

Department of the Army
RECORD OF DECISION
Rusk Permit Area Individual Permit Application

SUBJECT: Department of the Army Record of Decision and Statement of Findings for the Rusk Permit Area Individual Permit Application

This document constitutes the U.S. Army Corps of Engineers (USACE), Fort Worth District, Record of Decision (ROD) for the application by Sabine Mining Company (Sabine) for a Department of the Army permit under Section 10 of the Rivers and Harbors Act of 1899 to authorize installation of a temporary culvert in the Sabine River, a navigable water of the United States (WOUS), and Section 404 of the Clean Water Act to discharge dredged and fill material into WOUS, including wetlands, in conjunction with the construction, operation, and reclamation of the Rusk Permit Area. This ROD is based on the analyses of direct, indirect, and cumulative impacts in the Rusk Permit Area Environmental Impact Statement (EIS). In compliance with the National Environmental Policy Act (NEPA), this ROD identifies: the key factors considered in the USACE's decision, the alternatives considered and the environmentally preferred alternative, monitoring programs and mitigation measures, and the USACE's decision relative to the Proposed Action. This document also constitutes the 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings.

This ROD incorporates by reference the *Rusk Permit Area Scoping Summary Report for the Rusk Permit Area Environmental Impact Statement* (October 2009); *Rusk Permit Area Draft Environmental Impact Statement (DEIS)* (October 2010); and *Rusk Permit Area Final Environmental Impact Statement (FEIS)* (May 2011). The FEIS was prepared in an abbreviated format; the DEIS and FEIS together comprise the complete EIS. The USACE is the lead agency for NEPA compliance. Cooperating agencies include the U.S. Environmental Protection Agency (USEPA), U.S. Fish and Wildlife Service (USFWS), and the Texas Parks and Wildlife Department (TPWD).

1. Application as described in the public notice.

APPLICANT: Sabine Mining Company, a wholly owned subsidiary of The North American Coal Corporation; 6501 Farm Road 968 West, Hallsville, Texas, 75650-7413.

WATERWAY & LOCATION: The Rusk Permit Area is located 1 mile north of Tatum, Texas (see DEIS Figure 1-1), in Rusk, Panola, and Harrison counties. The project site is immediately south of the existing South Hallsville No. 1 Mine and the Sabine River, west of State Highway (SH) 43, and north of Farm-to-Market (FM) 7096 to the eastern boundary of Gregg County, Texas (see DEIS Figure 2-2).

LATITUDE & LONGITUDE: Of mine center - Latitude North: 32.354°
Longitude West: 94.536°

PROJECT PURPOSE:

Basic: The basic purpose of the project is lignite mining.

Overall: The overall purpose of the Rusk Permit Area is to expand the applicant's lignite mining operations at the existing South Hallsville No. 1 Mine in order to provide a long-term, reliable, continuous, and economically stable fuel source to American Electric Power/Southwestern Electric Power Company's (SWEPCO's) Pirkey Power Plant, thus supporting SWEPCO's efforts to supply dependable, affordable electricity to its customers. The applicant is seeking to utilize a local lignite resource to continue to provide local economic benefit through increased local employment, increased tax base, and indirect job growth in Rusk and Panola counties. The applicant is also proposing to develop the Rusk Permit Area for the purpose of fulfilling their contractual obligation to SWEPCO to deliver locally mined lignite until 2035.

Water Dependency Determination: This project is not a water-dependent project.

PROPOSED WORK:

The Rusk Permit Area consists of 20,377 acres, of which up to 14,392 acres would be disturbed over the 30-year life of the mine for mining and ancillary facilities, such as transportation and utility corridors. Approximately 500 acres would be disturbed for surface mining at any one time during the project, based on sequential backfilling and contemporaneous reclamation of the mine pits. The applicant's Proposed Action is summarized below; a detailed description is presented in Section 2.5 of the EIS. The disturbed areas associated with the Rusk Permit Area by major category are presented in DEIS Table 2-4.

The Rusk Permit Area would include the development of sequential mine pits through the removal of soil and rock in order to reach and extract the lignite seams that occur at depths of 30 to 180 feet below the surface. An average of 4.0 million tons of lignite would be mined per year. The project also would include construction of access and haul roads, a dragline walkway, sediment control ponds, transmission line, temporary lignite storage areas, non-lignite storage areas, a truck fueling/parking area, and installation of wells for pit dewatering. Several existing county roads (CRs), farm-to-market (FM) roads, state highways (SHs), oil and gas facilities, and utility lines would be relocated or temporarily closed.

