. Annual mine blocks are provided for proposed mine years 1 through 5 and the remaining mine areas were designated in multi-year mine blocks. The proposed mining blocks will affect all of the watersheds. For each of these precipitation events, the watersheds were modeled for the premine, active mine, and postmine hydrologic and sedimentologic conditions. The areally weighted curve numbers were determined from weighting the soil group and the land use for the premine, active-mine and postmine periods and are provided in Appendix 146-A and Table 146-6 in the initial Application. After the areally weighted curve numbers were determined for the watersheds, the curve numbers were adjusted for the local antecedent moisture conditions. The average premine CN value was 76, average active-mine CN value was 79, and average postmine CN value was 77.
- v. Increases in runoff and peak flow are directly related to increases in curve numbers as a result of the change in land use. The surface-water modeling that was performed does not include the mitigating effects of the sedimentation ponds that are designed to retain and treat runoff. However, Marshall Mine, LLC explains its rationale for omitting sedimentation pond effects in that the use of sedimentation ponds may slightly increase evaporation rates, but because model results show that postmine runoff volumes are greater than premine runoff volumes, the net effect of the use of sedimentation ponds do not significantly affect runoff volumes from the proposed permit area. Marshall Mine, LLC amended the surface-water PHC determination in Supplement Nos. 3 and 4 to provide a comparison of premine water quantity leaving the mine area to postmine water quantity leaving the mine area for average monthly rainfall and evaporation conditions. In Supplement 3, Marshall Mine, LLC provided a summary of the surface-water mass-balance comparisons (Appendix 146-J); and, in Supplement 4, Marshall Mine, LLC provided supporting calculations for its surface-water mass-balance

calculations (in an addendum to Appendix 146-J) and a map showing watershed delineations (Figure 146-J-1, *Postmine Watershed Map*).

- vi. Marshall Mine, LLC's surface-water mass-balance comparison was used to quantify the impacts that the proposed mining operations are expected to have on surface-water availability (the volume of rainfall runoff from the mine site available to downstream water users). Using these surface-water mass-balance calculations, Marshall Mine, LLC compared the projected average rainfall runoff volume after completion of mining and reclamation to the known average rainfall runoff volume prior to the initiation of mining operations. The mass-balance calculations account for changes to land-use categories, for changes to SCS (NRCS) hydrologic curve numbers, for the storage capacities of proposed permanent impoundments, and for evaporation losses from the permanent ponds. The mass-balance calculations used average monthly rainfall rates based on long-term data from NOAA, and average evaporation rates based on long-term data from the Texas Water Development Board. Marshall Mine, LLC's comparison showed that after mining and reclamation, the average annual runoff from the mine area will decrease by about 5 percent (89 ac-ft). In TA Addendum 3, Staff indicates that it considers this decrease in rainfall runoff volume to the Sabine River negligible. Additionally, Staff notes that any rainfall runoff from the mine site is classified as ephemeral flow. Ephemeral flows only occur in response to rainfall events and are generally of short duration. Staff believes that the small decrease in ephemeral flows from the mine site (a decrease which is entirely due to Marshall Mine, LLC's intent to construct several ponds in the reclamation area) is offset by the benefits that the ponds will provide to the region, in that the ponds will enhance wildlife and vegetation diversity.
- vii. USGS Station 08022040 is located on the Sabine River just upstream of its confluence with Caddo Creek. USGS data indicate that the average annual streamflow for the Sabine River at Station 08022040 is about 1,822,025 ac-ft per year. The anticipated decrease in annual average rainfall runoff due to mining operations (89 ac-ft) is about 0.005 percent of the average annual streamflow for the Sabine River at USGS Station 08022040. Therefore, Staff considers the decrease in rainfall runoff volume to the Sabine River to be negligible. Additionally, Staff notes that any rainfall runoff from the mine site is classified as ephemeral flow, which the Regulations describe as miscellaneous flows. Ephemeral flows only occur in response to rainfall events and ephemeral flows are generally of short duration. Staff believes the small decrease in ephemeral flows from the mine site (a decrease which is entirely due to the fact that the Marshall Mine intends to construct several ponds in the reclamation area) is offset by the benefits that the ponds will provide to the region, in that the ponds will enhance wildlife and vegetation diversity. Staff believes that the PHC determination, as revised and

amended in Supplements 3 and 4, adequately addresses §12.146(d)(3)(D)(iv) of the Regulations regarding postmine surface-water availability.

- viii. Marshall Mine, LLC's PHC determination states that hydrologic impacts to water rights of record downstream of the proposed permit area are expected to be minimal. Further, Marshall Mine, LLC states in section .130 of the permit Application that it searched TCEQ records for water rights of record downstream of the permit area and found that no water rights exist between the permit area and the confluence of Caddo Creek with the Sabine River. Consequently, Staff believes that the PHC determination, as revised and amended in Supplements 3 and 4, adequately addresses §12.146(d)(3)(C) of the Regulations regarding diminution or interruption of surface source of water within the proposed permit or adjacent areas.
- ix. On page 146-19 (Supplement 3), Marshall Mine, LLC acknowledges the potential for increased sediment yield in the postmine phase when compared to the premine phase. The modeling results are summarized in Table 146-8, *Predicted 10-Year, 24-Hour Storm Event Sediment Yields, Marshall Mine, LLC Permit No. 59 - Application for Renewal/Revision/Consolidation*, and in Appendix 146-D, *Sedimentologic Data*. The increase in sediment loading is directly related to the removal of vegetation. All disturbed surface water will be routed through approved sedimentation ponds that will be operated to maintain compliance with TCEQ effluent standards. Gross annual erosion was predicted using the revised universal soil loss equation (RUSLE), while predictions of the single-storm sediment yields were determined using the modified universal soil loss equation (MUSLE). A rainfall/erosivity factor (R factor) of 375 was used in both RUSLE and MUSLE. A composite-soil erodibility (K factor) was determined from weighting the respective soil types, the soil areas and the soil K values. The premine land cover and practice information were determined from information provided in section .135. Active-mine conditions assumed bare soil for those areas actively disturbed. Postmine land cover and practice are based on the proposed postmine land uses. Marshall Mine, LLC indicates that sediment losses will increase during the active-mine period and subsequently decrease in the postmine period. In Table 146-8, Marshall Mine, LLC lists the annual average yield for premine conditions and the sediment yields from a 10-yr/24-hr storm event for premine, active-mine and postmine conditions. Additional sedimentologic data are provided in Appendix 146-C. Average annual and 10-yr/24-hr storm yields are provided in Appendix 146-D.
- x. On page 146-22 (Supplement 3), Marshall Mine, LLC indicates that the mean annual lake evaporation is 49 inches for the proposed permit area. Mining evaporative losses were estimated by subtracting the total water surface area of postmine ponds (conservatively based on approximately 75 acres) from the total

- xii. Mining is expected to increase the suspended and dissolved-solids concentrations in the storm-water runoff. All storm-water runoff from the disturbed area will be routed through sedimentation ponds and will not be released before it meets TCEQ discharge standards. After mining and reclamation are complete, the suspended solids and dissolved solids concentration are expected to return to baseline levels. Marshall Mine, LLC concludes that, from its evaluation of these data, the surface-water PHC determination reveals no adverse water-quantity impacts to the surface-water hydrologic balance in the vicinity of the proposed permit area.
 - e. The Application, as supplemented, is satisfactory to meet the requirements of §12.146(a), (c) and (d) for surface water, with adoption of Permit Provision No. 10.
43. In Appendix I (TA Addendum 3), Staff provided a Cumulative Hydrologic Impact Assessment (CHIA) Summary for surface-water and groundwater systems derived from current, proposed and otherwise anticipated mining operations within a defined Cumulative Impact Area (CIA). Staff indicated that the complete CHIA is contained in Appendix I of Addendum 2 to Staff's Technical Analysis (TA) for the Marshall Mine, Permit

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No. 59, dated November 16, 2012 (Docket No. C12-0010-SC-00-A) and was adopted by the Commission in that docket. Staff further indicates that, in its opinion, a new CHIA is not necessary and none has been conducted. The Commission finds that the approved CHIA remains sufficient to meet §12.146(e) and §12.216(3) of the Regulations.

