RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION

SMRD DOCKET NO. C15-0005-SC-49-C

APPLICATION BY LUMINANT MINING COMPANY LLC
FOR RENEWAL/REVISION OF PERMIT NO. 49A
BREMOND MINE, ROBERTSON COUNTY, TEXAS

ORDER APPROVING APPLICATION FOR RENEWAL/REVISION

Luminant Mining Company LLC (Luminant), 1601 Bryan Street, Dallas, Texas 75201 has applied to the Railroad Commission of Texas (Commission) for renewal/revision of its surface coal mining and reclamation permit for its Bremond Mine, Permit No. 49A, located in Robertson County, Texas. The application was filed pursuant to the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES. CODE ANN. CH. 134 (Vernon 2011 & Supp. 2016) (Act), and the "Coal Mining Regulations," Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE CH. 12 (West 2016) (Regulations).

The Bremond Mine lies approximately five miles east of the town of Bremond, Texas, in Robertson County. Permit No. 49 was initially approved and issued for the Twin Oak Mine on March 23, 2004. It was renewed and renamed on April 20, 2010. This application for renewal/revision of the Bremond was declared administratively complete by the Director, Surface Mining and Reclamation Division (SMRD) and transferred to the Hearings Division on November 14, 2014. Public notice and notice to landowners and state and federal agencies, with opportunity to comment, were provided. No public hearing on the application was requested.

SMRD's Applications and Permits Staff (Staff) reviewed the application for compliance with the Act and pertinent regulations, and prepared a Technical Analysis (TA) document dated November 16, 2015. Staff and Luminant are the only parties to the proceeding. Technical review of the application, supplements, Staff analyses and other filings by the parties reflects no outstanding deficiencies with four Staff-recommended permit provisions. After review of the supplemented application and the Staff's TA and addenda, the Administrative Law Judge recommends that the Commission find that the application should be approved in accordance with the Findings of Fact, Conclusions of Law, the permit provisions (Appendix I) and the soil monitoring plan (Appendix II) to this Order.

FINDINGS OF FACT

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

1. On November 12, 2014, Luminant Mining Company LLC (Luminant) submitted its application pursuant to the Texas Surface Coal Mining and Reclamation Act, TEX. NAT. RES, CODE ANN. Ch. 134 (Vernon 2011 & Supp. 2016 (Act) and the "Coal Mining Regulations," Tex. R.R. Comm'n, 16 TEX. ADMIN. CODE Ch. 12 (West 2016) (Regulations) made up of one volume for renewal/revision of its surface coal mining and reclamation permit for the Bremond Mine, Robertson County, Texas. FM 2293 bisects the proposed permit area. The Petteway Cemetery is outside the proposed permit area but is very near the eastern boundary. The western boundary of the proposed permit area is formed in part by Walnut Creek, and the southern boundary intersects Gnats Creek. The northern boundary, which follows a segment of the existing railroad, is located south of the White Rock community.

   (a). Luminant submitted the required application fee of $3,000.00 [§12.108(a)(3)] (Regulations). The Director of SMRD declared the application administratively complete and filed it with the Office of General Counsel for docketing on November 14, 2014. The application consists of the one main volume and three additional volumes filed as supplements. Staff filed two comment letters listing application deficiencies and providing non-substantive comments (hereinafter, "CL1" and CL2"). Staff also filed a Technical Analysis document and an addendum to its Technical Analysis (hereinafter, "TA" and "TA1", respectively). Luminant filed three supplemental documents (hereinafter, "SD1", "SD2" and "SD3") in response. These documents were filed as follows: CL1, by letter dated January 30, 2015; SD1, by letter dated August 20, 2015; CL2, by letter dated September 16, 2015; SD2, by letter dated October 26, 2015; TA, by letter dated November 16, 2015; SD3, by letter dated January 5, 2016; and TA1, by letter dated January 28, 2016, reviewing all supplements.

   (b). Staff and Luminant are the only Parties to the proceeding. Copies of the application have been on file with and available for public inspection at the office

of the County Clerk, Robertson County, and at the Commission's main office in Austin, Texas (§12.222, Regulations). The information contained in the supplements was for the purpose of supplementation, clarification, revision or correction of data and information addressed in sections of the administratively complete application, and to address comments and questions of parties. The application and all supplements were appropriately placed on file for public inspection. The required public notice was given after the filing of the application (§12.123, Regulations). The supplementary documents were filed to address Staff exceptions to compliance and proposed permit provisions presented in the TA. The information contained in the supplemental documents, for the purposes of approval of this application as set out in this Order, does not constitute a material change to an application for which additional notice must be provided under §12.226 of the Regulations. Staff's TA1, the final TA Addendum, indicates that Luminant has satisfactorily addressed all of Staff's enumerated deficiencies with Commission approval of the Staff-recommended permit provisions.

2. The permit area contains 3,371 acres (SD1). No additional acreage is proposed to be added. No mining has occurred and none is proposed for the renewal term (2014-2019). Two exploration pits have been completed and surface water and groundwater monitoring are ongoing. Some support structures may be constructed during the renewal term. Existing Permit Provision No. 1 that specifies the location in SD2 of the approved permit of frequency distributions for PH, acid-base account, clay, and sand for topsoil and subsoil that constitute the postmine soil performance standards is retained.

3. The application, as supplemented, was appropriately verified by an authorized representative of Luminant [§12.107 (g)] (Regulations) and was processed pursuant to the Act, the Regulations, the Administrative Procedure Act, TEX. GOV'T CODE ANN. CH. 2001 (APA), and "Practice and Procedure," TEX. R.R. Comm'n, 16 TEX. ADMIN. CODE §1.1 *et seq*. Notice of application was published once each week for four consecutive weeks in a newspaper of general circulation in the locality of the surface mining and reclamation operations on January 16, 23, 30, and February 6, 2015, in the *Bremond Press*, Robertson County, Texas. Luminant filed proof of publication of notice

by letter dated March 9, 2015. The notice of application contains all information required by §134.058 of the Act and §12.207(a) of the Regulations.

4. The Commission placed a complete notice of application in the mail on January 16, 2015 to the Texas and Federal agencies listed in §12.207 of the Regulations and to local government agencies. No comments were filed in response to the notice.

5. The Commission placed a complete notice of application in the mail on January 16, 2015 to landowners within and adjacent to the proposed permit area. No landowners submitted comments/inquiries and/or protests regarding the application or requested a hearing.

6. The application, as supplemented (Section .116), includes all information required to show organizational information, ownership interests, and compliance information as required by §12.116 of the Regulations. Oak Grove Mining Company LLC and Oak Grove Power Company LLC own certain tracts or are the lessee(s) of certain land tracts located within the proposed permit area. Luminant updated information in SD1 and SD3 to show new and former names of its corporate companies (changed since approval of the permit) and included the officers and directors of Energy Future Holdings Corp., Energy Future Competitive Holdings Company LLC, Texas Competitive Electric Holdings Company LLC, Luminant Holding Company LLC, Luminant Mining Company LLC, Oak Grove Mining Company LLC, and Oak Grove Power Company LLC. Information for notices of violation was updated (Appendix 116-D) (SD3). In the initial application, Luminant included Plate 116-1, the property ownership map with tracts within and adjacent to the permit area identified by tract number. Tract ownership for tracts within the permit area are set out in Appendix B, and ownership of tracts adjacent to the permit area are set out in Appendix C. Appendix C also includes a description of the legal instrument by which Luminant claims right-of-entry, if any. Appendix E contains a table listing those tracts with lignite interests that have been severed from the surface estate. Appendix F includes lease holder information.

7. Information has been presented which complies with the requirements of §12.117 of the Regulations for documentation of claimed right-of-entry.

8. The application, as supplemented, includes required information regarding the proposed permit boundary and term. The requirements of §12.119 of the Regulations for the proposed permit term and the requirements of §12.125 of the Regulations for life-of-mine information have been met. Luminant will provide a revision application should Luminant propose mining during the requested term. The approved permit contains information for the permit term and affected acres for the life-of-mine and the size, sequence, and timing of subareas in accordance with §12.125(a)(Regulations).