Prior to initiation of mining at the Rusk Permit Area, the proposed transportation and utility corridor would be constructed. This corridor, inclusive of the proposed dragline walkway and primary haul road, would facilitate transfer of South Hallsville No. 1 Mine draglines to the Rusk Permit Area and would provide for transport of lignite from the Rusk Permit Area to the existing lignite truck dump or coal barn at the South Hallsville No. 1 Mine. The proposed corridor alignment and associated crossing of the Sabine River were located in consultation and review with the USACE, TPWD, and Railroad Commission of Texas (RCT) through a site visit on May 6, 2008, and subsequent coordination. Additional detail regarding the proposed dragline walkway and main haul road is provided in Section 2.5.1.6 of the DEIS.

Overburden and interburden (the material to be removed above and between the lignite seams, respectively) primarily would be removed using 25- to 92-cubic yard capacity draglines to allow access to the lignite seams. Both highwall and spoil side positions would be used by the draglines. No blasting is proposed. The volume of overburden and interburden production would vary with the depth at which mining would occur. The minimum mineable lignite thickness considered to be recoverable is 0.25 feet.

Once an initial box pit is excavated, overburden and interburden from each subsequent pit would be backfilled into the previous pit to establish a graded surface at approximately the same elevation as the pre-mining surface. Overburden material would be selectively handled to ensure placement of a minimum 4-foot cover of suitable oxide material for use as growth media on top of the backfill. This surface then would be suitable for completion of reclamation procedures including rough and final grading, testing of selectively handled overburden for suitability, seeding and planting, and other final reclamation tasks. The sequence of activities would be implemented to achieve post-mining land uses and long-term reclamation goals as approved by permitting agencies prior to site construction.

Surface water control facilities would be constructed in appropriate locations prior to initiation of mining in each drainage area in order to control runoff from disturbance areas, including the initial mining area and infrastructure areas. These facilities would include a combination of ditches, sediment control ponds, and other control structures or best management practices (BMPs) (e.g., installation of riprap, check dams, temporary vegetation, managed discharges, etc.) designed to minimize erosion and control surface water quality discharged from the site. All surface water runoff from disturbance areas (except roads) would pass through a sediment control pond or series of sediment control structures prior to discharge through Texas Pollution Discharge Elimination System (TPDES)-regulated outfalls. Each structure would be planned and constructed in accordance with RCT requirements.

Temporary sediment control measures (e.g., drop structures, terraces, silt fences, check dams) would be installed, as needed, prior to construction and during operations to minimize erosion from disturbance areas. These controls would decrease overland flow velocities, reduce runoff volumes, trap sediment, and stabilize reconstructed soils.

Dewatering of overburden potentially would be necessary where saturated portions of the Carrizo and Upper Wilcox sands exist in the proposed mining area. Dewatering would reduce the amount of groundwater entering the pits and would stabilize the highwall and spoil both for safety reasons and to allow efficient operations. Based on modeling conducted by Pastor, Behling & Wheeler, LLC (2009), approximately 129 dewatering wells, with a pumping rate of approximately 15 gpm, would be required incrementally for the initial (5-year) mine area. Underburden dewatering is not proposed due to lack of substantial underburden sands below the lowest mineable lignite seam, and it is anticipated that seepage into the pit would be sufficient to relieve underburden pressure.

Dewatering well water (approximately 340 to 1,065 acre-feet per year) would be disposed of in accordance with Texas Commission on Environmental Quality (TCEQ) requirements either via sediment control ponds or, if the dewatering well water meets TPDES discharge standards without treatment, directly to the closest surface water channel. Discharge of dewatering well water through the sediment control ponds also would be conducted in accordance with TPDES permit criteria.

RCT-designated post-mining land uses for the proposed Rusk Permit Area may include pastureland, forest land, fish and wildlife habitat, developed water resources, grazing land, industrial/commercial uses, residential, undeveloped land, and cropland, depending on landowner agreements. WOUS, including wetlands, would be reclaimed in accordance with final USACE permit criteria; they would be incorporated per landowner agreements as features or fish and wildlife enhancement areas within the RCT-designated post-mining land uses. The applicant's reclamation plan is described in Section 2.5.3 of the DEIS and FEIS.

Surface disturbance associated with the proposed project construction and operation would result in direct impacts to a total of 303.1 acres of WOUS, including 151.2 acres of forested wetlands, 62.6 acres of non-forested wetlands, 48.3 acres of ponds, 269,047 linear feet (22.1 acres) of ephemeral streams, 73,193 linear feet (13.5 acres) of intermittent streams and 2,759 linear feet (5.4 acres) of perennial streams. These impacts would occur incrementally over the 30-year life of the mine. These impacts would be minimized by limiting surface disturbance in the mine areas to a maximum of 500 acres at one time and through implementation of the proposed contemporaneous reclamation program and the applicant's proposed Conceptual Mitigation Plan (CMP) (Appendix C of the FEIS).

