

**COMMISSION OF TEXAS
OFFICE OF GENERAL COUNSEL
HEARINGS SECTION**

SMRD DOCKET NO. C12-0026-SC-34-C

APPLICATION BY LUMINANT MINING COMPANY LLC

**FOR RENEWAL/REVISION/EXPANSION OF SURFACE MINING PERMIT NO. 34E, MONTICELLO -
WINFIELD MINE, TITUS AND FRANKLIN COUNTIES, TEXAS**

**ORDER OF APPROVAL OF APPLICATION FOR RENEWAL/REVISION
AND ISSUANCE OF PERMIT NO. 34F**

STATEMENT OF THE CASE

Luminant Mining Company LLC, 1601 Bryan Street, Dallas, Texas 75201-3411, applied to the Railroad Commission of Texas (Commission) for approval of an application for renewal/revision/expansion of its surface coal mining Permit No. 34E, Monticello Winfield Mine. The permit area contains approximately 26,330 acres in Titus and Franklin Counties. The application was filed pursuant to the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. CH. 134 (Vernon Supp. 2013) and the "Coal Mining Regulations," Tex. R.R. Comm'n, 16 TEX. ADM. CODE CH. 12 (West 2013). The application proposes various operational changes, and a renewal term of five years.

After public notice of application, no hearing was requested. The parties to the proceeding are Luminant Mining Company LLC (Luminant or Applicant) and Staff. As set out in the findings of fact, and after review and supplementation of the application to revise the initial application and to address deficiencies noted by Staff, Luminant has addressed all technical deficiencies. Based upon the application, Staff's Technical Analysis document, and other information filed by the parties, the Commission approves the application for renewal/revision, as supplemented, with the permit provisions contained in Appendix I and the soil testing plan contained in Appendix II. The currently accepted bond in the amount of \$120,000,000 accepted by Order dated May 15, 2012 remains sufficient.

FINDINGS OF FACT

Based upon the evidence in the record, the Commission makes the following Findings of Fact:

1. By letter dated April 23, 2012, Luminant Mining Company LLC (Luminant) submitted its application for renewal/revision/expansion of its surface coal mining and reclamation permit for the Monticello

Winfield Mine, Permit No. 34E, to the Railroad Commission of Texas (Commission). The initial application consisted of twenty-five (25) volumes and was accompanied by the application fee of \$3,000. The approved permit contains approximately 26,330 acres; Luminant proposes to add 402 acres to increase the permit area to 26,732 acres. This area for expansion is north of Titus County Road (CR) 1312, east of U.S. Highway 271 (business), south of an unnamed road, and west of Farm-to-Market Road (FM) 2152. Revisions to the operations and reclamation plans are proposed. Luminant requests an additional five-year permit term. The current permit was last renewed October 23, 2007 (Docket No. C5-0009-SC-34-C). An authorized representative of Luminant appropriately verified the application and supplements.

2. By letter dated May 2, 2012, the Director, Surface Mining and Reclamation Division (SMRD), determined the application for renewal/revision to be administratively complete and filed the application with the Office of General Counsel. The application was made pursuant to the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. CH. 134 (Vernon Supp. 2013) (Act) and the "Coal Mining Regulations," 16 TEX. ADMIN. CODE CH. 12 (West 2013). The Commission processed the initial application and supplemental documents pursuant to the Act, the Regulations, the Administrative Procedure Act, TEX. GOV'T CODE CH. 2001 (APA), and the Commission's "Practice and Procedure," Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE CH. 1.1 *et seq.*
3. The application for renewal/revision/expansion, as supplemented, comprises a total of 35 volumes; after the initial 25-volume application, Luminant filed Supplemental Document No. 1 (SD1), 8 volumes, Supplemental Document No. 2 (SD2), one volume, and Supplemental Document No. 3 (SD3), one volume. Hereafter, all references to supplemental documents will be to the abbreviation "SD" followed by the applicable numeral, and all references to Staff's Technical Analysis document and addenda will be by "TA" followed by the appropriate numeral for the addendum.
 - (a). Staff notified Luminant that the TA would be due before August 23, 2012. The examiner reviewed the draft notice of application contained in the application by letter dated June 29, 2012 and requested changes to the notice. A revised draft was filed by letter dated July 20, 2012, and the examiner approved the notice for publication by letter dated July 27, 2012.

- (b). By letter dated August 21, 2012, Luminant provided mailing labels for surface owners and owners of other interests within and adjacent to the permit boundary in accordance with Commission policy. By letter dated September 6, 2012, the examiner sent mailed notice to owners of interests in land within the permit boundary and adjacent to it. By letter dated September 7, 2012, mailed notice was also sent to State and Federal agencies as required by §12.207(c) of the Regulations. The notice included an opportunity to request a copy of the application and was sent to the appropriate divisions of the 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, U.S.D.A. Natural Resources Conservation Service (NRCS), U.S.D.I. Fish and Wildlife Service (USFWS), and the U.S.D.I. Office of Surface Mining Reclamation and Enforcement, Tulsa Field Office (OSM). The Commission mailed notice to the Titus and Franklin County Judges on the same date. The notices of application provided interested persons the opportunity to file comments and to request a hearing within required time periods. The notice of application contained all information required by §134.058 of the Act and §12.207 of the Regulations. The notices contained information identifying the applicant, the location and boundaries of the permit area, the availability of the application for inspection, and the address to which comments should be sent.
- (c). By letter dated September 14, 2012, Staff filed a copy of Staff's application deficiencies and non-substantive comments after review of the application. Luminant filed SD1 (eight volumes) on May 10, 2013. By letter dated June 10, 2013, Staff indicated that the application as supplemented by SD1 remained deficient and attached a list of the remaining 32 application deficiencies and several non-substantive comments. Luminant filed SD2 (one volume) by letter dated October 7, 2013; it contained materials to clarify previous responses and to file additional materials for compliance with the remaining deficiencies in the application, as supplemented. The examiner determined by letters dated July 9, 2013 and October 10, 2013 that no additional notice was required due to the filing of SDs 1 and 2, respectively.

- (d). Staff filed its TA with the Hearings Division by letter dated February 24, 2014. The TA recommends 12 permit provisions that include three existing provisions recommended to be retained, two modified provisions, one revised provision, and six new provisions.
4. Luminant filed copies of the application for public review in the offices of the Titus County Clerk in Mt. Pleasant, Texas, the offices of the Franklin County Clerk in Mt. Vernon, Texas, and with the Commission's offices in Austin and Tyler, Texas. Luminant, in its letter dated October 22, 2012, sent a copy of the publishers' affidavits and clippings showing that notices were published in the *Mt. Vernon Optic-Herald* on August 30, September 6, 13, and 20, 2012 and in the *Mt. Pleasant Daily Tribune* on September 13, 20, 27, and October 4, 2012. The examiner notified Luminant of returned mailings by letters dated October 10 and December 20, 2012; there were a total of 33 returned mailings for insufficient addresses, eight were able to be re-mailed with addresses provided. Approximately 6% of the 414 persons to whom notice was sent were returned for insufficient addresses. Luminant filed updated addresses as available.
5. Affidavits of publication and clippings provide documentation of all required published notice. The requirements of §12.207 and §12.123 have been met. By letter dated October 22, 2012, Luminant filed proof of publication of notice. Luminant's publication of notice of application occurred once each week for four consecutive weeks in newspapers of general circulation in the locality of the surface mining and reclamation operations in the *Mt. Pleasant Daily Tribune* in Titus County September 13, 20, and 27, 2012, and on October 4, 2012 and in the *Mount Vernon Optic-Herald* in Franklin County on August 30, 2012 and on September 6, 13, and 20, 2012. Publication meets the requirements of §12.207 of the Regulations. The last date of publication was October 4, 2012, and the deadline for requests for public hearing was Sunday, November 18, 2012, a Sunday, so that the effective deadline for requests for hearing was Monday, November 19, 2012. No requests for hearing were filed.
6. The Texas Parks and Wildlife Department (TPWD) was the only agency filing substantive written comments in this docket. Staff incorporated its response to the comments into the TA document, Appendix III to the TA. The TPWD comments and recommendations have been adequately addressed. No other written comments were submitted regarding the application during the public

comment period. The following comments/recommendations were reviewed by Staff and by the examiner and the additions and clarifications provided by Luminant are sufficient, along with the permit provision adopted in this Finding of Fact.

- (a). TPWD recommended the inclusion of the U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) 21 Project No. 200600536 authorization to Section .121 of the application. Luminant included copies of its initial and current NWP 21 Project 200600536 in Section .121, Appendix C in SD2. In addition, Luminant indicated in its Errata, page 2, SD2, information that it has submitted a permit request to the USACE for the expansion area, USACE Project No. SWF-2012-00261. In SD1, Luminant has included the proposed conceptual mitigation plan for the expansion area (Section .144, Appendix B). In addition, the Commission has received a copy of the jurisdictional determination of waters of the U.S. for the permit; however, Staff recommends a permit provision requiring that Luminant provide a summary table and figure summarizing the impacts and depicting the various USACE permit areas at the Monticello-Winfield Mine to update the permit with summary information regarding impacts authorized under the USACE permit. This permit provision is included as Permit Provision No. 9 and is approved by the Commission.
- (b). TPWD also commented that bermudagrass and bahiagrass should not be used for wildlife habitat. In SD2, Luminant gave examples of desirable native grasses and clarified that bermudagrass, bahiagrass, and crimson clover might be initially planted to stabilize soils and minimize erosion, but would not contribute significantly to wildlife habitat.
- (c). TPWD commented that Bermudagrass was inappropriate to use as a management tool in wooded reclamation areas because it has minimal wildlife value and results in loss of habitat. In SD2, Luminant modified text to clarify that bermudagrass and other fast growing non-native species may be used as an initial groundcover for highly erodible/disturbed environments and may be used to control erosion during early forest development but only as support for the land use. Staff noted that Bermudagrass and desirable invader species should constitute no more than 25% of vegetation for the land use.

- (d). Two species recommended by TPWD to be added to the list of plant species for wildlife habitat were added by Luminant in Appendix 144-C, SD1.
- (e). In response to TPWD's recommendation that a notation should be added to Appendix 144-D (now Appendix 144-C) to indicate that sweetgum and eastern red cedar will only be used as minor components of the planting mixture, Luminant added text to its narrative in SD2 and in Appendix 144-C (SD3) to clarify that these two species will only be used as minor components of the plant mixture.
- (f). TPWD recommended that the mitigation plan approved by the USACE be included in Appendix 144-B rather than the proposed conceptual mitigation plan. Luminant included the proposed mitigation plan in SD1, Appendix 144-B, as supplemented in SD2. Because changes could occur to the proposed plan as a result of USACE authorization, and the authorization letter typically does not include the changes, Staff recommends that Permit Provision No. 10 be adopted to require Luminant to provide to SMRD within 90 days of submittal to the USACE, copies of the correspondence to and from the USACE on projects related to the accounting and reclamation of authorized impacts to waters of the U.S., including wetlands at the mine to include changes in the mitigation plan, the final locations of mitigation sites, and an annual accounting of acres impacted and reclaimed that will be proposed as the mitigation acreage. This permit provision is approved in order to accomplish effective coordination of reclamation.
- (g). TPWD indicated that an April 20, 2011 letter from TPWD to the USACE regarding current NWP 21 Project 200600536 was sent directly to the USACE regarding compensation and mitigation of wetland impacts, and TPWD did not include duplicate comments in its comment letter to the Railroad Commission. Luminant indicated that it submitted information to address the comments in the April 20, 2011 letter in its submittal of the permit request to the USACE for the expansion area, USACE Project No. SWF-2012-00261. In SD1, Luminant has included the proposed conceptual mitigation plan for the expansion area (Section .144, Appendix B). Luminant's response is sufficient.

- (h). TPWD's remaining three comments/recommendations: (1) recommended restoring streams, streambanks, and floodplains to their approximate original contour and revegetating wetland and riparian areas using native vegetation of similar or higher quality, (2) encouraged Luminant personnel to provide data on future sightings of box turtles and if encountered in an area to be disturbed, relocating the turtle to a nearby area of suitable habitat, and (3) encouraged Luminant to use native species in pastureland reclamation to provide forage for agricultural purposes while benefiting wildlife. Staff supports these comments and indicated (1) that Luminant by rule must establish approximate original contour, including streams, streambanks, and floodplains (§§12.384(b) through 12.385 and that Luminant includes species of higher quality, (2) Staff encourages appropriate handling and location of both three-toed box turtles and Ornate box turtles if encountered in disturbed areas and noted that Luminant does not anticipate encountering the turtles in active areas. Luminant indicates that the pace of clearing and other activities will allow time for the turtles to relocate, and (3) Staff encourages Luminant to strive for increased diversity. Luminant's application, as supplemented, includes the use of native species as appropriate.
7. Baseline information for the permit area historically has consisted of several study areas and several permit areas that, for the most part, have been consolidated over the years into Permit No. 34E. Initially, there were two major permits, the Monticello Winfield and Thermo Mines, Permit No. 5, and the Monticello B-2 Mine, Permit No. 34. Two expansion areas were later added as separate permits, Monticello H & G Area, Permit No. 30, and the Monticello I Area, Permit No. 43. All of these permit areas, except for the Thermo Mine and the B-2 Mine, were consolidated into a single permit in 1996, the Monticello Winfield Mine, Permit No. 30B. The Thermo Mine remained as Permit No. 5. The B-2 Mine (Permit No. 34) was consolidated in 1999 with the Monticello Winfield Mine, Permit No. 30B as Permit No. 34C. Many of the plates and maps in this renewal/revision/expansion application, as supplemented, especially as related to baseline information, retain their character as pertinent to specific mine areas.
8. Luminant proposes to continue mining in the South Smith Creek primary area and 12 auxiliary areas identified by mine years for the permit term as Auxiliary Areas A-1, A-2, F-2, and J-4, L area Auxiliary No. 1, L-4 and L-5 Auxiliary Areas, M-1 and M-2 Auxiliary Areas, and South Smith Creek

Auxiliary Areas 4 [Table 125(a)-1, SD 1 and Finding of Fact No. 17]. The mine areas are denoted on the Life of Mine Maps, Plates 125(a)-1 through 3. The 402 acres requested for addition to the mine plan are located in the southern portion of the L mining area. Areas to be mined during the proposed five-year permit renewal term denoted in the application as “2012-2016” constitute a progression of the existing mining operations. Dewatering is proposed to continue in all mine areas. Lignite production will be accomplished through the use of draglines, and auxiliary equipment such as hydraulic excavators, hydraulic backhoes, front-end loaders, end-dump trucks, haulers, scrapers, dozers and motor graders. Lignite recovered will be transported by railcar for delivery to the Monticello Steam Electric Station.

9. Other proposed activities are coal screening, disposal of bottom ash and fly ash (G Area Ash Disposal operation), use of bottom ash as needed as a surfacing material to improve traction, a description of the exploration plan, final pit impoundments, diversions and ponds, revised postmine land use and postmine contour and slope, the continued use of overburden as topsoil substitute material as set out in this Order, the number and location of final pits, revised transportation and public road closures and buffer variances. No dragline relocations are proposed. Luminant has described backfilling and grading operations and the time and distance for completion of backfilling and grading.
10. The application was submitted to the Commission at least 180 days prior to the date of commencement of proposed activities. The application, as supplemented, also meets the requirements of Regulation §12.107. The application, as supplemented, was filed in the format required by the Commission at the time of filing, contains the applicable information required under §§12.116 through 12.154 and all other applicable requirements found in 16 Tex. Admin. Code Chapter 12, and is in compliance with §12.107(a), with adoption of the permit provisions in Appendix I to this Order and the Soil Testing Plan in Appendix II. The application, as supplemented, is supported by appropriate references to technical data and other written material available to the Commission, with adoption of Appendices I and II. The technical data submitted in the application, as supplemented, are accompanied by the information required by §12.107(c) and (e), as approved in this Order. The technical analyses contained in the application, as supplemented, have been prepared under the direction of professionals qualified in the subjects analyzed, as required by §12.107(d), as approved in this Order. The application and supplements submitted to the Commission were accompanied by Forms SMRD-1C,

each appropriately signed by an individual authorized to act on behalf of the applicant indicating that the information contained in each submittal is true and correct to the best of his knowledge and belief. The original Form SMRD-1C for each application and supplement is contained in the Commission's files. The application, as supplemented, also meets the requirements of §12.108 of the Regulations. The application for the renewal/revision/expansion was accompanied by a check in the amount of \$3,000. The appropriate application fee has been received by the Commission for this renewal/revision/expansion application and documentation of this fee payment is contained in the Commission's files.

11. Section .116 of the application, as supplemented, includes all information required to show organizational information, ownership and control, current officers and directors, updated compliance information, and other mining permits and identifications. The application includes Appendices 116-A through 116-E. There are no oil and gas leases within the permit area. The text of this section was replaced in its entirety in SD1 and in SD2. Changes were made to Section .116 in SD1 to Appendix 116-C, Property Ownership Information, and to Appendix 116-E, Lignite Severed from the Surface Estate. In SD2, changes were made to update the text of Section .116, to update the names of officers and directors and dates of departure from controlling companies, and to provide revised property ownership maps, Plate 116-1 through Plate 116-4. Additional revisions were made in the supplements as well.
 - (a). Luminant is a Texas limited liability company; its resident agent is CT Corporation, 350 North St. Paul Street, Dallas, Texas 75201. Luminant is the payer of the abandoned mine reclamation fee.
 - (b). The following reflects the current ownership and control of Luminant: Energy Future Holdings Corp. (formerly known as TXU Corp.) is the parent corporation of Energy Future Competitive Holdings Company (formerly known as TXU US Holdings Company). Energy Future Competitive Holdings Company is the parent corporation of Texas Competitive Electric Holdings Company LLC (formerly known as TXU Energy Company LLC), a Delaware limited liability company. Texas Competitive Electric Holdings Company LLC is the corporate parent of Luminant Holding Company LLC (formerly known as Luminant

Energy Investment Company LLC), a Delaware limited liability company. Luminant Mining Company LLC is a Texas limited liability company and is a wholly-owned subsidiary of Luminant Holding Company LLC. Luminant Generation Company LLC, owns or controls the coal to be mined and has the right to receive the coal after mining. Luminant Generation Company LLC is a Texas limited liability company and a wholly-owned subsidiary of Luminant Holding Company LLC (SD2).

- (c). All of the officers, directors, and managers of all entities who may own or control Luminant have been adequately identified in the application as supplemented through SD2.
- (d). Section .116, Appendix A, of the application contains a sample lease and amendment to lease. Luminant proposes to conduct mining operations on property it owns, property owned by TXU Generation Company LP, and on property where a valid coal and lignite lease exists. Luminant and TXU Electric Company, subsequently TXU Energy Company LLC and now Texas Competitive Electric Holdings Company LLC, agreed by contract that Luminant may conduct mining activities on property leased from Texas Competitive Electric Holdings Company LLC. Luminant does not propose any surface mining operations on any property for which Luminant has not secured right-of-entry from the landowner.
- (e). Section .116 of the application, as supplemented, includes the identification of all tracts within and adjacent to the permit area and owners of all interests in those tracts (Appendix B (as supplemented in SD1, SD2, and SD2) and Appendix C, Section .116 (as supplemented in SD1 and SD2), and Plate 116-1, Plate 116-3, and Plate 116-4, Property Ownership Map, (as supplemented in SD2), and Plate 116-2 (as supplemented in SD3). Section .116, Appendix A contains a sample lease form. Section .116, Appendix D, contains required compliance information. Section .116, Appendix E (SD1), includes a description of the lease, location, and ownership of each property tract where the surface estate has been severed from the mineral estate. Based on the information contained in the application, as supplemented, there are no active or valid oil and gas leasehold interests within the permit area.

- (f). In the application, as supplemented, Luminant updated its compliance information to include the 15 notices of violation issued to Luminant for the three years prior to the filing date of the application. These notices applied to operations conducted under permits for the Martin Lake Mine (three notices), the Oak Hill Mine (seven notices), and for the Three Oaks, Leesburg, Kosse, Martin Lake AIV South, and the Monticello-Thermo Mine (one notice for each of these mines). From the information filed by Luminant and Staff, no termination dates are listed for NOV Nos. 298T and 301T. Staff has indicated in its TA, Section .116, however, that there are no pending violations; therefore, the application and TA provide sufficient compliance information for issuance of a renewed, revised, and expanded permit.
12. Luminant proposes to conduct mining operations on property it owns, property owned by Luminant Generation Company LLC and on leased property. Property ownership is detailed in Section .116 and Section .117 of the permit application, as supplemented. Luminant has described and identified all tracts within and adjacent to the permit area and all documents to demonstrate a legal right to enter and begin surface mining and reclamation operations on all tracts proposed for operations as revised in this application, as supplemented, in accordance with §12.117 of the Regulations (Appendices 116-B and 116-C, as supplemented, and 116-E, SD1).
13. The requirements of §12.118(a), (b), and (c) of the Regulations have been met.
- (a). The permit area is not within an area designated as unsuitable for surface mining activities under §§12.75 - 12.85 of the Regulations, and not within any area under study for such designation in an administrative proceeding.
 - (b). Luminant does not claim an exemption under §12.118(b) provided for applicants having made substantial financial commitments prior to January 4, 1977.
 - (c). Luminant will not conduct surface mining activities within 300 feet of any occupied dwelling other than those owned by Luminant.