9. The proposed permit area is not within an area designated as unsuitable for surface mining activities and is not within any area under study for designation in an administrative proceeding (§12.118, Regulations).

10. The applicant does not propose to conduct surface mining activities within 300 feet of any occupied dwelling not owned by Luminant. Luminant does not propose to conduct mining in an area for which mining is prohibited or limited, except as otherwise approved by the Commission. The requirements of §12.118 of the Regulations have been met.

11. Luminant provided a certificate of liability insurance coverage, which was previously submitted to the Commission by letter dated July 20, 2015, and which was effective from August 1, 2015 to August 1, 2016. Official notice has been taken of the certificate of insurance approved on August 30, 2016 effective from August 1, 2016 through August 1, 2017. The approved certificate provides information that complies with §12.311 for personal injury and property damage insurance.

12. Section .121 of the application, as supplemented, includes identification of other licenses and permits required, including permits or authorizations issued by the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers ("USACE"), the Texas Commission on Environmental Quality (TCEQ), the U.S. Mine Safety and Health Administration, and the Texas Parks and Wildlife Department. Dates of issuance of approved issued permits are contained in the application, and registration activation dates are contained in SD2. This section meets the requirements of §12.121 (Regulations).

13. The approved permit identified 15 cultural resource sites within the permit area in accordance with §§12.125(2) and 12.151 of the Regulations. In the application, the survey results that identified the sites are summarized. Eleven of the 15 sites identified in the permit as potentially eligible for listing in the National Register of Historic Places have been determined not eligible by the Texas Historical Commission; four sites still require protection. Only one of the four sites requiring protection, Site 41RT309, may be impacted in a future permit term by mining activities. None will be impacted in the proposed term. The treatment and protection plan for any sites that may be discovered is contained in approved Permit No. 49.

14. The application, as supplemented, contains references to the original application for Permit No. 49 to describe the geology and hydrology of the areas proposed for disturbance within the proposed permit area. Luminant provided an updated water well inventory in Section 128, Appendix 128-E, and Plate 128-2 showing well locations. Seven new water wells were identified during the latest October 2014 inventory. Updated oil and gas wells within the permit boundary are shown on Plate 128-2 and listed in Appendix 128-E1. This information and references to the approved permit, detailed in Staff's TA, pp. 20-24, adequately identify the location of the information required by §§12.126-12.129 of the Regulations, as updated.

    (a). Geologic information for the permit area including geophysical logs, core lithographic descriptions, and geochemical analyses of overburden, lignite seams, interburden, lignite-void areas, and underburden are included in the approved permit. The underburden consists primarily of poorly permeable sediments of sand, silt, and clay. The proposed permit area overlies the following formations within the Wilcox Group: the Calvert Bluff, the major lignite-bearing unit, the underlying Simsboro Formation, and the underlying Hooper. The requirements of §12.127 (Regulations) have been met.

    (b). Regional groundwater/surface water hydrology has been adequately characterized to determine adequate monitoring of groundwater and surface water in accordance with §§12.128 and 12.129 (Regulations).

(i). The information for groundwater includes characterizations of principal aquifers from core and borehole data as well as aquifer tests, baseline monitoring wells, and private water wells within one mile of the permit area. Aquifer-bearing channel sands, confined and unconfined, are found within the overburden and underburden sand, silt and clay units. Other overburden units are generally thin, discontinuous, and of poor permeability. Groundwater data for water levels are included, and long-term groundwater monitoring and well locations are in accordance with the requirements of §12.146(b)(Regulations). Luminant will continue to submit within 60 days following the end of each calendar year a water table elevation chart identifying each applicable long-term monitoring well, the baseline or earliest recorded historic water level, the end-of-year water level, and the change in water level, if any, for each well. Data from quarterly groundwater sampling for pH, specific conductance, temperature, sulfate, chloride, total dissolved solids (TDS), and dissolved iron and manganese will be reported to the Commission quarterly. Spoil wells will also be sampled annually for major constituents and 12 trace elements.

(ii). To meet the requirements for surface water (§12.129 of the Regulation), Luminant included references to the initial application and Supplemental Document Nos. 1 and 2 of Permit No. 49 along with a summary of the baseline information. The baseline information remains unchanged from approved Permit No. 49. An adequate surface water control plan during mining and reclamation operations was also included in the approved permit. The permit area is located between the Brazos and Navasota Rivers in the Walnut Creek Basin (part of the Brazos River Basin). Three tributaries flow south through the proposed permit area to Gnats Creek, which drains into Walnut Creek, then to the Little Brazos River, and then to Segment 1242 of the Brazos River Basin. All tributaries of Walnut Creek that drain the permit area are intermittent; Walnut Creek is a perennial stream within the permit area. Luminant's approved Permit No.

49A describes the watershed characteristics for these creeks and rivers, with pertinent stream profiles, streamflow and water quality data from six locations used to monitor monthly maximum flood stages, providing peak flows and depths and mean daily streamflow. In connection with the approved permit, Luminant provided long-term stream monitoring data from the Tehuacana Creek gauging station as having comparable geomorphic, water quality, and water quantity characteristics as compared with the permit area Station TOS-12, the downstream point of the Walnut Creek watershed. From aerial survey, Luminant identified 52 natural or man-made ponds within the permit area. No major impoundments or reservoirs are located within the permit area. The Twin Oak Reservoir, impounding Duck Creek, is located two miles east-northeast of the permit area. No significant springs occur within the proposed permit area; smaller springs may occur. In the approved permit, Luminant provided sufficient surface-water information to describe seasonal variations in discharge conditions and water quality characteristics within the mine plan and adjacent areas in the approved permit.

(iii). An adequate surface water control plan was included in the approved permit for disturbances proposed in this application and for future mining.

(A). Fresh water will be re-routed into freshwater stream diversion around mining to be subsequently discharged downstream. Other surface waters within the watersheds of the permit area will be diverted away from disturbance, or routed into surface water control structures such as diversions and sedimentation ponds.

(B). Sedimentation control measures will be used, such as mulching and use of check dams to decrease contributions of suspended solids to streamflow. All surface water runoff from disturbed areas will be routed through a sedimentation pond prior to discharge to a receiving stream. Measures will be used to ensure that acid-

forming and toxic-forming materials do not come into contact with fresh water.

(C). Final discharge ponds will be subject to TCEQ discharge permit effluent limitations. The results of discharge sampling will be reported monthly to the TCEQ. Monitoring of these outfalls will be adequate to show any effects from disturbed runoff routed to sediment-control ponds for treatment to meet state and federal effluent standards prior to discharge. Results from quarterly monitoring of long-term surface water monitoring sites based on a paired watershed system (an undisturbed watershed compared to a disturbed watershed) will be reported to the Commission for flow, pH, TDS, total suspended solids (TSS), settleable solids, total iron, dissolved iron, total manganese, and dissolved manganese. Luminant also includes a plan to monitor runoff from significant rainfall events.

15. Luminant will replace groundwater supplies and surface water supplies when affected by contamination, diminution or interruption caused by surface mining operations. The approved permit includes alternative sources of water that include deep water-bearing sands in the Wilcox Formation, the Twin Oak Reservoir, and rural water companies. Luminant has identified 12 water rights within the vicinity of the proposed permit area. Luminant acknowledged its responsibility to provide alternative water supplies to any impacted water user (both ground-water and surface-water supplies) required by §12.130.

16. The approved permit includes climatological information for the permit area meeting the requirements of §12.131 of the Regulations. Rain gauge information from a gauge installed near a tributary of Steele Creek near the intersection of State Highway 7 and the Limestone/Robertson County Line, providing rainfall data for a period of 12 months (roughly 1987-1988), is a part of this information, as well as long-term rainfall and temperature data gathered from the National Weather Service (NWS) Station located at Marlin, Texas in a cooperative effort with the TCEQ. Prevailing wind information

collected from the Waco, Texas, National Weather Service station reflects winds from the south as most frequent. Mean annual rainfall is about 36 inches at the weather station. Total rainfall from monthly measurement over the period of 12 months (nearer to the permit area than Marlin) from the gauge near Steele Creek is 25.16 inches.