44. The application, as supplemented contains Marshall Mine, LLC's postmine land-use plan. Marshall Mine, LLC provided adequate information to comply with the requirements of §§12.147 and 12.399 of the Regulations. Marshall Mine, LLC refers to section §12.145 for the discussion on reconstruction of reclaimed land, and revegetation for fish and wildlife, pastureland, and industrial/commercial land uses, on page 147-1 of the application. Additionally, Marshall Mine, LLC commits to reconstruct and reclaim the land in accordance with the revegetation and success criteria specified under §12.395. Marshall Mine, LLC indicates that the proposed postmine land uses will be accomplished by backfilling, grading, recontouring, selective handling of approved soil materials, and revegetating disturbed areas. In order to enhance fish and wildlife values, Marshall Mine, LLC proposes to plant woody plantings along reconstructed drainageways, ponds, roads, and/or fence lines. Marshall Mine, LLC refers to §12.145(b)(2) for estimated reclamation and maintenance costs.
 - a. Marshall Mine, LLC indicates that proposed fish and wildlife, pastureland, and industrial/commercial land uses are compatible with adjacent land uses and consistent with landowner plans. Marshall Mine, LLC adequately provides a description of the proposed postmine land use within the proposed permit area. Marshall Mine, LLC references 12.145, where it included a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses.
 - b. Alternative postmine land uses changes are proposed and documentation of required landowner consultation has been provided. Marshall Mine, LLC provided an updated coal and lignite lease in Appendix 117-1, Supplement 1, that lists fish and wildlife, industrial/commercial, forestry, or pastureland as potential postmine land uses. Surface-owner postmine land-use preferences are shown in Table 117-1. 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.
 - c. Marshall Mine, LLC 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.
 - d. Marshall Mine, LLC revised the postmine land use map from the exhibit that was submitted in Supplement 1 by reducing the disturbance boundary of Tracts 031A and 014 and shown in revised Table 147-1 and Exhibit 147-1, as follows:

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Postmine Land-Use by Area Disturbed		
Land-Use Type	Acres	Percent of Mine Area
Industrial/Commercial (I/C)	97.4	7.92%
Fish and Wildlife Habitat	1,012.8	82.29%
Developed Water Resource (DWR)	20.4	1.65%
Pastureland	100.2	8.14%
Total	1,230.8	100%

- e. The application, as supplemented, contains a description of the reclamation activities that Marshall Mine, LLC 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. Prescribed burning may be utilized to reduce accumulations of biomass in areas reclaimed to fish and wildlife habitat land use. 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.
- 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 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.
- h. Marshall Mine, LLC 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.
- i. Appropriate agencies were provided the opportunity to review the application and to provide comments.
- j. No cropland alternative land uses are proposed for which other requirements would be applicable.
- k. Staff recommends a finding of fact in order to capture Staff's concern regarding future applications for release of reclamation liability, as follows: that the disturbance

boundary in the northern half of the [existing] Permit No. 57 area, in which no additional disturbance is planned, includes undisturbed land. Undisturbed land has no postmine land use because it was not disturbed by mining-related activities. Staff highly recommended that Marshall fine-tune this disturbance boundary prior to submittal of soil-testing data and applications for release of reclamation liability for this area. Soil-testing data are required of all land within the disturbance boundary, and the soil-bank area must be congruous with the disturbance boundary; however, it is Staff's understanding that no additional disturbance is planned within the northern half of the [existing] Permit No. 57 area. Staff added that this incongruity will impede review of soil-testing data, a prerequisite for Phase I release of reclamation liability. If uncorrected, it will also likely result in comments in a future application for release of reclamation liability if the areas proposed for release on the periphery of disturbance are not congruous with the approved disturbance boundary. Staff indicates that the information provided in the application, as supplemented, has been reviewed and determined to be adequate to address the requirements of §12.147.

45. The Application, as supplemented, meets the requirements of §12.148 of the Regulations. Marshall Mine, LLC provides a general plan for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam, and embankment within the proposed permit area proposed for construction during the permit term.
 - a. Marshall Mine, LLC indicates that the design plans and specifications for all sedimentation ponds were prepared by, or under the direction of, and certified by a qualified registered professional engineer. Marshall Mine, LLC indicates that all of the proposed sedimentation ponds are shown on Exhibits 139-1 and 125-1. A typical cross-section or plan view for a sedimentation pond is included as Figure 148-1. Marshall Mine, LLC indicates that because its proposed sedimentation ponds are or will be designed to detain surface runoff for 10 hours, or until water quality is acceptable for discharge, no hydrologic impacts are anticipated. The probable hydrologic consequences associated with pond construction are discussed under its response to §12.146 of the Regulations. Marshall Mine, LLC provides (page 148-2) a brief summary of the method (NRCS runoff curve-number method) used in the design and sizing sedimentation ponds. For disturbed areas, Marshall Mine, LLC assumes the watershed to be in a "worst case" state. Experience has shown that the "worst case" disturbed condition of a mined watershed occurs when the dragline spoil piles have been graded and shaped in preparation for seeding. The area is reasonably smooth, contour-graded with no cover, and should exhibit the condition providing the most runoff per unit area during the disturbance phase of mining. While this will never occur simultaneously throughout a pond's disturbed watershed, Marshall Mine, LLC has chosen to use this assumption because of its conservative approach to pond sizing. A composite curve number is then calculated from the entire watershed using a weighted average of all the curve numbers present in the watershed. Marshall Mine, LLC states that the composite runoff curve numbers for the design of ponds will range

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from 80 to 85. Marshall Mine, LLC indicates that all sedimentation ponds and impoundments will be approved and constructed before the area to be drained into the pond is disturbed. Construction of any proposed pond will not begin prior to Commission approval.

- b. In accordance with the requirements of this section, detailed design plans for structures that meet or exceed the size or other criteria of the Mine Safety and Health Administration, 30 CFR 77.216(a), must be prepared by or under the direction of, and certified by, a qualified registered professional engineer, with assistance from experts in related fields such as geology, land surveying, and landscape architecture; must include any geotechnical investigation, design, and construction requirements for the structure; must include a description of the operation and maintenance requirements for each structure; and must describe the timetable and plans to remove each structure, if appropriate. Marshall Mine, LLC indicates that impoundments that exceed the size or other criteria of Mine Safety and Health Administration (MSHA), 30 CFR 77.216(a) are not being proposed. The detailed design plans for any structure at the Marshall Mine that does not meet the criteria of 30 CFR 77.216(a) must be prepared by, or under the direction of, and certified by a qualified registered professional engineer. Any future submittal for a MSHA-sized structure will include this geotechnical investigation, design, and construction requirements information.
- c. Sedimentation ponds, whether temporary or permanent, must be designed in compliance with the requirements of §12.344 of the Regulations. Any sedimentation pond or earthen structure that will remain in the proposed permit area as a permanent water impoundment must also be designed to comply with the requirements of §12.347 of the Regulations, and must, at a minimum, comply with the requirements of 30 CFR 77.216-1 and 77.216-2. A description of the operation and maintenance requirements for an impoundment is provided on page 148-3 (MSHA Ponds) and page 148-4 (non-MSHA Ponds). Removal plans and schedule for any future pond will be included in the design and construction plans for the structure. Any sedimentation pond or impoundment not approved for retention under §12.347 and §12.354 will be removed once the disturbed drainage area has been restored, the vegetation requirements of §12.395 are achieved, and the drainage entering the pond meets applicable water-quality requirements. Reports and modifications will be made to the Commission on a quarterly basis in accordance with §12.344 of the Regulations, with annual certifications provided for each structure in accordance with §12.347 of the Regulations. Each sedimentation pond will have a storage capacity to meet the standards established in the Texas Pollutant Discharge Elimination System (TPDES) permit issued by the TCEQ. In the event that applicable effluent limitations cannot be met due to the nature of the disturbance drainage, water treatment facilities (chemical or flocculent addition systems) will be installed to provide adequate water treatment prior to release from the permit area.