14. Section .119 of the application, as supplemented, shows the number of acres anticipated to be mined or otherwise affected over the life-of-mine. The application, as supplemented, includes information which complies with the requirements of §12.119(a) of the Regulations for the anticipated starting and termination dates of each phase of mining and the anticipated number of acres of land to be affected for each phase of mining and over the total life of the permit. The proposed permit term is denoted in the application as 2012-2016. The list of the annual mined and disturbed acreages for the proposed permit area for the proposed term is included in Table 119-1 of the application, showing acreages to be mined by year for the permit term. Luminant anticipates at least one additional permit term for mining in Mine Years noted as 2017-2023 (1143 acres) following the requested permit term. For the requested permit term, Luminant proposes mining approximately 864 acres. Additional acreage will be affected but not mined during the permit term.
15. By Order dated May 15, 2012, the Commission approved continued compliance with §12.311 for minimum liability insurance coverage by proof of self-bonding in accordance with §12.309(j)(2). An applicant that is self-bonded may be considered to meet self-insurance requirements (§12.311). Luminant meets the requirements for self-bonding as set out in the Order dated May 15, 2012 for the current bond for this permit, in the Order dated December 11, 2012 for the most recent self-bond accepted by the Commission for Luminant (Liberty Mine, Permit No. 58, and Finding of Fact No. 15 in the May 24, 2013 Commission order approving and issuing the renewal revision of Permit No. 46C (Oak Hill Mine). Docket No. C13-0007-SC-00-D). In addition to basing approval of self-insurance on self-bonding, in previous permitting actions the Commission also based approval of self-insurance on the operating agreement between Luminant and Texas Utilities Electric Company, now TXU US Holdings Company. This agreement guarantees payment of all of Luminant's costs due to injuries and damages (Articles IV and V, Operating Agreement dated April 28, 1978 between Texas Utilities Generating Company, Luminant's predecessor in interest, and Dallas Power & Light, Texas Power & Light, and Texas Electric Service Company, Texas Utilities Electric Company's predecessors in interest) (Affidavit of Diane J. Kubin, Assistant Secretary of TXU Corp. and Secretary of TXU Mining Management Company LLC and TXU Energy Company LLC, with attached operating agreement, as modified, effective April 20, 1979, and assumption agreement executed January 1, 2002). The operating agreement remains in full force and effect, as having been assumed by TXU Energy Company LLC, renamed Texas Competitive Electric Holdings Company LLC, and by TXU

US Holdings Company. Adequate evidence shows that self-insurance continues in effect for the proposed permit. The requirements of §12.120 are met.

16. There is no active oil and gas drilling within the proposed permit area. Several petroleum and gas pipelines are located within the proposed permit area. Luminant has identified all pipelines and ownership of the pipelines.
17. Luminant has included information in the application, as supplemented, in compliance with §12.125(1). The application includes information for the size, sequence, and timing of subareas of the permit and the life-of-mine anticipated permit terms required by §12.125(1) of the Regulations [SD1, Table 125(a)-1, Mine Block Acreage for the Life of Mine, and Plates 125(a)-1 through 3, application]. Annually, approximately 1.2 million tons of lignite will be mined during the proposed permit term, and total production from the mine is estimated at 22 million tons through the life of mine. Luminant is requesting to revise acreage to be mined by 464 acres in six auxiliary areas from the acreage approved in Revision No. 51 approved administratively on March 28, 2012.
18. Luminant has included information in the application, Section .125, Appendix A, as supplemented in SD1, to provide the status of all cultural resource sites located within the proposed permit area. Luminant also provided a summary of all cultural resource surveys. The information includes Table 125-(2)-I, a listing of all cultural resource sites within the proposed permit boundary, and Table 125-(2)-II, sites that remain to be evaluated and tested and/or protected or mitigated as depicted on Figure 125(2)-1 (SD1). Approximately 262 sites were identified within the permit boundaries. Nineteen sites with an unknown eligibility status or for which assessment and mitigation, if necessary, have not been completed, are listed on Table 125-(2)-II. The current permit contains Permit Provision No. 1 set out in Appendix I to this Order. Staff recommends retention of the permit provision as modified in Appendix I, and Luminant accepts the permit provision. The provision is retained to ensure protection and documentation of all cultural resource sites as required by the Regulations. These sites will be protected in accordance with §12.151 of the Regulations. Seventeen sites have been determined eligible for listing in the National Register of Historic Places; one additional site, a structure, was designated as a non-site by EPA due to damage from a windstorm. The remaining 16 eligible sites (except for three for which testing and data recovery are complete and the sites cleared for mining),

and the 19 sites for which eligibility has not been determined (eight of which are cemeteries) are depicted on Figure 125(2)-1 (SD1) and must be protected until declared eligible for listing or required testing and mitigation measures, if any, are completed. Staff recommends a modification to existing Permit Provision No. 1 to state:

No disturbance of any cultural resource site shall occur until the permittee has obtained written approval from the Commission. Copies of all correspondence between the permittee and the Texas Historical Commission and the permittee and the U.S. Environmental Protection Agency, shall be provided to the Commission concurrently or otherwise, in as timely a manner as possible.

This permit provision is approved to ensure protection of cultural resource sites as required by the Regulations. There are no publicly owned parks located within the proposed permit area that would also be subject to protection required by §12.151. Protection, testing, treatment and mitigation of cultural resource sites will be in compliance with the 1991 Memorandum of Understanding (MOU) between the Commission and the Texas Historical Commission (THC). If there is conflict between the MOU and other agreements, the Commission and the THC and other applicable agencies will be consulted to determine the lead agency and agreement. The application also includes Luminant's commitment to notify the Commission and the THC of the discovery of any new site usually within two days but the timeframe is variable depending upon the characteristics of the site and to provide any letter report or study necessary to document a new site to the Commission and to the THC within a reasonable time. Although site 41TT543 is listed in text as eligible, it is not on the list or on the map, it is not included in the count of the sites eligible stated in this Finding. Staff believes the number of the site should be 41TT534 that is listed and depicted.

19. The application includes identification of other licenses and permits required for the proposed activities in accordance with §12.121 to address all areas proposed for inclusion in the proposed permit area. This listing is included in the application, as revised in SD2 and SD3. Section .121 includes copies of permits in Appendix A (TCEQ Permit No. 02697 for wastewater discharges, six TCEQ permits to appropriate state water, and one Certificate of Adjudication), Appendix B (renewal of air quality Permit 495 for Winfield North Mine Train Loading Station, permit renewal of TCEQ Permit No. 7019 for air quality permit for Train Loading Station No. 3), TCEQ registration 28115 for standard exemption to install a soil vapor extraction system and statement of exemption, TCEQ permit

by rule registration number 77934 for portable lignite screen and related information, and Appendix C containing a modification to Luminant's Nationwide Permit No. 21 (Project No. 200600536) from the US Department of the Army Corps of Engineers (USACE). Luminant indicates in SD3 that the USACE is in the process of reviewing individual permit application USACE Project No. SWF-2012-00261 for impacts to jurisdictional water in the permit area and that Luminant will provide a copy of the Individual Permit document for Appendix C of Section 121 of the RRC permit upon issuance of USACE Individual Permit. The section of the application, as supplemented, provides identifying information for TCEQ permits, TCEQ Solid Waste Registration number (34680), TPDES Multi Sector General Permit No. TXR05AM67 for discharge of storm water associated with industrial activities, TPDES Storm Water Construction General Permit No. TXR15KS97 for storm water for construction activity, EPA hazardous waste identification number TXD000728972, Mine Health and Safety Administration identification numbers, ID No. 41-03660 (Monticello-Winfield South), and ID No. 41-01900 for the Monticello Winfield North), and the TPWD Scientific Permit Number SPR-1006-760 for persons who may conduct activities authorized by the permit.

20. In the application in Section .126, Luminant provided a general overview of regional hydrology and geology for the permit area and vicinity and reference materials. In Section .127, more specific information is included that meets the requirements of §§12.127 of the Regulations for geology.
- (a). Section .126 of the application includes a summary of published information and a reference list to data and information contained in the approved permit and predecessor permits. Luminant included Figure 126-1, "Surface Geology of the Monticello Winfield Study Area," depicting the principal geologic units of the region, including the alluvium, fluvial terrace, and Wilcox and Midway Groups, as well as the Carrizo Sand and Reklaw Formation. Principal structural features are depicted on Figure 126-2, and aquifers of the region are depicted on Figure 126-3.
 - (b). The application, as supplemented in SD1, Section .127, sets out detailed geologic information, including thickness and extent of primary lignite seams and physical and chemical characteristics of the overburden, interburden, and underburden. A revised geology description is included in the application, as supplemented in SD1, with revised text,

appropriately signed, sealed, and certified by a professional geoscientist licensed in Texas. Included in the application are Plates 127-1 Continuous Core Location Map, Geologic Cross Section Location Maps (showing stratigraphic units) from predecessor permits (Plates 127-2 through 127-9), maps showing the structural contours on top of the lignite seams from predecessor permits (Plates 127-10 through 127-13), overburden thickness maps from predecessor permits (Plates 127-14 through 16), and net sand thickness (overburden) maps from predecessor permits (Plates 127-17 through 127-18). More than 2,000 holes have been drilled and logged within the current permit area, spaced on 500 and 1,000-foot centers; most were drilled and logged to approximately 10 to 20 feet below the lowest minable lignite seam. Sixty-eight (68) continuous cores have been collected within the permit area; three were drilled in 2012 to ensure that core density requirements were met. Information for these cores are included in Appendices 127-A (core descriptions) and 127-B (analytical data). The four major units are lignites, sands, clays, and sandy muds. These units and the primary lignite seams are described. Four mineable seams are present in the J, L, and M areas proposed for mining during the requested permit term, and three mineable seams are present in the A, F, and SSC areas proposed for mining in the requested permit term. Staff noted in its TA that 5 of the 9 cores used to characterize the proposed expanded mining areas did not meet the proposed Commission guideline of one core for each 250 acres to be mined. In addition Staff noted that two cores are over 5,000 feet from the next core (J-4 auxiliary area). Staff reviewed each of these five cores and determined that additional coring would not be needed.

- (1). For Core B2-CC-1 that covered 465.9 acres in the L-5 area, rather than 250 acres, Staff noted that this core is located within 350 feet of the 59-acre L-5 Auxiliary Area to be mined and, because of this, determined that this is adequate to characterize the L-5 area.
- (2). For Core B2-CC-4 that covers 400 acres of the L-4 area and is approximately 4,000 feet from Core B2-CC-8 that also covers a portion of the L-4 area, Staff noted that Luminant proposes to use overburden no deeper than 32 feet below ground surface (bgs), mostly oxidized material, within the zone of influence of these cores for placement in the top four feet of the postmine surface. For the J-4 area, Cores B2-

CC-8 and B2-CC-11 have zones of influence covering the proposed expansion of the J-4 auxiliary area, proposed to be expanded from 40 to 62 acres. Although these two cores are approximately one mile apart, rather than the recommended 4,000 feet, and the zone of influence of Core B2-CC-8 covers 285 acres rather than a recommended maximum of 250 acres, the zone of influence is just above the maximum. For both the L-4 and J-4 areas, staff concluded that the cores are sufficient. Core B2-CC-8's zone of influence covers 48 of the 62 acres proposed for mining in the J-4 Auxiliary Area and Core B2-CC-11's zone of influence covers the other 12 acres, and the material proposed for use in the top four feet of the reclaimed surface will not include unsuitable materials. Based on the general absence of acid-forming and toxic-forming materials in the overburden at this mine (the entire overburden above the uppermost lignite seam is suitable) and the success of reclamation at the mine using mixed overburden for three decades, staff believes additional coring is unwarranted for the L-4 area and J-4 areas.

- (3). For Core CC-03-12, covering 283.3 acres based on the postmine land use disturbance boundary, staff concluded that the exceedance of the 250-acre guideline is not of concern because of the proximity of Core CC-03-12 to M-Auxiliary Areas 1 and 2, and to Core CC-B2-18. Staff did note that for the permit term following renewal/revision/expansion Luminant will need to drill a core to characterize the western portion of the 375-acre M Area block indicated for mining in 2017.

Luminant has included sufficient information to characterize the overburden in the areas proposed for mining and mining-related disturbance. Because of the areas within the A Area, and the J-4, M-1, and M-2 Auxiliary Areas that are unsuitable for use in the top four feet of the reclaimed surface, and the inability of the dragline to successfully handle this material in reclamation, and also due to discrepancies in Luminant's descriptions of the area where the dragline and auxiliary equipment will be used, Staff recommends a new permit provision, set out in Appendix I of this Order as new Permit Provision No. 7, to ensure that no AFM/TFM is located within the top four feet of the reclaimed surface. This permit provision is adopted to clarify the operations and reclamation plan.

21. The application, as supplemented in SD1, includes a replacement Section .128 of the application containing baseline data and information that adequately describes the groundwater hydrology of the proposed permit area and adjacent areas in accordance with the requirements for §12.128 of the Regulations.
- (a). This section includes updated and revised information as well as information contained in previous permit areas included in the current permit area. No new baseline groundwater data was collected for the application; however, the water well and oil and gas well inventories were updated to reflect current conditions.
- (b). Summaries are included for groundwater investigations for the 1991 Monticello Mine (Permit 5) renewal between 1980 and 1990 (Table 128-1), the 1992 H and G-East Study Area (Permit 30), the 1993 I Study Area, and the 1994 B-2 Mine Renewal (Permit 34). Aquifer test results are summarized in Table 128-2. Hydrogeologic Data Location Maps are included as Plates 128-1 through 128-4. Potentiometric Surface Maps are included for the Winfield Overburden (1991 Permit 5 Renewal), Winfield Underburden (1992 Permit 30), I Study Area Overburden (1993 Permit 43), B-2 Water Elevation Map (1994 Permit 34 Renewal), B-2 Overburden Confined (1994 Permit 34 Renewal), and B-2 Underburden (1994 Permit 34 Renewal) as Plates 128-5 through 128-13.
- (c). The Winfield Water Well Inventory and Oil/Gas Well Inventory Map (1991 Permit Renewal) is included as Plate 128-14; the B-2 Water Well Inventory and Oil/Gas Well Inventory Map (1994 Permit 34 Renewal) is included as Plate 128-15. There are no active oil and gas wells within the Permit 34E boundaries. A few dry and abandoned oil and gas wells are located on Plate 128-15. Baseline water well chemistry is summarized in Appendix 128-C, and available laboratory reports are contained in Appendix 128-D. Water well records from the 2012 updated water well inventory of wells within the Permit 34E area and within one mile of the Permit 34E boundary are contained in Appendix 128-F. The listing of wells in the 2012 update in Appendix 128-F shows approximately 216 locations with multiple wells at most

locations; 394 wells are listed. Of these 394, most are used for domestic purposes. Other uses include approximately 11 listed as for stock purposes, six for public water supply, six industrial, four for irrigation, four shown as other or not listed, and 17 shown as unused. Appendix 128-F also includes listings of wells contained in the 1991 Monticello Mine Renewal of Permit No. 5 and of the 1994 B-2 Permit 34 Renewal. Staff indicates that over 750 private wells were updated with the 2012 update.

- (d). Principal aquifers are the confined and unconfined sand units in the overburden and underburden Wilcox Group. In the overburden, channel sands are typically unconfined, although some form a confined aquifer, and may have thicknesses up to 100 feet. In non-channel areas, sands generally do not exceed 40 feet in thickness. Interbedded mud units act as barriers that separate the sand units into small confined reservoirs and restrict vertical permeability. The underburden contains thin sands that are usually not continuous over a significant area. The application also includes information regarding hydrologic properties of the overburden and underburden, recharge and discharge, groundwater movement, and groundwater chemistry for each of the predecessor permits.
- (e). Luminant indicates that the total dissolved solids (TDS) from overburden wells varies from approximately 32 mg/L to greater than 1,120 mg/L with an average slightly greater than 300 mg/L. The pH of overburden waters ranges between 5.2 and 8.4 standard units (s.u.) with an average of approximately 6.3 s.u. The TDS of water in the underburden ranges from approximately 116 to 2,038 mg/L, and pH ranges from 7.1-8.9 s.u. averaging approximately 7.9 s.u.
- (f). The updated information as provided in the application modifies the groundwater report contained in the approved permit. The revised report is signed and sealed (SD1) by a Texas-licensed professional geoscientist.

22. A report characterizing the surface waters of the permit area and adjacent areas has been updated in the application, as supplemented, as “Surface Water Information Monticello-Winfield Mine Permit 34E Renewal/Revision/Expansion Titus and Franklin Counties, Texas” (Report). The revised report is signed and sealed (SD1) by a Texas-licensed professional geoscientist. The information, as updated, is adequate to provide the information required by §12.129 of the Regulations for watersheds, surface water bodies, springs, discharges, and surface water quality, quantity and seasonal variation for the proposed permit area. Surface water data location maps for the study areas for predecessor permits for the permit area and adjacent areas are contained in Section 129 of the application as Plates 129-1 through 129-4.
- (a). Section 129 of the application, as supplemented, includes a description of previous surface water baseline studies, baseline monitoring stations (Table 129-1), and baseline surface water conditions based on information regarding surface water impoundments (locations shown on Figure 129-1), stream monitoring stations, watershed size and characteristics, and data from stream sampling stations, springs (Figure 129-1), seeps, (Figure 129-1) and impoundments (Table 129-1).
 - (b). Lake Bob Sandlin, Lake Monticello, Tankersley Lake, New City Lake, and Old City Lake, are located within or in the vicinity of the mine. The following springs were described as located within the proposed permit area or in its vicinity: Yankee, White Oak, Ripley, Marshall, Priefort, Oak Grove, Simmons, Spring Hill, and Moore Springs.
 - (c). The Monticello Winfield Study area is located within the watersheds of Big Cypress Creek and White Oak Creek in Titus County. The H Area is located within the watershed of Blundell Creek in Titus and Franklin Counties. The G-East Area and the I Study Area are drained by several unnamed tributaries of Dragoo Creek, Tankersley Creek, and Lake Bob Sandlin in Titus County. The B-2 Study Area is also drained by the White Oak Creek and Big Cypress Creek watersheds. The proposed expansion area is drained by unnamed tributaries of Hayes Creek. Runoff from this area was monitored during the Monticello B2 Mine renewal (Permit No. 34) at Stations SW-2A and SW-2B. Streamflow information is based on monthly streamflow measurements at monitoring stations receiving flow, continuous

monitoring of stream stage stations, and estimated streamflow using data from a nearby United States Geological Survey gauging station, the Birch Creek watershed near Yantis, Texas, as located on Figure 129-1, as most representative of three U.S.G.S. station watersheds (Table 129-5); baseline monthly streamflow volumes for the proposed permit area are set out in Appendix 129-E, as well as rainfall-runoff correlations.

- (d). Storm runoff estimates were based on nine storm events for an unnamed tributary of Tankersley Creek and two events for Piney Creek. Based on rainfall-runoff relationships calculated in accordance with Natural Resources Conservation Service runoff methodology, curve numbers were estimated and these were used to estimate runoff for 24-hour 10-year, 25-year, and 100-year storm events of 6.9, 8.25 and 10.55 inches, respectively (Section 2.5.4 of Report).
 - (e). Monthly baseline stream monitoring results are contained in Table 129-4 [for pH, total suspended solids (TSS), total dissolved solids (TDS), chloride (Cl), sulfate (SO₄), total iron (Fe), dissolve iron, total manganese (Mn), and dissolved manganese. Lab analytical data is contained in Appendix 129-B. Data from a one-time sampling event for ponds and impoundments are contained in Appendix 129-B. Photographs and brief descriptions of sampling sites are contained in Appendix 129-C. Table 129-7 sets out estimated monthly streamflow volumes for study area watersheds.
 - (f). Table 129-8 is a listing of 12 pertinent wastewater permits, and Figure 129-1 depicts "Locations of USGS Gauging Stations, Lakes, Springs, and Wastewater Permits."
 - (g). Streamflow is characterized by USGS Station 08018730 (Birch Creek near Yantis, Texas) for the period October 1978 – September 1989. The permit area is located within Segments 0404 and 0408 of the Cypress Creek Basin and Segment 0303 of the Sulphur River Basin (SD1).
23. No changes are proposed to the alternative water supply information contained in the approved permit, except that Luminant has updated the list of active water rights within the permit area and adjacent areas by including a report, *Alternative Water Supply Information, Monticello-Winfield Mine Permit*

34E Renewal/Revision/Expansion, Titus and Franklin Counties, Texas. Tables 130-1 and 130-2 list 38 existing water rights depicted on Figure 130-1. The report, certified by a professional geoscientist, includes information regarding groundwater and surface water users and alternative water sources. Mining and dewatering will disrupt the natural hydrologic groundwater system and the impact will be potential lowering of the groundwater table. Tables 130-1 through 130-3 are included in the report. Seventeen existing water rights are located either within the proposed permit or downstream of the proposed permit. Approximate locations are identified on Plate 130-1. They are located variously in the Sulphur River Basin, Segment 0303, the Cypress Creek Basin, Segment 0404, and the Cypress Creek Basin, Segments 0405 and 0408. Of the 17 water rights within or downstream of the permit area, four are for municipal use, two are for municipal and industrial uses, three are for industrial uses, one is for industrial and mining uses, two are for mining purposes, one is for domestic/livestock use, three are used for irrigation, and one is used for recreation. Luminant or an affiliate holds eight of the water rights. Luminant shall replace ground and surface water supplies when affected by mining operations as required by the Act and Regulations. The approved permit sets out alternative sources of water as required by §12.130. Alternative sources include drilling wells several hundred feet deep into the deep Wilcox aquifer system in the underburden or local public water supplies. Lake Monticello and Lake Bob Sandlin may also provide water supplies. Luminant will meet §134.110 of the Act and §12.352 of the Regulations for replacement of water supplies when diminution or interruption is proximately caused by surface mining operations as required.

24. All required climatological information has been presented in the application and approved permit required by §12.131 of the Regulations. Based upon National Weather Service (NWS) data from Mount Pleasant, Texas, mean rainfall annually from 1931-2002 is 46.47 inches. The gross annual evaporation rate based on data from the USGS station for the period 1954-2000 from the Texas Water Development Board is 55.1 inches. The mean monthly low and high temperatures are 50.7 degrees Fahrenheit and 76.1 degrees Fahrenheit for the period of record 1931-2002. The prevailing wind is southerly. High winds are associated with northwest fronts and with thunderstorms. Wind data is from the Dallas/Fort Worth NWS cooperative station for the period 1961-1980. The report was signed and sealed by a professional geoscientist.