17. The approved permit includes information from baseline studies conducted for vegetation included in the proposed permit area. The permit area is located in the Post Oak Savannah vegetation area of Texas. Baseline studies identify vegetative types and provide the descriptions of plant communities within the proposed permit area. The approved permit includes information from aerial photography and ground survey. Summaries of each vegetative community are included in the application for renewal/revision. Nine vegetative communities are described; three major types are included: grasslands, upland hardwood forest, and bottomland/riparian forest. The previous survey results were confirmed as sufficient to characterize current premine vegetation. The information contained in the application and approved permit adequately characterize the vegetation in the subject area and is sufficient to allow an evaluation of the importance of vegetation to fish and wildlife and to predict the potential for reestablishing vegetation as required by §12.132 (Regulations).

    (a). The fish and wildlife resources information presented in the application, as supplemented, and in the approved permit is sufficient to meet the requirements of §12.133, including information sufficient to design the protection and enhancement plan required by §12.144 of the Regulations [Finding of Fact No. 23(1)].

18. The approved permit, Section .133 of the application, and Supplemental Document No. 1, contain fish and wildlife resources baseline information, including information concerning the presence or absence of threatened and endangered species. The fish and wildlife information in this application and the approved permit is sufficient to characterize the wildlife communities and habitats for the proposed permit area and adjacent areas. The investigation and wildlife studies contain site-specific information

concerning Federal and State-listed threatened and endangered species, and descriptions/depictions of habitats including riparian and aquatic areas.

(i). Endangered and threatened aquatic species which may occur or migrate through the proposed permit area include two new species - the Sharpnose Shiner and the Smalleye Shiner - which were federally listed as endangered in 2014, the threatened blue sucker, and three threatened fresh-water mollusks – the false spike mussel, smooth pimpleback, and Texas fawnsfoot. None of these species were observed during baseline investigations and are not likely to occur in the renewal area.

(ii). Terrestrial endangered and threatened species which may occur or migrate through the proposed permit area include the threatened Bald Eagle, the threatened Wood Stork, the threatened Timber Rattlesnake, and the endangered Whooping Crane. Because of unsuitable habitat, it is unlikely that the endangered Houston Toad occurs within the renewal area. The endangered Interior Least Tern, the threatened Louisiana Black Bear, the threatened Texas Horned Lizard, and the threatened Alligator Snapping Turtle are not expected to occur in the area in pre-mining habitats. The endangered Red Wolf species does not occur in the renewal area. It is not likely that the renewal area would provide suitable stopover or overwintering habitat for peregrine falcons. The Sprague's pipit is a candidate for federal listing as threatened or endangered, but no impacts to this species are anticipated (SD1). The Bald Eagle has been identified near the renewal area. Although some may occur as migrants, none of the other endangered species were found in surveys.

(iii). Luminant provided an updated accounting of wetlands and waters of the U.S. (USACE's jurisdiction) as follows: forested wetlands, 0.4 acres; non-forested wetlands, 1.8 acres; on-channel ponds, 6.2 acres; and stream channels, 16.26 acres, totaling 24.66 acres.

(iv). Luminant provided a statement in the application, p. 133-11, that all bird species listed in the approved permit are protected by the Migratory Bird Treaty Act ("MBTA"), except Rock Doves, European Starlings, House Sparrows, Wild Turkey, and Northern Bobwhite.

(v). The only known occurrences of the Large-fruited Sand Verbena plant are located in the Lower Trinity-Tehuacana and Navasota watersheds; the renewal area is not within either watershed, nor have appropriate soils or habitat for the species been observed. The historic range of the Navasota Ladies' Tresses includes Robertson County, but no individuals of Navasota Ladies' Tresses have been encountered during vegetation baseline investigations or specific surveys for the species conducted in the renewal area. Though not required at this time, Staff's TA cautions that multi-year comprehensive surveys using current USFWS guidance for the Navasota Ladies' Tresses will be required prior to the commencement of disturbance in the renewal/revision area.

19. Luminant's approved permit includes Plate 134-1 depicting the distribution of soil series within the proposed permit area, including the locations of prime farmland soils. Information is included describing the soil series (Appendices 134-C and 134-D). Present and potential productivity of the premine soils must be provided when mining activities are proposed within the permit area. Coarse fragment data is located in Table 134-5. Areally-weighted frequency distributions for the topsoil and subsoil for pH, ABA, and percent clay and sand are set out in Supplemental Document No. 2 of the approved permit (pp. 134-33a, 134-34a, 134-35a and 134-36a). These have been included in Permit Provision No. 1. The approved permit information is sufficient for the soil baseline to which postmine soil monitoring results will be compared for compliance, as postmine soil performance standards. Luminant is in agreement that Permit Provision No. 1 should be retained to specify postmine soil performance standards. Information contained in approved Permit No. 49A is sufficient to depict the extent of native soils in the area by series and soil mapping units, physicochemical characterization of the native soils,

present and potential productivities, and soil baseline distributions in accordance with §12.134 of the Regulations.

20. The approved permit (Plate 135-1) contains a depiction of premine land-use information for the permit area. The application for renewal/revision includes Table 135-1 that sets out acreage in six land-use categories within the permit area: (i) pastureland, 2,590 acres (76.8%); (ii) undeveloped land, 662 acres (19.6%); (iii) developed water resources, 19 acres (0.6%); (iv) cropland, 13 acres (0.4%); (v) residential, 4 acres (0.1%); and (vi) industrial/commercial, 83 acres (2.5%). This table is included in Section .135 of the application in a summary report by Luminant's consultant that reviewed and summarized methods and results of earlier investigations. The summary also included information for historical land use (agriculture, with livestock, remaining as the top agricultural commodity). Other items are referenced that are contained in the approved permit (land capability and production, previous mining, alternative use, and land management plans). In Staff's TA, references were included on pp. 32-33 to descriptions and tables contained in the approved permit containing this information. Aerial photography and field surveys were used to determine land uses for the proposed permit area, along with relevant literature. Premine land capability and productivity information is provided as required. The subject area is not subject to municipal regulation. No mining has occurred within the proposed permit area. The information contained in the approved permit, the application, and the TA as referenced, meets the requirements of §12.135 of the Regulations.

21. All requirements have been met in the application, as supplemented, for the submission of properly certified maps, cross-sections, and plans required by §§12.136 and 12.137 of the Regulations. These are identified as being contained in the application and supplements and/or in the approved Permit No. 49, with specific references (SD2). The Staff's TA includes certifications of compliance with regulatory requirements.

22. Luminant requested a negative determination of prime farmland for the permit area in the approved permit based upon a 1997 survey for the proposed mine. Section .138 of approved Permit No. 49 indicates that none of the prime farmland soils identified in the

renewal area meet the criteria established in § 12.138, and the Commission made a negative determination for all prime farmland soils identified in the proposed renewal area. No changes have been made to affect the Commission determination.

The permit area is east of the 100th meridian west longitude and, therefore, the requirements of §12.202 of the Regulations for alluvial valley floors are not applicable.

23. The approved permit, with this application, as supplemented, presents a proposed operations and reclamation plan that meets the requirements of §§12.139 - 12.144 of the Regulations.

(a). In the approved permit, Luminant planned to mine an average of 1 million tons annually during the proposed five-year permit, with approximately 10 million tons of lignite proposed for recovery through the year 2011. Luminant provided a narrative description of proposed mining operations at that time. Luminant proposed to use standard surface-mining procedures and methods. Five of eight mappable lignite seams were proposed for mining (L1 through L5). No final pits were proposed. In this application, Luminant now proposes no mining during the renewal term.