- d. The Application does not include detailed design plans for permanent impoundments. No coal processing waste banks, dams, and embankments are proposed for this five-year permit term. Marshall Mine, LLC states all surface-water control structures are shown on Exhibit 125-1, Exhibit 139-1, and Exhibit 148-1.
- e. Coal processing waste banks or embankments are not being proposed within the permit area.
- f. In Table 148-2, replicated below, Marshall Mine, LLC lists all impoundments which have been proposed or approved for construction during the term of the permit. This exhibit shows the existing structures (diversions, access and haul roads, and sedimentation ponds) that provide surface-water control for the Marshall Mine.

Table 148-2
PERMANENT IMPOUNDMENT DESIGN AND CONSTRUCTION SCHEDULE

<u>Impoundment Number</u>	<u>Surface Area (ac)</u>	<u>Watershed Area (ac)</u>	<u>Runoff Storage (ac-ft)</u>	<u>Design Submittal</u>	<u>Construction Approval</u>	<u>Construction Certification</u>
REC-1	2.2	145	35	2017	2017	2017
REC-2	4.0	207	40	2017	2017	2017
REC-3	7.6	311	85	2018	2018	2019
REC-4	3.0	133	25	2019	2019	2019

- g. Marshall Mine, LLC states that it lists in Table 148-1 the sedimentation pond(s) that have been approved or constructed during the "term of the permit." Exhibit 148-1, *Water Control Plan*, was prepared, signed, and sealed on July 20, 2017, by Mr. Dan H. Metcalf, a licensed professional engineer in the State of Texas.
- h. In Table 148-1, the only pond listed is the A-1 Sedimentation Pond. In its Supplement 1 Errata (page 34), Marshall Mine, LLC indicates that it revised page 148-1 to state that Table 148-1 contains a listing of the existing and proposed sedimentation ponds that will be active during the permit term. FAC-1 Permanent Impoundment was approved in Revision No. 9 to Permit No. 57 on February 2, 2016, to no longer serve as a sedimentation pond; therefore, it was removed from Table 148-1. Hence, the only watershed shown on Exhibit 148-1 is for the A-1 Sedimentation Pond, which includes the watershed for FAC-1 Permanent Impoundment. The A-1 Sedimentation Pond is the only surface-water control pond for the mine during the proposed permit term.
- i. Marshall Mine, LLC updated Tables 148-1 and 148-2 in the Application to include the month and day instead of just the year for "Initial Design Submittal," "Construction

Approval," and "Construction Certification," and update the information for REC-1 and REC-2 Permanent Impoundments in Table 148-2 to indicate that the ponds were approved by letter dated December 21, 2017. Marshall Mine, LLC also added the anticipated year of reclamation for each pond to Table 148-1. Table 148-1 and Table 148-2 were both certified by a professional engineer.

- j. Detailed or general design plans are included in revised Table 148-2 for proposed REC-3 and REC-4 Permanent Impoundments. On Exhibit 145-1, Marshall Mine, LLC shows the general location and shape for these two ponds. These ponds are located within areas to be mined during this permit term; therefore, their design, approval, and certification will occur later during the proposed permit term. Marshall Mine, LLC mentions Exhibit 148-1 on revised page 148-2.
 - k. Marshall Mine, LLC proposed to monitor stream water-quality parameters at the outlet of FAC-1 Sedimentation Pond once a quarter when discharging in Permit No. 57. Staff agreed with Marshall Mine, LLC's proposal to monitor stream water-quality parameters at the outlet of the sedimentation pond. The design plans for the sedimentation pond in section .148, however, indicated that the pond has been designed to discharge during a 25-yr/6-hr storm event or greater. Marshall Mine, LLC proposed in section .148 to pump the pond down to its normal pool elevation (264.0 ft amsl) between storm events.
 - l. Approved Permit No. 57 includes existing Permit Provision No. 2, which states: "Marshall Mine, LLC must sample and monitor stream water-quality parameters at the outlet of Sedimentation Pond FAC-1 once a quarter when discharging or while it is being pumped between storm events." Staff indicates that in Revision No. 9, Marshall Mine, LLC requested that FAC-1 Sedimentation Pond be released from sediment-control requirements because discharge from the pond now flows into the A-1 Sedimentation Pond in Marshall Mine, LLC Permit No. 59. The Commission approved Revision No. 9 by letter dated February 2, 2016. Staff recommends that Permit Provision No. 2 for Permit No. 57 not be retained because the FAC-1 Impoundment is no longer a final discharge pond and was released from sediment control requirements. Existing Permit Provision No. 2 (for Permit No. 57) is no longer needed and is not retained.
46. There are no known underground mines within the proposed permit area. The information provided is adequate to address the requirements of §12.149 and §12.367(a) of the Regulations.
47. The Application, as supplemented, meets the requirements of §12.150 of the Regulations. Marshall Mine, LLC has provided descriptions, including maps and cross sections, of stream-channel diversions to be constructed within the proposed permit area to achieve compliance with §12.341.

- a. Surface-water control diversions are proposed for use to divert overland flow from disturbed areas to the proposed sediment control structures and undisturbed areas around disturbed areas. The diversions proposed for the proposed permit term are identified in Application Table 150-1, which is substantively replicated below. Marshall Mine, LLC indicates that diversions proposed for construction in the proposed permit term are shown on Exhibit 139-1. No diversions of perennial or intermittent streams are proposed during the proposed permit term.

TABLE 150-1
DIVERSION DESIGN AND CONSTRUCTION SCHEDULE

Diversion Name	Disturbed (D) or Freshwater (F)	Submitted to RRC	Approved by RRC	Reclaimed
FAC-1A	D	2010	2011	Permanent
FAC-1B	D	2010	2011	Permanent
PD-1	D	2013	2013	Permanent
A-1A	D	2011	2012	2030
A-1B Mod No. 1	D	2016	2016	2030
A-1B1	D	2016	2016	2030
A-1C	D	2011	2012	2030
A-1D	F	2011	2012	2030
A-1E	D	2011	2012	2030
A-1F	D	2011	2012	2030

- b. In accordance with Advisory Notice EN-PS-341, Marshall Mine, LLC proposes to use a standard ditch to divert miscellaneous flows away from disturbed areas. The proposed diversions will be located within an area where surface-water control has been established and will not act as a boundary of surface-water control by altering the watershed of an approved sedimentation pond. Diversions will be temporary or approved as permanent prior to acceptance into the ERP or submittal of an application for Phase I release of reclamation liability. Diversions will not divert intermittent or perennial streams and watershed sizes will be less than 640 acres.
- c. A typical design for temporary stream diversions is presented on Figure 150-1, *Typical Temporary Stream Diversion Cross Section*. All temporary stream channel diversions will be removed when no longer needed and the affected land regraded and revegetated in accordance with the applicable performance standard requirements. Plans for permanent stream channel diversions will be submitted as they become necessary.
- d. Marshall Mine, LLC provides a summary of the hydrological and hydraulic analyses used in the design of each proposed miscellaneous flow diversion (MFD) in Appendix

150-1. Peak discharges were determined for a 2-yr/6-hr storm event (3.25 inches) for watersheds of 200, 400, and 640 acres using SEDCAD4 software. The results of the SEDCAD4 models are provided in Appendix 150-1. In Table 150-2, Marshall Mine, LLC lists the watershed and ditch sizing parameters. An MFD with a watershed size of less than 640 acres will have a maximum flow depth of 3.1 ft, a bottom width of three feet, 3:1 (h:v) side slopes, and a freeboard of 0.65 ft to the top of the ditch. A cross-section showing these characteristics is provided on Figure 150-2. Marshall Mine, LLC will provide an approximate location for a diversion (minimum scale 1 in. = 400 ft) within five days of initiating construction of an MFD.