25. Revised premine vegetation information for the proposed revised permit boundary has been included in the application and SD1 and SD2, Section 132. Staff certified that the information is sufficient to describe the proposed permit area. The requirements of §12.132 of the Regulations have been met. Luminant summarizes previous baseline vegetation information contained in the previously approved permits (excluding the Thermo Mine) and to add baseline information for the 402-acre area proposed for addition to the permit area. The report consists of an introduction (Section 1 of the report, a description of vegetation communities (Sections 2 and 3), methods used for mapping, sampling and analysis (Section 4), vegetation characteristics and extent (Section 5), important plant species that may occur within the proposed permit area (Section 6), and information regarding sensitive and important habitat (Section 7). Luminant has identified the area and extent of the following premine vegetative communities for the proposed permit area and has described each community and its plant composition, with the percent of the proposed permit area including the expansion area (Table 132-1, SD1, and pp. 132-18 through 132-27, as supplemented in SD1 and SD2): grassland, 63.2%, consisting of grasslands of variable species composition and management; upland hardwood forest, 15.4%, made up of approximately 75% hardwoods and 25% pines with shrubs grass, and vines; bottomland/riparian forest, 6.7%, located on wide floodplains with riparian forests adjacent to smaller streams and having three-quarters of lowland hardwood species; pine forest, 4.4%, with 75% loblolly and shortleaf pines and approximately one-quarter of the scattered hardwoods; regenerative/cutover, 3.3%, made up of areas affected by logging activities or with abandoned pastureland or cropland areas; disturbed land, 2.4%, unvegetated areas due to man-made activity; aquatic habitat, 1.6%, with vegetation on the shallow edges of the water or including hydric habitat or wetlands; 1.7% mixed pine/hardwood forest, having less than 75% of hardwoods and more than 25% pines or less than 75% pine and more than 25% hardwoods; 0.7%, cropland, consisting of watermelon fields or pecan orchards, 0.6%, hydric habitat, including wetter portions of bottomland forests, wet meadows, and marshes. Plates 132-1-A, 132-1-C, and 132-1-D depict the vegetational areas within the proposed permit area. Sampling sites are described, and Plate 132-2-A, 132-2-B, and 132-2-C are included depicting the location of sampling sites and accompanying elevations. Plate 132-3 (S1) depicts updated vegetation/habitat boundaries within the M Area proposed for mining in 2015. Commercially important species include hay crops and commercial timber. No threatened or endangered species of plants are located within the proposed permit boundaries. Sensitive and important habitats include wetlands and other hydric and aquatic habitat. Suitable habitat for two rare plant species, the rough-

stem aster and the panicked indigobush, may exist within the proposed permit area but these plants have not been documented within the proposed permit area. There is no critical habitat located within the proposed permit area. Appendices A, B, and C, as supplemented in SD1 and SD2, contain the following, respectively: Representative Listing of Vascular Plant Species Within the Permit 34E Renewal Area, Results of Quantitative Vegetation Sampling in the Permit 34E Renewal Area, and Rare Plants Information (TPWD Annotated County Lists of Rare Species).

26. Adequate fish and wildlife resource information is included in the application, as supplemented, with the current status of state and federal threatened and endangered species and with information to provide an accounting of premine wetlands and waters of the U.S. pursuant to §404 of the Clean Water Act. The information provided includes appropriate scope and level of detail to enable the design of a protection and enhancement plan for fish and wildlife required by §12.144 of the Regulations, including site-specific resource information to address listed or proposed endangered or threatened species or their critical habitats or other habitats of unusually high value for fish and wildlife in accordance with the Endangered Species Act of 1973, as amended, set out in 16 U.S.C. 1531 *et seq.* The application has sufficient information for state-listed threatened and endangered species. The information meets the requirements of §12.133 of the Regulations.
- (a). The application includes summary descriptions of habitat (consistent with those included in the baseline report in Section .132) in Section .133 of the application, as supplemented. Wildlife species commonly occurring within these types of habitat areas are listed for each type of habitat.
- (b). The report includes summaries setting out information regarding specific results of fish sampling (Appendix 133-A), results of fish sampling from eight stations in the Monticello H Area from May 6-7, 1991 in Table 133-A-1, from October 7-9, 1991 in Table 133-A-2, from four stations in the Monticello G-East Area from May 8-9, 1991 in Table 133-A-3, October 7-9, 1991 in Table 133-A-4, from seven stations in the Monticello I Area from May 8-9, 1991 in Table 133-A-5 and from October 7 and 9, 1991 in Table 133-A-6, a fish sample summary from the Monticello B-2 Area in Table 133-A-7, with details in Table 133-A-8 from October 27-28, 1987 and May 17-18, 1988), field surveys of amphibians and reptiles based upon those

of potential occurrence and whether they were observed in the H and G-East Areas in Spring and/or Fall 1991, in the Monticello I Area in Spring and/or Fall 1991 (Appendix 133-B), and in the B-2 Study Area in 1989 (Appendix 133-B), birds (Appendix 133-C), mammals in the H and G-East Area and in the Monticello I Area (separate list), Spring and/or Fall 1991, and small mammal trapping in the Monticello I Area (Appendix 133-D).

- (c). Appendix 133-E contains a copy of the 2011 listing of the TPWD's lists of rare species. Table 133-13 is a listing of threatened and endangered species with the potential to occur in Franklin and Titus Counties based upon U.S. Fish and Wildlife Service information for 2012 and Texas Parks and Wildlife information for 2011. The listing shows that three Texas-listed threatened species of mollusks/mussels (Louisiana Pigtoe, Texas Pigtoe, and Southern Hickorynut) have the potential to occur in Titus and/or Franklin Counties. Based on this list, Franklin County has potential for one rare plant species, the rough-stem aster.
- (d). Appendix 133-F included in SD2 contains specific information regarding surveys for protected mussels. Luminant added to its discussion in the application that was based on a survey in the Leesburg Mine Area with additional text in SD2 in Section 2.5.2 through 2.5.4 of the text of the fish and wildlife baseline report based on surveys in the M and K Areas of the proposed permit area conducted on July 31, 2013. In the survey, two streams were sampled, Hayes Creek for the K Area located in the Big Cypress Creek basin (one location) and East Piney Creek (two locations) draining the M Area in the Red River basin. Appendix 133-F contains photographs of the locations and of the two mollusk/mussel species located. Although two species of mussels were observed, none of the three threatened species of mussels were observed. Because the habitat within the proposed permit area is suboptimal, and because few numbers of common mussel species were encountered in these areas, it is unlikely that any threatened species of mussels occur within the proposed permit area. In addition to the three potential mussel species discussed herein, threatened and endangered species with the potential to occur in Titus or Franklin Counties are included in Table 133-13 of SD1. The current status of each is listed below (State: S; Federal: F):

Docket No. C12-0026-SC-34-C
Application for Renewal/Revision/Expansion
Monticello – Winfield Mine, Permit No. 34F

Fish Species and Aquatic Species (common name)	Protected Status*	Likelihood of Occurrence
Creek Chubsucker	Threatened (S)	Possible due to the presence of habitat, in East Piney Creek but unlikely as range is east and southeast of permit area; not observed
Paddlefish	Threatened (S)	Prefers large streams; presence in permit area unlikely
Blackside Darter	Threatened (S)	No documented presence in baseline studies; suitable habitat exists
Louisiana Pigtoe Mollusk (mussel)	Threatened (S)	Unlikely, suboptimal habitat
Texas Pigtoe Mollusk (mussel)	Threatened (S)	Unlikely, suboptimal habitat
Southern Hickorynut Mollusk (mussel)	Threatened (S)	Unlikely, suboptimal habitat
Reptiles/Amphibians (common name)		
Alligator Snapping Turtle	Threatened (S)	Potential habitat exists within the permit area and has been recorded in Titus County; possible within the permit area, but unlikely. Likely occurs in Sabine River
Texas Horned Lizard	Threatened (S)	Not recorded; a remote possibility
Timber Rattlesnake	Threatened (S)	None observed; potential habitat exists within the permit area
Northern Scarlet Snake	Threatened (S)	None observed; potential habitat exists within the permit area
Birds (common name)		
Interior Least Tern	Endangered (F and S)	Possible rare migrant
Piping Plover	Threatened (F and S)	Possible rare migrant
Bald Eagle (protected under Federal Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act)	Delisted (F) and Threatened (S)	Has occurred, but no nesting activity; expected migrant along shores of nearby lakes
American Peregrine Falcon	Delisted (F); Threatened (S)	Unlikely; a possible rare migrant
Peregrine Falcon	Delisted (F); Threatened (S)	Unlikely; a possible rare migrant
Wood Stork	Threatened (S)	Could occur as a migrant because appropriate habitat exists; no recorded occurrences in Titus or Franklin Counties
Bachman's Sparrow	Threatened (S)	Unlikely due to limited habitat
Arctic Peregrine Falcon	Delisted (F)	Unlikely; a possible rare migrant
Sprague's Pipit	Candidate for Listing (F)	Possible migrant in summer and fall
Mammals (common name)		
Red Wolf	Endangered (F and S)	Extirpated from East Texas
American Black Bear	Threatened due to similarity of appearance to another protected species (Louisiana Black Bear) (F), and Endangered (S)	Unlikely; historic sightings but no recent sightings; confined to small numbers in Louisiana and Mississippi

- (e). Although some of the species in the chart in subparagraph (b) of this Finding of Fact have the potential to occur within the proposed permit area, all are either unlikely to occur, or habitat appropriate for the species is absent, or limited, or species have not been observed, with the exception of the Bald Eagle and migratory birds and the Timber Rattlesnake, Northern Scarlet Snake, and Alligator Snapping Turtle. For the latter three species, the presence of these species is possible within the proposed permit area because appropriate potential habitat exists. Staff recommends a new permit provision, Permit Provision No. 8 in Appendix I, to require that Luminant provide a plan within 90 days of permit issuance to survey unmined aquatic and terrestrial habitat in the M and L areas specific to these three species. Luminant is in agreement with the recommended permit provision. The Commission adopts Permit Provision No. 8. The application, as supplemented in SD 1, contains updated information regarding sightings of the Bald Eagle from 1999 through 2012. No nest or nesting activity has been documented. Luminant has also provided an updated jurisdictional map of waters and wetlands of the U.S. (Plates 133-1-A through 133-1-C, application). Sufficient information has been provided to show that the proposed activities, with the protection and enhancement plan included in the application (Finding of Fact No. 35) will not affect the continued existence of any threatened or endangered species.
 - (f). Due to a discrepancy between the representation of wetlands on Plates 133-1-A through 133-1-C and the overlapping areas in Attachment C, Document C-1, Figures 2-1 and 2-2 of the proposed USACE project (February 1, 2013), Permit Provision No. 9 is adopted to ensure that the requested Railroad Commission permit will be consistent with the USACE permit.
27. The proposed permit, as supplemented, provides the information required by §12.134 of the Regulations for soil resources information, including prime farmland soils. The application includes a narrative report, "Soil Resources Information Monticello Winfield Mine Permit No. 34E Renewal/Revision/Expansion Application," based upon the Natural Resources Conservation Service (NRCS) published descriptions of soil series (1990). Luminant included a description of the soils series in Appendix 134-A, laboratory source data by genetic horizon in Appendix 134-B, laboratory source data by depth interval (0-12 inches, and 12-48 inches) in Appendix 134-C, and NRCS Soil Interpretation Tables from Camp, Franklin, Morris, and Titus Counties containing values for chemical

and physical soil properties, soil features, water features, soil limitations for various uses, and soil limitations for the growth of vegetation. Soil interpretation tables are included in Appendix 134-D for Texas and Louisiana and beginning on page 134-200 for the proposed permit area. Luminant included Plates 134-1 through 134-3 (SD1) (Distribution of Soils, by soil series). There are 20 soil units, made up of 16 soil series. All units were sampled for characterization. Table 134-1 in the report reflects proportionate extent of soils within the proposed permit area, and Table 134-2 reflects the proportionate extent of prime farmland soils within the proposed permit area. Prime farmland soils comprise 32.7% of soil within the proposed permit area, including one unit (Freestone) that makes up 28.5% of the 32.7%. Four other units make up the remainder of prime farmland soils; two of these are prime farmland soils only if artificially drained, and they are not drained within the proposed permit area. Table 134-4 contains irrigated and non-irrigated yields assuming a high level of management for bahiagrass, common bermudagrass, improved bermudagrass, corn, grain sorghum, peanuts, oats, soybeans, and wheat by mapping unit for Camp, Franklin, Morris, and Titus Counties (NRCS, 2004). Present productivities for Titus County soils (among other counties) are contained in Table 134-5 for (USDA, 2007) and for field crops (2002), and Table 134-6, forestland productivity for Camp, Franklin, Morris, and Titus Counties (USDA, 2004). Table 134-4 contains NRCS soil-capability classifications; weighted mean values for each geochemical parameter analyzed after depth-weighting the 0-12 "and 12-48" depth intervals are set out in Table 134-7. Luminant also includes Table 134-8 containing acreage and areal extent of each soil and, in Table 134-9, minimum and maximum values for the geochemical parameters. Tables 134-10 through 134-15 contain areally weighted frequency distributions for PH, acid-base accounting, clay, sand, cadmium, and selenium. Adequate information is included in the application, as supplemented, for soil identification and description, present productivity of soils, and native soil baseline and soil parameter frequency distribution tables for the proposed permit area.

28. Luminant presented information in the application for premine land use for the proposed permit area, as supplemented in SD1 and SD2, that meets the requirements of §12.135. Luminant included Figure 135-1, General Location Map, Plates 135-1 through 135-3 dated February 29, 2012 to depict the proposed permit area, and Plate 135-2 (SD1), an updated land use map from a field investigation for characterizing the northeasternmost portion of M Area. The report summarizes all reports previously submitted for premine land use in Monticello permits 30A, 30B, 30C, 34V, 34D, and 5C (excluding

Thermo Mine) and adds portions related to the 402 acres proposed for expansion. The information included in the application contains descriptions of land use, historical land use, and land capability and productivity. Eight land uses were previously delineated in reports prepared for Luminant and filed with the Commission. No new land uses are contained within the expansion area. As expanded, the proposed permit area has the following land uses: Pastureland, 46.6%; undeveloped land, 28.6%; grazingland, 14.9%; industrial/commercial, 3.7%; residential, 3.7%; developed water resources, 1.7%; cropland, 0.7%; and forestry, 0.1%. The expansion area has five land uses and makes up the following percentages of the total number of acres within the proposed expanded permit area: Pastureland, 0.1%; undeveloped land, 0.1%; industrial/commercial, <.01%; residential, <.01%; and developed water resources, <.01%. These five land uses make up the following percentages of the 402-acre expansion: pastureland, 41.1%; undeveloped land, 47.6%; industrial/commercial, <0.1%; residential, 10.6%; and developed water resources, <0.6%.

- (a). Pastureland is used for grazing and/or is occasionally cut for hay. Primary species are bermudagrass, bahiagrass, and dallisgrass. Based on 80 representative pastureland sites, approximately 70% of pastureland within the representative sites was in good to excellent condition (SD1). Some pastureland is in lesser condition due to poor management, overgrazing, and encroachment of invasive species.
- (b). Undeveloped land is made up of unmanaged pastureland or dense to open woodlands.
- (c). Grazingland in the proposed permit area may contain both managed and unmanaged lands with predominantly native species. Two representative sites that previously were within the proposed permit area were discussed. One site, in Area I, sampled in 1991, contained broomsedge bluestem, fall witchgrass, and little bluestem as well as herb and vine species. It was grazed by horses and regularly mowed and hayed, but was considered in poor condition. The second site, in Area B-2, was sampled in 1993 and was dominated by splitbeard bluestem, with seven other grass species and 15 forb and vine species. It was also being grazed by horses and was considered in poor condition.

- (d). The industrial/commercial land use consisted of roadways, commercial businesses or services, and small manufacturing. Residential land use is minimal, as is cropland, which is made up of pecan orchards and fields of watermelon. No cropland is located within the expansion area. Forestry is quite minimal, comprising only 20.4 acres, made up of loblolly and shortleaf pines. There is no forestry within the expansion area. The developed water resources within the proposed permit area are made up of small manmade ponds used by livestock.
- (e). An estimate is included in the report that the Monticello Winfield Mine has produced a cumulative total lignite production that makes up 18% of the state's total coal production.
- (f). The report includes additional information regarding land capability and refers to Section .134 of the application, including Tables 134-4 through 134-6 for productivity and the information contained in Appendix 134-D for soil capabilities (Finding of Fact No. 27). Table 135-2 contains a summary of cropland yields for Titus and Franklin Counties showing low and high yields for corn, grain sorghum, soybeans, wheat, peanuts, and for bahiagrass, common bermudagrass, and improved bermudagrass, the most common species managed for forage production on pastureland soils; the low and high yields for the three grasses are 2-8 animal unit months (AUM) (amount of forage or feed required to feed one animal unit for 30 days), 2-7 AUM, and 3-10 AUM, respectively. The report, as supplemented in SD1, also describes element of wildlife habitat, setting out characteristics of plants important for wildlife habitat and examples of useful species, including grasses and legumes, freshwater wetland plants, grain and seed crops, riparian herbaceous plant, riparian shrubs, vines, and trees, upland coniferous trees, upland deciduous trees, upland wild herbaceous plants, upland shrubs and vines, habitat for open land wildlife species, habitat for woodland wildlife species, habitat for wetland wildlife species, and habitat for rangeland wildlife.
- (g). Luminant addresses local and regional land use management and guidance plans in Section .135, as supplemented in SD1 and SD2, including Titus and Franklin Counties, the Ark-Tex Council of Governments (ATCOG), the TPWD, and the Texas Water Development Board (TWDB). Luminant indicates that the proposed permit operations will not conflict with any other planned land use in the area including the TPWD- developed Texas Outdoor Recreation

Plan (TORP) first incorporated into the Land and Water Resources Conservation and Recreation Plan (LWRCRP) last updated in 2010 and then made a separate plan in 2012. The two plans address conservation and recreation. Mining operations also will not conflict with the TPWD's Texas Conservation Action Plan (TCAP) (2012) that updates and replaces the Texas Wildlife Action Plan (TWAP), prepared in 2005 and updated in 2010. The 2012 TCAP is a series of 11 regionally specific ecoregion handbooks and a statewide/multi-region handbook to be used as a conservation guide for all natural resources. Titus and Franklin Counties are stated to be located in TPWD Wildlife District 5, the Post Oak Wildlife District, and in the TCAP Cross Timbers Ecoregion. Titus and Franklin Counties are located in the TWDB's Northeast Regional Water Plan, Region D, with 17 other counties. The TWDB projects that water use patterns in this region will change substantially through 2060 with population projections increasing 57% and total water demand increasing by over 50%. Specifically, mining use is expected to increase by approximately 32%. The plan took these mining projections into consideration in developing the plan. No state, regional, or local plans for land management appear to conflict with the proposed operations.

29. All general requirements for maps, cross-sections, and plans have been met in the application, as supplemented in SD1, in accordance with §§12.136–12.137. Section .136 contains maps depicting utilities on Plates 136-1-1 through 136-1-3. Section .137 includes Premine Contour Maps and Premine Slopes Maps, Plates 137-1 through 137-3 and 137-2-1 through 137-2-3, respectively. In addition, all requirements for operations maps and plans have been met in the application, as supplemented, in accordance with §12.142 of the Regulations. They are referenced in Section .142 of the application, SD1.
30. A 41.3-acre area identified as prime farmland originally contained within the permit area was mitigated in accordance with regulatory requirements for prime farmland, and the area has now been released from bond (Commission Order dated May 16, 2006, Docket No. C5-0004-SC-34-F). Adequate identification and documentation regarding this acreage has been presented in the approved permit. Prime farmland soils as defined in §12.3(125) of the Regulations exist within the expansion area. Luminant has included in Section .138 of the application information concerning the prime farmland soils contained within seven tracts located in the expansion area: Tracts 1251, 1140, 1062,

1250, 1337, 1126, and 1126B (total, 402.1 acres). Luminant has requested a negative determination of prime farmland for these tracts. A negative determination may be determined by the Commission if Luminant demonstrates that the tracts have not been used for growing crops for five of the last ten years prior to its acquisition or leasing by Luminant or a related entity. The application contains an affidavit signed before a notary by a resident of Titus County in which the land lies stating that he was familiar with the lands in question and that the lands had not been used as cropland for five of the last ten years prior to its acquisition by Luminant or a related entity and that the primary use had been as pastureland or timberland. Aerial imagery reflects no evidence of cropping in these tracts. Luminant has identified prime farmland soils in accordance with Commission requirements and has submitted sufficient information to show that the seven tracts may be determined as not prime farmland. A negative determination is made by the Commission for these seven tracts. The requirements of §12.138 have been met.

31. The application contained mine operations maps in Plates 139-1-1 through 139-1-14, as supplemented, and mine block and pit progression on the Life of Mine maps, Plates 125(a)-1 through 125(a)-3. The following operations maps were revised: Plates 139-1-2 (SD2), 139-1-4, 139-1-5, 139-1-11, 139-14 (SD1), 139-2-1 through 139-2-3 (SD2), 139-3-1 through 139-3-3 (SD2), 139-4-1 through 139-4-3 (SD1), 139-B-1 (SD2), 139-5 (SD2), and 139-11 (SD2). Mining in all areas is completed with the exception of the SSC primary area, Auxiliary Areas A-1, A-2, F-2, J-4, L-4, L-5, L-Area Auxiliary No. 1, M Area Auxiliary No. 1 and No. 2, and SSC Area Auxiliary Nos. 2, 3, and 4. The narrative addresses the following as required: dams, embankments, and other impoundments, overburden and topsoil handling and storage areas and structures, coal removal handling, storage areas and structures (depicted on Plates 139-1-1 through 139-1-14 as revised in SD1, SD2, and SD3), coal removal, handling, storage, cleaning, and transportation areas and structures, spoil, coal processing waste, and noncoal waste removal, handling, storage, transportation, and disposal areas and structures, mine facilities, and water and air pollution control facilities.
 - (a). Prior to mining, the land will be cleared and grubbed. Maximum clearing distances are set out in a table on page 139-7, Section .139 of SD1, and the approximate range is from 1,400 to 3,000 feet. Clearing techniques include harvesting timber, clearing with dozers, stacking and burning, and disposal in the pit. Activities will be minimized as much as possible. Luminant

has shown that the distances requested are needed to provide adequate space to conduct premine activities such as, but not limited to bench preparation and access clearing for surveying and to ensure safe and efficient operation of mining equipment.