(b). Luminant does propose certain construction activities and has updated the permit as needed. Construction activities related to approved structures are proposed; any lignite encountered during such construction may be recovered. Approved structures and mine facilities shown on Plates 139-1-1 through 6 of the application, as revised in SD1, may be constructed during its requested renewal.

(c). All existing pipelines within the permit area have been visibly marked at 200-foot intervals in accordance with §12.382(2); any new pipeline will also be marked as required.

(d). The application also includes a narrative description of the design, construction, use, modification, maintenance and reclamation of structures to be used and includes a discussion of Luminant's surface water control plan, Table 139(T)-6,

Primary Sediment Control Structures and Impoundment Schedule, Table 139(T)-7, Diversion Schedule, and Table 139(T)-8, Permanent Impoundment Schedule.

(e). No haulroads are proposed for construction during the requested renewal term.

(f). Material from temporary overburden storage areas will be used in the final reclamation of the Bremond Mine. All fill areas will be reclaimed to approximate original contour (AOC). Any waste and spoil generated during construction proposed for the renewal term will be appropriately handled and stored or transported and disposed of as required by law.

(g). SD1 includes Luminant's description of its plan for potential exploration activities that include subcrop definition drilling, lignite and overburden coring, lignite test pit excavation, other deposit development drilling, and aquifer identification. Prior to conducting exploration activities, Luminant will notify the Commission. A map depicting the location of boreholes subsequently cased as wells will be provided annually. Luminant provides additional information regarding exploration disturbance; no unique, critical or high-value habitat will be disturbed, and all road and transportation facilities will meet regulatory requirements. Disturbed areas will be restored to AOC, and topsoil will be salvaged and redistributed on disturbed areas that will be revegetated with native species.

(h). No disturbance of streams is proposed. Appropriate diversions will be used to prevent erosion and to protect streamflow and runoff outside the permit area. In addition, Luminant will ensure that all acid-forming and/or toxic-forming materials are appropriately handled and disposed of as required.

(i). The approved permit contained an operations and reclamation plan including a backfilling and grading plan, soil stabilization methods, revegetation practices, methods to ensure that no acid-forming or toxic-forming materials or combustible materials are placed in the top four feet of the postmine surface, accomplishment of AOC, surface water control measures, diversions and impoundments, temporary haul roads, appropriate disposal of waste in accordance with regulatory

requirements, including those of the Environmental Protection Agency, the TCEQ, and the Texas Department of Transportation. No changes have been made in this application; however, no mining is proposed for the renewal term.

(j). The approved permit application adequately addressed the requirements for the fugitive dust control plan. That plan indicates that dust will be controlled by water spray, asphalt emulsion on roads, temporary closing of roads when not in use, the use of motor graders to periodically grade roads, and by mulching and vegetating construction activities as they are constructed. No mandatory air pollution control plan is required because the proposed permit area is not located west of the 100th meridian west longitude [§12.143(a)]. Staff agrees that the dust control measures proposed are sufficient and that no discretionary air pollution control plan is needed [§12.143(b)(1)]. The application contains a fugitive dust control plan in compliance with §12.143 of the Regulations.

(k). No existing structures will be used during the requested permit term (§12.140). No blasting is proposed (§12.141). No disposal of excess spoil is proposed (§12.153).

(l). For the requested renewal, the application contains adequate measures to protect fish and wildlife and to mitigate impacts for the permit term in accordance with §12.144 of the Regulations. Luminant has delineated 2,969 acres of undisturbed land that will serve to protect fish and wildlife within the 3,371-acre permit area (Plate 147-1).

(i). The following methods are included in the original permit: (1) conducting mining by proceeding in narrow, incremental bands to minimize impacts; (2) use of vegetation species with known cover and forage value for wildlife enhancement areas in order to provide food and cover for wildlife; (3) ensuring that habitat types will be interspersed and plantings situated to provide maximum contact with existing areas used by wildlife; (4) use of a wildlife protection plan that includes protection of perennial streams and specific intermittent streams from disturbance unless approved by the

Commission in accordance with the Regulations; (5) avoiding rookeries and raptor nest sites to minimize effects to migratory birds; and (6) avoiding wetland areas or disturbing these areas as little as possible.

(ii). Luminant voluntarily implements "best solution" measures, as agreed upon by USDI Fish and Wildlife Service ("USFWS"), to avoid and/or minimize impacts to migratory birds from general surface mining operations and to comply with migratory bird protection, including mining in narrow bands to keep disturbance areas as small as possible at any one time followed immediately by reclamation activities, avoiding rookeries and raptor nest sites during breeding and nesting season, and developing site-specific conservation measures where appropriate.

(iii). In the event of wetland disturbance, reclamation and mitigation of the area will be in accordance with USACE Permit requirements with mitigation ratios of 1:1 for forested wetlands, 1:1 for non-forested wetlands and 1:1 for ponds and stream channels. The plan for mitigation of stream channels includes the 1:1 ratio for 16.26 acres of stream channels. The plan contained in the approved permit is consistent with the April 12, 2005 supplemented Pre-Construction Notification for Nationwide Permit No. 21 for project 20010045b authorized by the USACE on June 27, 2005. This permit program expired in 2012 and is no longer valid. Because there are not any impacts proposed to Waters of the U.S., a current USACE permit is unnecessary. Staff and Luminant have agreed on the adoption of Permit Provision No. 3, which states that no mining-related construction or exploration activities within jurisdictional waters of the U.S. are approved until Luminant receives a permit from the USACE to demonstrate compliance with the Clean Water Act. Staff's TA1 indicates that this provides sufficient commitment to address this concern, and this Permit Provision No. 3 is approved.

(iv). Luminant will monitor for threatened and endangered species, will report any such species encountered, and will take appropriate measures to ensure their protection.

(v). Luminant's postmine land use plan indicates that 384 acres will be reclaimed as pastureland out of 402 total acres (96% pastureland) and the remaining 18 acres will be reclaimed as developed water resources (4% developed water resources) (Table 147-1). Staff noted a discrepancy between Luminant's proposed revised postmine land-use map (Plate 147-1) which appears to indicate no changes in land use when compared to the approved map, and Luminant's revised Table 147-1 which indicates a three-acre decrease in pastureland and a corresponding overall decrease in the disturbance area. Luminant clarified in SD1 that the decrease in acres from 405 to 402 is due to corrections to AutoCAD irregularities in the 147-1 drawing. This plan is consistent with the postmine land use plan.

(m). Luminant coordinated with USFWS in 2003 to ensure compliance with the Migratory Bird Treaty Act (MBTA), and a copy of this coordination letter, along with associated documentation related to the Fish and Wildlife Plan and migratory birds, is included in Appendix 144-A (SD1). Luminant contacted USFWS again in 2015 by telephone and by letter to solicit input and to follow up on the 2003 consultation regarding MBTA compliance. This letter, dated February 4, 2015, was sent to USFWS and is also provided in Appendix 144-A (SD1). Luminant also provided a copy of a July 8, 2015 letter from the USFWS to Luminant in Appendix 144-A (SD2). This letter indicates that USFWS believes that Luminant's mining and reclamation activities fall within the scope of prohibited conduct under the MBTA. This letter states that "[t]he MBTA provides, in part, that unless and except as permitted by regulation, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, or attempt to take, capture, or kill any migratory birds." Because USFWS believes the MBTA prohibitions apply to Luminant's mining activities, the letter recommended that Luminant incorporate USFWS's *Nationwide Standard Conservation Measures*

into Luminant's generic wildlife plan as best management practices that are intended to avoid, minimize, or mitigate, to the extent practicable, potential impacts of permitted mining activities on migratory birds. In a September 4, 2015 ruling regarding the MBTA, the United States Court of Appeals for the Fifth Circuit held in *U.S. v. Citgo Petroleum Corp.*, No. 14-40128, 2015 WL 5201185, 801 F.3d 477 (5th Cir. 2015) that "the MBTA's ban on 'takings' only prohibits intentional acts (not omissions) that directly (not indirectly or accidentally) kill migratory birds." Because this court's ruling is binding in Texas, the USFWS's July 8, 2015 response does not accurately reflect the requirements of the MBTA in the State of Texas, and the MBTA prohibitions do not apply to Luminant's mining activities that do not involve intentional impacts on migratory birds.