Avoidance and Minimization Information:

Table 2-11 of the DEIS and FEIS (attached as ROD Table 1) summarizes the applicant's committed environmental protection measures that would be implemented as part of the Proposed Action to minimize environmental impacts associated with development of the Rusk Permit Area. Measures are identified for geology, groundwater and surface water resources, WOUS, soils, vegetation, fish and wildlife resources, cultural resources, air quality, land use and recreation, transportation, and hazardous materials. Included in these measures is the applicant's proposed CMP. Implementation of these measures was considered in the DEIS and FEIS analysis, as well as in the preliminary analysis relative to the requirements of Section 404(b)(1) of the CWA as presented in Appendix A of the DEIS. These items are further described in this ROD.

Compensatory Mitigation:

As part of the proposed project, the applicant would mitigate unavoidable adverse impacts to WOUS by performing on-site restoration of WOUS. The mitigation would occur in-kind, relative to aquatic resource type at a quality and quantity commensurate to offset proposed impacts. All losses of WOUS would be mitigated. The project would directly impact 303.1 acres of WOUS during the life of the mine, including 151.2 acres of forested wetlands, 62.6 acres of non-forested wetlands, 48.3 acres of ponds; also, 269,047 linear feet (22.1 acres) of

ephemeral streams, 73,193 linear feet (13.5 acres) of intermittent streams and 2,759 linear feet (5.4 acres) of perennial streams.

The CMP addresses reclamation/restoration of wetlands, streams, riparian woodlands, and open water features, with the objective of re-establishing aquatic resources of greater ecological condition than those currently present on site. This would be achieved by utilizing existing high quality natural and reclaimed reference sites as design targets. The measures outlined in the plan include both direct and compensatory replacement ratios of features removed from the area by mining.

To mitigate for the project-related impacts to WOUS, the applicant has proposed to perform a combination of activities including mine reclamation, stream relocation and reconstruction utilizing natural channel design principles and wetland creation within the reclaimed areas. In order to ensure adequate compensation for adverse impacts to aquatic resources, they would be mitigated in accordance with the following ratios: 1:1 for ponds and streams [48.3 acres of ponds; 269,047 linear feet (22.1 acres) of ephemeral streams, 73,193 linear feet (13.5 acres) of intermittent streams and 2,759 linear feet (5.4 acres) of perennial streams], 1.5:1 for non-forested wetlands (93.9 acres), and 2:1 for forested wetlands (302.4 acres). Restored, enhanced, and created areas would be revegetated with native plants dominant within the project area.

Mitigation would primarily consist of on-site replacement of wetlands, streams, and ponds. Mitigation typically would be in-kind for each resource type; out-of-kind mitigation would be considered as a last resort for replacement and would typically require a higher ratio. Compensatory mitigation sites would be protected in perpetuity by either deed restrictions or conservation easements (depending on securing a third party to hold a binding contract) that would be required by a special condition on any authorization issued. The applicant has also proposed \$78,657.00 in compensatory mitigation financial assurances for the first 5-year mine block in addition to \$32,157,870.00 of RCT performance bond. The RCT bonding amount includes monies for spoil leveling, regrading, soil preparation, revegetation and maintenance while the additional compensatory mitigation amount insures the topography refinement to create wetlands and streams; planting of stream riparian buffers, forested and non-forested wetland vegetation; and repair and monitoring costs. The proposal also includes a release schedule consistent with Fort Worth District compensatory mitigation banking guidelines. Mitigation in subsequent 5-year mine blocks would be assured in a similar fashion.

Additional specific information regarding the monitoring of the reclaimed mine site is provided in Section 2.5.3.10 of the DEIS and FEIS.

EXISTING CONDITIONS:

The Rusk Permit Area is located in Rusk, Panola, and Harrison counties just south of the Sabine River in the pineywoods vegetation region and consists of upland and floodplain hardwood forests, with areas of dispersed pasture land and pine plantations. Current land uses include forestry, pasture land, industrial/commercial facilities, developed water

resources, and residential areas. Most of the area is rural in character and only sparsely developed. Detailed resource-specific existing conditions are presented in Chapter 3.0 of the DEIS and FEIS.

2. Authority.

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403).
- Section 404 of the Clean Water Act (33 U.S.C. §1344).
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

3. Scope of Analysis.

a. NEPA.

(1) Factors.

(i) Whether or not the regulated activity comprises "merely a link" in a corridor type project.

The regulated activity is not a link in a corridor type project.

(ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity.

The location of the project is dictated by the location of lignite reserves and existing facilities, including the applicant's existing South Hallsville No. 1 Mine and SWEPCO's Henry W. Pirkey Unit No. 1 Power Plant.