- e. The Application does not include detailed design plans for diversions. Marshall Mine, LLC indicates the diversions proposed for construction during the proposed permit term are identified in Table 150-1 and are shown on Exhibit 139-1. Marshall Mine, LLC further states that no diversions of perennial or intermittent streams are anticipated during the proposed permit term. Staff indicates that the information provided is adequate to meet the requirements of §12.150.

48. The Application, as supplemented, meets the requirements of §12.151 of the Regulations. Marshall Mine, LLC indicates that there are no publicly owned parks in the permit area. On page 151-1, Marshall Mine, LLC provides a summary and timeline of field survey of archaeological sites and historic resources in the proposed permit area, including the permit expansion area. In its description, Marshall Mine, LLC refers to Table 125-1, Exhibit 125-2, and Appendices 125-2 and 125-3. Marshall Mine, LLC states that, [the mine operator] "Caddo Creek Resources Company has worked closely with the state historic preservation office (SHPO) to identify and evaluate historic and archaeological resources and will continue to do so in the future, including implementation of appropriate assessment, protection, and data recovery measures for National Register-eligible archaeological sites and historic resources." Staff indicates that the information contained in the Application demonstrates compliance with §12.151.

49. The Application, as supplemented, meets the requirements of §12.152 of the Regulations, with the adoption of a permit provision, as described below. Marshall Mine, LLC describes, with appropriate maps and cross sections, the measures to be used to ensure that the interests of the public and landowners affected are protected if, under §12.72(a) of this title (relating to Procedures for Compatibility Findings, Public Road Closures and Relocations, Buffer Zones, and Valid Existing Rights Determinations), the applicant seeks to have the Commission approve: (1) conducting the proposed surface mining activities within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join that right-of-way; or (2) relocating a public road. Marshall Mine, LLC indicates that the public roads located within and/or adjacent to the mine-plan area are identified on Exhibit 152-1 and their status is provided in Table 152-1 and discussed in section .118. The public roads are: FM 1186, CR 1308 (Holcomb Road), CR 1309 (Hezzie Cook Road), and CR 1328 (Ponderosa Road). Marshall Mine, LLC proposes to

temporarily close all or portions of Harrison CR 1328 (Ponderosa Road). Marshall Mine, LLC intends to conduct mining operations within 100 ft of the outside right of way of public roads located within the permit area as shown on Exhibit 152-1 and listed in Table 152-1. The approvals required under §§12.71(4) and 12.72(e) for a buffer-zone waiver will be obtained from the Commission prior to conducting such operations. These mining activities will include construction and maintenance of drainage-control structures and erosion-control facilities, and any other normal mining or husbandry practices required. Marshall Mine, LLC will not conduct mining operations within 100 ft of the outside right-of-way of public roads until such time as a buffer-zone waiver is obtained from the Commission. No relocations of public roads are anticipated during the proposed permit term. Staff recommends approval of the requested variances; however, until such time as the ALJ indicates that it is no longer needed, Staff sponsors continuation of Permit Provision No. 152-1, as stated in the Order dated February 12, 2013, in Docket No. C12-0001-SC-00-A, Finding of Fact No. 39, which states as follows: "Marshall Mine, LLC, must provide the appropriate documentation to satisfy the requirement of §12.71(a)(4) and 12.72(a) documenting approval of road closure by the authority with jurisdiction over the public road." ("Permit Provision No. 152-1"). The ALJ recommends modification of existing Permit Provision No. 152-1 for clarity to ensure appropriate documentation is obtained from the designated responsible agency with jurisdiction over the public road, in accordance with SMRD Advisory Notice AD-AD-072; memorializing that the Commission has designated the Texas Department of Transportation with respect to State highways, and County Commissioners Courts with respect to county roads outside the jurisdiction of cities and towns, as the responsible agencies for fulfilling the public notice requirements for mining-related impacts that result in road closures and road relocations. Further modification of existing Permit Provision No. 152-1 is recommended to ensure that the necessary information is submitted to the Commission and approved by the SMRD Director in a timely fashion. The Commission approves retention of existing Permit Provision No. 152-1, as modified and renumbered as **Permit Provision No. 11**, and as set out in Appendix I to this Order as follows:

Marshall Mines, LLC must provide appropriate documentation to satisfy the requirements of §12.71(a)(4) and §12.72(a) that demonstrates approval by the designated responsible agency and/or authority for road closures in accordance with the Surface Mining and Reclamation Division's Advisory Notice AD-AD-072, *Designation of Responsible Agencies for Road Closures and Relocation-Public Notice Requirements* (effective date February 14, 1996). The sufficiency of the documentation submitted in accordance with this permit provision is to be determined and acknowledged by the SMRD Director prior to any road closure.

The Application, as supplemented, meets the requirements of §12.152 of the Regulations, with adoption of Permit Provision No. 11.

50. The Application, as supplemented, meets the requirements of §12.153 of the Regulations. Marshall Mine, LLC states the entire volume of spoil is required to achieve approximate original contours within the area where overburden has been removed, that no excess spoil will be produced, and that the requirements of §12.153 regarding the disposal of excess spoil are not applicable. Staff agrees that no excess spoil will be produced at the Marshall Mine.
51. The Application, as supplemented, meets the requirements of §12.154 of the Regulations regarding road systems and support facilities.
 - a. Marshall Mine, LLC has submitted plans and drawings for each road, as defined in §12.3, to be constructed, used or maintained within the proposed permit area. Marshall Mine, LLC provides a road schedule, including proposed reclamation dates, in Application Table 154-1, *Road Design Status*. Marshall Mine, LLC indicates that Table 154-1 contains a list of all road designs that have been approved or will be submitted for approval during the current term of the permit, which include: A-1 Haul Road; A-1 Access Road; A-1 Access Road Modification No. 1; Entrance Road; and Truck Entrance Road. Marshall Mine, LLC indicates that the approximate locations of the haul road, ramps and road proposed for use in the five-year proposed permit term are shown on Exhibit 139-1. Marshall Mine, LLC summarizes in section .154 of the Application the procedure that was used to determine appropriate typical culvert sizes for roads proposed to be constructed during the proposed permit term, and provides general specifications used for the primary roads constructed within the proposed permit area. A description of the sediment control measures that Marshall Mine, LLC intends to use in the ditches of primary and ancillary roads in order to minimize erosion and retain sediment within disturbed areas as required at §12.343 is provided on page 154-3. Marshall Mine, LLC indicates that if it is necessary to cross active pipelines with a road, six feet of compacted material will be placed between the pipeline and the road which crosses over, and excavation will not be allowed within 100 ft of an active pipeline without the approval of the Commission.
 - b. Approved Permit No. 57 contains existing Permit Provision No. 3, which reads as follows: "Prior to making cuts within 100 feet of the Penn Virginia gas pipeline, in accordance with §12.382, Marshall Mine, LLC must submit to the Commission consent from the affected pipeline owner and obtain acknowledgement from the Commission (or Director). Marshall Mine, LLC must inform the Commission in writing when consent by pipeline owner Classic has been renewed or replaced. If such information is not received and acknowledged, all activities not completed within 100 feet of the pipeline shall cease." Staff indicates that Marshall Mine, LLC submitted a consent letter from Penn Virginia Oil & Gas, LP on April 26, 2012, which was acknowledged by the Commission by letter dated June 14, 2012. Staff indicates that this permit provision therefore was no longer required. The Commission concurs and existing Permit Provision No. 3 (Permit No. 57) is not retained.