24. The application, as supplemented, contains a plan for reclamation of the lands within the proposed permit area that meets the requirements of §134.092 the Act and the §12.145 of the Regulations.

(a). The approved permit includes a reclamation timetable and schedules for the completion of reclamation tasks and the sequence and phases of each major step in reclamation (Approved Permit No. 49, SD2, pp. 145-9 through 145-11, Figure 145-1, and Staff Addendum No. 3 for approved permit, pp. 17-18).

(b). Luminant's accepted bond currently in place for all of its statewide mining operations is a blanket collateral bond in the amount of $975,000,000 (Docket No. C16-0021-SC-00-E approved by Order dated September 27, 2016). Staff's analysis indicates that Luminant's current bond amount exceeds the sum of the estimated reclamation costs for its Texas mines, including the proposed bond amount attributable to the Bremond Mine. Luminant's current bond of $975,000,000 is an *Exit Collateral Bond* that became effective on October 3, 2016, when Luminant's ultimate parent company, Energy Future Holdings Corp., and its competitive businesses (the "Competitive Companies"), emerged from the Chapter 11 proceeding that was pending before the United States Bankruptcy Court for the District of Delaware. The current *Exit Collateral Bond* replaced an

Interim Collateral Bond that was in effect until the October 3, 2016 emergence of Energy Future Holdings Corp. and its Competitive Companies from bankruptcy. The *Exit Collateral Bond* is a blanket collateral bond that covers all of Luminant's statewide mining operations. It is in the amount of $975,000,000, based on current operations. This amount exceeds the sum of the estimated reclamation costs for Luminant's Texas mines, including the proposed bond amount attributable to the Bremond Mine. The proposed bond amount for the Bremond Mine, $3,423,560, is approved as more conservative than Luminant's estimate, $2,981,378.40. Therefore, no changes to Luminant's existing blanket collateral bond (the *Exit Collateral Bond*) are necessary as a result of this permit renewal. Luminant has agreed that if it decides to construct any previously-approved structures during the renewal period, then Luminant will need to submit and obtain approval of a revised bond map and reclamation cost estimate that includes costs for reclamation of temporary structures prior to the commencement of construction.

(c). Luminant will not require variances to the 180-day timing requirement and requirement that rough backfilling and grading follow coal removal by no more than four spoil ridges behind the pit being worked for the reclamation activities proposed in the renewal application; no mining is proposed. Luminant indicated on page 139-5 of the application that the premine and postmine contours (and associated slopes) are found in Permit No. 49A and that Table 139(a)-1, Slope Comparison Table, has not been provided in the application. In response, Staff noted that Table 139(T)-1, Slope Comparison Table [the renamed version of Table 139(a)-1], was provided in SD1. Staff's TA states that the premine and postmine slopes included in this table do not agree with the information in Table 139(a)-1 found in Revision No. 1 of Permit No. 49A, that the acreage total does not match that contained within the proposed 3,371-acre renewal/revision area, and that the proposed premine and postmine slopes contained in Table 139(T)-1 are not supported by a revised postmine contour map or postmine slope map. Therefore, Staff sponsors Permit Provision No. 2 regarding this issue, which states that the premine and postmine slopes depicted in Table 139(T)-1 found in

SD2 of this renewal/revision application are not approved, and that the approved premine and postmine slopes are found on Table 139(a)-1 [Revision No. 1 of Permit No. 49A]. This permit provision is adopted.

(d). No changes to soil handling methods are approved.

(e). Luminant will ensure that any acid-forming or toxic-forming materials which could be present in the postmine reclaimed soils are identified, that the postmine reclaimed soils are adequate as a growth medium, with topsoil equal to or better than the premine soil for sustaining revegetation, that the 1-4 foot depth has comparable root development characteristics, and that prohibited fertilizer augmentation will be detected. Luminant will compare postmine reclaimed soils to the premine soil baseline (Section 134 of the application) by the use of a banking method. For parameters not listed in the premine soil baseline, Luminant will use the Commission's Technical Guideline SA-2 as the standard to determine postmine soil success. Luminant's soil testing plan contained in Staff's Appendix VII to the TA, as set out in Appendix II to this Order, is approved as sufficient to ensure suitable postmine soils. The application includes a contingency sampling plan that will be used if any AFM/TFM problems are identified so that such areas may be treated or replaced as appropriate. Staff proposes the retention of Permit Provision No. 1 to reflect that the frequency distributions (provided on pages 134-33a, 134-34a, 134-35a, and 134-36a of Supplemental Document No. 2 of Permit No. 49) for topsoil and subsoil are the postmine-soil performance standards for pH, acid-base account, clay and sand, respectively. Existing Permit Provision No. 1 is retained.

(f). Luminant does not propose to revise the approved revegetation plan contained in the approved permit. The plan contains a schedule for postmine land use and revegetation. The reclamation plan was determined to meet the general requirements of §12.145 and the revegetation requirements of §§12.390-12.395. Requirements of §12.145(b)(5)(A)-(F) will be met by the approved revegetation plan. The approved permit includes a list of species to be used in revegetation,

methods of revegetation, measures to control disease and pests, mulching techniques, hay production and grazing plans, and standards to be used for evaluating ground cover and productivity. Luminant proposes to use the Commission's guidelines entitled *Procedures and Standards for Determining Revegetation Success on Surface-Mined Lands in Texas*. The Natural Resources Conservation Service Forage Production Standards will be used as the standard for productivity for pastureland. Luminant included in SD2 a revised index page on which it listed the location of this information in the approved permit document.

(g). Methods described by Luminant in the approved permit to maximize coal recovery are inapplicable during the requested renewal term.

(h). The approved permit specifies required procedures to be used for well plugging operations. In SD2 Luminant includes a reference to the approved permit, Supplemental Document No. 2, pp. 145-33 through 145-36, for its approved drill hole casing and sealing plan. In addition, the application includes information indicating that Luminant will comply with the requirements of the Clean Air Act (42 U.S.A. § 7401 et seq.) and Section 404 of the Clean Water Act (33 U.S.C. §1344). As noted in Finding of Fact No. 23(l), Staff and Luminant have agreed on the adoption of Permit Provision No. 3, which states that no mining-related construction or exploration activities within jurisdictional waters of the U.S. are approved until Luminant receives a permit from the USACE to demonstrate compliance with the Clean Water Act. Staff's TA1 indicates that this provides sufficient commitment to address this concern, and this Permit Provision No. 3 is approved.

25. The approved permit includes a description as required by §12.146 of measures to be taken to protect the hydrologic balance of the surface water and groundwater systems within the permit area and adjacent areas and to prevent damage outside the permit area, to meet water quality laws and protect groundwater and surface water users as set out below and in these Findings of Fact. This includes Luminant's determination of probable

hydrologic consequences (PHC) and the Staff's Cumulative Hydrologic Impact Assessment (CHIA) as required by §§12.146(c) and (d) of the Regulations.

(a). The approved permit identifies alternative water supplies (Finding of Fact No. 15).

(b). No mining is proposed in the renewal term so there will be no impacts to groundwater levels in the immediate vicinity of mining pits. No advance overburden dewatering should be needed. Some minor, advance underburden depressurization could be required in the proposed permit term, resulting in a temporary drawdown in the surrounding underburden sands. Advance underburden depressurization is not approved at this time [See subparagraph (f).].

(c). Five long-term groundwater monitoring (LTGM) wells have been installed. Luminant proposes to continue quarterly water level monitoring and water quality sampling during the requested renewal term for the same chemical constituents. LTGM wells will also continue to be sampled, analyzed, and reported quarterly for pH, specific conductance, temperature, sulfate, chloride, total dissolved solids, and dissolved iron and manganese. There are no spoil wells at this time. Measures to be taken relevant to diversions and ponds will minimize contributions of additional sediments to surface waters. Discharges into receiving streams will meet applicable federal and state water quality laws and regulations in accordance with water quality permit requirements. Disturbances to the surface water hydrologic balance within the permit and adjacent areas will be minimal. Luminant has undertaken to mitigate impacts caused by proposed activities. Schedules are included for primary sediment control structures, impoundment, and diversions.