- (b). Mining for the proposed permit term will be accomplished by the use of dragline and mobile equipment. Luminant will maximize recovery of lignite by recovering all economically mineable seams (normally greater than ½ foot in thickness and less than 198 feet deep [page 139-8 (SD1)]). The planned pit lengths will vary from approximately 325 feet to 3,390 feet. Maximum pit widths are 150 feet. Pit widths for auxiliary areas will be 100-200 feet typically. Mining methods to be used for draglines and for auxiliary/mobile equipment used in portions of mine blocks where the overburden depths are generally 50 feet or less are described as well as pit alignment and transition. Auger mining may be used to maximize the recovery of lignite not economically recoverable with conventional mining techniques, subject to timing of the open pit; however, no such areas have yet been identified. A general description of auger mining, methods and performance standards is included (SD1). Pit ends may vary due to angling pits if necessary in special mining situations to fully recover the lignite. Offset pits may also occur when one end of a pit advances at a faster rate than the other end. If angled pits or offset pits will result in a change to the approved postmine slopes, Luminant will obtain Commission approval prior to implementation. Mining disturbance will not be extended beyond the mining limits line shown on operations maps unless approved by the Commission. No excess spoil is anticipated. Lignite will be hauled primarily on haulroads from active mine areas to the Monticello-Winfield South and North Mine Loading Station or approved stockpile areas. No dragline relocations are proposed. Luminant will continue to use bottom ash as a surface coating on mine road surfaces for weather resistance and to improve traction (p.139-21, SD1). Existing Permit Provision No. 5 (Appendix I to this Order specifies that Luminant shall notify the Commission annually no later than January 31 of any bottom ash used the previous year on mine road surfaces together with a map that identifies the location of areas of bottom ash use; or a notification letter, if there are no new uses of bottom ash or mine roads. Luminant has agreed with the retention of this permit provision needed in order to track use of this material. Existing Permit Provision No. 5 is retained.

- (c). Overburden will be removed and selectively handled to replace native topsoil and subsoil to ensure that there is at least a 48-inch depth of suitable plant growth material on the surface. Suitable material will include all overburden excluding a five-foot buffer zone above the uppermost mineable lignite seam and a five foot buffer zone above and below the rider seams. Luminant included an analysis showing that there is sufficient suitable material that may be handled in all mining areas; a minimum depth of 25.3 feet is required. The dragline will be the means for selective handling of suitable materials in all areas, with the exception of the A-1 and A-2 Auxiliary Areas, J-4 Auxiliary Area, and M-1 and M-2 Auxiliary Areas for the permit term (SD3). Auxiliary/mobile equipment will be used to supplement the dragline for selective handling of overburden. Luminant describes and depicts several typical handling methods in SD1 and SD2, Section .139.
- (d). Luminant requested additional time and distance for backfilling and grading in most mining areas for the requested permit term. The areas are similar geologically to those areas mined in previous permits. Luminant has included Tables 139(T)-3 and 139(T)-4 related to geology, geometry, and worst-case mining method to update information for the requested permit term. Time is measured from the date of last lignite removal per excavated numbered pit. A permit provision in the existing permit addressed the timing of backfilling and grading in the F-2 Auxiliary Area; the provision was numbered as Permit Provision No. 6. Staff recommends that this permit provision be revised to address necessary backfilling and grading times for each mine area based on proposed operations. Permit Provision No. 6 is modified to specify the following backfilling and grading times and is hereby adopted:

F-2 Auxiliary Area, Dragline, 180 days;
SSC Area, Dragline, 8 months;
A Auxiliary Area, 180 days;
J Auxiliary Area, 180 days;
L Auxiliary Areas, 180 days; and
M Auxiliary Areas 180 days.

Staff notes that Table 139(T)-4 must be revised to (1) show the above time periods on the "Proposed Permit 34E Time" column of Table 139(T)-4 and (2) to provide a meaning for the

single asterisk shown after the 1200 ft. proposed Permit 34E distance for the SSC Area, Dragline or delete the asterisk. Luminant must provide this clarification in the next revision filed for the permit.

- (e). Luminant includes the two approved temporary cessation orders for the proposed permit term in Table 139(T)-2 (SD2) but proposes no new ones. Luminant will notify the Commission in accordance with §12.397 any additional temporary cessations.
- (f). Luminant indicates that there will be 10 final pits during the proposed permit term. The application includes general design plans for final pit impoundments on Plates 139-2-1 through 139-2-3 and on Table 139(T)-8.
- (g). Table 139(T)-2 (SD2) also lists six stream channel buffer zone variances requested through the end of the proposed permit term: Blundell, East Piney, Smith, Tankersley, Piney, and Drago Creek. Luminant requests variances from the prohibitions against conducting activities within 100 feet of perennial or intermittent streams set out in §12.355 of the Regulations. The Commission may approve disturbances within 100 feet of perennial or intermittent streams: (1) if proposed activities will not cause or contribute to the violation of applicable State or federal water quality standards and will not adversely affect the water quantity and quality or other environmental resources of the stream [§12.355(a)(1)], and (2) in cases of temporary or permanent stream-channel diversions, they will comply with §12.341 of the Regulations related to the requirements for approval of diversions [§12.355(a)(2)]. The stream buffer zones are depicted on Plates 139-4-1 through 139-4-3 (SD1). Activities allowed by the variances would include but not be limited to pre-stripping, topsoiling, advance benching, walkways and crossings, general reclamation, and reclamation maintenance activities. In compliance with the requirements of §12.355, Luminant has not presented information sufficient to set out the site-specific activities and how each will meet the requirements of §12.355(a)(1) and (2). All proposed temporary and permanent stream channel diversions must comply with §12.341 in that the design capacities and construction will be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream of the diversions; that is, the combination of channel, bank, and floodplain

configuration will be adequate to safely pass at a minimum the peak runoff from a 10-yr/6-hr design storm event for temporary diversions, or, for permanent diversions, the peak runoff, at a minimum, from a 100-yr/6-hr design storm event. The extent of disturbance must also be marked to show the upstream and downstream extent of disturbance and to ensure compliance with water quality standards by using erosion control measures such as hay check dams, silt fence, revegetation, and erosion control matting. In areas where the stream channel is impacted by construction activities, a storm-water pollution prevention plan will be followed. Detailed design projects include such protection plans. No unapproved areas of perennial or intermittent streams shall be disturbed without prior approval of a stream buffer zone variance pursuant to the requirements of Section 12.355 of the Regulations. No proposed new variances are approved.

- (g). The application, as supplemented, includes premine and postmine slope information and evaluation. Premine slopes are depicted on Plates 137-2-1 through 137-2-3 and are summarized in Table 137-1. Premine contours are depicted on Plates 137-1-1 through 137-1-3. Proposed postmine slopes are depicted on Plates 139-3-1 through 3, as supplemented (SD1). Proposed postmine contours are depicted on Plates 139-2-1 through 3 (SD1). Table 139(T)-1 contains a comparison of premine and postmine slope categories for the premine study area (26,734 acres) to the postmine study area (approved permit area plus the requested addition of 402.1 acres, 26,734 acres). The table reflects that only minor changes will occur. Based on the number of acres in each slope category, premine slopes in the 0-5% slope category will decrease from 81.9% of the study area to 75.2% of the study area postmine; premine slopes in the 5-10% slope category will increase from 14.6% to 17.0% in the study area postmine; premine slopes in the 10-15% slope category will increase from 2.8% to 5.6% in the study area postmine; and premine slopes over 15% will increase from 0.8% to 2.2% in the study area postmine.
- (h). Fly ash (class 2 waste) and bottom ash (class 3 waste) disposal are proposed to continue with a minimum cover of 15 feet above and below the ash in conjunction with the G Area operations and reclamation. A revised ash disposal management plan is included in Appendix 139B of the application as supplemented in SD1 and SD2. Luminant had proposed a separate

revision application (Docket No. C9-0025-SC-34-B, Revision No. 14) for the proposed ash disposal plan that was also included in the application, as supplemented. With approval of this proposed renewal/revision/expansion, the separate docket will be moot and may be dismissed. Luminant intends a postmine land use plan of industrial/commercial for the area. The Secondary Ash Disposal Area (depicted on Plate 139-1-5) is approved for a minimum of 20 feet of cover material [pages 139(b)-B-1 and 4 of SD2] and no change is proposed. Luminant will continue to use temporary rail spurs for transport from the Monticello Power Plant. Details of the ash disposal plan are located in Appendix B, Section .139 of the application, as supplemented in SD1 and SD2.

- (1). The ash disposal plan includes the Primary Ash Disposal Area and the Secondary Ash Disposal Area. The initial plan allowed disposal of fly ash only with a minimum thickness of 30 feet of overburden beneath the ash that would be a maximum thickness of 40 feet and a 40-foot thickness of overburden above the ash. This area used a deep disposal method using the dragline and cross-pit spreader and other auxiliary equipment. The Secondary Ash Disposal Area was limited to a maximum thickness of 20 feet of ash with a minimum of 20 feet of overburden above and below the ash. This method made use of a shallow method of disposal using scrapers, dozers, and other auxiliary equipment. Bottom ash was approved to be placed in the ash disposal area in 1992. This area included a 460-foot buffer zone between the Ash Registration Boundary and the ash disposal boundary. The secondary area has not been used for ash disposal since 1993. It is proposed for use as an emergency disposal area.
- (2). In 1996, the Commission approved an expansion of the original area to the east. A maximum ash thickness of 30 feet of overburden below and above the ash was approved and was later revised to 15 feet.
- (3). Luminant now proposes that fly ash and bottom ash disposal advance into another expansion area generally on the northern and eastern sides of the Primary Ash Disposal Area (Section 139, Figure 2-1 and Plate 1-1). This area will have a 520-

foot buffer zone between the ash registration boundary and the limit of ash disposal. The ash from lignite and Western coal for disposal is moved from the Monticello Steam Electric Station by rail to the G Area. Ash will be placed at five locations within the Primary Ash Disposal Area; when this is completed, ash will be placed in the expansion area. The ash will be disposed of with a thickness of 15 feet of overburden under the ash and a thickness of 15 feet of overburden over the ash. The 15-foot cover will protect the ash from erosion. The ash is disposed of below the natural groundwater level. The application includes a long-term ash disposal zone schedule (p. 139-B-3, Appendix 139B, SD1). Net additional acreage will be 534.3 acres for a total TCEQ Registration Area of 2,390.8 acres.

- (4). The plan includes storm water runoff control. Runoff that has been in contact with fly ash will be routed into collection sumps and pumped to the north operating pond at the power plant (TCEQ Permit No. 01528). It also includes a plan to reclaim the primary, secondary, and expansion area of ash disposal. Ash disposal will not be completed in the expansion area during the proposed permit term. It is estimated that completion of disposal will take place in 2038. No ash will be placed at an elevation of 350 mean sea level or greater to avoid impacting shallow domestic wells within 1000 feet of Pit 129. Staff recommends a new permit provision, Permit Provision No. 11 in Appendix I of this order to ensure reporting of top-of-ash elevations in G-area Pit 129 when requested to demonstrate protection of adjacent shallow domestic wells. The Commission approves this permit provision.
- (5). As revised in SD1 and SD2, Luminant describes reclamation of the disposal zones in Appendix 139B. Backfilling and regrading have been completed in Zones 1 and 3 and are projected to be completed in Zone 4 by April 30, 2014 and in Zone 2 by January 19, 2015. Completion of reclamation in Zone 4 includes construction of the GR-17 and GR-18 Ponds. The GR-17 Pond will replace the G-13 Pond, and the GR-18 Pond will replace the GR-14 Pond. Detailed plans are estimated to be submitted to the Commission for GR-17 by June 29, 2014 and for Pond GR-18 by March 20, 2015.

- (6). The application includes TCEQ's approval letter for the revisions to the G-Area as a landfill (letter dated July 1, 2008). Luminant has also included its consultant's revised hydrogeologic study for the expansion to the disposal area, "2008 Update to Hydrogeologic Study for the Ash Placement Operations at the Luminant Monticello-Winfield Mine Titus County, Texas." This report included a re-evaluation of previous studies conducted in 1990, 1996, 2003, and 2004 and included an evaluation of the proposed expansion of the disposal area to the north by approximately 3,000 feet and to the east by less than 1,000 feet. The stated purpose of the revised study, based on collected subsurface data, the hydrogeology of the expansion area, and a conservative simulation of the transport of ash leachate over 100 years into the native subsurface material was to evaluate (1) whether the proposed expansion area is hydrogeologically suitable for continued ash placement, and (2) the potential impacts to groundwater from placement of fly ash and bottom ash in the expansion area and final pits.
- (7). Based upon this study and Staff review, the ash disposal activities will not impair the groundwater of the adjacent areas. This conclusion is based upon the very low hydraulic conductivities of saturated sand units within and near the proposed expansion area and final end pits. The reclaimed overburden will most likely resaturate to steady state conditions in one to several decades. Leachate tests of fly ash samples indicate that the ash is capable of producing a leachate with increased (but still low) concentrations of several trace metals such as boron, chromium, molybdenum, and selenium. No less than 15 feet of low permeability spoil material will be placed above and below the ash. Computer simulations indicate that in the 100 years after resaturation, the bulk of the leachate plume will travel horizontally through the native overburden and reclaimed overburden sediments and underlying spoil material. Based on coring investigation and sampling analyses, the reclaimed overburden has chemically active constituents that react with the ash leachate, lowering its pH to near neutral, and absorbing or precipitating trace elements. Downward movement will be limited by the low vertical hydraulic conductivity.

Conservative assumptions were included in the model (Visual MODFLOW version 4.0) in the updated study including the use of 100% leachate from fly ash (Class II non-hazardous waste) although 20% is anticipated to be from bottom ash (Class III non-hazardous waste) that produces lesser concentrations of trace elements, the use of one overburden unit, the most transmissive overburden unit, muddy sands, although several lower permeability units also make up the overburden, and use of the highest concentrations among certain chemicals of concern capable of being produced from the leachate. The study indicates that the chemical composition of the ash leachate and groundwater in spoil areas will be similar after the leachate has migrated through a portion of the native overburden. During this period, impacts to groundwater from the ash leachate are not predicted to occur more than approximately 300 feet east of the final end pits; however, a 520-foot wide buffer zone will be established around the perimeter of the ash placement boundary. The registered ash disposal area will be deed-restricted so that no drinking water wells are installed. Monitoring wells have been installed and additional wells will be installed as ash placement progresses. The report includes tables, figures, geologic cross sections, and Appendices A-F to the report providing supporting information for the conclusions set out in the report.

- (8). Figure 7-1 of the report depicts the long-term groundwater monitoring (LTGM) plan for the ash disposal area, the expansion area, and surrounding areas. There are 7 existing wells and 11 proposed wells. Criteria for the placement and construction of wells are included in the application, as well as sampling technique and constituents sampled. Water levels in the monitoring wells will be sampled annually until water levels rise to the screened interval of the well, and then will be monitored quarterly for one year and annually thereafter. The following constituents will be analyzed: chloride, total dissolved solids (TDS), sodium, potassium, calcium, magnesium, arsenic, sulfate, bicarbonate, selenium, chromium, boron, and molybdenum. Temperature, pH, and conductivity will be measured in the field. Modifications to the monitoring program will be proposed if needed.

- (i). In the application, SD1, Luminant has undertaken to mark pipelines for effective field recognition by workers and equipment operators as follows: The location of pipelines shall be visibly marked at 200-foot intervals in active mining areas, as measured from the centerline of the pipeline nearest to mining-related construction activities in accordance with §12.382(2) of the Regulations when pipelines are located within 500 feet of surface mining activities such as pre-benching and/or overburden removal operations. Petroleum pipelines and natural gas pipelines within 200 feet of mining related disturbances will be marked using high-visibility markers every 25 feet for the entire length of the activity; the marking interval will extend 200 feet in both directions beyond the location of the limits of the mining related disturbances. Previously approved Permit Provision No. 9, requiring pipeline marking, is no longer needed in that Luminant has incorporated this undertaking in the text of the application as supplemented. The previously adopted permit provision is deleted.
- (j). Luminant includes a general description of how dams, embankments, and impoundments will be designed, constructed, and maintained to meet applicable requirements. This description addresses clearing, appropriate fill, minimum elevations, height of dams/embankments, appropriate side slopes, spillway requirements Mine Safety and Health Administration (MSHA) requirements, seepage control, erosion control, pond inspection, use of permanent impoundments, and reclamation of temporary impoundments. The application also includes in SD 1 and SD2 listings if all existing, proposed, and reclaimed primary sediment control structures, impoundments, and diversions. Plans are included in Sections .148 and .150 of the application, as supplemented, for proposed sediment ponds and other impoundments and diversions, as supplemented (Findings of Fact No. 41 and No. 42).
- (k). Plate 146(d)-1 of the application depicts areas where dewatering is proposed and the maximum extent of five feet of simulated drawdown. According to the information provided on page 146(d)-30, pumped groundwater will be routed through a sedimentation pond if sampling (one-time sample at the discharge point) reveals that the water does not meet TPDES effluent criteria. Discharges that meet TPDES effluent requirements may be discharged into natural drainages and monitored at the end of the discharge pipe as a TPDES discharge point. This undertaking had been Permit Provision No. 7 in the approved permit.

The information provided addresses the requirements of existing Permit Provision No. 7 and Staff recommends that this permit provision not be retained.

- (l). Temporary overburden storage areas are depicted on Plates 139-1-1 through 139-1-14, as supplemented. Any excess construction materials are utilized in reclamation of the project and are noted on detailed design plans submitted for Commission approval.
- (m). Luminant will dispose of coal waste in the active pit from the use of coal screening facilities. Coal screening facilities will be used to enhance coal recovering by separating parting material and lignite. The facilities may be located at the loading stations, at any temporary lignite stockpile, or in active pit areas. No coal waste will be placed within the top four feet of the reclaimed surface, it will be placed in the pit floor or ramp floor. Hazardous waste will be handled in accordance with the Resource Conservation and Recovery Act, EPA, TCEQ, and the Department of Transportation. No coal cleaning facilities are proposed. Bottom ash, a non-hazardous waste from coal combustion, will be occasionally used as a road surfacing material to improve traction and to provide a safer surface. Dust control on haulroads will be in accordance with §12.143 (Finding of Fact No. 34).
- (n). Staff recommends the retention of Permit Provision No. 5, requiring that Luminant notify the Commission annually of the use of bottom ash on other road surfaces along with a map identifying the locations of the areas of use, or a notification letter if there are no new uses of bottom ash (TA1). This permit provision is needed to track the use of bottom ash and is approved as Permit Provision No. 5 contained in Appendix 1.
- (o). The A-West Auxiliary Area was located over an abandoned underground mine area. Mining in this area, completed in 1997, was conducted in compliance with the ground control plan approved by the Mine Safety and Health Administration. Backfilling and grading have been completed. No other underground mine areas are known to exist within the proposed permit area (p. 149-2, application).

- (p). The application as supplemented (SD1) includes an exploration plan for exploration within the proposed permit area. Following notification to the Commission, Luminant may conduct exploration within the permit area. Luminant will follow all requirements of the Regulations, including mapping of boreholes subsequently cased as wells, with maps provided to the Commission on an annual basis by March 1 of the year after wells are installed. In addition, Luminant will meet requirements that activities will not disturb habitats of unique or unusually high value, and critical habitats, and Luminant will minimize environmental damage to the extent practicable. Requirements for roads and other transportation facilities will be met. No ephemeral, intermittent, or perennial streams will be diverted. Luminant will meet requirements for small temporary diversions to prevent erosion or water pollution. Sediment control in accordance with §§12.343 and 12.344 will be accomplished. Luminant will handle any toxic and/or acid-forming substances in accordance with §§12.346 and 12.386 of the Regulations, and all exploration hole, borehole, well, or other opening created during exploration will meet requirements set out in §§12.331 through 12.333. The plan includes addresses methods used in excavating a test pit as well as reclamation practices to be used when projects substantially disturb the land surface.
32. Luminant provided information on the following structures that constitute “existing structures” as defined by §12.3(63), structures that are used in connection with or to facilitate lignite mining operations and that were constructed prior to August 3, 1977, the date of enactment of the federal Surface Mining Control and Reclamation Act of 1977, and will continue to be used during the proposed permit term: A-1 Pond, A-2 Pond, A-3 Treatment Pond, A-15 Pond, A-19 Pond, and the Winfield North Facility roads, including culverts. The A-14 Pond has been reclaimed. The information required by §12.140 has been provided.
33. No blasting operations are proposed within the proposed permit area (§12.141).
34. The applicant will meet requirements for air pollution control. No air-quality monitoring plan must be filed in that the permit area is not located west of the 100th meridian west longitude; however, Luminant currently has in place an air-monitoring plan for the G and M Areas to monitor dust emissions from the ash disposal area and mining operations, including any impacts to the Reichert property. This monitoring plan was filed in SD1 (Appendix 143-A) of the approved permit and is

included in the complete replacement of Section 143 of the application for renewal/revision as Appendix A to the section in SD3. The plan includes continued monitoring of air monitoring stations S-45 and S-52 for the Ash Area, as well as Air Monitoring Station N-78 near the Reichert property (Tract 1612) in accordance with Permit Provisions 2, 3, and 4 contained in the approved permit and in place since approved by Commission Order in Docket No. C0-0038-SC-34-C. The plan, however, should include monitor Station N-78 only when mining and/or reclamation activities are occurring in the M-Area Auxiliary No. 1 and the M-Area Auxiliary Area No. 2. As mining has progressed, Luminant now requests that Air Monitoring Station N-78 be operated only when mining and/or reclamation activities are ongoing in those areas (SD3). Staff recommended that approved Permit Provisions Nos. 2, 3, and 4 that address provide that air monitoring be retained with a modification to Permit Provision No. 4 requiring that Luminant begin air monitoring at Station No. 78 prior to mining activity/disturbance and continue air monitoring until backfilling and grading are complete and vegetation is established (Phase II Bond Release). The revision to Permit Provision No. 4 is needed to ensure complete monitoring and is adopted as set out in Appendix I to this Order. Monitoring will include times when activities including construction, reclamation, and maintenance activities, in addition to mining, are ongoing (Permit Provision No. 4). The locations of the monitoring stations are shown on page 143-A-2 of Appendix 143-A (SD3). The monitoring plan will still include Permit Provisions 2 and 3 needed to specify quality control and assurance and air quality limitations, as well as Permit Provision 4, as revised due to the progression of mining. Luminant is in agreement with these permit provisions. These changes are reasonable and are adopted (Permit Provision No. 4 in Appendix I). The required plan for fugitive dust control practices is also included in the application and will adequately control fugitive dust resulting from mining and reclamation operations as required by §12.143(b)(2) of the Regulations. The plan includes temporary closure of roads when not in use, the use of water trucks for reduction of dust from traveled surfaces, control of vehicle speed on traveled surfaces, the application of asphalt emulsions, and prompt revegetation with temporary and permanent vegetation, as well as the use of motorgraders to periodically grade and shape the road surfaces.

35. The application, as supplemented in SD1, SD2, and SD3, includes a protection and enhancement plan in accordance with §12.144 of the Regulations to minimize disturbances and adverse effects on fish and wildlife and related environmental values during the proposed operations and reclamation for the proposed permit term. The information is made up of text and Appendices 144-A through 144-C.