- c. The design and construction of haul-road extensions will be consistent with the requirements for primary roads. Designs and specifications prepared in accordance with §§12.400 through 12.403 will be submitted to the Commission for review and approval prior to the construction of additional primary roads within the mine-plan area and outside surface-water control. Primary and ancillary roads are and will continue to be designed, constructed, maintained, and reclaimed in accordance with the specifications provided under the response to §12.154(a). Typical cross-sections for these roads are provided on Exhibit 154-1. The general location of each road within the mine plan area is shown on Exhibit 139-2. Marshall Mine, LLC adds that the detailed design plans for proposed roads will be submitted to the Commission in 2019 and 2020, respectively. Marshall Mine, LLC explains that the ramps shown on Exhibit 139-1 will be constructed under SMRD Advisory Notice IN-EN-3(149) and will not be submitted to the Commission for approval; therefore, they are not included on Table 154-1. The ramps are shown for information purposes only to indicate the coal transportation route. The plans and drawings for each primary road were or will be prepared by a qualified registered professional engineer with experience in the design and construction of roads as required by the Regulations.
 - d. Marshall Mine, LLC has submitted a description, plans, and drawings for each support facility to be constructed, used, or maintained within the proposed permit area. The detailed design plans for roads contained in the Application meet all applicable requirements under §12.154 and §§12.400 and 12.401 of the Regulations. The plans and drawings shall include a map, appropriate cross sections, design drawings, and specifications sufficient to demonstrate compliance with §12.403 of the Regulations (relating to Support Facilities) for each facility. Marshall Mine, LLC indicates that all facilities within the permit area will be operated in accordance with the requirements of §12.403.
52. The required Application fee of \$3,000 was submitted [§12.108(a), Regulations]. contained in seven volumes, was submitted on July 31, 2017, at least 180 days prior to the expiration date of the permit [§12.106(b)(2), Regulations]. Marshall Mine, LLC has met the general requirements for format and contents of the Application, as supplemented. Form SMRD-1C was filed, and it contains information required by §§12.116-12.154 [§12.107(a), Regulations]. In the Application, as supplemented, the information is current, presented clearly and concisely, and is supported by appropriate references [§12.107(b), Regulations]. Maps and plans contained in the Application meet the requirements under §12.207(f) of the regulations. Technical data has been submitted as required [§12.107(c) and (e), Regulations], and the data were prepared by or under the direction of professionals in the subjects analyzed [§12.107(d), Regulations]. A responsible official of the Applicant verified the Application, as supplemented, under oath that the information is true and correct to the best of the official's information and belief [§12.107(g), Regulations].

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Marshall Mine, LLC
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53. The permit Application, as supplemented, and as modified by the permit provision contained in Appendix I and the Soil Testing Plan contained in Appendix II, meets the requirements of §12.216 of the Regulations as set out below and as included in the Findings of Fact.
 - a. The permit application, as amended and supplemented, is accurate and complete. All requirements of the Act and Regulations have been met as set out in these Findings of Fact with the inclusion of the permit provisions set out in Appendix I and the Soil Testing Plan set out in Appendix II to this Order.
 - b. Marshall Mine, LLC has demonstrated that surface coal mining and reclamation operations, as required by the Act and the Regulations, can be feasibly accomplished under the mining and reclamation plan contained in the permit renewal/revision/expansion/consolidation application, as supplemented, with adoption of the proposed permit provisions contained in Appendix I to this Order.
 - c. Staff made an assessment of the probable cumulative hydrologic impacts (CHIA) of all anticipated coal mining in the general area on the hydrologic balance, including the Rusk Mine, South Hallsville No. 1 Mine, Martin Lake AIV South Mine, Martin Lake Mine, and the Oak Hill Mine, in Appendix I of Staff's November 16, 2012, TA Addendum No. 2 for the new Marshall Mine permit application, Docket No. C12-0001-SC-00-A. The November 16, 2012 CHIA contains an assessment of the probable cumulative impacts anticipated for the life-of-mine operations for these lignite mines, all of which are located within the Sabine River Basin in Harrison, Rusk, and Panola Counties. Therefore, another CHIA for this same area is not necessary. 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 within an area designated as unsuitable for surface mining (§§12.74 – 12.85, Regulations) nor involved in a proceeding seeking to designate the area as unsuitable for surface mining (§§12.78 – 12.85, Regulations). The proposed operations, as approved in this Order, will not take place on any prohibited federal lands within the boundaries of national forests or on prohibited lands contained within national parks, refuges, trails, wilderness preserves, or wild and scenic rivers. Proposed operations will not adversely affect any properties listed on or eligible for listing on the National Register of Historic Places, except as otherwise allowed by §12.71(a)(3) (Regulations) and will not be conducted within prohibited 100-ft buffer zones of the outside right-of-way of public roads, except as otherwise approved by the Commission and provided for in the Regulations. Proposed operations will not be conducted within 300 ft of any occupied dwelling not owned by Marshall Mine, LLC except as provided for in §12.71(a)(5) and 12.72(b)

(Regulations), public building, school, church, community or institutional building, or public park. Proposed operations will not commence within 100 feet, measured horizontally, of a cemetery. No underground mines are known to exist within or adjacent to the permit area; no mining related activities are proposed within 500 feet of an underground mine (§12.149, Regulations).

- e. Marshall Mine, LLC has submitted all required information for documentation of right of entry required under §12.117 of the Regulations.
- f. The information provided in the application, as supplemented, is adequate to address the requirements of §12.116 (Regulations). All required fees have been paid. Marshall Mine, LLC is current in payment of required franchise taxes. The report from the AVS database (operated by the OSM) is contained in Appendix VI of Staff's TA Addendum No. 3; the information in the AVS database indicates that there are no pending violations that remain uncorrected, or the violations are in the process of being corrected or are subject to a valid, good faith appeal of the alleged violation. Marshall Mine, LLC has demonstrated compliance with §12.215(e) (Regulations) and has satisfied the requirements for submissions and demonstrations under §12.216(7) (Regulations).
- g. The Applicant/Violator System report has been reviewed. The report included no indication that required reclamation fees have not been paid.
- h. The surface coal mining and reclamation operations to be performed at the Marshall Mine will not be inconsistent with other such operations anticipated to be performed in areas adjacent to the proposed permit area.
- i. As addressed in Finding of Fact No. 54, *infra*, the accepted bond for Permit No. 59 is in the amount of \$30,000,000, is sufficient and will remain in place. No change to the approved bond for Permit No. 59 is required prior to issuance of the requested permit.
- j. The proposed permit renewal/revision/expansion area is located east of the 100th Meridian West Longitude and, by definition, contains no alluvial valley floors; therefore, the requirements of §12.202 of the Regulations are not applicable. Marshall Mine, LLC has, with respect to prime farmland, satisfied the requirements of §§12.138 and 12.201 of the Regulations as set out in this Order. No additional negative determination on prime farmland is approved in this order.
- k. The postmining land uses depicted in the application are in accordance with the requirements of §12.399.
- l. All specific performance-standard approvals required under Subchapter K of the Regulations have been made by the Commission.

- m. The proposed activities will not affect the continued existence of endangered and threatened species or result in the destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act of 1973 (16 U.S.C. Sec. 1531 et seq.) with the adoption of the permit provisions.
 - n. The requirements in §12.390 for a long-term, intensive agricultural postmine land use are not applicable during the requested permit term because no postmine cropland land use is planned or required.
- 54. Official notice has been taken of the current franchise tax account status pages available on the Texas Comptroller of Public Accounts' website that evidence an active right to transact business in Texas. Marshall Mine, LLC and CCRC are current in payment of required franchise taxes. The parties were afforded the opportunity to contest official notice of the documents prior to their admittance into the record.
- 55. Permit No. 59 is currently bonded by a surety bond, No. SUR0027682, issued by Argonaut Insurance Company ("Argonaut") in the amount of \$30,000,000 that was accepted by Commission Order dated March 26, 2019 [Docket No. C18-0011-SC-59-E]. Permit No. 57 is currently bonded by a surety bond, No. 105219329, issued by Travelers Casualty & Surety Company of America ("Travelers") in the amount of \$200,000 that was accepted by Commission Order dated March 12, 2012 [Docket No. C12-0010-SC-00-D]. Marshall Mine, LLC's current bond for Permit No. 59 in the amount \$30,000,000 by Argonaut is sufficient to provide required reclamation performance bonding for all activities proposed in the application, as supplemented [Finding of Fact No. 39.c., *supra*]. The \$30,000,000 bond will remain in place and no change to the bond by Argonaut is required prior to issuance of the permit sought by the application, as supplemented. Marshall Mine, LLC has requested the \$200,000 bond by Travelers for Permit No. 57 be released by the Commission. Based on the record in this docket, the Commission finds that all liability that has accrued against Marshall Mine, LLC on the existing Permit No. 57 area will be effectively transferred to the \$30,000,000 bond by Argonaut upon approval of the application and the current bond for Permit No. 57 may be released.
 - a. The Regulations at §12.306(a) state that liability under a performance bond shall continue until all reclamation, restoration and abatement work required of persons who conduct surface coal mining and reclamation operations under requirements of the Act, the Regulations, and the provisions of the permit has been completed, and the permit terminated by release of the permittee from any further liability in accordance with §§12.312 and 12.313; addressing procedures, criteria, and schedule for release of performance bond. Alternatively, an existing bond may be replaced with a separate bond if the liability which has accrued against a permittee on the permit area covered by the bond is transferred to an *acceptable* replacement [§12.310]. The bond may be