(iii) The extent to which the entire project will be within the Corps jurisdiction.

The Rusk Permit Area requires an Individual Permit (IP) from the USACE under Section 10 of the Rivers and Harbors Act of 1899 to authorize installation of a temporary culvert in navigable WOUS and Section 404 of the CWA to discharge dredged and fill material into WOUS. While uplands comprise most of the project area, a dendritic pattern of streams and wetlands is present throughout the site. Thus, it is not reasonable to delineate a distinct part of the site that consists entirely of uplands. As the permit decision is a major federal action with the potential to significantly affect the quality of the human environment; the USACE determined that an EIS was necessary. The USACE as lead federal agency prepared the EIS in compliance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the NEPA (40 Code of Federal Regulations [CFR] 1500-1508) and 33 CFR 325 and Appendix B to Part 325- NEPA Implementation Procedures for the Regulatory Program.

Under Section 404 of the CWA and Section 10 of the Rivers and Harbors and Act, the USACE has jurisdiction over the WOUS, including wetlands, within the project area and the temporary culvert installation at the Sabine River, respectively. Other jurisdictional agencies and their authorities are presented in Tables 1-1 and 1-2 of the DEIS and FEIS.

(iv) The extent of cumulative Federal control and responsibility.

In addition to the above-referenced USACE responsibilities, Federal control and responsibility for the Rusk Permit Area also includes the Surface Mining Control and Reclamation Act of 1977 (delegated to RCT), Section 402 of the CWA (delegated to TCEQ), Mine Safety and Health Administration (MSHA) and the United States Coast Guard. A summary of Federal, state and local authorizations is included in item #7 below.

(2) Determined scope.

- Only within the footprint of the regulated activity within the delineated water.
 Over entire property.

The study area for direct and indirect impacts to WOUS includes the proposed disturbance area; the projected mine-related 5-foot groundwater drawdown area within the Carrizo-Wilcox aquifer system; and segments of the Sabine River, Cherokee Bayou, Black Slough, and Watt Creek (inclusive of their tributaries), extending downstream from the points of proposed mine water discharge to the State Highway 43 bridge over the Sabine River (approximately 5 miles). The study area was selected based on the potential for impacts to WOUS within the proposed life-of-mine area and potential mine-related effects on river water quality and quantity (including WOUS) from proposed dragline and haul-road crossing activities. The WOUS cumulative effects study area includes the proposed Rusk disturbance area; areas of surface disturbance associated with past, present, and reasonably foreseeable future actions (see Section 2.7 of the DEIS) within a 15 mile buffer surrounding the Rusk disturbance area; the projected cumulative 5-foot groundwater drawdown area within the Carrizo-Wilcox aquifer system; and segments of the Sabine River and its 100-year floodplain from the vicinity of Easton, Texas, and extending downstream to the State Highway 43 bridge over the Sabine River (approximately 5 miles). The downstream extent of the cumulative effects study area was selected based on the potential for cumulative surface water quality or quantity effects on the Sabine River or its floodplain.

b. NHPA "Permit Area".

- (1) **Tests.** Activities outside the waters of the United States are/are not included because all of the following tests are/are not satisfied: Such activity would/would not occur but for the authorization of the work or structures within the waters of the United States; Such activity is/is not integrally related to the work

or structures to be authorized within waters of the United States (or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program); and Such activity is/is not directly associated(first order impact) with the work or structures to be authorized.

(2) **Determined scope.**

Under Section 106 of the NHPA, the area of potential effect (APE) is defined (36 CFR 800.16[d]) as “the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. Additionally, the APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking”. Accordingly, the cultural resources APE for direct, indirect, and cumulative impacts is consistent with the permit boundary.

c. ESA "Action Area".

(1) **Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.**

(2) **Determined scope.**

The study area for direct and indirect impacts to listed species included the area within the permit boundary and the projected mine-related 5-foot groundwater drawdown area of the Carrizo-Wilcox aquifer system; and segments of the Sabine River, Cherokee Bayou, Black Slough, and Watt Creek (inclusive of their tributaries), extending downstream approximately 5 miles from the points of proposed mine water discharge. A distance of 5 miles was selected based on the proposed in-channel work for the dragline walkway and main haul road crossings of the Sabine River, and the potential for mine-related effects to aquatic and riparian habitats along the waterbodies in the study area. The listed species cumulative effects study area included the area within the proposed permit boundary and the projected cumulative 5-foot groundwater drawdown area of the Carrizo Wilcox aquifer system; areas of surface disturbance associated with past, present, and reasonably foreseeable future actions (see Section 2.7 of the DEIS); and segments of the Sabine River, Cherokee Bayou, Black Slough, and Watt Creek (inclusive of their tributaries), extending downstream approximately 5 miles from the points of proposed mine water discharge. A distance of 5 miles was selected based on the proposed in channel work for the dragline walkway and main haul road crossings of the Sabine River under the Proposed Action, and the potential for cumulative effects to aquatic and riparian habitats along the waterbodies in the study area.