(d). The surface water control plan as set out in the application, as supplemented, will adequately monitor and serve to ensure protection of surface water.

(e). Installation and pumping of underburden depressurization wells is not approved during the proposed renewal/revision term.

(f). The Staff prepared a Cumulative Hydrologic Impact Assessment (CHIA) dated September 1, 2016 filed in Docket No. C14-0012-SC-27-C, the renewal/revision application for the Walnut Creek Mining Company's Calvert Mine. Official notice is taken of the CHIA filed in that docket for this renewal/revision for the Bremond Mine. The Calvert Mine and the Bremond Mine are located in the Walnut Creek watershed, a tributary to the Little Brazos River; Walnut Creek and the Little Brazos River are each part of the Brazos River Basin for which the CHIA was prepared. The stream segment designation applicable is Segment 1242. The Cumulative Impact (CIA) area is the same for each mine. The CHIA indicates that less than six percent of the CIA will be disturbed by mining activities. The approval of the Bremond permit renewal/revision application is dependent on the CHIA illustrating that mining operations at the Bremond Mine have been designed to prevent material damage to the hydrologic balance outside the permit area. SMRD Staff has prepared 2 previous CHIA documents for the Bremond Mine and Calvert Mine - on April 19, 199? for Permit No. 27B (Docket No. C2-0111-SC-27C) and on October 14, 2008 for Permit No. 27F (Docket No. C7-0025-SC-27-C, Staff's TA Addendum No.1) due to the increase in surface water acreage from 118.8 acres to 264 acres. The 1993 CHIA and 2008 CHIA were limited to the life of mine operations proposed at the time and did not include the areas proposed for mining in the upcoming permit term for the Calvert Mine the new CHIA filed for the Calvert Mine renewal/revision addresses. As set out in this Order, no mining has occurred and none is proposed for the renewal term (2014-2019). Two exploration pits have been completed and surface water and groundwater monitoring are ongoing. Some support structures may be constructed during the renewal Only minor disturbances are proposed for the Bremond Mine. In this pending application, WCMC proposes to decrease the permit area by 648 acres. The CHIA prepared by Staff is a comprehensive update for the entire Walnut Creek watershed. Based upon the information provided by the applicant, Staff analysis of information contained in the application, as supplemented, and the Staff-prepared CHIA, the proposed surface mining and reclamation operations have been designed to

minimize effects on surface waters and groundwater. This CHIA is sufficient as an assessment of the probable cumulative hydrologic impacts of the permit area. Staff determined that cumulative postmine effects on surface water quality and quantity from mining would be minimal.

(i). Walnut Creek is a perennial stream with a watershed of approximately 138 square miles and is a subwatershed of the Little Brazos River basin, which covers 329 square miles. The Little Brazos River flows into the Brazos River approximately 25 miles downstream of the Calvert Mine.

(ii). The Staff described the potential effects of the mining activities of the Calvert and Bremond Mines on the surface and ground water in a cumulative impact area (CIA), an area over which the proposed operation(s) "may cause measurable changes in specified hydrological parameters at a particular location within the geographical area of a specified watershed system" (CHIA, p. I-1, Staff's TA Addendum No. 1 for Docket No. C14-0012-SC-27-C) by (a) delineating two mass-balance calculation points in the CIA; (b) evaluating baseline water quantity and quality; (c) for surface water, evaluating chemical and physical changes in receiving stream flow, as well as geomorphic changes within the CIA; (d) for ground water, evaluating potential aquifer-head drawdowns and declines as well as the physical and chemical changes in the reclaimed spoil areas, including chemical changes in the spoil groundwater.

(iii). For surface water, total dissolved solids (TDS) was used as the indicator parameter in the mass-balance analysis to project changes to the chemical quality of surface water. Although Mass-Balance Location No. 1, on Walnut Creek immediately upstream of its confluence with Little Brazos River, showed the largest potential of TDS concentrations at 31.3% (from 240 mg/L to 315 mg/L), this value is significantly

below the threshold value of 750 mg/L TDS for TCEQ Stream Segment No. 1202. Further downstream at Mass-Balance Location No. 2 on the Little Brazos River at identified irrigation Water Rights 4363A and 4364A, the cumulative effects are also predicted to remain significantly less than 750 mg/L. The cumulative impacts are also softened by the dilution caused by substantial runoff within the Brazos River Basin drainage area. TDS concentrations post mining are also predicted to be in an acceptable range.

(iv). The physical changes expected within the mines' reclaimed areas will cause small changes in the quantity of surface water available for downstream users. Changes to be expected include attenuation of storm events due to surface water impoundments and longer sustained flows in receiving streams. This is insignificant when compared to the amount of storm water runoff originating within the CIA and the Brazos River Basin. In addition, it is not expected that post mine soils loss will be less than pre-mine due to the construction of surface water control and treatment structures.

(v). For ground water, the Staff found that the projected aquifer-head drawdowns and declines due to mining activities were found to be insignificant within the CIA. This is due primarily to the limited extent of sand bodies and the usually unconfined conditions within isolated watershed areas in the Wilcox's overburden.

(vi). Mining will cause physical changes in the spoil areas which will alter the spoil resaturation rates and change the geometry of the groundwater flow. However, the cumulative effects of mining on these values are insignificant.

(vii) Mass balance analyses were also employed to project the impacts to water quality in the spoil area groundwater. These analyses showed measurable cumulative effects throughout the CIA for both mines, but these were significantly less than threshold values established for TDS concentrations in TCEQ Stream Segment No. 1202 and are acceptable. The same is true for the effects of spoil-area groundwater on streamflow water quality in critical reaches outside the mine areas. The material damage is deemed insignificant because of the dilution effects of surrounding aquifers and from substantial runoff within the large drainage areas.

26. Luminant includes a revised proposed postmine land use plan for the permit area. The postmine land use plan for the proposed disturbed acreage for the requested permit term (402 acres) has been certified by a Texas registered professional engineer and will result in land uses in the following percentages: pastureland, 96%, and developed water resources, 4% (Application, Section 147, Postmine Land Use Map, Plate 147-1 and Table 147-1). The uses proposed are alternative land uses from the premine uses for the affected tracts. The adjacent land uses are undeveloped, pasture, industrial/commercial, and developed water resources. No proposed disturbances will occur where Luminant does not own the land or possess a valid lease granting right of entry to mine. The postmine land use plan is feasible, reflects an achievable higher land use and is compatible with adjacent land uses in the general area as set out in Section 135 of the application, as supplemented. The proposed uses reflect the landowner's preference. There are no state or local land use plans or programs or agency approval or authorizations required for the proposed postmine land uses, other than the Commission's approval. The proposed plan will present no actual or probable hazard to public health or safety, water-flow diminution or pollution, or unreasonable delays. The information provided meets the requirements of §12.147 and §12.399 of the Regulations.

27. Luminant meets the requirements of §§12.148 (ponds, impoundments) and 12.150 (diversions). No new ponds or impoundments are proposed, and no coal-processing waste banks, dams, or embankments are proposed. Finding of Fact No. 23(d) addresses Table 139(T)-6 and Table 139(T)-8 that list approved temporary and permanent ponds, respectively. Table 139(T)-7 contains a revised list of approved diversions for the renewal/revision area. Locations of temporary ponds and diversions with applicable watersheds are depicted on Plate 148-1, Surface Water Control. No detailed design plans have been included in the application for Ponds Al and A2 and their treatment ponds; these are approved temporary structures and are proposed to be constructed during the requested permit term (2014-2019). Luminant proposes these ponds as permanent; the general design plans for these ponds along with their associated treatment ponds were approved on June 27, 2005. The design plans for the A-2C Diversion, approved on June 27, 2005, do not depict temporary stockpiles associated with the construction and/or reclamation of this diversion. Revised detailed design plans for the A-2C Diversion, and any other diversions listed on Table 139(T)-7, which require the use of temporary stockpiles as part of their construction and/or reclamation, must be submitted and approved prior to construction. Staff sponsored this requirement as Permit Provision No. 4 in connection with this requirement, and Luminant agreed to the provision as proposed. This Permit Provision is adopted.