released if the Commission has approved an *acceptable* replacement bond to assure completion of the reclamation plan prior to demonstrating reclamation has been accomplished in accordance with §§12.312 and 12.313 [see §12.310(b)].

- b. The existing surety bond for Permit No. 59, issued by Argonaut in the amount of \$30,000,000, is sufficient in form and amount and may effectively constitute a replacement of the existing bond for Permit No. 57 to allow for release of the \$200,000 bond issued by Travelers. As reflected in the subject application, and confirmed by the parties on the record during the informal conference held on February 24, 2020, Exhibit 145-3, *Bond Areas*, (Supplement 3) and the reclamation cost estimate calculated by Staff in the amount of \$28,630,098 (Appendix II of TA Addendum No. 3) includes all areas previously disturbed and bonded by the respective bonds for the permits proposed for consolidation in the subject application and all areas proposed for disturbance during the requested term. By letter dated February 25, 2020, Marshall Mine, LLC requested that the liability secured under the current bond for Permit No. 57 be transferred to the current bond for Permit No. 59 and that the \$200,000 bond for Permit No. 57 be released and returned to the applicant.⁴
- c. The existing \$30,000,000 bond issued by Argonaut for Permit No 59 is on a Commission form for surety bond, Form SMRD-42-C. The instrument binds Marshall Mine, LLC as “Principal” and Argonaut, as Surety, jointly and severally and contains the following provisions on page 2 of the bond:

And the Surety to this bond, for value received, agrees that no amendment to existing law, rules or regulations, no adoption of new laws, rules, or regulations, and *no amendment, revision, renewal, or replacement of the Permit (including the reclamation plan) shall in any way alleviate its obligation on this bond*, and it does hereby waive notice of any such amendment, adoption, revision, renewal, or replacement.⁵

It is agreed that this bond shall be in full force and effect, and non-cancellable, for the duration of the reclamation obligation *on the land affected by the Permit, as amended, renewed, revised, or replaced, or land substituted therefore*, or until the Principal is otherwise relieved of its obligation hereunder by order of the Railroad Commission of Texas.⁶

The emphasized language above extends liability under the existing bond for Permit No. 59 to all areas proposed in the subject application that are required to be bonded;

⁴ Disposition of reclamation performance bonds for surface coal mining and reclamation permits that have been terminated (released) by Commission Order is governed by the Commission’s Record Retention Schedule approved on December 23, 2013, Section 7.0.014; allowing a permittee to request return of the bond within 20 days after an order releasing a bond becomes final and receipt of a bond disposition notification letter from the Commission.

⁵ Surety Bond, No. SUR0027682, issued by Argonaut Insurance Company on September 7, 2017; accepted by Commission Order dated March 26, 2019. (emphasis added).

⁶ Id. (emphasis added).

including all areas currently bonded within the existing Permit No. 57 area. Given the \$30,000,000 bond by Argonaut exceeds the minimum bond amount for the proposed activities adopted by the Commission in Finding of Fact No. 39.c., *supra*, retention of the \$200,000 bond by Travelers is superfluous (i.e., those areas covered by the Permit No. 57 bond would also be covered by the Permit No. 59 bond upon approval of the application, as all liability accrued within the existing Permit No. 57 area would be transferred to the existing, continuing bond for Permit No. 59 based on the operations proposed in the application (see Finding of Fact No. 54.b., *supra*).

- d. The ALJ has taken official notice of the Commission Order accepting the current bond for Permit No. 59 and all documentation incorporated into the Order issued in Docket No. C18-0011-SC-59-E.⁷ The Order, dated March 26, 2019, and evidence in the record show the \$30,000,000 surety bond issued by Argonaut is properly executed and applicable requirements were met prior to acceptance of the bond. Based on admittance of the Order and evidence in the record in Docket No. C18-0011-SC-59-E into evidence in the current docket, all Findings of Fact and Conclusions of Law contained in the Order accepting the current bond for Permit No. 59 are incorporated into this Order. Additionally, updated documentation obtained from the Texas Department of Insurance's website, accessed on February 20, 2020, showing that Argonaut has an active Texas license and is currently licensed as a surety has been officially noticed.⁸ Updated information showing Marshall Mine, LLC and CCRC are authorized to transact business in Texas based on information obtained from the Texas Comptroller of Public Accounts website on February 21, 2020 has also been officially noticed.⁹ [§12.309(f)(1)]. The parties were provided copies of all documentation officially noticed and afforded the opportunity to contest the proposed action prior to their admittance into evidence.
- e. Release of the current bond for Permit No. 57 issued by Travelers is not a bond release or a release of any reclamation obligations under §12.312-.313 that requires additional notice and does not affect the sufficiency of the notice for the subject application; no public notice is required other than notice of the Commission meeting to consider this action.
- f. By letters dated March 3, 2020, the proposed order was circulated to current representatives of Argonaut and Travelers, as identified by the Applicant, prior to Commission consideration of this matter.

⁷ ALJ Ex. No. 3

⁸ ALJ's Exhibit No. 4- TDI Printout Insurance Marshall Mine, LLC dated February 20, 2020

⁹ ALJ's Exhibit No. 1- Franchise Tax dated Feb. 21, 2020-Marshall Mine, LLC and ALJ's Exhibit No. 2- Franchise Tax dated Feb. 21, 2020-CCRC

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Marshall Mine, LLC
Permit No. 59, Marshall Mine

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56. The proposed order was properly circulated to the parties, and the required public posting of the consideration of this application by the Commission has occurred.
57. This application was processed in accordance with the procedures contained in the Regulations, Act, Commission Practice and Procedure and in accordance with the Administrative Procedure Act.

CONCLUSIONS OF LAW

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

1. The Commission has jurisdiction under §134.051 and §134.075 of the Act and §12.216 of the Regulations to approve this application for permit renewal/revision/consolidation and expansion as contained in this Order, and as set out in Appendices I and II to this Order.
2. The application for renewal/revision/expansion of Permit No. 59 and consolidation of Permit Nos. 59 and 57, with references in this Order to the approved permit provisions (Appendix I) and soil testing plan (Appendix II) meets all requirements for approval as set out in the Act, the Regulations, the APA, and the Commission's *Practice and Procedure*, as set forth in the Findings of Fact.
3. Proper notice of the application was provided in accordance with the requirements of the Act, §§134.058 and 134.059; the Regulations, §12.207; the Commission's *Practice and Procedure*, 16 TAC §1.1 et seq.; and the Administrative Procedure Act (APA), Tex. Gov't Code Ch. 2001 (Vernon Supp. 2019). A public hearing was not held or required given that no person with an interest which was or may have been adversely affected requested a hearing on the application pursuant to §12.211 of the Regulations. Open meeting notice has been made as required.
4. A Motion for Rehearing has not been effectively filed in this proceeding pursuant to §1.128 of the Commission's Procedure and Practice Rules.
5. Based upon the Findings of Fact, the application was submitted to the Commission by Marshall Mine, LLC 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.
6. A reclamation cost estimate for the Marshall Mine in the amount of \$28,630,098 is sufficient to ensure completion of the reclamation plan if the work has to be performed by a third-party at the direction of the Commission in the event of forfeiture.