d. Public notice comments. NA

The USACE published three public notices in the Federal Register for the EIS: 1) Notice of Intent (NOI) published on June 24, 2009; 2) Notice of Availability (NOA) for the

DEIS published on October 29, 2010; and 3) NOA for the FEIS published on May 20, 2011. The USACE also published a public notice on June 25, 2009, inviting public and agency input and comments on the applicant's proposal. See Paragraph 3(d)(1) relative to public comments and 3(d)(2) relative to issues raised during this public participation process.

(1) The public also provided comments at public hearing, public meeting, and/or Explain

The public participation process is summarized in Chapter 4.0 of the DEIS and FEIS. The public provided comments at the public scoping meeting on July 7, 2009, and interested agencies provided input regarding the scope and analyses for the EIS during the July 8, 2009, agency meeting. Participating agencies included TPWD, RCT, USFWS, and USEPA. Public and agency comments on the DEIS were received during participation at the open house meeting and public hearing (November 15 and 16, 2010, respectively) and via comment letters during the 60-day DEIS public comment period. Public and agency comments also were received during the 60-day FEIS comment period.

(2) Commenters and issues raised

Scoping comments are summarized in the *Scoping Summary Report for the Rusk Permit Area, October 2009*; the key issues are summarized in Chapter 4.0 of the DEIS. The scope of the EIS reflects the input received during the scoping process. Commenters, issues raised, and responses to comments on the DEIS are presented in Appendix G of the FEIS. Comments received on the FEIS are addressed below.

On May 20, 2011, the USACE Fort Worth District initiated the 60-day public comment period on the FEIS. Four commenters replied to the public notice. The following comments and issues were raised and responded to as described.

Comment Number	Organization	Comment	Response
1	TPWD	S4-2 This response refers to response to comment F2-6, which does not fully address the 100% versus 60% removal of the dragline walkway constructed within the 100-year floodplain. The response only mentions possible additional disturbance and impacts on floodplain geometry from complete removal. It does not address or compare disturbance by overbanking flows or effects on floodplain geometry from leaving 40% of the fill in place.	Federal Emergency Management Agency (FEMA) requires that the water surface elevation of the 100-year floodplain of the Sabine River not be raised by more than 1 foot. By removing 60 percent (rather than 100 percent) of the dragline walkway, the floodplain impacts would remain within the allowable limit. This 60 percent removal from the floodplain of the Sabine River would include removal of all fill from WOUS within the dragline walkway footprint. A thorough technical review was conducted and subsequently approved in Railroad Commission of Texas (RCT) Permit 55 issued July 26, 2011. In addition to RCT approval, the plan also was approved by the local FEMA floodplain administrator.
2	TPWD	S4-3 The applicant should indicate why the area downstream of the crossing would need to be cleared regardless of the method used to convey floodwater beneath the haul road.	The hydraulic impact of a structure (e.g., culvert, bridge, etc.) on a floodplain extends downstream of that structure. In this case, to mitigate the impact of the bridge and culvert structure on the 100-year floodplain, it is necessary to increase the hydraulic conveyance of the floodplain by clearing in a non-regulated fashion for a distance of approximately 400 feet downstream of the structure. Although long-term temporary in nature, these effects would be reduced over time as these areas revegetate following removal of the structures.
3	TPWD	S4-5 If the no-action alternative includes continued operation of the currently permitted areas of the South Hallsville mine, then the proposed action should include this as well.	Ongoing operation of the South Marshall Permit Area at the South Hallsville No. 1 Mine would continue under existing permits and authorizations until reserves are depleted, as discussed in Sections 2.5 and 2.6 of the Draft Environmental Impact Statement (EIS). Also as discussed, currently permitted ancillary facilities at the South Hallsville No. 1 Mine would be used during operations at the