Appendix 144-A includes the USFWS concurrence with Luminant's plan to protect migratory birds approved (letter dated May 15, 2003). Appendix 144-B, as supplemented in SD1 and SD2, includes specific information for wetland mitigation including permanent impacts and mitigation. Appendix 144-D that included locally adapted native plant species for reclaiming fish and wildlife habitat land use and compensatory mitigation areas was removed from the permit in SD1, and Appendix 144-C, contained in SD1 and supplemented in SD2 and SD3, now contains a list of native plant species recommended for planting in revegetation of fish and wildlife postmine land use reclamation. Luminant will use appropriate species with proven nutritional value for fish and wildlife for planting and distribution that are appropriate to lands reclaimed to fish and wildlife habitat. The protection and enhancement plan, as supplemented in SD1, SD2, and SD3 meets the requirements of §§12.144 and 12.380 of the Regulations.

- (a). The plan includes a description of minimization of disturbance and protective measures for threatened and endangered species, migratory birds, and other species in accordance with TPWD and USFWS requirements and consultation.
- (b). Measures are included related to the removal of surface features, construction of roads and other facilities, limitation of speed on roads, proper design of diversions and stream channel restoration, roadway stream crossings, and timely revegetation of stream disturbances. Some ponds will be stocked with fish of appropriate species and at appropriate stocking rates. Pond edge areas will serve to increase habitat diversity and provide cover and food for birds. In addition, the plan includes protective measures during active mining, such as mining in narrow bands to lessen impacts, avoiding rookeries and raptor nest sites during the breeding and nesting season, and enhancement measures including restoration of streams and other wetlands, and construction of ponds and impoundments. Restoration measures, engineering techniques, and structures that may be used include revegetation establishment as soon as practicable, control of slopes and grade, mulching established stream slopes, use of vegetation and materials appropriate for the protection of slopes from overland flow and surface erosion, terraced diversions, silt fencing, use of weirs and berms to dissipate energy, native rock boulders to provide reduced flow, create microhabitats, and increase substrate diversity, other

slope stability measures, such as anchored vegetative cuttings, meandering streams, riprap, and sediment basins.

- (c). Steps will be taken to monitor and report any sightings to the Commission of protected species with potential to occur within the proposed permit area: the Texas Horned Lizard, Alligator Snapping Turtle, American Bald Eagles, the Timber Rattlesnake if encountered within the proposed permit area. Luminant will relocate the Alligator Snapping Turtle if a live specimen is encountered, will initiate a nest survey if it encounters an American Bald Eagle's nest, and will report and implement a handling and relocation plan if the Northern Scarlet Snake (SD2) is encountered. Fencing will be designed to protect or guide wildlife but will not impede migration. Because habitats appropriated for the Timber/Canebrake Rattlesnake, the Northern Scarlet snake and the Alligator Snapping Turtle exist or may exist within the M and L Areas, Permit Provision No. 8 requiring a plan to survey unmined aquatic and terrestrial habitat in these areas specific to these species is adopted [Finding of Fact No. 26(e)].
- (d). Luminant will follow wetland mitigation in accordance with requirements for jurisdictional waters and wetlands of the U.S. Losses will be mitigated in accordance with the following composite mitigation ratios (mitigation and compensatory mitigation) (SD1, SD2, and SD3, Appendix 144-B): 2:1 for forested wetlands, 1.5:1 for non-forested wetlands, 1:1 for stream channels, and 1:1 for ponds. The forested wetland category includes mitigation for impacts to scrub-shrub wetlands. Non-forested wetlands includes emergent wetlands such as constructed shallow water areas adjacent to stream channels, constructed shallow water areas incorporated in pond designs to create waters <6.6 feet in depth, or water-holding depressions formed in other land uses. The ratios proposed for mitigations of waters of the U.S. including wetlands were evaluated using the final draft version of the Texas Rapid Assessment Method published by the USACE, Fort Worth District; this is the USACE's preferred method of projecting the ratio of wetland impacts to wetland reclamation needed to compensate for impacts. The proposed ratios of mitigation are greater than those calculated as needed to replace the wetland impacts by mitigation. Based on these ratios, Luminant's Compensatory Mitigation Plan (CMP), prepared as USACE Project No. SWF-2012-00261 for the Monticello Mine

(Draft Submittal with RCT Permit Renewal, February 1, 2013, and contained in SD1, estimates that 171.11 acres of wetland and jurisdictional waters of the U.S. exist within the 3,248-acre area to which this USACE permit will apply within the Monticello-Winfield Mine. Luminant has not included an accounting of impact and mitigation acreages for the Monticello-Winfield Mine and has not identified the areas covered in previous, current, and pending permit terms. Staff recommends the adoption of a permit provision to require that Luminant provide this information in the form of a cumulative map and table within 90 days of permit issuance in order to effectively track mitigation. Permit Provision No. 9 is adopted. [See also Finding Fact No. 6(a) for the adoption of this permit provision and related Permit Provision No. 10].

- (e). Appropriate species of vegetation will be used for the postmine land use including native species and species important for food and cover for wildlife. Native species will be used as a preference when appropriate seed is available and growing conditions permit. For steep slopes or other highly erodible/disturbed environments, fast growing non-native species such as common bermudagrass and certain clovers may be used as an initial ground cover, or in forested habitat, Virginia wildrye, wheat, common bermudagrass, or an appropriate cool or warm season grass. Native plant species recommended for planting in revegetation of fish and wildlife postmine land use are contained in Appendix 144-C, as supplemented (SD3). Section .144 of the application also includes naturally introduced species that will colonize reclaimed areas, but will not be planted, and tree and shrub species that will be used for forest development. Luminant will enhance land reclaimed for fish and wildlife habitat by developing a variety of habitat types. Plantings will be located to maximize contact between existing forest stands, lakes, streams, wetlands, and unmined areas. Links between habitat by use of development of corridors will be developed if needed, especially in riparian zones. Pastureland may be seeded with legumes to provide additional seasonal ground cover and to provide a food source. Waterways and small ponds will not be disturbed unless necessary to meet permit or operating requirements.

36. The requirements of §12.145 of the Regulations for a reclamation plan for the proposed renewal term have been met as set out in Section .145 of the approved permit, as revised in the application, as supplemented.

- (a). Luminant has provided a reclamation timetable in accordance with §12.145 (b)(1) in SD1. The timetable set out in the application was revised to include a revised Figure 145-F-1, “Reclamation Timetable,” SD1. The timeline begins upon completion of removal of lignite and covers a time period of approximately 11 years including submittal of Phase I release application and completion of ERP at which Phase II and III bond release application(s) are submitted (within one year of completion of the ERP). Mulching will occur following initial planting of temporary or permanent vegetation. The timetable incorporates species-specific planting dates [Appendix 145-C, as supplemented (SD1)], or at any time depending upon need. Timing of the planting of temporary vegetation may also vary based on weather conditions. Suitable mulch or other soil-stabilizing measures will be used to control erosion, increase the retention of moisture in the soil, and to promote seed germination. Mulching will occur following initial planting of temporary or permanent vegetation. Luminant will obtain SMRD approval of quantitative data demonstrating revegetation success prior to its submittal of Phase II and/or III bond release applications. The timetable includes completion of coal removal, backfilling and grading, the completion of temporary and permanent planting and submittal of initial soil sampling data (two years), augmented planting, fertilization, irrigation, establishment of management units, and the initiation of the extended responsibility period (three years), Phase I bond release submitted (one year), normal husbandry practices (five years, including the year during which Phase I bond release is submitted), and submittal of Phase II and III bond release application (one year). Replanting and additional time for backfilling and grading may add time to the schedule.
- (b). Luminant provided a summary and supporting calculations for its reclamation cost estimate in SD1 as revised from the initial application in Appendix H, Section .145 in the amount of \$111,512,492.30. SD1 included a revised Appendix H and summary of reclamation costs based on acreage figures taken from Plates 142-1 through 142-3, depicting bonded areas and Table 142-1 (SD1). Luminant included a “worst-case” calculation of worst-case pit closures

(one per mined area), backfilling and grading of one worst-case pit, mined areas, disturbed areas, ancillary areas, Phase I reclamation areas, Phase II reclamation areas, and closure of the Primary and Secondary Ash Disposal areas. In its TA, Appendix II, Staff set out its calculation of reclamation costs. Staff calculated that \$117,991,540, as costs of reclamation, and Staff recommends that its estimate be approved by the Commission as the minimum required bond amount in that it is the higher and more conservative estimate. The estimate is higher primarily due to the use of higher revegetation costs. Staff's estimate also includes more up-to-date equipment costs and productivity factors. Staff's estimated dragline pit closure costs are based on the worst-case pit closure utilizing cross-sectional volumes of the deepest pit in each mining area with the longest pit in that mining area. Auxiliary pit closure was estimated based on reclamation of the cross-sectional volumes associated with an open pit with a 50-foot coal depth to the length of the most feasible direction of mining of the auxiliary area. The Commission approves Staff's estimate. Luminant's currently accepted bond in the amount of \$120,000,000 accepted by Order dated May 15, 2012 remains sufficient to cover the costs of reclamation should a third party be directed to complete reclamation upon forfeiture.

- (c). Luminant has met the requirements of §12.145(b)(3) for a description of backfilling and grading operations to approximate premine topography and approximate original contour. Luminant will use overburden with the exception of specific intervals for backfilling and regarding, in accordance with its application, as supplemented, and Permit Provisions No. 6 and No. 7.
 - (1). Rills and gullies that would disrupt the approved postmine land use will be filled, regraded, or otherwise stabilized; areas of erosion where sediment would cause or contribute to a violation of receiving stream water quality requirements or that occurs before permanent vegetative cover is planted will be repaired. All active eroding rills and gullies will be repaired prior to Phase II release.
 - (2). Drainageways will be established and will be developed in accordance with the Soil and Water Conservation Plan included in the application.

- (3). A backfilling and grading variance has been approved for the SSC Area, Dragline Area. All other areas will be reclaimed in accordance with requirements set out in §12.384. Existing Permit Provision No. 6 specifying timing of rough backfilling and grading in the F-2 Auxiliary Area has been revised as set out in Finding of Fact No. 31(d), with the adoption of revised Permit Provision No. 6.
- (4). Staff has certified that proposed postmine slopes and contours as supplemented will meet the requirements of the Regulations. Staff provided a comparison in its TA, page 85, of premine slopes for the proposed permit area of 26,733 acres to postmine slopes as proposed that reflects the following slight changes: a reduction in the 0-5% slope category of 6.7% and increases in the 5-10%, 10-15%, and greater than 15% slope categories of 2.4%, 2.8%, and 1.4%, respectively. These slight changes are approved.
- (d). The requirements of §12.145(b)(4) for soil handling are met. Appendix 145-A in Section .145 of the application, as supplemented in SD1 and SD2, includes a study of shallow geologic sediments in order to characterize the overburden to evaluate its suitability for use as a topsoil substitute and for use within the top four feet of the reclaimed soils (“An Evaluation of Overburden Suitability as a Topsoil Substitute and the Identification of Acid Forming and Toxic Forming Materials”). Based on this study, Luminant proposes to use identified suitable overburden intervals to reclaim the top four feet. Buffer zones of five feet above the uppermost mineable lignite seam and five feet above and below rider seams are unsuitable, as reviewed by Staff, as well as rider seams and lignite layers and will not be placed in the top four feet during reclamation. Other unsuitable materials have been identified. Luminant will avoid the following intervals that are unsuitable: B2-CC-11 and B2-CC-9 (rider seams with buffers 0-22.7 feet and 35.3-87.7 feet below ground surface, respectively; B2-CC-18, material 15 feet deep or deeper bgs in the core’s zone of influence; and material deeper than 22.7 feet bgs in the zone of influence of Core B2-CC-11. Suitable replacement material is illustrated in core summary diagrams in Appendix 145-A-A, as revised in SD1 and SD2. Average values for suitable replacement material meet standards for pH, acid-base accounting, clay, and sand

[SMRD Advisory Notice ER-BA-127(b)]. Staff indicates that a comparison to native soils (Tables 145-A-2 through 145-A-6) shows that selective handling can provide materials more suitable to meet Regulation §12.335(1) to place a soil medium that is equal to or more suitable for sustaining vegetation than the native topsoil and subsoil and that the substitute material is the best available for revegetation. Luminant will selectively handle unsuitable material so that it is not placed in the top four feet during reclamation [Finding of Fact No. 36(c)(3)].

- (e). The requirements of §12.145(b)(5)(A)-(F) for a plan for revegetation are met.
- (1). A timetable for reclamation and revegetation has been provided [subparagraph (a), *supra*].
 - (2). Luminant has described how it will reclaim disturbed lands to the postmine land uses of forestry, fish and wildlife habitat, pastureland, cropland, and undeveloped land. For forestry, Luminant will plant loblolly, shortleaf, and longleaf pine seedlings and will manage them for timber. The minimum initial stocking rate will be 600 trees/acre. The lands will be appropriately managed in accordance with Commission regulation and accepted forestry practices. Fish and wildlife habitat will be used to reduce adverse impacts to wildlife species. Species for fish and wildlife habitat will be selected from the list in Appendix 144-C. Ground cover will be used to control erosion and to stabilize soils. Some herbaceous and woody plants will occur in reclaimed soils to provide diversity. Pastureland will utilize forage grasses, primarily bermudagrass. Plant species and seeding rates will be selected from the list in Appendix 145-C. Some species may occur because of seed and root stock already present in postmine soil material. No species that is poisonous or noxious will be allowed to infest an area. Temporary cover may include annual species such as wheat, millet, rye, oats, and sorghum. Cropland areas will be managed for production of hay in accordance with the USDA NRCS letter dated May 31, 2000 (Appendix 138-B). For undeveloped land, plant species will be selected from the list in Appendix 144-C. Luminant has provided species to be used in revegetation, the

seeding and stocking rates to be used, planting and seeding methods, mulching techniques and irrigation practices and pest and disease control measures.

- (3). Stocking standards, ground cover standards, and productivity standards will meet the requirements of the Regulations, as set out in the application, as supplemented, Staff review, and this Finding of Fact. Luminant will use the Commission's *Procedures and Standards for Determining Revegetation Success on Surface-Mined Lands in Texas* to determine revegetation success for all postmine land uses.
- (i). Luminant will plant southern pine seedlings (loblolly, shortleaf pines, and longleaf pines) on land reclaimed to forestry at stocking of 600 stems/acre. Herbaceous species will be planted in fish and wildlife habitat as well as trees and shrubs. Pastureland will be seeded with Bermuda grass and supplemented with cool-season species and annual species as needed for temporary cover. Invader species included in Luminant's list for pastureland may constitute up to 25% of the ground cover in reclaimed pastureland.
- (ii). Forested areas will be evaluated for stocking density and ground cover. A stocking density of a minimum of 90% of the 450 stems/acre technical standard will be used for forestry and a ground cover success standard of at least 90% of the 78% technical standard for forestry land use with at least 75% of the species counted as ground cover from the approved list, and the remaining 25% from Appendix 144-C and Table 145-B-1 in Appendix 145-B as "Native Plant Species Recommended for Planting in Revegetation of Fish and Wildlife Post-Mine Land Use Reclamation" (application, as supplemented). These species will not be planted but may occur naturally. The plants listed in Appendix 144-C were either identified in the baseline survey or are listed as occurring in the Pineywoods, Post Oak Savannah, or Blackland Prairie Vegetational Regions of Texas. These desirable invader species will provide some value of food or cover for large mammals, small

mammals, or birds or are wildflower species that can attract insects that can be food for wildlife,

- (iii). Special provisions apply for forested areas when the ERP timeline exceeds the reclamation timetable as when an area continues to receive active mine, drainage, precluding Phase III bond release. Stands could become over 11 years old and could benefit from thinning. Upon approval of the ground cover and stem count reports by the Commission, these forested areas will then be managed according to Texas Forest Service “Recommendations for Thinning Pine Plantations on Mine Reclamation Sites in Northeast Texas” (Appendix 145-E). Luminant also includes management specifications regarding thinning of these forested areas (SD1, p. 145-15) involving a quantitative survey of groundcover and evaluation of the health of the stand (using a Basal Area standard of 70 or more).
- (iv). Luminant will use a stocking standard of 100 stems/acre for fish and wildlife habitat and will meet 90% of this stocking standard during the last year of the ERP. Luminant will meet 90% of the ground cover standard of 78% for fish and wildlife habitat during the last year of the ERP, with 75% of the species used for ground cover from the approved planting list and 25% from the plants identified in Appendix 144-C and Table 145-B-1 in Appendix B as “Native Plant Species Recommended for Planting in Revegetation of Fish and Wildlife Post-Mine Land Use Reclamation.” The plants add to species diversity and provide food and cover for wildlife.
- (v). Luminant will also meet 90% of the 95% technical standard for productivity for pastureland based on NRCS technical standards (Appendix 145-B, desirable invader species) and a 90% of the 95% ground cover standard with 75% of the ground cover from the approved list and 25% from approved invader species (Table 145-B-2) (not planted, but naturally occurring as native plants or as locally naturalized). Ground cover and productivity will

meet or exceed the approved standard during any two years of the ERP except the first year. Productivity will be measured through a combination of hay harvest records, field clipping of standing forage and/or grazing use records.

- (vi). Cropland productivity will meet requirements of §12.625. Hay will be used as the crop evaluation in accordance with standards of the USDA NRCS (Appendix 145-D) for Common Bermudagrass, Coastal Bermudagrass, Big Bluestem, Little Bluestem, Indiangrass, Switchgrass, and Sideoats Grama, as applicable. Productivity will meet or exceed the approved standard during any three years of the ERP except the first year.
 - (vii). Undeveloped land will be evaluated based on woody plant stocking rate and by ground cover. The land will meet 90% of a woody plant stocking rate of 100 stems/acre with species from Appendices 144-C, 145-C, and will meet at least 90% of the 95% ground cover standard, with approved invader species applicable to fish and wildlife.
 - (viii). Revegetation success on residential and industrial/commercial land use will be based on ground cover not less than that required to control erosion based on the Revised Universal Soil Loss Equation. Planted species will be those found in Appendix 145-C for residential land use, with approved invader species for fish and wildlife considered applicable for ground cover evaluations. Industrial/commercial land will be planted with species found in Appendix 145-C and Appendix 144-C. Approved invader species for fish and wildlife will be considered applicable for ground cover evaluations for industrial/commercial use as well.
- (f). Luminant has included a soil-testing plan in its application as supplemented (SD1 and SD2) that complies with §12.145 (b)(5)(G). The plan is set out in Appendix II to this Order and is approved.

- (i). The plan includes a description of the 23-acre soil-testing grid system, initial soil sampling of composite soil samples for the 0-1 foot interval and for the 1-4 foot interval for each grid, marking of grids, sampling parameters, soil sampling density, maintenance sampling, reporting, and an alternate soil sampling plan should sampling indicate possible AFM/TFM problems. Any such problems will be corrected.
- (ii). The plan was supplemented in SD2 to include the sampling a random 10% of grids (entire top four feet using two depth increments, 0-1 foot, and 1-4 feet) for the same parameters as those in the initial soil sampling as well as hot-water extractable boron, cadmium, and selenium.
- (iii). Initial postmine soil monitoring results will be submitted to the Commission before the placement of land into the ERP and before the approval of Phase I release. The analytical results and a map showing each grid and/or partial grid reported will be submitted to the Commission in both hard copy and digital formats. The map will display the grids and/or partial grids sampled and reported plus the Texas State Plane coordinates of their location. Maps provided will clearly delineate the configuration of each grid, represented by the data contained in the report, and digital acreage information will be provided. The statistical soil baseline will provide the frequency distributions of native soils based on acreage for the regulated parameters (Table 145-T-1, SD1, Areal-Weighted Frequency Distributions for Postmine Soil Performance Standards) that results of sampling will be compared to for compliance. For parameters not listed in the statistical baseline, the statewide criteria as shown in Advisory Notice ER-BA-127(b) will be used to determine postmine soil success. In the event that chemical and physical properties of the postmine soils warrant further investigation, the Commission may require further testing.
- (iv). For postmine soils within the disturbance area, Luminant will use a banking method to compare the percentage of postmine soils within the disturbance area with a

specific parameter to the percentages of baseline soils with the specific parameter. One bank with two depth increments (0-1 foot and 1-4 feet) will be used. The numbers of postmine acres will be banked by parameter and the banked acres provided with each submittal of initial postmine soil data, so that the percentage of acres allowable within the disturbance area does not exceed the percentage of acres contained in the soil baseline for that parameter. Adjustments can be made if the percentage of acres allowable within the disturbance area exceeds the percentage of acres contained in the soil baseline for that parameter by utilizing amounts up to the unused sum of less desirable categories from the premine statistics.

- (v). Maintenance soil sampling (to ensure that there is no augmentation beyond normal husbandry practices) will be done for pastureland land management units (LMUs) during the extended responsibility period at the end of the growing season (October 1 through December 31) prior to the first year of productivity assessment, during the first year of productivity assessment, and during the second year of productivity assessment. If years of productivity assessment are not concurrent, Luminant will collect maintenance samples in the year prior to the second year of productivity assessment. The composite samples will be taken for the 0-1 foot depth increment and analyzed for pH, nitrate-nitrogen, and plant-available phosphorus, potassium, calcium, and magnesium. The samples will be taken for each 100 acres or less. Areas greater than 100 acres will be subdivided during sampling to reflect areas of approximately equal size less than 100 acres. The plan provides for subsamples to be composited to represent the LMU. Sampling results with a map as well as the amount and type of fertilizer and lime applied will be submitted to the Commission during the first quarter of the year following each reporting period.
- (vi). The soil-testing plan is included in the application, as supplemented (pp. 145-18-25). Staff set out the soil-testing plan, as supplemented in SD1 and SD2, in Staff's TA; this plan is included as Appendix II to this Order. The soil-testing plan contained in Appendix II will ensure that the top four feet of reclaimed soils meet state requirements; the plan is approved.