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Marshall Mine, LLC
Permit No. 59, Marshall Mine

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7. Marshall Mine, LLC's existing posted bond for Permit No. 59 in the amount of \$30,000,000 is in excess of the minimum required bond amount. No additional bond or approval is required prior to issuance of the requested permit.
8. All liability that has accrued against Marshall Mine, LLC on the existing Permit No. 57 area will be effectively transferred to the existing, continuing \$30,000,000 bond for Permit No. 59 upon approval of the application. Marshall Mine, LLC's existing posted bond for Permit No. 57 in the amount of \$200,000 may be released.
9. Based upon the updated compliance history filed by Marshall Mine, LLC [Finding of Fact No. 52.f., *supra*] in accordance with §12.116(a)(2) and §12.215(g) of the Regulations and AVS Report, a renewed, revised, consolidated, and expanded permit may be issued for the Marshall Mine.

IT IS THEREFORE ORDERED that the Findings of Fact, Conclusions of Law, Permit Provisions, set out in Appendix I, and Soil Testing Plan, set out in Appendix II, as contained in this Order, are hereby adopted;

IT IS FURTHER ORDERED that Marshall Mine, LLC's application for renewal, revision, expansion and consolidation of Permit No. 59 and Permit No. 57 is approved as set out in this Order;

IT IS FURTHER ORDERED that the renewed, revised, expanded and consolidated permit is hereby renumbered as Permit No. 59A;

IT IS FURTHER ORDERED that Permit No. 59A is hereby issued to Marshall Mine, LLC;

IT IS FURTHER ORDERED that Marshall Mine, LLC's current surety bond, No. SUR0027682, issued by Argonaut Insurance Company in the amount of \$30,000,000 remains in place until released or replaced by Commission Order and is sufficient to provided reclamation performance bonding for required reclamation of approved operations under Permit No. 59A;

IT IS FURTHER ORDERED that Marshall Mine, LLC's current surety bond, No. 105219329, issued by Travelers Casualty & Surety Company of America in the amount of \$200,000 is hereby released;

IT IS FURTHER ORDERED that the Commission may vary the total amount of bond required from time to time as affected land acreages are increased or decreased or where the cost of reclamation changes; 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

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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 on April 21, 2020.

RAILROAD COMMISSION OF TEXAS

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Wayne Christian

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CHAIRMAN WAYNE CHRISTIAN

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Christi Craddick

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COMMISSIONER CHRISTI CRADDICK

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Ryan Sitton

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COMMISSIONER RYAN SITTON

ATTEST:

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Callie Farnay

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Secretary, Railroad Commission of Texas

APPENDIX I
PERMIT PROVISIONS
DOCKET NO. C17-0018-SC-59-C

1. Marshall Mine, LLC shall, within 120 days of permit issuance, submit a revision application to identify and provide contiguous ownership information in accordance with §12.116(d)(2) of the Regulations, to include at a minimum, contiguous ownership information for the following tracts within the permit area: Tract 001D, Tract R00035425, and Tract R00007878. This revision shall also include an updated Exhibit 117-1, *Land Tracts*, to include depiction of all tracts contiguous to any part of the permit area. This revision application shall be submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations.
2. Marshall Mine, LLC shall not conduct any surface coal mining and reclamation operations on any tract(s) for which it has not demonstrated right of entry and/or provided required baseline information until a revision application(s) is submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations, containing:
 - (1) documentation of right-of-entry pursuant to §12.117 for all tracts within the permit area for which a demonstration of right-of-entry to conduct mining activities has not been provided, including Tracts R00007690, R00017843, R00035425, GLO, R00014469, R00007895, R00007878, and R00007896; and
 - (2) cultural resources survey information pursuant to §12.125(2) of the Regulations, vegetative information pursuant to §12.132 of the Regulations, and fish and wildlife information pursuant to §12.133 of the Regulations, including Tracts R00039132, R00007690, R00017843, and R00035425.
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, including Sites 41HS269, 41HS949, 41HS958, 41HS959, 41HS991, 41PN291, and 41PN296, shall not be disturbed by mining and/or mining-related activities. Copies of all correspondence items, including all attachments, between Marshall Mine, LLC and the Texas Historical Commission shall concurrently be provided to the Surface Mining and Reclamation Division.
4. Within 120 days of permit issuance, Marshall Mine, LLC shall submit a revision application to the Director of the Surface Mining and Reclamation Division to update sections .132, .133, and .144 to reflect the current Texas Parks and Wildlife Department list of rare, threatened, and endangered species for Harrison County. This revision application shall be submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations.
5. Within 120 days following the date of permit issuance, Marshall Mine, LLC shall revise Exhibit 135-1, *Premine Land Use*, and Table 135-1, *Premine Land Use*, for consistency with the vegetation baseline, including identification of areas meeting the definition of "undeveloped land use" at §12.3(99) of the Regulations, depicted on Exhibit 132-1, *Vegetation Communities and Sampling Locations*, as riparian forest, seasonal swamp, hydric, stream terrace, floodplain forest, and cypress slough. This revision application shall be submitted for review and approval in accordance with §12.226 of the Regulations.

Waters of the U.S.	Minimization (On-site) Ratio ¹	Compensatory Mitigation Ratio ¹	Composite ² Mitigation Ratio ¹
Forested Wetlands	1.0:1.0	1.0 to 1.0	2.0:1.0
Non-forested Wetlands	1.0:1.0	0.5 to 1.0	1.5:1.0
Ponds	1.0:1.0	---	1.0:1.0
Streams	1.0:1.0	---	1.0:1.0

² Composite ratios include both minimization and compensatory mitigation.

8. If Marshall Mine, LLC is approved to conduct surface coal mining and reclamation operations in the Sabine River floodplain, it shall, prior to conducting such activities, submit a revision application containing a detailed protection and reclamation plan to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations. Such application shall include, at a minimum, the following protection and reclamation plan elements unless otherwise specifically addressed in the approved U.S. Army Corps of Engineers (USACE) mitigation plan:
- 1) maintain a minimum of a 600-ft, premine-vegetated buffer adjacent to the Sabine River during the life of mine, measured perpendicularly from the northeast edge of the river at bankfull width;
 - 2) reclaim the area to its premine land uses (including specific plant species) or, entirely to fish and wildlife habitat land use, and at least as protective as the USACE mitigation plan;
 - 3) reclaim so that approximate original contours mimic the topography and hydrology of the premine floodplain, as determined in a final reclamation plan submitted and approved for this area after coordination with the Texas Parks and Wildlife Department (TPWD) and Staff; and
 - 4) Marshall Mine, LLC shall not begin disturbances associated with construction of structures in the floodplain prior to obtaining approval of such structures from the Director of Surface Mining and Reclamation Division in accordance with §12.226 of the Regulations and with consultation of TPWD.