Comment Number	Organization	Comment	Response
			<p>proposed Rusk Permit Area. The impacts associated with the existing South Hallsville No. 1 Mine were analyzed in previous National Environmental Policy Act (NEPA) documents: United States Environmental Protection Agency (USEPA) 1997, 1982. In the Rusk Permit Area EIS, impacts of the existing mine were analyzed under the No Action Alternative and were appropriately considered in the cumulative impact analyses for the Rusk Permit Area (see Section 2.7.1 and the resource-specific cumulative impact analyses in Chapter 3.0).</p>
4	TPWD	<p>The FEIS and Record of Decision should note that the Sabine River is classified by TPWD as an ecologically significant stream segment from the headwaters of Toledo Bend Reservoir in Panola County upstream to the Panola/Rusk county line (within TCEQ classified stream segments 0504 and 0505).</p> <p>This classification was based on the following:</p> <p>Biological function - Texas Natural Rivers System nominee for outstandingly remarkable fish and wildlife values (NPS, 1(95); priority bottomland hardwood habitat displays significant overall habitat value (Bauer et al., 1991).</p> <p>High water quality/exceptional aquatic life/high aesthetic value – exceptional aesthetic value (NPS, 1995).</p> <p>Threatened or endangered species/unique communities - Paddlefish (Species of Concern/State Threatened) (TPWD, 1998).</p> <p>Bauer, J., R. Frye, B. Spain. 1991. A natural resource survey for proposed reservoir sites and selected stream segments in Texas. Texas Parks and Wildlife Department, Austin, Texas.</p> <p>National Park Service. 1995. The nationwide rivers</p>	<p>This stream classification is clearly noted in the DEIS in Section 3.2.4.1 on page 3.2-30.</p>

Comment Number	Organization	Comment	Response
		inventory. United States Department of the Interior, Washington, DC. Texas Parks and Wildlife Department. 1998. Fish hatchery stocking records. Texas Parks and Wildlife Department, San Marcos, Texas.	
5	TPWD	S4-6 TPWD supports mitigation measures SW-1 through SW-7.	Comment noted.
6	TPWD	S4-7 Page 2-53, 3.2-39, 3.2-48: Although the FEIS shows mitigation measure SW-3 as a measure to be considered, SMC has committed in its Railroad Commission of Texas (RCT) permit application to mitigation measure SW-3 through Supplement No.4 of the RCT permit application in Appendix 144-3 Silt Prevention and Monitoring Plan for Sabine River Transportation Corridor Construction Activities. The plan includes sediment controls and river water sampling and monitoring during pre-construction, during construction and while the bypass channel is in place, and following removal of the bypass channel.	Comment noted. Note that mitigation measure SW-3 has been revised to be more specific relative to inspection and reporting requirements; the revised mitigation measure is included in Table 1 of this ROD.
7	TPWD	S4-9 TPWD staff does not recommend an East Texas woody plant stocking rate of 100 stems per acre of hardwoods. This number is too low. A restoration site should have at least 250 stems per acre of 5-year-old trees at a five year monitoring point. At least 150 (60%) of those stems should be hardwoods.	The Conceptual Mitigation Plan (CMP) has been revised to reflect this district's requirements of a minimum of 250 trees per acre 5 years after planting. Note that stocking rates for created (establishment) sites are not the same as for a restoration site, as noted in this comment; the noted 100 trees per acre standard coincides with Texas Park and Wildlife Department (TPWD) recommendations stated in the RCT <u>Procedures and Standards for Determining Revegetation Success on Surfaced-Mined Lands in Texas</u> .
8	TPWD	S4-9,S4-10,S4-11,S4-12 On page 2-34, Sabine Mining Company has increased its commitment of reclaimed land to Fish and Wildlife land use which	Comment noted.

Comment Number	Organization	Comment	Response
		<p>changed from 137 acres to 545 acres for the FEIS. Please note that SMC submitted to the RCT their permit application Supplement No.4 dated May 9, 2011 for this project in which SMC has increased their fish and wildlife land use commitment to 1,649 acres for the first 5-year permit term disturbance area of 2,811 acres. This represents 58.7% of the disturbance area. TPWD is pleased with these increased Fish and Wildlife land use commitments. TPWD also supports SMC's current outreach efforts to ascertain whether landowners are willing to have wetland and stream mitigation on their land.</p>	
9	TPWD	<p>S4-13 The applicant indicated at the site visit on 6/1/2011 that the haul road bridge may remain following mine closure. If the applicant does not commit to remove the bridge and road, then the impacts to the Sabine River and its floodplain should be considered permanent and compensated as such in the Mitigation Plan.</p>	<p>As discussed in Section 2.5.3.8 of the Draft EIS, the bridge structure would be removed and the disturbance area reclaimed.</p>
11	TPWD	<p>S4-14 TPWD supports additional mitigation measure V-1.</p>	<p>Comment noted.</p>
12	TPWD	<p>S4-15 Supplement No.4 to SMC's RCT permit application provides adequate commitment of postmine Fish and Wildlife land use at 1,649 acres for the first 5- year permit term. This commitment satisfies many of TPWD's concerns voiced in comments on the draft EIS with respect to Sabine River corridor reclamation, vegetation species diversity, and mixed pine/hardwood upland forest losses to pasture and pine plantation forest. TPWD encourages SMC to continue committing postmine fish and wildlife lands for subsequent permit terms so that an estimated 6,235 acres of mixed pine/hardwood upland forest being disturbed for the 30-year life-of-mine can be reclaimed within a land</p>	<p>Comment noted.</p>