- (g). The application Section .139, as supplemented, [Finding of Fact No. 31(b)] sets out a plan for operation that will maximize recovery of all mineable lignite seams in compliance with §12.145(b)(6) of the Regulations.
- (h). As set out in subparagraph (f), supra, and in Section 139 of the application, as supplemented, the requirements of §12.145(b)(7) for a plan to cover all AFM/TFM and combustible materials with four feet of non-AFM/TFM and non-combustible materials are met. The application also includes a plan to dispose of non-coal waste, to dispose of coal waste from coal screening facilities, and to dispose of hazardous waste and non-hazardous Class II Waste as required by law.
- (i). As supplemented in SD1, Luminant has included required procedures for plugging abandoned domestic water wells and abandoned monitor/dewatering wells in accordance with the Texas Department of Licensing and Regulation rules (16 TEX. ADMIN. CODE, Part 4, §76.1004) and exploration boreholes, Coal Mining Regulation §§12.331-333. Staff has included a summary of exploration hole plugging, domestic, water well plugging, monitoring and dewatering well plugging procedures included in the application in its TA, pp. 105-107. Wells that are not abandoned will be capped. The Commission will be notified five (5) working days in advance of any well plugging operations occurring within Luminant's permit area. Mining operations will not approach nearer oil or gas wells than allowed by the Regulations unless such operations are approved by the Commission. If the permittee will progress across an oil or gas well, the well will be plugged as required (16 TEX. ADMIN. CODE, Part 1, §3.14). Previously adopted Permit Provision No. 8 adopted to ensure that all cased boreholes would be adequately and timely identified is no longer needed in that Luminant has incorporated this undertaking into the text of the application, as supplemented. The previously approved provision is deleted. An exploration plan is included in the application [Finding of Fact No. 31(p)]. Each exploration hole, well, borehole, or other opening created during exploration activities will be handled in accordance with §§12.331 - 12.333.

- (j). The requirements of Section §12.145(b)(9) are met. Luminant undertakes in its application, p. 145-29 (SD1), that it will comply with the Clean Air Act and other air quality laws applicable to its operations, as well as the provisions of TPDES permits, the Clean Water Act, 33 USC 1251 *et seq.*, and USACE Nationwide Permit No. 21 and pending Individual Permit authorizations, (referenced in Section .121 of the application as supplemented). In addition, Luminant will meet the provisions of its dust control plan and air-quality monitoring plan (Finding of Fact No. 34).
- 37. The bond maps contained in the application, as supplemented, accurately depict the areas to be covered by the accepted bond.
- 38. The application includes a description as required by §12.146 of the Regulations of measures to be taken to protect the hydrologic balance of the surface water and groundwater systems within the permit area and adjacent areas and to prevent damage outside the permit area, to meet water quality laws, and to protect groundwater and surface water users. This includes Luminant's determination of probable hydrologic consequences (PHC) set out in Section .146 of the application, as supplemented in SD1-SD3) [an updated assessment of groundwater and surface water monitoring activities ("Probable Hydrologic Consequences Determination Monticello Winfield Mine Permit 34E Renewal/Revision/Expansion Titus and Franklin Counties Texas March 2012")], as supplemented in SD1 and SD2, alternate water supply information, operational procedures, a long-term groundwater monitoring plan (LTGM plan), and a long-term surface water monitoring (LTSM) plan. In addition, Staff prepared its Cumulative Hydrologic Impact Assessment (CHIA) as required by §12.146(e) of the Regulations (Finding of Fact No. 39). Luminant has updated its hydrologic plan, including its plan for annual reporting of dewatering activities within 60 days following the end of the calendar year.
 - (a). Alternative water supplies are identified (Finding of Fact No. 23) should impacts to water supplies occur as a proximate result of surface mining operations. Luminant has undertaken to supply alternative sources in such cases.
 - (b). Selective handling of overburden and appropriate soil testing will identify acid-forming and/or toxic-forming materials (AFM/TFM), and Luminant has included an alternative testing plan after treatment or re-handling to ensure that all AFM/TFM are placed below the top four

feet of reclaimed soils. In addition, low-permeability clays exist beneath the lowest lignite seam to be mined. The mixed overburden that will be used in backfilling and grading will likely be less transmissive of water than the premine overburden. Resaturation of the overburden is estimated to be from several years to several decades. Most premine wells were completed in sand-rich aquifers; spoil wells are completed in silt and clay-rich mixed overburden and will exhibit higher concentrations of TDS because of higher concentrations of iron, magnesium, sulfate, and chlorides. The pH of the spoil water will be comparable to premine overburden groundwater. The TDS in spoil wells are not expected to exceed the maximum concentrations observed in the historical database. Luminant indicates that the small volume of potentially high TDS groundwater migrating out of portions of the resaturated spoil will mix with a much larger volume of low TDS groundwater in surrounding aquifers and will result in very minor changes to the surrounding groundwater chemistry. Luminant included results from a mass-balance study using a conservative assumption that approximately one-half of the average annual recharge to the spoil water table will migrate toward the adjacent overburden aquifer. Results are shown in Table 146(d)-5 of the application, indicating a predicted postmine increase in TDS concentration of about 7% over baseline values in the overburden aquifer adjacent to the mined out area (from 500 to 536 mg/L). Effects to surface water via seepage or water well users should be minimal. Historical long-term water quality monitoring from wells completed in the native overburden surrounding the mined-out portions of the Monticello-Winfield Mine support the conclusion that significant offsite water quality impacts are unlikely [p. 146(d)-14, application].

- (c). Impacts to groundwater levels may occur in the vicinity of mining from groundwater inflow to the pit; these impacts are likely to be limited to the areas closest to the pit, and Luminant will control this water as a part of its water control plan. Limited advance dewatering proposed for the permit term will also cause water level declines. Luminant has identified areas that will require dewatering on Plate 146(d)-1 of the application. These include all mine areas except the A-1, A-2, L-4 and L-5 Auxiliary Areas. Luminant proposes to dewater sands with saturated thicknesses exceeding 20 feet. The saturated sands in these areas are discontinuous and this will limit effects from dewatering. Luminant contracted for computer modeling to predict potential impacts to water wells. Conservative factors such as boundary conditions

and hydraulic conductivity were included in the model. Dewatering over a three-year period was assumed. Plate 146(d)-1 depicts the five-foot simulated drawdown from the simulated dewatering. Table 146(d)-2 lists approximately 244 water wells located within the predicted 5 feet or more drawdown areas. Of these, 34 wells are listed as abandoned or are classified as not used. The remaining wells are primarily used for domestic purposes with a few used for livestock, and approximately 33 listed as used for irrigation. Approximately 64 wells are 200 feet or deeper below ground surface with less potential to be affected by proposed dewatering because of confining layers that hydraulically separate the mine floor from the deeper underground sands. All wells located within the drawdown area are depicted on Plate 146(d)-1. Staff analysis indicates that the modeling satisfactorily represents potential effects from proposed dewatering. An evaluation of drawdown was submitted to the Commission in the 2011 Annual Dewatering Report for the Monticello-Winfield Mine (PBW, 2012). The report indicates that dewatering effects are, with limited exceptions, within the expected drawdown. Four exceptions were noted ranging from -7.6 feet to -13.6 feet, likely due to previous mining in nearby areas or weather-related seasonal fluctuation. Long-term groundwater monitoring data provided in Appendix 146(d)-A indicate that most of the long-term wells installed in spoil material one to two decades ago have fully resaturated.

- (e). To assist in evaluating impacts to groundwater from dewatering and in determining whether effects of dewatering exceed the probable hydrologic consequences predicted by computer modeling, Luminant includes a plan for monitoring and annual reporting of dewatering activities [application, p. 146(d)-17]. Luminant will submit to the Commission a report summarizing annual activities within 60 days following the end of each calendar year. The report will include a potentiometric surface elevation chart that lists the long-term groundwater monitoring (LTGM) wells, the baseline or earliest recorded water levels from the wells, the fourth quarter (or most recent) water levels from the LTGM wells, the change in water levels, along with a summary of groundwater withdrawal amounts for each active well in each well-field, a map showing the approximate location of the active well field during the previous year and the change in water levels, the locations of inactive dewatering wells that have not yet been mined through or plugged and abandoned, and an evaluation, with summary, that compares the observed effects from dewatering/depressurization to the effects

predicted in the PHC. Luminant will provide the Commission with a response addressing any observed or anticipated exceedance of the estimates contained in the approved permit application. Discharges of water from dewatering activities will be routed through a final discharge pond prior to release from the permit area; however, they may be discharged into natural drainage as long as the dewatering discharge is routed through an activated TPDES wastewater final discharge monitoring point and meets all applicable monitoring and water quality standards. If not, they will be routed through a final discharge point prior to release from the permit area. Monitoring results shall be reported at the intervals specified in the TPDES wastewater discharge permit (application, p. 139-19). The current permit contained a permit provision adopted because Luminant did not state in the application, as supplemented, that dewatering discharges that do not flow through approved sedimentation ponds would be sampled as point source discharges, rather than as composite discharges. The permit provision was adopted to ensure effective sampling prior to discharge and was adopted as Permit Provision No. 7. Staff recommends deletion of this permit provision as no longer needed in that Luminant has undertaken in the application to sample the discharges as point source discharges if a one-time sample at the discharge point reveals that the water does not meet TPDES effluent requirements. The permit provision is deleted.

- (f). Luminant proposes an updated LTGM plan as set out in Table 146(d)-6 (SD3) with locations depicted on Plate 146(d)-2 (SD3) that will provide sufficient information to ensure the protection of the groundwater hydrologic balance. This table and plate were updated following Commission administrative approval of Revision No. 70 on December 30, 2013. Luminant will monitor approximately 72 wells (placed in overburden, underburden, spoil, or native materials): some will monitor the ash disposal area and will be sampled annually, with two installed subsequent to final reclamation. Several are wells that are in Phase III bond release areas and will be sampled annually. The remainder will be sampled quarterly. Table 146(d)-5a contains updated completion data (SD2). Completion data for monitoring wells installed during the permit term will be submitted to the Commission within 30 days following the end of the quarter in which they were sampled. Paper copies of laboratory reports will be provided in addition to the electronic data. Such monitoring wells will be installed within one year of backfilling and grading. For each long-term groundwater

monitoring well, quarterly samples will be taken and reported to the Commission for the following parameters: TDS, dissolved iron (Fe), dissolved manganese (Mn), sulfate (SO₄), chloride (Cl), field EC (electrical conductivity), field pH, field temperature, and depth to water. Ash monitoring wells will be sampled also for parameters listed in Appendix B of Section 139. For spoil monitoring wells, annual samples will also be analyzed for the following 12 dissolved trace elements [p. 146(d)-14, SD2]): aluminum, arsenic, boron, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc. If a new or replacement well is installed, Luminant will conduct one-time sampling for all of the quarterly and annual parameters, as well as calcium, dissolved magnesium, carbonate (CO₃), nitrate-nitrogen, potassium, bicarbonate, and sodium.

- (g). Based upon the application, as supplemented, Finding of Fact No. 31(h)(5)-(7), studies performed regarding the hydrogeologic effect of the ash disposal proposals, Commission Orders approving the ash disposal operations, and Staff recommendation of approval of the proposed ash disposal operations, groundwater monitoring plan, and the PHC submitted by Luminant, the changes included in the application in Appendix B to the ash disposal operations will not result in deterioration of the groundwater.
- (i). The application, as supplemented in SD1-SD3, includes appropriate surface water information (Finding of Fact No. 22), modeling of potential impacts to surface water quantity and quality, and a long-term surface water monitoring (LTSM) plan sufficient to detect concentrations of required effluent parameters. The information provided is adequate to ensure protection of surface waters.
- (1). Measures will be taken, during and after the proposed surface mining activities, to minimize additional contributions of sediment to surface waters, so that discharges into receiving streams will meet applicable Federal and State water quality laws and regulations in accordance with water quality permit requirements. Sediment ponds and impoundments will detain water and thereby decrease the contribution of TSS in discharges in accordance with the TCEQ TPDES permit requirements. Results of sampling of each final discharge pond will be reported to the Commission. Sampling

will be conducted at monitoring stations at undisturbed and disturbed watersheds (“paired watersheds”) upstream and downstream of proposed disturbances.

(2). Luminant modeled 14 sub-watersheds and re-modeled 19 sub-watersheds.

- (a). Fourteen sub-watersheds anticipated to be impacted by the remaining life-of-mine were modeled using the SEDCAD4 model for 10-year, 25-year, and 100-year storm events based on site specific hydrologic and sedimentologic characteristics for premine, during mining, and postmining scenarios utilizing conservative assumptions, including no mitigating effects that will exist from sedimentation ponds and use of the largest mine block for each watershed as the modeled disturbance. Watersheds were mapped and soils and land use data, topography, cover, and other characteristics, such as rainfall depths, were assigned to the watersheds and incorporated into the hydrologic model. Appendices 146(d)-C, 146(d)-D, 146(d)-E, and 146(d)-F set out detailed information regarding the factors used and the modeling. The results of the modeling for the 14 watersheds are summarized in Table 146(d)-8 for the three rainfall events. A comparison of the 24-hour 10-year rainfall event for the pre- and during-mine scenarios for the modeled watersheds shows an average increase in runoff volume of 0.05 ac-ft/ac and an average increase in peak flow rate of 0.23 cfs/ac. The average increase in postmine runoff volume and peak flow rates from premine are estimated at 0.03 ac-ft/ac and 0.13 cfs/ac, respectively. There will be mitigating effects from postmine ponds due to evaporation. Runoff volumes and peak flow rates will not be significantly affected. Sediment yield from erosion was also calculated for each watershed. Table 146(d)-9 reflects the results for the 10-yr/24-hr rainfall event for sediment yield for premine, during mining, and postmining scenarios for the 14 subwatersheds. Sediment yield is generally predicted to increase during mining when compared to premine conditions.

- (b). Staff requested that Luminant re-model postmine runoff and peak flow for watersheds impacted by mining during the currently approved permit term or during the renewal/revision/expansion permit term. This included modeling 19 sub-watersheds that were re-modeled for the 10-year/24-hour storm event based on proposed postmine topography. The sizes of some watersheds were revised. Appendix 146(d)-J contains the remodeling results. Luminant indicates that for several watersheds peak flows and runoff are predicted to increase. For three, peak flows and runoff will decrease; however, these streams are intermittent, and there are no water rights downstream of these watersheds prior to their confluence with Lake Bob Sandlin. Overall impacts are predicted to be minimal to individual watersheds and insignificant to the receiving stream, Big Cypress Creek (SD3).
 - (c). Surface mine drainage will be routed through sedimentation ponds prior to release and must meet TCEQ effluent limitations; sediment concentrations will, therefore, be controlled. Runoff studies have shown that recently revegetated spoil plots at existing lignite mines in Texas have been found to be within acceptable limits for pH, iron, and manganese. Luminant included analytical results from its consultant's review of water quality data for pH, TSS, TDS, total iron, and total manganese collected between 1991 and 2010 from long-term paired monitoring stations HSW-W2 (disturbed) on an unnamed tributary of Tankersley Creek and station HSW-W1 (undisturbed) in Appendix 146(d)-G, and included a comparison in Table 146(d)-10 of the application. The comparison indicates that water quality from the disturbed station is similar to undisturbed conditions.
- (3). In accordance with the requirements of the Regulations and as indicated in Finding of Fact No. 23, Luminant will replace any water supplies impacted as a proximate result of mining activities.

- (4). Luminant describes monitoring requirements and reporting frequencies for active mining, postmining, and all final discharge ponds [Table 146(d)-12, as supplemented in SD1, and footnotes] and paired monitoring stations [Table 146(d)-11 and footnotes]. Reporting frequencies are also set out in Table 146(d)-11. The tables specify monthly reporting per the TPDES permit (with weekly sampling while ponds are discharging) until Phase II release has been approved, quarterly reporting of individual pond data to be sampled weekly within 30 days following the calendar quarter, quarterly reporting in paper and electronic format for long-term monitoring stations for flow data (daily minimum, maximum, and average), and water quality data [total dissolved solids (TDS), total suspended solids (TSS), TSM (total settleable material), pH, total iron (Fe), total manganese (Mn), and total selenium (Se), and daily rainfall]. Long-term surface water monitoring stations are depicted on Plate 146(d)-3. Final discharge ponds that do not discharge during the quarter will be reported as “no flow.” Final discharge outfalls are listed in Table 146(d)-14. An outfall may contain multiple discharging ponds. Pursuant to the TPDES permit, individual effluent samples from each source will be analyzed for required parameters and then flow-weighted for reporting to the TCEQ. The weekly individual pond sampling analyses will be reported to the Commission quarterly. Annual updates of outfall location maps will be submitted no later than January 31 of the calendar year. The tables specify effluent parameters and parameter limits for active mining final discharge ponds and postmining final discharge ponds. Active mining final discharge ponds (ponds receiving mine drainage or water that is pumped or siphoned from the active mine area and discharge during times other than precipitation events will be sampled for the following parameters (effluent limits follow each parameter): TSS, 70 mg/L, daily maximum; Fe, 7.0 mg/L, daily maximum; Mn, 4.0 mg/L daily maximum, if required to be sampled by the TPDES permit; Se, if required by the TPDES permit, total maximum daily load limit set by TCEQ, and pH, greater than or equal to six and equal to or less than nine standard units. In addition, flow will be reported. For active mining final discharge ponds that discharge or increase in volume of discharge caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event,

settleable solids with a limit of 0.5 ml/L, pH of greater than or equal to six and equal to or less than nine standard units, and reporting of flow are the limitations. For postmining final discharge ponds that receive water from a reclamation area that has been returned to approximate original contour and on which revegetation has commenced, the following parameters will be sampled for the following effluent limitations: settleable solids, 0.5 ml/L; and pH, equal to or greater than six and equal to or less than nine standard units; in addition, flow will be reported. Ponds with discharges that exceed effluent parameter limits will be reported to the Commission via email or facsimile transmission within 24 hours of Luminant's becoming aware of the violation.

- (j). Luminant's surface water modeling as revised following Staff review is adequate to predict the runoff and sediment yield during the proposed permit term. Runoff volumes are predicted to increase slightly during mining and to approximate premine levels after mining is complete. Sediment yield is predicted to increase considerably during mining and to decrease after completion of mining to approximate premine levels.
39. The Commission Staff processed two previous applications and prepared cumulative hydrologic impact assessments (CHIAs) that together cover the permit area of the Monticello Winfield Mine. These include the Monticello Thermo A-1 Mine that included the northern portion of the Winfield Mine within the Sulphur River Basin (Docket No. C10-0021-SC-00-A, Monticello Thermo A-1 Mine) and the Leesburg Mine (Docket No. C4-0003-SC-00-A), covering the majority of the southern portion of the Winfield Mine within the Cypress Creek Basin. The Staff considered these CHIA documents included in the Technical Analyses for those two dockets in preparation of its cumulative hydrologic impact assessment (CHIA) required by §12.146(e) for this application (renewal/revision/expansion) contained in its TA, Appendix I. The assessment included all relevant mine areas and included the Cypress Creek and Sulphur River Basins' watershed systems affected by the proposed operations. The operations proposed were found to be designed to prevent damage to the hydrologic balance outside the mine plan area. Long-term effects on surface waters are predicted to be insignificant given the large drainage basins involved. Long-term effects on groundwater are predicted to be minimal. Staff has again determined that no significant changes noted in the life-of-mine plan from this application

will change the potential effects of the operations. The areas proposed for mining considered in those CHIAAs were larger than those now proposed for mining.

- (a). Both surface water and groundwater impacts were assessed based upon the PHC submitted by Luminant.
- (b). Luminant provided required information and data in the application, as supplemented, in its probable hydrological consequences determination (PHC) set out in Section .146(d), as supplemented, in accordance with §12.146 of the Regulations to describe cumulative effects. Staff's assessment indicates that the principal hydrologic concerns in relation to the probable impacts to groundwater are the possible occurrence of material damage due to aquifer drawdown and decline, the possible occurrence of material damage due to physical changes within spoil areas, and the possible occurrence of chemical changes in the spoil groundwater. Further, Staff's assessment indicates that the principal hydrologic concerns in relation to the possible occurrence of material damage to surface water relate to chemical changes in receiving streamflow, possible material damage due to physical changes in receiving streamflow, and possible material changes due to physical changes in the permit area that might affect the sediment produced and its possible effects on receiving streams. The CHIA finds, however, that projected drawdown and decline of groundwater due to activities at the mines will be generally insignificant due primarily to the large dilution effects from the surrounding aquifers; in addition, although moderate increases in TDS, as the indicator parameter, may occur in some watersheds, predicted values of TDS will meet applicable stream segment standards, and there will be negligible or insignificant cumulative postmine effects on surface water quality and quantity from mining due primarily to the large drainage basins of the Sulphur River and Cypress Creek. A lower soils loss ratio will result from premine to postmine due to restoration of land to approximate original contour and managed vegetation and mitigation of erosion by surface water control structures. These structures also will result in some attenuation of storm events and somewhat longer sustained flows in receiving streams. Transmissivity of near-surface aquifers is expected to be permanently decreased within reclaimed areas relative to surrounding unmined areas. Impacts on streamflow and on surrounding aquifers from spoils groundwater and changes in resaturation

rates were found to be insignificant also due to the dilution effect from surrounding aquifers and substantial runoff within the drainage basins.

40. The application, as supplemented, meets the requirements of §§12.147 and 12.399 of the Regulations, and the proposed alternative postmine land uses and other designated land uses are approved. Tables and plates contained in the application, as supplemented, were appropriately certified. The changes proposed in the postmine land uses result in the following approximate changes to the percentages of approved postmine land uses for disturbed areas: a 1% increase in pastureland, a 1% decrease in fish and wildlife habitat, <1% change in percentage of forestry, developed water resources, and industrial/commercial land use, and no change in the percentage of cropland, undeveloped land, and residential land use. The percentages of land use for all categories for the composite acres will be 37% pastureland, 22% fish and wildlife habitat, 29% forestry, 7% developed water resources, 5% industrial/commercial, and <1% each for residential, undeveloped, and cropland.
- (a). Section 147 of the application includes revised Table 147-2, "Leased Tract Pre Mine Land Use Acreage," that contains information regarding 2 leased tracts (SD2), as well as revised Plates 147-1 through 147-3, *Postmine Land Use Map*, depicting the locations of proposed land uses. Table 147-1 and Plates 147-1 and 147-3 were revised in SD3. No alternative postmine land uses are proposed on leased tracts; Luminant will reclaim these tracts to their premine land uses.
- (b). In SD3, Luminant clarified that it does not have right-of-entry to Tracts 1732A and 2373; however these tracts are depicted on the Postmine Land Use map, Plate 147-1 as partially within the disturbance boundary and as leased tracts. Staff recommends a new permit provision, Permit Provision No. 12 in Appendix I to this Order, requiring that Luminant submit corrected Plates 147-1 and 147-2 that do not depict tracts for which it has no documented right-of-entry as leased tracts and that exclude the footprint of these non-right-of-entry tracts from within the disturbance boundary. This permit provision is approved as set out in Appendix I to this Order. In addition to this discrepancy, there are three tracts for which Luminant must clarify on the tract sheets contained in the application to show that Luminant has limited right-of-entry due to the retention of lignite ownership (Tracts 1140A,

1256A, and 1264). Permit Provision No. 12 contained in Appendix I to this Order is adopted to ensure that these tracts are represented correctly.