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 Marshall Mine, LLC
 Permit No. 59, Marshall Mine
 Appendix I - Permit Provisions

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9. Each long-term groundwater monitoring (LTGM) plan well(s) located in proposed mine blocks shall be replaced prior to destruction of the monitoring well. The location of the replacement well(s) must be submitted as a revision application 180 days prior to planned destruction of the existing well(s), and include all information required under the Regulations to allow for the replacement well(s) to be incorporated into the approved LTGM plan. This revision application shall be submitted to the Director of the Surface Mining and Reclamation Division for review and approval in accordance with §12.226 of the Regulations.
10. Within 120 days following completion of the State-wide evaluation to address concerns with long-term surface-water monitoring (LTSM) data sampling frequency and "no-flow" events, but no later than 1 year after issuance of the permit, Marshall Mine, LLC shall submit to the Director of the Surface Mining and Reclamation Division (SMRD) a revision application to modify its LTSM plan to obtain sampling data supportive of required findings necessary to demonstrate protection of water quantity prior to release of Phase II and III reclamation liability. Analyses of treated water may not be used for demonstrations that Marshall Mine, LLC has met water-quality protection requirements necessary for Phase II or Phase III release of reclamation liability. This revision application shall be submitted to the Director of the SMRD for review and approval in accordance with §12.226 of the Regulations.
11. Marshall Mines, LLC must provide appropriate documentation to satisfy the requirements of §12.71(a)(4) and §12.72(a) that demonstrates approval by the designated responsible agency and/or authority for road closures in accordance with the Surface Mining and Reclamation Division's Advisory Notice AD-AD-072, *Designation of Responsible Agencies for Road Closures and Relocation-Public Notice Requirements* (effective date February 14, 1996). The sufficiency of the documentation submitted in accordance with this permit provision is to be determined and acknowledged by the SMRD Director prior to any road closure.

APPENDIX II

SOIL TESTING PLAN AND POSTMINE-SOIL PERFORMANCE STANDARDS **DOCKET NO. C17-0018-SC-59-C**

[Derived from *Appendix VII - Soil Testing Plan and Postmine Performance Standards*, as proposed in Staff's TA Addendum 3 (see Finding of Fact No. 39.f.vii.)]

- I. Areas disturbed by mining activities will be monitored according to the minesoil-monitoring plan described in Technical Release SA-4 and supplemented as follows:

Maps

The soil monitoring report shall include a map of the area under review. This map shall be on a scale of 1" = 1000' or larger and illustrate the following information:

- (1) A grid system of the mine area consisting of blocks not exceeding 5.5 acres each.
- (2) The permittee may monitor on a larger grid size if it can be demonstrated to the Commission by site-specific studies that a larger grid size is justified. Each grid shall be labeled for identification;
- (3) Index marks identifying the Texas coordinate numbering system;
- (4) The most current disturbance boundary will be submitted with all soil monitoring reports in both paper and electronic format.

II. Initial Sampling

A. Timing of Soil Sampling

Initial soil sampling will consist of composite samples from each 5.5-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 following backfilling and grading, prior to the placement of land into the extended responsibility period (ERP), Phase I, II or III bond release. This period allows sufficient time for additional reclamation efforts if the soil suitability criteria are not immediately met.

Adjacent samples will be collected no less than 200 ft apart. Six soil samples per grid will be mixed to make one composite sample per depth increment. If a grid is less than two acres in size, it will be combined with an adjacent grid. If a partial grid is ≥ 0.5 acre in size, additional sampling will be conducted on 200-ft centers. No more than two grids will be combined for initial sampling purposes. Composite samples in topsoil-substitute scenarios shall be representative of the 0-1 ft and 1-4 ft layers and will be supplied to the Commission. The samples shall be collected by using standard techniques for sampling soils.

If a grid is sampled in its full extent of 5.5 acres, it will be reported that way. However, if a grid is not completely leveled and the leveled portion needs to be placed in ERP, the portion proposed for placement into ERP will be sampled and reported. The portion of a grid that has been sampled and reported will be marked using ERP boundary lines.

Banking-acreage balances for postmine soil performance parameters will be submitted with the initial postmine soils report. Exhibit 145-4 shows the areal extent of postmine soil sampling grids. Upon Commission request, Marshall Mine will use GPS/GIS field equipment to adequately identify any grid(s) the Commission may desire to audit.

B. Analyses and Reporting

Topsoil-Substitute Scenarios

The 0-1 ft composite samples shall be analyzed for:

1. pH
2. Potential acidity
3. Exchangeable acidity
4. Neutralization potential
5. Acid/base accounting = neutralization potential - (potential acidity + exchangeable acidity)
6. Texture: sand, silt and clay (USDA-NRCS)
7. Nitrate-nitrogen
8. Plant-available phosphorus, potassium, calcium, and magnesium
9. Cation exchange capacity (CEC)
10. Sulfur forms (pyritic, organic, total and sulfate)

The composite samples for the 1-4 ft layer shall be analyzed for:

1. pH
2. Potential acidity
3. Exchangeable acidity
4. Neutralization potential
5. Acid/base accounting = (neutralization potential) - (potential acidity + exchangeable acidity)
6. Texture: sand, silt and clay (USDA-NRCS)
7. Cation exchange capacity
8. Sulfur forms (pyritic, organic, total and sulfate)

Ten percent (10%), randomly selected by the laboratory, of the 5.5-acre grids sampled, shall be analyzed for Cd, Se, and hot water-extractable B for both depth intervals.

Laboratory results will be provided to the Commission within two years of rough backfilling and grading and prior to the land being considered for placement into the extended responsibility period. Reports will be sent to the Commission by the end of the first quarter of the reporting year. Whole and partial grid acreage will be provided for all topsoil-substitute areas depicted on Exhibit 145-4 with the submittal of minesoil-monitoring results.

In areas where postmine soil-monitoring data indicate possible AFM/TFM problems or a negative banking acreage balance(s), the following will be performed:

1. collect samples from grids no larger than 5.5 acres in size on a four-interval basis (0-1, 1-2, 2-3 and 3-4 ft), one sample per acre;
2. Marshall Mine will notify the Commission of its re-sampling schedule (at least five working days in advance) to allow Commission Staff to be present during sampling;
3. should more site-specific information be warranted, the Commission may specify that areas smaller than 5.5 acres be sampled and that samples not be composited;
4. a proposed remediation plan will be submitted along with the re-sample analyses;
5. provide a split to the Commission;
6. analyze these samples for initial postmine soil parameters;
7. provide results and a map depicting all tested and impacted areas; and
8. provide post-remediation analyses demonstrating that the negative banking-acreage has been balanced.

Maintenance Soil Sampling

Composite samples to a depth of 6 inches will be taken from maintenance grids defined by postmine land use management unit boundaries (as modified by minesoil monitoring grid boundaries where necessary to maintain a maximum grid size of 100 acres). Management units exceeding 100 acres will be zoned accordingly so as to not exceed 100 acres in total. A sampling intensity of 1 sample per 10 acres will be used to collect and composite samples to represent a maximum of 100 acres. The intent of fertility sampling is to identify fertility augmentation for the purpose of enhanced production. Fertilization and liming application rates will be provided in maintenance soil reports. Maintenance sampling reports will be submitted separately from, and prior to, the submittal

of forage production reports. Forestry, industrial/commercial, and fish and wildlife land use tracts will not be sampled for fertility given that they are evaluated by stem density rather than production.

These samples will be analyzed for pH, nitrate-nitrogen, and plant-available P, K, Ca, and Mg. Samples will be collected within the period October 1 to December 31 of the year immediately prior to the first year of productivity assessment and within the October 1 to December 31 period following the first and second years of productivity assessment. If the first and second years of productivity assessment are not consecutive, samples will also be collected within the period October 1 to December 31 of the year immediately prior to the second year of productivity assessment. Analytical results and a map showing the grids will be submitted to the Commission in conjunction with forage production reports for management units.

The Commission may require additional analyses contingent on overburden core data and the material to be placed within the top four feet.

III. Final Sampling

No earlier than the fourth year of the ERP, a random ten percent of the 5.5-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 shall be provided to the Commission no later than April 1 of the year following said sampling.

In the event that chemical and physical properties of the overburden warrant further investigation, the Commission may require additional testing. Procedures for the analyses of the above mentioned parameters will be in accordance with Attachment A, *Overburden Parameters and Procedures*, and Attachment B, *Soil Testing Procedures*, March 1980, Texas Agricultural Extension Service, for plant-available nutrients.

Success of postmine-soil quality will be based on a comparison of the values of the postmine parameter-frequency distributions and the distribution of premine soils contained in the native soil baseline (Appendix 134-3) supplemented with the criteria described in SMRD Advisory Notice ER-BA-127(b).