28. There are no public road closings or relocations proposed during the requested permit term. Any public road closures and/or relocations must first be approved by the county and state road authorities, as applicable, and approved by the Commission with required documentation filed with the Commission.

29. Surface mining activities will not approach nearer than 100 feet of the right-of-way line of any public road except as allowed by the Regulations or approved by the Commission. No activities within road buffer zones are proposed.

30. A road schedule is included in revised Table 154-1 of the application Section 154 reflecting reclamation dates (2021). The system of roads is depicted on Plates 139-1-1 and 139-1-6 of the application. No new roads are proposed. All roads listed in Table 154-

1 were approved in existing Permit No. 49. All have an in-service date(s) of 2015-2019. These roads include A-1 Pond Access Road, A-1 Pond Access Road No. 2, A-2 Pond Access Road, A-2 Treatment Pond Access Road, RR No. 1 Access Road, RR No. 2 Access Road, and RCR 462. Required detailed design plans, appropriately certified, were submitted for all of these access roads, in the approved Permit No. 49, Section 154, Appendix A, Revision No. 1, approved June 27, 2005.

31. The required application fee of $3,000 was submitted [§12.108(a)]. The application was filed on November 12, 2014, at least 180 days prior to the expiration date of the permit [§12.106(b)(2)]. Luminant has met the general requirements for format and contents of the application, as supplemented. Form SMRD-IC was filed, and it contains information required by §§12.116-12.154 [§12.107(a)]. In the application, as supplemented, the information is current, presented clearly and concisely, and is supported by appropriate references [§12.107(b)]. Technical data has been submitted as required [§12.107(c) and (e)], and the data were prepared by or under the direction of professionals in the subjects analyzed [§12.107(d)]. A responsible official of the applicant verified the application, as supplemented, under oath that the information is true and correct to the best of the official's information and belief [§12.107(g)].

32. The permit application, as supplemented, and as modified by the permit provisions contained in Appendix I and the soil testing plan contained in Appendix II, meets the requirements of §§134.065 - 134.066, 134.075 and 135.092, and all other applicable provisions of the Act and §12.216 of the Regulations as set out below and as included in the Findings of Fact.

(a). The permit application, as amended and supplemented, is accurate and complete. All requirements of the Act and Regulations have been met as set out in these Findings of Fact with the inclusion of the permit provisions set out in Appendix I and the soil testing plan set out in Appendix II to this Order.

(b). The operations, as required by the Act and Regulations, can be feasibly accomplished under the operations plan as set out in the application, as supplemented, Findings of Fact, and with the inclusion of the appendices.

(c). The Commission Staff has made an assessment of the cumulative hydrologic impacts as required, and the operations are designed to prevent damage to the hydrologic balance outside the proposed mine plan area.

(d). The proposed permit area is not within an area designated as unsuitable for surface mining nor involved in a proceeding seeking to designate the area as unsuitable for surface mining. The proposed operations, as approved in this Order, will not take place on any prohibited federal lands within the boundaries of national forests or on prohibited lands contained within national parks, refuges, trails, wilderness preserves, or wild and scenic rivers, will not adversely affect any properties listed on or eligible for listing on the National Register of Historic Places, except as otherwise allowed by §12.71(a)(3), and will not be conducted within prohibited 100-foot buffer zones of the outside right-of-way of public roads, except as otherwise approved by the Commission, or within 300 feet of any occupied dwelling not owned by Luminant, public building, school, church, community or institutional building or public park, or within 100 feet, measured horizontally, of a cemetery. No underground mines are known to exist within or adjacent to the permit area; no mining related activities are proposed within 500 feet of an underground mine (§12.149).

(e). Luminant has submitted all information required under §12.117 for ownership of surface and mineral estates.

(f). As of the date of this Order, Luminant has been issued 16 notices of violation (NOVs) during the three years prior to the filing of the application for operations at various mines. One of these was issued regarding operations at Bremond Mine. All NOVs except one have been terminated. Staff's deficiencies noted that the AVS database had been queried to determine whether Luminant or any controller identified in the application or found in the database has any outstanding violations, and that the AVS database had linked Luminant and/or its controllers to 18 outstanding violations, bond forfeitures, and/or civil penalties. In response, Luminant stated that all of the violations were linked through one of the directors

of Energy Future Holdings Corp. who was a previous director of DuPont and that the noted violations are all subject to one or more settlement agreements. As noted in Staff's TA1, based on the information provided, Staff no longer notes this application deficiency. The information provided in the application, as supplemented, is adequate to address the requirements of § 12.116. All required fees have been paid. Luminant is current in payment of required franchise taxes.

(g). The proposed operations will not be inconsistent with other surface mining and reclamation operations in adjacent areas. No additional bond is required.

(h). Luminant submitted the performance bond required prior to issuance of the permit.

(i). Luminant has, with respect to prime farmland, addressed in this application the requirements of §12.201 of the Regulations (Finding of Fact No. 22).

(j). Luminant has met requirements for prime farmland and alluvial valley floors.

(k). The postmining land use of the permit area meets requirements of the Regulations.

(l). All specific approvals have been made by the Commission as required for permanent program performance standards.

(m). The proposed activities will not affect the continued existence of endangered or threatened species or result in destruction or adverse modification of critical habitats.

(n). No long-term intensive agriculture postmining land use is proposed.

(o). No remining is proposed for previously mined areas.

33. Open meeting notice was posted for Commission consideration of this application.

CONCLUSIONS OF LAW

1. Proper public notice of application and notice of application to Texas and federal agencies were made as required by the Act, Regulations, the APA and the Commission's procedural rules. No public hearing was required. Open meeting notice has been made as required.

2. The application for renewal/revision of Permit No. 49A, with references to the approved permit and with the permit provisions and soil testing plan meets all requirements for approval as set out in the Act, the Regulations, the APA, and the Commission's procedural rules, as set forth in the Findings of Fact.

3. The current blanket collateral bond in the amount of $975,000,000 is in place as approved by the Commission effective October 3, 2016 and no changes are needed in this docket.

IT IS THEREFORE ORDERED BY THE RAILROAD COMMISSION OF TEXAS that the Findings of Fact, Conclusions of Law, permit provisions, and soil testing plan as set out in this Order are hereby adopted; and

IT IS FURTHER ORDERED that the application, as supplemented, and as limited by the permit provisions is hereby approved as Permit No. 49B, Bremond Mine;

IT IS FURTHER ORDERED that the renewed and revised permit may be conditionally issued upon acceptance of the pending bond; and

IT IS FURTHER ORDERED by the Commission that this Order shall not be final and effective until 25 days after the Commission's Order is signed, unless the time for filing a motion for rehearing has been extended under TEX. GOV'T CODE §2001.142, by agreement under TEX. GOV'T CODE §2001.147, or by written Commission Order issued pursuant to TEX. GOV'T CODE §2001.146(e). If a timely motion for rehearing of an application is filed by any party at interest, this order shall not become final and effective until such motion is overruled, or if such motion is granted, this order shall be subject to further action by the Commission. Pursuant to TEX. GOV'T CODE §2001.146(e), the time allotted for Commission action on a motion for rehearing in this case prior to its being overruled by operation of law is hereby extended until 90 days from the

date Commission Order is signed.

SIGNED IN AUSTIN, TEXAS, this 25th day of October, 2016.