- (c). Luminant has included information that shows that required criteria set out in §12.399 have been met for the proposed alternative postmine land uses proposed for land owned by Luminant. The land uses requested represent higher achievable land uses that are compatible with adjacent land uses, are feasible, and will not adversely affect fish and wildlife and related environmental values, and the proposed land uses will not result in unreasonable delays in reclamation. The application, as supplemented, along with the approved permit, include adequate information showing the capability of the reclaimed land to support the proposed uses and the reclamation activities required to achieve the uses. Although there are general planning authorities and Luminant's postmine land use plan is consistent with these plans [Finding of Fact No. 28(g)], no existing laws are known regulating land use classification. No other approvals are required from land use or other authorities other than the Commission for the alternative land uses. Based upon the reclamation plan contained within the application, as supplemented, the proposed alternative uses are feasible, can be achieved within a reasonable time after mining, and can be maintained. Luminant provided a certification by a registered professional engineer that these plans conform to required standards.
41. The application, as supplemented, contains required information for ponds, impoundments, embankments, and dams as required by §12.148 of the Regulations. A general description has been included describing all ponds, impoundments, embankments, and dams proposed and approved for use during the requested permit term. A list of all primary sediment control structures and impoundments is included in Table 139-T-6, along with each pond's estimate drainage area, runoff, sediment, surface area, in-service date, and if approved, the Commission approval date. Plates 148-1 through 148-3, Surface Water Control (SD1), show the location of structures. Permanent structures are also shown on Plates 139-2-1 through 139-2-3 (Postmine Contours). Typical cross-sections for various types of ponds are also depicted on Figures 148-1 through 148-3. For the requested permit term, Luminant proposes Sediment Ponds M-2 Modification, M-3 Modification, and L-5; the GR-17 and GR-18 impoundments are also proposed for 2014 and 2015, respectively (SD2). Detailed design plans for Ponds M-2 and M-3 were previously approved; however, these ponds were never constructed.

Luminant has replaced these ponds with general design plans for M-2 Modification and M-3 Modification to these pond designs, with an approximate in-service date of 2014. Pond L-5 has an in-service date of 2015. General plans for these structures including cross sections on Figures 148-1 through 148-3, are included in the application. Preliminary hydrological information is contained in Section 139 of the application as well as Appendix 148-B. The application contains required geological information in Section 127 of the application. A qualified registered professional engineer certified the general plans. General design plans are in accordance with the requirements of §12.148(a)(1). General design plans are approved. No detailed plans have been submitted, and the structures are not approved for construction. A schedule for these submittals is included in Tables 139(T)-6 through 139(T)-8. A permanent impoundment schedule is set out in Table 139-T-8 of the application, as supplemented (SD1). The GR-17, GR-18, GR-7, GR-11, GR-4, GR-15, J-10, JR-12, SSC-1, SSC-3, SSCR-10, SSCR-12, and SSCR-13 impoundments are proposed as permanent during the permit term. General design plans are contained in Table 139(T)-8 and Figures 148-1 through 3 (typical cross sections). The general design plans are approved. No detailed design plans have been submitted to the Commission in the application, as supplemented. No permanent impoundments are approved in this Order.

42. A general description of diversions, including maps and cross sections of stream channel diversions to be constructed within the proposed permit area to achieve compliance with §12.341(a) of the Regulations is contained in Section .148 of the application, as supplemented, in compliance with §12.150 of the Regulations. The information is contained in the application, as supplemented, along with Section 139 of the application, including Table 139(T)-7 that contains a listing of all diversions, and Appendices 148-A and 148-B (miscellaneous flow diversions). Table 139(T)-7 also includes the approval date if approved, approximate in-service date, watershed area in acres, intended purpose, and date for reclamation or permanent status. The general design plans are approved. The application indicates that there will be two stream channel diversions during the requested permit term. The Smith Creek Restoration South was approved by the Commission by letter dated August 13, 2012. SD2 of the application indicates that the East Piney Creek diversion (M-Area Haul Road culvert), a perennial or intermittent stream channel diversion is proposed for 2014; this diversion was approved November 17, 2013. All diversions are depicted on the operation maps contained in the application, Section .139, as supplemented. No detailed design plans have been submitted for diversions. The

application, as supplemented, includes required information for miscellaneous flow diversions (all diversions of flow other than from intermittent or perennial streams) in accordance with requirements of §12.341, subsection (a)(1), that they minimize adverse impacts to the hydrologic balance within the permit area and adjacent areas to prevent material damage outside the permit area and to assure the safety of the public, in accordance with subsection (a)(2), that they will be stable, will provide protection against flooding and resultant damage to life and property, will prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow outside the permit area, and that they will comply with all applicable local, State, and Federal laws and regulations. Diversion designs will incorporate appropriate slopes, appropriate channel linings, energy dissipators at discharge points where necessary, and other erosion protection measures as needed. In accordance with §12.341(a)(3), temporary diversions shall be removed when no longer needed and the land will be reclaimed consistent with protection of water treatment downstream. In the application, p. 139-20, Luminant undertakes to design diversions so that the combination of channel, bank, and floodplain configuration is adequate to safely pass to safely pass at a minimum, the runoff resulting from a 2-yr,6-hr precipitation event (temporary ephemeral diversion), a 10-yr/6-hr precipitation event (permanent ephemeral diversion), or 100-yr/6-hr precipitation event (stream channel diversion), or a 10-yr/24-hr precipitation event for any diversion that forms a watershed boundary for a sedimentation pond. The applicant has included required information for diversions of water in accordance with §12.341(a) that are not for perennial or intermittent stream channels for the following surface water diversions: M-11, M-16, M-5, M-6, L-21 (modification), and L-19 (modification). Detailed design plans were previously approved for the M-6, L-21, and L-19 diversions but the diversions were not constructed. These three diversions have been replaced with new information; their in-service dates are 2014 (M-6) and 2015 (L-19 and L-21). Required information has also been submitted for the non-stream-channel diversions M-11, M-16, and M-5 with in-service dates of 2014 for each. The M-5 and M-6 diversions will divert disturbed runoff to the M-2 Pond; the M-11 diversion will route disturbed runoff to the M-3 Pond, and the M-16 diversion's purpose is surface water control. The applicant has presented all required information set out in §12.341(a). All diversions proposed for the requested permit term will be temporary diversions that will be removed when no longer needed. Detailed design plans must be submitted and approved by the Commission prior to construction.

43. The application provides the information required by §12.152 for closure or relocation of roads as supplemented in SD3 and as limited in this Finding of Fact. Luminant includes a revised Section .152. In the application, Luminant proposed one county road closure in December 2014 and 37 public road buffer variances for 37 public roads for the proposed permit term (Although the road buffer variances are numbered 1-33, the public road variance numbered 23 in the application, SD3, actually contains variance requests for multiple roads.) In SD3, Luminant requested two additional road closures, Titus County Roads 1612 and 1400; however, these two were not included in the public notice as required for approval. Luminant also requested two additional road buffer variances for these two roads (SD3); however, unlike the 37 public road buffer variances, these two variances were not included in the public notice, and these two variances are not approved. The information required for the 37 variances for 37 public roads has been provided and these 37 public road buffer variances are approved [subparagraph (c) of this Finding of Fact and paragraphs 1-31 of Appendix III to this Order]. The proposed county road closure is denied [subparagraph (a) *infra*].

- (a). The following road closure was proposed: a portion of Titus County Road (CR) 1400 (Plate 139-1-11, and application, SD3). Public notice of the proposed road closure has been made in the notice of application published by the Commission; however, no documentation has been filed of Titus County approval, the designated road authority for the closure. The road closure is not approved. Luminant has undertaken to provide documentation of county approval to the Commission when received for approval of the closure of CR 1400. No other relocations or closings will be undertaken until all necessary approvals have been obtained from the proper state and county offices and approval received from the Commission.
- (b). When county roads have been closed, Luminant will request that that the county roads be approved as temporary ancillary roads. County roads were designed and constructed under the specifications and supervision of the Titus County Commissioners' Court and satisfy the performance standards of Section 12.400(b) of the regulations. Through normal use, these roads will be maintained to control or prevent erosion, siltation and air pollution attendant to erosion; control or prevent damage to fish and wildlife resources; control or prevent contributions of suspended solids to stream flow or runoff outside the permit area; neither cause or contribute to violations of State or Federal water quality standards applicable to

receiving waters; not seriously alter the normal flow of water in streambeds or drainage channels; control or prevent damage to public or private property; and contain no acid or toxic-forming substances in road surfacing. The reclamation bond will be calculated to support the use of abandoned public roads for surface mining related activities. Detailed design plans will be submitted prior to any road design modifications.

- (c). Luminant has provided required information for 37 public road buffer variances for 37 public roads for the proposed permit term. Luminant has provided the name, specific locations, and specific activities for the portions of roads proposed for a road buffer variance to mining-related activities to occur within 100 feet of each road. Surface mining activities will not approach nearer than 100 feet from the outside right-of-way line of any public road except as allowed by regulations and approved by the Commission. Activities approved for the 31 road buffer variance areas will include, but not be limited to, mining, pre-stripping activities, pond construction, diversion construction, road construction, dewatering activities, regrading, reseeding, erosion repair and other such activities associated with normal mining, construction and reclamation procedures. Luminant having provided information sufficient to warrant these variances, in accordance with Staff review, and public notice having been provided in the published notice of application, the road variances are approved. The approved variances are set out in Appendix III to this Order. The locations of the public road buffer zone variances are shown on Plates 152-1 through 152-3 of the application.
- (d). All county roads within the Monticello Winfield Mine Area have established fences on both sides and Titus County and Franklin County maintain the area within these right-of-way fences. Luminant proposes to use these established fence lines as the right-of-way boundary on each side of these roads. Actual field measurements of the right-of-way widths (fence to fence) of several of these county roads yielded an average width of 40 feet. Therefore, where fence lines may not exist, Luminant proposes to use 40 feet (or 20 feet on either side of the road as measured from the road centerline) as the right-of way width. Luminant will notify the Commission in a timely fashion should applicant become aware of a situation in which a county road right-of-way may differ from the aforementioned width.

44. The application, as supplemented, in compliance with the requirements of §12.154 of the Regulations, provided the updated status for all roads in Table 154-1 “Road Schedule” (SD1), including the reclamation schedule for temporary roads. No other changes to the approved transportation system are proposed. Roads are depicted on Plates 154-1 through 154-3, SD1. No detailed design plans for primary roads are included. Typical road sections are depicted on Figures 154-1 through 154-3. The application, SD1, also includes a description of transportation facilities including peak flow information for typical watersheds (Appendix 154-A) and sizing of culverts.
45. Required public liability insurance exists as approved by the Commission through self-insurance as allowed by the Regulations and as approved by the Commission by Order dated December 11, 2012 (Docket No. C13-0007-SC-00-D, Permit No. 58, Martin Lake Liberty Mine). Updated financial reports have been submitted to the Commission as required by the Commission Order dated December 11, 2012. No changes have been filed in this docket that would change the approval by the Commission for self-bonding under which self-insurance was also approved by the Commission. No new bond is proposed or required. Luminant’s franchise account status in Texas is active.
46. The Applicant-Violator System (AVS) report shows that Luminant has paid all abandoned mine land fees and has no violations that have not been corrected or are in the process of being corrected in accordance with § 12.215 of the Regulations [Finding of Fact No. 11(f)].
47. Information contained in the approved permit and the portions of the application that propose revision to approved operations meet the requirements of §134.066 of the Act and §12.216 of the Regulations.
- (a). The application, as supplemented, with the permit provisions contained in Appendix I, is accurate and complete and all requirements of the Act and Regulations have been met for approval of the application, as supplemented. [§12.216(1)]
- (b). Proposed operations, as required by the Act and Regulations, can be feasibly accomplished under the operations plan. [§12.216(2)]

- (c). The Commission Staff made an updated assessment of the cumulative hydrologic impacts of the proposed permit area. The operations proposed are designed to minimize disturbance to the hydrologic balance within the permit area and adjacent areas, to prevent material damage outside the permit area to assure the protection and replacement of water rights, and to support approved postmining land uses in accordance with the Act, Regulations, and approved permit. Cumulative long-term effects on surface waters are predicted to be insignificant given the large drainage basins involved. Cumulative long-term effects on groundwater are predicted to be minimal. [§12.216(3)]
- (d). The permit area is not within an area designated as unsuitable for surface coal mining operations or within an area under study for designation as unsuitable (§§12.78-12.85). The permit area is not on any lands subject to the prohibitions and limitations of §12.71(a)(1), (6), or (7). No surface coal mining operations will be conducted within the boundaries of any National Forest, within 300 feet, measured horizontally, of any prohibited occupied dwelling(except as provided in §§12.72(f) and 12.71(a)(5), public building, school, church, community or institutional building or public park, within 100 feet, measured horizontally, of a cemetery, or within 100 feet of the outside right-of-way line of a public road except where access haulage roads join such right-of-way, or as otherwise previously approved by the Commission or approved in this Order. [§12.72(e)]
- (e). The proposed operations will not adversely affect any places included in or eligible for listing in the National Register of Historic Places. [§12.216(5)]
- (f). Documentation required for claimed right-of-entry for proposed operations is contained within the application, as supplemented, including as required by §12.117(b) for operations involving surface mining of coal where the private mineral estate to be mined has been severed form the surface estate. [§12.216(6)]
- (g). Information from Luminant and Staff review show that current violations have been terminated or are in the process of abatement. The Applicant Violator System database (AVS) report operated by the Office of Surface Mining Reclamation and Enforcement (Staff's TA, Appendix VI) indicates no pending violations or uncorrected violations or appeals. [§12.216(8)]

- (h). Luminant has provided proof that all required application and reclamation fees have been paid. The AVS report indicates no unpaid reclamation fees. [§12.216(8)]
- (i). Mining and reclamation operations will not be inconsistent with other such operations anticipated to be performed in areas adjacent to the proposed permit area. [§12.216(9)]
- (j). Staff and Luminant prepared estimates of reclamation costs. Staff's higher estimate, \$117,991,540 is approved. No new bond has been submitted. The approved self-bond with third-party guarantee and indemnity agreement is in the amount of \$120 million in excess of reclamation costs and will remain in place. [§12.216(10)]
- (k). Luminant has satisfactorily addressed prime farmland. The proposed permit is east of the 100th meridian west longitude and contains by definition no alluvial valley floors. The requirements of §12.202 are not applicable. [§12.216(11)]
- (l). Proposed alternative land uses meet the requirements of §§12.147 and 12.399, as applicable, with adoption of the permit provisions in Appendix I to this Order. [§12.216(12)]
- (m). All specific approvals required under Subchapter K of the Regulations have been made, with adoption of the permit provisions contained in Appendix I. [§12.216(13)]
- (n). The proposed changes to the permit will not affect the continued existence of endangered or threatened species, with the adoption of Permit Provisions Nos. 8, 9, and 10 contained in Appendix I. [§12.216(14)]
- (o). All requirements for postmine agricultural land uses have been met. §12.216(15)]
- (p). The applicant does not control and has not controlled mining operations with a demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act.

48. The requirements set out in §§12.227-12.230 for permit renewal/revision/expansion have been met for operations within the permit boundaries: a completed application, notice and review, bond, insurance, and term of the permit. The terms of the permit are being met, and all revised information has been provided or has been made available to the Commission, as supplemented with the permit provisions contained in Appendix I to this Order.
50. The proposed order was properly circulated to the parties, and the docket has been posted for consideration by the Commission.

CONCLUSIONS OF LAW

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

1. The application for renewal/revision/expansion of Permit No. 34E, as supplemented, with the permit provisions set out in Appendix I to this Order, meets all requirements for approval as set out in the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. CH. 134 (Vernon Supp. 2013) (Act), the "Coal Mining Regulations," Tex. R. R. Comm'n, 16 TEX. ADMIN. CODE (CH. 12) (West 2013) (Regulations), the Administrative Procedure Act, TEX. GOV'T CODE, CH. 2001 (Vernon Supp. 2013) (APA), and "Practice and Procedure," Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE §1.1 et seq. (West 2013).
2. Proper public notice of application and notice of application to Texas and Federal agencies was made as required by the Act and Regulations.
3. No public hearing is warranted or required pursuant to the Act, Regulations, APA, or "Practice and Procedure."
4. The Commission may approve the application for renewal/revision/expansion, as supplemented, with the permit provisions contained in Appendix I to this order, soil-testing plan contained in Appendix II, and road buffer variances contained in Appendix III.
5. No increased bond is required prior to issuance of the renewed/revised/expanded permit.

Docket No. C12-0026-SC-34-C
Application for Renewal/Revision/Expansion
Monticello – Winfield Mine, Permit No. 34F

THEREFORE IT IS ORDERED that the Findings of Fact and Conclusions of Law are hereby adopted; and

IT IS FURTHER ORDERED that the application for renewal/revision/expansion, as supplemented, and with adopted Appendices I-III to this order, meets all requirements for approval and is hereby approved; and

IT IS FURTHER ORDERED that no additional bond is required, and the bond accepted by Commission Order dated May 15, 2012 in the amount of \$120,000,000 remains sufficient for reclamation performance bonding of the renewed/revised/expanded permit; and

IT IS FURTHER ORDERED that the permit is hereby renumbered as Permit No. 34F; and

IT IS FURTHER ORDERED that Permit No. 34F is hereby issued for a permit term of five years.

DONE AT AUSTIN, TEXAS, on the 25th day of March, 2014.

RAILROAD COMMISSION OF TEXAS


CHAIRMAN BARRY T. SMITHERMAN


COMMISSIONER DAVID PORTER


COMMISSIONER CHRISTI CRADDICK

ATTEST:


Secretary
Railroad Commission of Texas

APPENDIX I
PERMIT PROVISIONS

APPENDIX V - PERMIT PROVISIONS

1. 12.125(2)-1
No disturbance of any cultural resource site shall occur until the permittee has obtained written approval from the Commission. Copies of all correspondence between the permittee and the Texas Historical Commission, and the permittee and the U.S. Environmental Protection Agency, shall be provided by the permittee to the Commission concurrently or otherwise, in as timely a manner as possible.
2. 12.143
Quality assurance and quality control procedures, monitoring, calibrations, and analysis, for the air quality monitoring plan will be conducted in accordance with EPA standards, 40 CFR 58.
3. 12.143
The applicant will be considered noncompliant, with respect to air quality emissions, if the National Ambient Air quality limit of 150 micrograms per cubic meter (40 CFR 50), over background air quality, is exceeded more than once in any 12-month period at any one air-quality monitor. Background air quality shall consist of air quality monitor data obtained from the same type, or an equivalent type, of monitor during the same time period in the area upwind of the monitor indicating the exceedance.
4. 12.143
The air monitoring station (N-78) near the Reichert properties shall be monitored to comply with Permit Provisions No. 2 and No. 3 and the approved air monitoring plan located in Appendix A, Section .143, of the application. Luminant shall begin air monitoring at Station N-78 a minimum of 90 days prior to commencement of surface mining activities in the L-4 and L-5 Auxiliary Areas, L-Area Auxiliary No.1, M-Area Auxiliary No. 1 and M-Area Auxiliary No. 2 and continue air monitoring until backfilling and grading is complete and vegetation established (Phase II Bond release). Luminant must notify the Commission in writing seven days prior to the commencement of air monitoring of Station N-78.
5. 12.139
The Commission shall be notified annually no later than January 31st of any bottom ash used the previous year on mine road surfaces together with a map,

which identifies the location of areas of bottom ash use; or a notification letter, if there are no new uses of bottom ash on mine roads.

6. 12.145b3

The backfilling and grading times for each mine area are approved as follows:

F-2 Auxiliary Area, Dragline, 180 days;
SSC Area, Dragline, 8 months;
A Auxiliary Area, 180 days;
J Auxiliary Area, 180 days;
L Auxiliary Areas, 180 days; and
M Auxiliary Areas 180 days.

Table 139(T)-4 must be revised in the next revision filed for the permit to : (1) show the above time periods on the "Proposed Permit 34E Time" column of Table 139(T)-4 and (2) to provide a meaning for the single asterisk shown after the 1200 ft. proposed Permit 34E distance for the SSC Area, Dragline or delete the asterisk. Luminant must provide this clarification in the next revision filed for the permit.

7. 12.139-2

Auxiliary/mobile equipment must be used to selectively handle overburden approved as suitable for placement in the postmine top four feet as topsoil/subsoil-substitute material in the A Area and J-4, M-1, and M-2 Auxiliary Areas.

8. 12.144-1

Luminant shall provide a plan within 90 days of permit issuance, to survey unmined aquatic and terrestrial habitat in M and L Areas that is specific to the Timber/Canebrake Rattlesnake, Northern Scarlet Snake, and Alligator Snapping Turtle.

9. 12.144-2

Luminant shall provide, within 90 days of USACE permit issuance, a map and table identifying the areas and acres of waters of the U.S., including wetlands that were and are proposed to be impacted under each permit using the four standard categories of waters and wetlands.

10. 12.144-3 Luminant shall provide to SMRD within 90 days of submittal to the USACE, copies of the correspondence to and from the USACE on projects related to the accounting and reclamation of authorized impacts to waters of U.S., including wetlands at the Monticello Winfield Mine. This must include but not be limited to changes in the mitigation plan, the final locations of mitigation sites, and an annual accounting of acres impacted and reclaimed that will be proposed as the mitigation acreage.
11. 12.146d1 Luminant shall provide current top-of-ash elevations in G-Area Pit 129, upon request by a SMRD Inspection and Enforcement Staff member or the SMRD Director, that demonstrate compliance with the approved ash-disposal plan for protection of adjacent shallow domestic wells.
12. 12.147-1 Luminant shall provide within 60 days of permit issuance a corrected Plate 147-1 and 147-2 in which it no longer depicts portions of Tracts 1732A and 2373 within the disturbance boundary or as leased tracts. Luminant shall make corresponding reductions in disturbance acres in Table 147-1 to account for the lesser acreage depicted on Plate 147-1 and 147-2.