Comment Number	Organization	Comment	Response
		use that offers beneficial fish and wildlife habitat equal to or better than the premine condition.	
13	TPWD	S4-16 Page 2-58, 3.5-36: TPWD is pleased with the additional mitigation measure to conduct mussel surveys in the Sabine River prior to occurrence of the proposed dragline crossing and subsequent dragline crossings. This measure is included in SMC's Supplement No.4 of their RCT permit application in that surveys would be done before all construction activities in the Sabine River. Page 2-58, 3.5-28, 3.5-36: TPWD is pleased with the additional mitigation measure to conduct mussel surveys and relocation in perennial tributary of Hendricks Lake and Hendricks Lake. This measure is included in SMC's Supplement No.4 of their RCT permit application.	Comment noted.
14	TPWD	S4-17 Page 2-58, 3.5-16, and 3.5-36: TPWD is pleased with the addition of a mitigation measure to be considered for fish and wildlife resources, namely installing TPWD-approved bird flight diverters on the proposed transmission line in areas of high bird use such as across the Sabine River and its floodplain. SMC's Supplement No.4 of their RCT permit application indicates SMC will use Avian Power Line Interaction Committee (APLIC) guidelines for design and construction of the transmission lines. The guidelines recommend bird collision mitigation measures, including marking the lines, to mitigate collisions once a line is in place and a significant bird/power line collision situation is identified. Thus, SMC will consider marking the lines, but there is no commitment. TPWD recommends that if SMC does not mark the lines at construction in areas of potential high bird use, SMC should report bird/power line collisions to	The commitment to use the Avian Power Line Interaction Committee guidelines is a requirement of Sabine's RCT permit. The referenced applicant proposed protection measure in the EIS has been revised for consistency. The revised measure is presented in Table 1 of this ROD.

Comment Number	Organization	Comment	Response
		<p>RCT and identify if a bird/power line collision situation occurs once the line is in place and throughout operation of the transmission line. So that impacts to migratory birds are attenuated and to avoid violation of the Migratory Bird Treaty Act, SMC should consult with USFWS and TPWD for mitigation measures to be conducted.</p> <p>Note: Although the FEIS still shows that SMC will use the 1970 DOI and USDA transmission line publication and the 1974 Rural Electrification Administration bulletin, the SMC has updated their RCT permit application to utilize the APLIC guidelines recommended by TPWD.</p>	
15	TPWD	<p>S4-20 Page 3.9-7: In Appendix G, the response to comment S4-20 indicates that the EIS has been modified to include the recommended mitigation measure and to see Section 3.9.4. Although the FEIS Table of Contents indicates that monitoring and mitigation measures of Section 3.9.4 had changes, please note that page 3.9-7 is missing from the FEIS. The comment was regarding recreation interruption on the Sabine River during construction, and TPWD recommended a mitigation measure to inform boaters of potential disruption to recreation activities on the river.</p>	<p>It has been determined that additional mitigation measures are not necessary, as the Texas Pollution Discharge Elimination System permit for the proposed project includes a public notice process, which the USACE considers adequate. Thus, page 3.9-7 intentionally was not included in the Final EIS; the response in Appendix G and reference in the Table of Contents incorrectly inferred its inclusion. The approved RCT permit includes a Multi-Sector construction permit authorization from TCEQ which requires notification to inform boaters of potential disruption to recreational activities on the river.</p>
16	TPWD	<p>S4-22 TPWD supports mitigation measure VR-1.</p>	<p>Comment noted.</p>
17	TPWD	<p>S4-23 The proposed technical standard of a stem count of 250 trees per acre of hardwood species is an acceptable standard, although that standard should be the minimum acceptable count. Achievement of 90% of the 250 trees per acre standards should not be adequate. This standard is an improvement over the 100 stems per acre mentioned in response to S4-9. TPWD supports the increased amount of postmine land use that SMC</p>	<p>In regard to the CMP, 90 percent is not identified and is not part of the revised standard for mitigation of forested wetlands. Rather, reclamation of forested wetland habitat would be deemed successful with a minimum tree density after 5 years of 250 trees per acre, as stated in Section 2.5.3.10 of the Final EIS. The 90 percent achievement standard is part of the RCT requirements for fish and wildlife habitat as stated in the RCT <u>Procedures and Standards for</u></p>