RAILROAD COMMISSION OF TEXAS

CHAIRMAN DAVID PORTER

COMMISSIONER CHRISTI CRADDICK

COMMISSIONER RYAN SITTON

Secretary
Railroad Commission of Texas

APPENDIX I
PERMIT PROVISIONS

1. The frequency distributions (provided on pages 134-33a, 134-34a, 134-35a, and 134-36a of Supplemental Document No. 2 of Permit No. 49) for topsoil and subsoil are the postmine soil performance standards for pH, acid-base accounting, clay and sand, respectively.

2. The premine and postmine slopes depicted in Table 139(T)-1 found in Supplemental Document No. 2 of this renewal/revision application of Permit No. 49A, are not approved. The approved premine and postmine slopes are found on Table 139(a)-1 [Revision No. 1 of Permit No. 49A].

3. No mining-related construction or exploration activities are approved until Luminant receives a permit from the USACE to demonstrate compliance with the Clean Water Act.

4. Revised design plans for the A-2C Diversion, and any other diversions listed on Table 139(T)-7 that require the use of temporary stockpiles as part of their construction and/or reclamation, must be submitted and approved by the Director, Surface Mining and Reclamation Division, prior to construction.

APPENDIX II
SOIL TESTING PLAN

(From Staff"s Appendix No. VII to its Technical Analysis Document)

APPENDIX VII – SOIL-TESTING PLAN AND POSTMINE PERFORMANCE STANDARDS

After final grading, permanent markers will be placed on 1,000-foot centers in regraded areas to delineate a 23-acre grid system (Plate 145-1 for minesoil-monitoring grid map) for monitoring postmine soil quality and nutrient requirements. These markers will be maintained until land is released from all reclamation obligations.

Initial soil sampling will consist of composite samples from each 5.7-acre grid as may be delineated by the advance of spoil leveling. The samples will be collected, analyzed and the results reported to the Commission within two years following rough backfilling and grading and prior to placement into the ERP or approval of Phase I, II, or III bond release. This period allows sufficient time for additional reclamation efforts if the soil suitability criteria are not immediately met.

Adjacent soil samples will be taken no less than 200 feet from each other. Six soil samples per grid will be mixed to make one composite sample per depth increment. If a grid is less than two acres in size, it will be combined with an adjacent grid. If a partial grid is ≥0.5 acre in size, additional sampling will be conducted on 200-foot centers. No more than two grids will be combined for sampling purposes. Composite samples will be made to represent the following depth increments: 0-1 foot and 1-4 feet in topsoil substitute scenarios. The samples will be collected using standard soil sampling techniques.

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

1. pH
2. Potential acidity
3. Exchangeable acidity
4. Neutralization potential
5. Acid/base accounting = Neutralization potential - (Potential acidity + Exchangeable acidity)
6. Texture - sand, silt and clay: USDA-NRCS
7. Nitrate-nitrogen
8. Plant available phosphorus, potassium, calcium, and magnesium
9. Cation Exchange Capacity

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

1. pH
2. Potential acidity
3. Exchangeable acidity
4. Neutralization potential
5. Acid/base accounting = Neutralization potential - (Potential acidity + Exchangeable acidity)
6. Texture - sand, silt and clay: USDA-NRCS
7. Cation Exchange Capacity

In addition to the above analyses, a random 10 percent of the samples (entire top four feet) will also be analyzed for cadmium, selenium, hot-water extractable boron, electrical conductivity, and sodium adsorption ratio. Procedures for the analyses of these parameters will be according to RCT, Overburden Parameters and Procedures (May 16, 1989), and Soil Testing Procedures (March, 1980, Texas Agricultural Extension Service) for plant available nutrients.

The analytical results, an updated postmine soil bank, and a map showing all grids reported will be submitted to the Commission in both hard copy and digital formats. The map will display the grids sampled and reported plus the Texas State Plane coordinates.

Luminant will 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.

SAMPLING TO THE EXTENT OF LEVELING

Grid centers will be surveyed and marked every 1,000 feet. The grids will serve as the basis for all initial sampling. If a grid is sampled to its full extent of 5.7 acres, it will be reported that way (e.g., grid 1234). However, if a grid is not completely leveled (5.7 acres), and the leveled portion needs to be placed into the ERP, the portion that has been leveled and will be proposed for placement into the ERA will be sampled and reported. The portion of a grid which has been sampled will be marked using the ERA line. The ERAs are marked in the field, with markers being placed so that markers are visible from one to the next. Markers are placed at each turn in an ERA line. So if anyone in the field needs to determine the extent of sampling for a portion of a grid, it would be as simple as locating the grid (from a map and/or the grid center post) and then observing which side of the ERA they are on.

Grid identification for reporting purposes will continue to 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 5.7-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.

Initial samples will be collected at approved density (one per acre). There are no combinations of grids proposed for any advancing divided, interior grids. Any portion of a grid which will be proposed for placement into the ERP will have the appropriate number of samples collected from it based on its acreage.

The statistical soil baseline will serve as the basis for determining postmine soil quality pertaining to the presence of AFM/TFM compared to the premine soil as discussed in §12.386. 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 statistical baseline, the statewide criteria as shown in Technical Release SA-2 will be used to determine postmine soil success.

CALCULATION OF DISTURBANCE AREA BANK ACCOUNT

The statistical soil baseline (section 134) will provide the frequency distributions of native soils for regulated parameters. These frequency distributions are then multiplied by the acreage within the predicted disturbance area to yield the actual acreage allowed for each parameter value at each depth increment. The predicted disturbance area depicted on the disturbance map will vary as mining progresses because of operational changes and adjustments that may occur during actual mining and reclamation activities. These changes to the disturbance boundary will be submitted to the RCT as part of each initial soil report or with each application for ERP. 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, these additional 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 foot and 1-4 feet).

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.

The proposed substitute material in the one- to four-foot zone is of the same origin as the proposed topsoil substitute material. Therefore, it is projected to have comparable qualities for root development as the topsoil substitute material. Final demonstration of quality will be based on postmine productivity.

MAINTENANCE SOIL SAMPLING

Composite soil samples will be taken from the 0-1 ft. depth and analyzed for pH, nitrate-nitrogen, and plant-available P, K, Ca, and Mg in accordance with the RCT overburden parameters and procedures list. The samples will be collected from each management unit. For sampling and reporting purposes, a management unit 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. Subsamples will be obtained to represent approximately ten acres per subsample. These subsamples will be composited to represent the management unit for analysis and reporting purposes. The soil samples will be obtained in the year immediately prior to the first year of productivity assessment, during the first year of productivity assessment, and during the second year of productivity assessment. 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. The purpose of this sampling program is to provide documentation on soil conditions for management purposes. 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. Analysis results and a map showing the units sampled will be submitted to the RCT during the first quarter of the year following each reporting period.

FOURTH-YEAR ERP SOIL SAMPLING

During the fourth year of the ERP, a random ten percent of the 5.7-acre grids (or approved larger size grids) will be sampled and analyzed in the same manner as the initial sampling requirements. The analytical results and a map showing the grids sampled will be provided to the Commission no later than February of the fifth year of the ERP. In the even that chemical and physical properties of the postmine soils warrant further investigation, the Commission may require additional testing.

CONTINGENCY SAMPLING PLAN FOR AFM/TFM

In the event the postmine soil-monitoring program identifies possible AFM/TFM problems, an alternate soil-monitoring program will be initiated. The program will be initiated to identify the extent of soil problems. Composite samples will be collected on 5.7-acre grids and analyzed for those parameters identified in the postmine monitoring program as a potential problem. Once soil problems have been corrected, analysis results and a map showing impacted areas will be reported to the Commission to verify the successful correction of any soil problems previously identified in the postmine soil-monitoring program.

The approved postmine soil standards will be based on those dictated in Permit Provision No. 1, approved by Commission Order dated March 23, 2004, in which it indicates that the frequency distributions (provided on pages 134-33a, 134-34a, 134-35a, and 134-36a of Supplemental Document No. 2 of Permit No. 49) for topsoil and subsoil are the postmine-soil performance standards for pH, acid-base account, clay and sand, respectively. In review of this renewal/revision application, Permit Provision No. 1 is recommended by Staff to be retained as Permit Provision No. 134-1.