Docket No. C12-0026-SC-34-C
Application for Renewal/Revision/Expansion
Monticello – Winfield Mine, Permit No. 34F

APPENDIX II

SOIL-TESTING PLAN AND POSTMINE PERFORMANCE STANDARDS

(From Staff's TA dated February 24, 2014)

SOIL-TESTING PLAN AND POSTMINE PERFORMANCE STANDARDS

After final grading, permanent markers will be placed on 1,000-ft centers in regraded areas to delineate a 23-acre grid system (see Plate 145-1) for monitoring postmine soil quality and nutrient requirements. These markers will be maintained until land is released from all reclamation obligations. All disturbed areas will be subject to the postmine soil monitoring program as outlined below

Initial Soil Sampling: Extent of Leveling

The grids will serve as the basis for initial postmine soil sampling. An initial composite soil sample will be obtained on each grid. The samples will be collected, analyzed and the results reported to the Commission within two years following rough backfilling and grading.

Initial Soil Sampling for Placement in to ERA

If a grid is not completely leveled (23-acres), the portion that has been leveled and will be proposed for placement into an Extended Responsibility Area (ERA) will be sampled and reported.

Portions of grids that are sampled and will be proposed for placement into an ERA will be physically marked in the field, with markers being placed so that they are visible from one to the next. The line dividing a grid into separate sampling portions will be clearly marked along an easily identifiable boundary such as an extended responsibility area, road or tree line. Markers are placed at each turn in an ERA line. So, if a person in the field needs to determine the extent of sampling which a portion of a soil grid has received, it would be a matter of locating the grid (from a map and/or the grid center post) and then observing which side of the ERA line they are standing.

Grid identification for reporting purposes will be clear so that there is no question about which grids have been reported. Portions of grids which are sampled to facilitate placement into ERP will be labeled in such a way that it is clear there will be further sampling and reporting as the remainder of that grid is leveled and proposed for ERP. For example, a complete 23-acre grid will be labeled as "2345" whereas the first portion of an adjacent divided grid will be labeled as "2346-1" with subsequent samples being labeled as "2346-2", etc. until the entire 23 acres have been sampled and reported. There are no combinations of grids proposed for any advancing divided, interior grids. Any portion of a grid that will be proposed for placement into the ERA will have the appropriate number of samples collected from it based on its acreage.

Luminant will submit initial postmine soil monitoring results before the placement of land into the extended responsibility period (ERP) and before the approval of Phase I bond release.

Initial Soil Sampling: Procedures and Parameters

Composite soil samples will consist of sub-samples collected at a density of one per acre of disturbance. An aggregate disturbance/redisturbance of 0.5 acre within a grid initiates soil sampling requirements. Composite samples will be made to represent the 0-1 ft and 1-4 ft depth increments. Adjacent soil sub-samples will be taken no less than 200 ft from each other. All samples will be collected using standard soil sampling techniques.

- If a grid is disturbed in its entirety, twenty-three (23) sub-samples will be mixed to make one composite sample per depth increment.
- If the disturbance within a grid is not the complete twenty-three (23) acres, then the disturbed acreage will be sampled at a frequency of one subsample per acre of disturbance. (Example: If only 12.6 acres are disturbed within the grid, 13 subsamples will be taken) If disturbance within a grid rounds to or is equal to 0.5 acre, at least one sample must be collected.
- If disturbance within a grid is less than 2 acres in size, the acreage may be combined with an adjacent grid, however no more than two grids will be combined for sampling purposes.
- If disturbance within a grid is less than 0.5 acre in size, it will not be individually sampled for reporting purposes but the acreage will be combined with an adjacent grid.
- If disturbance within a grid is less than 0.05 acre in size, it will not be individually sampled nor reported.

The composite samples representing the 0-1 ft increment will be analyzed for the following parameters:

1. pH
2. Potential acidity (PA)
3. Exchangeable acidity (EA)
4. Neutralization potential (NP)
5. Acid/base accounting (ABA) = 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. All sulfur forms

Docket No. C12-0026-SC-34-C
Application for Renewal/Revision/Expansion
Monticello – Winfield Mine, Permit No. 34F

The composite samples representing the 1-4 ft. increment will be analyzed for the following parameters:

1. pH
2. PA
3. EA
4. NP
5. ABA
6. Texture - sand, silt and clay: USDA-NRCS
7. CEC
8. All sulfur forms

In addition to the above analyses, a random 10 percent of the samples (0-1' and 1-4') will also be analyzed for hot-water-extractable B, total Cd, and total Se.

Procedures for analyzing plant available nutrients will utilize the Texas Agricultural Extension Service publication, *Soil Testing Procedures* (March, 1980). The remaining parameters will be analyzed according to the Commission's *Overburden Parameters and Procedures Manual* dated May 16, 1989 (updated in 2003 for the adaptation of the EPA method for pyritic sulfur analysis).

The analytical results and a map showing each grid and/or partial grid reported will be submitted to the Commission in both hard copy and digital formats. The map will display the grids and/or partial grids sampled and reported plus the Texas State Plane coordinates of their location. Luminant will also provide an updated bank with each initial report submitted, showing acres for each grid. Maps provided will clearly delineate the configuration of each grid, represented by the data contained in the report, and digital acreage information will be provided.

Initial Soil Sampling: Calculation of the Disturbance Area Bank Account

Luminant proposes to use a banking method to establish postmine soil suitability by comparison of premine and postmine acreage exceeding baseline soil quality criteria. For parameters not listed in the soil baseline, the statewide criteria as shown in Advisory Notice ER-BA-127(b) will be used to determine postmine soil success. The statistical soil baseline (Section 134) will provide the frequency distributions of native soils for regulated parameters (See Table 145-T-1 for Areally-Weighted Frequency Distributions for Postmine Soil Performance Standards). These frequency distributions are then multiplied by the acreage within the actual disturbance area to yield the actual acreage allowed for each parameter value at each depth increment. The disturbance area will increase as mining progresses to reflect additional areas of disturbance. Expansion of the disturbance boundary, reflecting newly mined and reclaimed areas, will be submitted to the Commission as part of each

initial soil report. Postmine acres sampled to date will be compared to the native soil baseline, and no parameter will fall below the postmine soil performance standards. Ultimately, the disturbance boundary will reflect the full extent of disturbance and reclamation within the mining permit.

Banked acres will be provided with each submittal of initial postmine soil data. Luminant plans to have only one bank for the entire permit area. If new areas are added to the permit or permits are consolidated, these areas will be incorporated into the soil bank. Acreage released from bond liability will continue to be included in the bank. Therefore, one bank will continue through a mine from the beginning of mining to the final extent of mining disturbance, irrespective of permit term or other time constraints. This approach will provide a truer means of evaluating postmine soil success throughout the entire life of a mine site than using intermediate bank areas. Luminant plans to provide one soil bank using two depth increments (0-1 ft and 1-4 ft).

The following steps are involved in calculating the postmine bank account:

- 1) The premine standard is calculated by multiplying category baseline percentages for each soil parameter by total acres within the bank area.
- 2) The postmine values are the sums of total banked acres by category for each soil parameter represented by the initial soil sampling data.
- 3) Finally, balances are calculated as the difference between premine and postmine values to which adjustments are made. Adjustments are made by utilizing offsetting negative postmine balances in a given parameter category by amounts up to the unused sum of less desirable categories from the premine statistics.

Maintenance Soil Sampling

The purpose of soil-fertility sampling program is to ensure no augmentation beyond normal husbandry practices has occurred during the Extended Responsibility Period. Maintenance soil sampling also provides documentation on soil conditions for management purposes. The results of this analysis will be used to determine the rate and amount of fertilizer application for the next growing season. The samples will be collected from each pastureland Land Management Unit (LMU).

The soil samples will be obtained at the end of the growing season (October 1 through December 31). Samples will be taken prior to the first year of productivity assessment, during the first year of productivity assessment, and during the second year of productivity assessment for pastureland LMUs. In the event that years of productivity assessment are not concurrent, Luminant plans to collect maintenance samples in the year prior to the second year of productivity assessment. Luminant will not obtain maintenance samples from areas where trees are planted, as fertilizer is only applied to trees the year in which they are planted.

At the end of each growing season, composite soil samples will be taken from the 0-1 ft. depth and analyzed for the following parameters in accordance with the Commission's overburden parameters and procedures list: pH , nitrate-nitrogen, and plant-available P, K, Ca and Mg.

For sampling and reporting purposes, a pastureland LMU will not exceed 100 acres in size. Any management unit greater than 100 acres in size will be subdivided during sampling to reflect areas of approximately equal size less than 100 acres. The divisions will be made along existing soil grid lines using either northings or eastings, whichever is appropriate for the management unit configuration. Each management unit will be identified by number and shown on the map accompanying the report. Sub-samples will be obtained to represent no more than 10 acres per sub-sample. These sub-samples will be composited to represent the management unit for analysis and reporting purposes.

A report showing the amount and type of fertilizer and lime applied (since the end of the previous growing season), analysis results, and a map showing the units sampled will be submitted to the Commission during the first quarter of the year following each reporting period.

Ten Percent Random Sampling in Fourth Year of ERP

During the fourth year of ERP, a random 10% of the 23-acre and/or partial postmine-soil monitoring grids will be re-sampled using two depth increments (0-1 ft and 1-4 ft) and analyzed for the same parameters as those in the initial soil sampling. Results and a map showing the grids randomly sampled will be provided to the Commission no later than the second month of the fifth year of the ERP. In the event that chemical and physical properties of the postmine soils warrant further investigation, the Commission may require additional testing.

Alternate Soil Testing Plan

In the event the postmine soil testing plan identifies AFM/TFM problems, an alternate soil testing plan will be developed specific for the affected area. Luminant will submit a plan and schedule to the Commission for approval prior to the initiation of alternate soil testing. This plan will include detailed information regarding delineation of affected area, sampling depth and increments. A maximum sample area of 5.7 acres at a density of one sample location per acre will be assigned and sampled on one-foot intervals to the depth of concern, unless otherwise approved by the Commission.

Docket No. C12-0026-SC-34-C
 Application for Renewal/Revision/Expansion
 Monticello – Winfield Mine, Permit No. 34F

Luminant will notify the Commission of its sampling schedule to allow members of the Commission staff to be present during this sampling. Upon request, splits of each sample will be provided to the Commission at the time of sampling. Samples will be analyzed for the same parameters as those in the initial soil sampling, unless submittal of a more limited suite of parameters is approved by the Commission. The results of these analyses and a remediation plan will be submitted to the Commission.

Once Luminant conducts remediation, the affected area will be sampled using the initial soil sampling protocol. This is essential to ensure remediated acreage is accurately reflected in the postmine soil bank and to replace any previously submitted data for the grid(s). Luminant will submit results to the Commission verifying the successful correction of the identified soil problem.

Postmine Soil Performance Standards

The proposed postmine soil performance standards for the proposed Monticello-Winfield Mine, Permit No. 34E renewal/revision/expansion area are attached.

MONTICELLO-WINFIELD MINE, PERMIT NO. 34E RENEWAL/EXPANSION AREALLY-WEIGHTED FREQUENCY DISTRIBUTIONS POSTMINE-SOIL PERFORMANCE STANDARDS FOR TOPSOIL SUBSTITUTE AREAS

pH, Soil Depth 0-1 ft			pH, Soil Depth 1-4 ft		
<u>3.8-3.9</u>	<u>4.0-4.4</u>	<u>4.5-4.9</u>	<u>3.6-3.9</u>	<u>4.0-4.4</u>	<u>4.5-4.9</u>
-----% area-----			-----% area-----		
1	11	37	1	12	57

ACID-BASE ACCOUNTING (ABA)											
tons/1000 tons (t/kt)											
<u>SOIL DEPTH</u>	<u>-11</u>	<u>-10</u>	<u>-9</u>	<u>-8</u>	<u>-7</u>	<u>-6</u>	<u>-5</u>	<u>-4</u>	<u>-3</u>	<u>-2</u>	<u>-1</u>
-----% area-----											
0-1 ft	---	---	---	---	1	1	2	5	13	5	31
1-4 ft	1	---	1	4	3	6	11	17	17	15	13

SAND (%)			
<u>SOIL DEPTH</u>	<u>81-85</u>	<u>86-90</u>	<u>91</u>
	-----% area-----		

Docket No. C12-0026-SC-34-C
 Application for Renewal/Revision/Expansion
 Monticello – Winfield Mine, Permit No. 34F

0-12" 3 4 1

<u>SOIL DEPTH</u>	<u>CLAY (%)</u>			
	<u>41-45</u>	<u>46-50</u>	<u>51-55</u>	<u>56-57</u>
	-----% area-----			
0-12"	2	2	1	1

<u>Selenium (Se) - ppm</u>		<u>Cadmium (Cd) - ppm</u>	
<u>SOIL DEPTH</u>	3	<u>SOIL DEPTH</u>	0.8 0.9 1.0 1.1
	-----% area-----		-----% area-----
0-1 ft	---	0-1 ft	1 --- --- 1
1-4 ft	1	1-4 ft	2 1 --- 2

**100% OF THE POSTMINE 0-1 AND 1-4 FT INCREMENTS
 WILL MEET THE FOLLOWING STANDARDS**

BORON (B) ≤ 5 ppm

Note: a zero (0) in a parameter value column indicates a value between 0.0% and 0.5%, rounded to 0. A dashed line in a parameter value column represents a true zero (0) value for that interval.

APPENDIX III
PUBLIC ROAD BUFFER VARIANCES

1. U.S. Highway 67 - On the north side of U.S. Highway 67, from the intersection of FM 1734 (along the western Permit boundary) to a point approximately 0.3 mile west of that intersection, continuing on both sides of U.S. Highway 67 for approximately 1.8 miles, then on the south side of U.S. Highway 67 for approximately 2.4 miles (to the eastern side of the Permit boundary).
2. U.S. Highway 271 - Along the east side of U.S. Highway 271, from the intersection of U.S. 271 and Titus County Road 1430 (NW 24) to a point approximately 0.64 miles south of that intersection, continuing on both sides of U.S. Highway 271 in a southerly direction and past the intersection with Business U.S. Highway 271 (Loop 419) to the intersection of U.S. Highway 271 and Titus County Road 1317 (NW-16). Then, in a southerly direction and along the west side of U.S. Highway 271, beginning at the intersection of U.S. 271 and Titus County Road 1317 (NW-16), approximately 0.42 miles to a point (permit boundary).
3. Business U.S. Highway 271 (Loop 419) - Along both sides of Business U.S. Highway 271 (Loop 419) from the intersection of Business U.S. Highway 271 (Loop 419) and U.S. Highway 271 to a point approximately 0.38 miles south of that intersection. Then continuing in a southerly direction along the west side of Business U.S. Highway 271 (Loop 419) to the intersection of Business U.S. Highway 271 (Loop 419) and Titus County Road 1317 (NW-16).
4. Titus County Road 1317 (NW-16) – Along the north and west side of Titus County Road 1317 (NW-16) from the intersection of U.S. Highway 271 and Titus County Road 1317 (NW-16) to the intersection of Titus County Road 1317 (NW-16) and Business U.S. Highway 271 (Loop 419).
5. Interstate Highway 30 - Along the north side of Interstate Highway 30, from the intersection of Interstate Highway 30 and the St. Louis and Southwestern Railway, and continuing approximately 0.3 mile east of the same intersection (east permit boundary).
6. Interstate Highway 30 South Access Road - Along the south side of Interstate Highway 30 South Access Road, from the intersection of Titus County Road 2550 (SW-5) to the intersection of Titus County Road 2435 (SW-29).
7. Interstate Highway 30 North Access Road - Along the north side of Interstate Highway 30 North Access Road, from the intersection of Titus County Road 1065 (NW-19), and continuing

approximately 3.2 miles east of the same intersection (excluding a 300-foot segment that is not in the permit area).

8. FM 127 - Along the north side of FM 127, from the intersection of Titus County Road 2500 (SW-19) and FM 127 to the intersection of Titus County Road 2400 (SW-35) and FM 127.
9. FM 2152 - Along both sides of FM 2152, from the intersection of FM 2152 and Titus County Road 1635 (NW-20) to the intersection of FM 2152 and Titus County Road 1535 (NW-26). Also along the west side of FM 2152 between its intersections with Titus County Road 1625 (NW-21) and Titus County Road 1635 (NW-20), and along the east side of FM 2152 between its intersections with Titus County Road 1535 (NW-26) and Titus County Road 1660 (NW-41).
10. FM 1734 - Along the east side of FM 1734, from its intersection with U.S. Highway 67 to its intersection with Titus County Road 1165 (NW-13), and along its south side between its intersections with Titus County Road 1165 (NW-13) and Titus County Road 1160 (NW-15C). Also along both sides of FM 1734 from its intersection with Titus County Road 1160 (NW-15C) to a point approximately 0.7 miles east of the intersection, then along the north side of FM 1734 from this point to a point located approximately 0.6 miles west from the intersection of FM 1734 and U.S. Highway 271 (permit boundary).
11. FM 1402 - Along the west side of FM 1402, from the intersection of FM 1402 and Titus County Road 1740 (NW-28A), to the intersection of FM 1402 and Titus County Road 1670 (NW-40).
12. Titus County Road 1200 (NW-4) - Along both sides of Titus County Road 1200 (NW-4), from the intersection of Titus County Road 1312 (NW-12) and Titus County Road 1200 (NW-4), to a point approximately 1.8 miles northwest of the intersection, then another 0.25 mile along the east side of Titus County Road 1200 (NW-4).
13. Titus County Road 1153 (NW-6) - Along both sides of Titus County Road 1153 (NW-6), from the intersection of Titus County Roads 1153 (NW-6) and 1150 (NW-15) and continuing to a point approximately 0.3 miles west of the same intersection (west permit boundary).
14. Titus County Road 1160 (NW-15C) - Along both sides of Titus County Road 1160 (NW-15C), from the intersection of FM 1734 to the Barrett Cemetery (entire length of road).

Docket No. C12-0026-SC-34-C
Application for Renewal/Revision/Expansion
Monticello – Winfield Mine, Permit No. 34F

15. Titus County Road 1150 (NW-15) - Along both sides of Titus County Road 1150 (NW-15), from the intersection of FM 1734 and Titus County Road 1150 (NW-15), and continuing to a point approximately 0.8 miles north of the same intersection (excluding a short segment that is not in the permit area) then along the east side of Titus County Road 1150 (NW-15) for an additional 0.6 miles.
16. Titus County Road 1240 (NW-17) - Along the south side of Titus County Road 1240 (NW-17), from the intersection of Titus County Roads 1240 (NW-17) and 1140 (NW-21), and continuing to a point approximately 0.5 miles west of the same intersection.
17. Titus County Road 1065 (NW-19) - Along the east side of Titus County Road 1065 (NW-19), from the intersection of U.S. Highway 67 and Titus County Road 1065 (NW-19), and continuing to the intersection of Interstate Highway 30 North Access Road and Titus County Road 1065 (NW-19).
18. Titus County Road 1635 (NW-20) - Along the north side of Titus County Road 1635 (NW-20), from the intersection of FM 2152 to a point approximately 0.9 mile from that intersection.
19. Titus County Road 1140 (NW-21) - Along both sides of Titus County Road 1140 (NW-21) from the intersection of FM 1734 and Titus County Road 1140 (NW-21) to the intersection of Titus County Road 1140 (NW-21) and Titus County Road 1240 (NW-17).
20. Titus County Road 1430 (NW-24) - Along the south side of Titus County Road 1430 (NW-24), from the intersection of U.S. Highway 271 and Titus County Road 1430 (NW-24), and continuing east to the end of this portion of road, approximately 0.5 miles east of the same intersection (remaining portion of road).
21. Titus County Road 1535 (NW-26) - Along the south side of Titus County Road 1535 (NW-26), from its intersection with FM 2152 westward approximately 0.5 mile.
22. Titus County Road 1670 (NW-40) – Along the south side of Titus County Road 1670 (NW-0), approximately 1.1 miles from its intersection with FM 1402.
23. Along both sides for the entire length of the following Titus County Roads: 2520 (SW-19B), 2470 (SW-33), 1740 (NW-28A), 1749 (NW-28B), 1760 (NW-28F), 1765 (NW-28-G) and 1325 (NW-33A).

24. Titus County Road 2550 (SW-5 and SW-22) - Along both sides of Titus County Road 2550 (SW-5 and SW-22), from the intersection of Interstate Highway 30 South Access Road to a point approximately 2.7 miles to the southeast.
25. Titus County Road 2670 (SW-5) - Along the west side of Titus County Road 2670 (SW-5), from a point approximately 0.4 miles north of the intersection of Titus County Road 2650 (SW-7) and Titus County Road 2670 (SW-5), and continuing north approximately 0.23 miles to a point (permit boundary). From that point, continuing north along both sides of Titus County Road 2670 (SW-5) to the intersection of Titus County Road 2670 (SW-5) and Titus County Road 2550 (SW-22).
26. Titus County Road 2650 (SW-7) - Along the north side of Titus County Road 2650 (SW-7), from its intersection with Titus County Road 2600 (SW-11), and continuing to a point approximately 0.25 miles west of the same intersection.
27. Titus County Road 2600 (SW-11) - Along the north side of Titus County Road 2600 (SW-11), from its intersection with Titus County Road 2650 (SW-7), and continuing to a point approximately 0.75 miles east of the same intersection (east permit boundary).
28. Titus County Road 2500 (SW-19) - Along both sides of Titus County Road 2500 (SW-19), from the intersection of Interstate Highway 30 Access to the intersection of FM 127 (south permit boundary).
29. Titus County Road 2400 (SW-35) - Along the west side of Titus County Road 2400 (SW-35), from a point approximately 0.1 miles south of the intersection of FM 899 and Titus County Road 2400 (SW-35) (permit boundary), and continuing to the intersection of FM 127 and Titus County Road 2400 (SW-35).
30. Titus County Road 1135 (NW-12) – Along both sides of Titus County Road 1135 (NW-12) from the intersection of Titus County Road 1135 (NW-12) and FM 1734 to the intersection of Titus County Road 1135 (NW-12) and Titus County Road 1200 (NW-4).
31. Franklin County Road SE-4130 - Along the east side of Franklin County Road SE-4130, from a point approximately 0.2 mile north of the intersection of Titus County Road 2630 (SW-12) and Franklin County Road SE-4130, and continuing to a point approximately 1.0 miles south of the intersection of Interstate Highway 30 South Access Road and Franklin County Road SE-4130.