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		<p>has designated as Fish and Wildlife land use. This commitment satisfies many of TPWD's concerns regarding mixed pine/hardwood upland forest losses to pasture and pine plantation forest. TPWD encourages SMC to continue committing postmine fish and wildlife land use for subsequent permit terms so that an estimated 6,235 acres of mixed pine/hardwood upland forest being disturbed for the 30-year life-of-mine can be reclaimed within a land use that offers beneficial fish and wildlife habitat equal to or better than the premine condition.</p>	<p><u>Determining Revegetation Success on Surfaced-Mined Lands in Texas and discussed in Section 2.5.3.10 of the Final EIS.</u></p>

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18	TPWD	S4-25 The applicant should consult with landowners in advance to determine whether wetland and/or stream restoration is acceptable on their land and plan accordingly. TPWD has learned that SMC is beginning this consultation process and encourages it as a necessary step in mitigation planning. Technology is available to plan fairly exactly where streams and wetlands will be put back and in what quantities. Other lignite mines in Texas are already doing this.	<p>Landowner agreements are negotiated in advance. Per the response to comment S4-12 in the Final EIS, specific mitigation locations for WOUS, including wetlands, will be developed based on the CMP and will be incorporated as features within the RCT post-mine land use categories where provided for in landowner agreements. Off-site mitigation will be evaluated and potentially approved on a site-specific basis by this district and would typically require higher replacement ratios. Replacement ratios for WOUS, including wetlands, are discussed in Section 2.5.3.6 of the Draft EIS.</p> <p>Also, per RCT Permit 55 approved July 26, 2011, “The reclamation and restoration of WUS will be through mitigation accomplished off-site except on properties where WUS reconstruction is possible. Where American Electric Power (AEP) has property ownership in the flood plain, the best postmine land uses for WUS mitigation areas are fish and wildlife habitat and developed water resources land uses. As described under 147(a)(3), where applicable to the restoration of WUS, including wetlands, postmine land use will be returned to the documented premine land use. Reclamation activities will develop postmine streams in accordance with postmine topography.”</p> <p>This RCT permit requirement stipulates that WUS be returned to their original location.</p>
19	TPWD	S4-26 The response does not address TPWD staff's concern over the low mitigation ratio.	<p>Out-of-kind mitigation is proposed only as a last resort, and no specific site is proposed in Sabine's 404 IP application. In order to receive approval for any out-of-kind mitigation, the applicant would be required to revise a detailed mitigation plan to be evaluated by this office.</p> <p>Regarding mitigation ratios, these ratios are</p>

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			<p>consistent with those required for numerous permit actions, and the USEPA in their June 20, 2011, letter acknowledged that the ratios were adequate.</p> <p>Also see the response to comment F1-3 in the Final EIS regarding the approved methodology for the CMP. This District did not have a single recommended aquatic resource functional/conditional assessment methodology at the time of pre-application consultation and IP application development for the Rusk Permit Area (2007-2009). The Texas Rapid Assessment Method was not published for testing and use until March 2011, and the Hydrogeomorphic East Texas Regional Guidebook only became available in October 2010. The applicant proposed the use of the Wetland Rapid Assessment Procedure (WRAP) and the USACE Mobile District Stream Mitigation Standard Operating Procedure (SOP) in the preparation of the IP application and CMP. The preliminary discussions of this methodology were coordinated with resource agencies during the July 2009 EIS scoping meetings. At that time, no concerns were expressed. The USACE reviewed the proposed methodology and approved its use in assessing baseline ecological conditions and determining appropriate compensatory mitigation. As such, the applicant invested substantially in collecting field data and making mitigation predictions using this methodology. Although differences exist in vegetative species composition, only minor differences were noted in scoring comparisons of similar aquatic resource types. Sabine's CMP is in accordance with the 404 IP format requirements of this district.</p>
20	TPWD	S4-27 As illustrated at the agency site visit, forestry and pastureland post-mine land uses can conflict	Comment noted.

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		with wetland mitigation. SMC staff cited several instances where landowners were unhappy with the wetland created on their land, requiring the SMC to compensate the landowner. However, TPWD is pleased with the recent changes to the post-mine land use designations which resulted in a much larger proportion designated as fish and wildlife land use, which is more compatible with stream and wetland mitigation.	
21	TPWD	S4-28 The Individual Permit was not previously distributed to TPWD. TPWD requested a copy after seeing the response to comments. The IP was received midway through the review of the FEIS. However, reference to a document showing the linear feet of impact does not address TPWD's concern regarding quantifying the linear feet of stream to be created as mitigation.	<p>TPWD and all other applicable agencies were provided copies of Sabine's 404 IP application (and subsequent additions or revisions). TPWD received their copy via Federal Express on January 28, 2010; the document, addressed to Tom Heger, was signed for in the TPWD mail room. Protocol for document distribution was discussed at the July 8, 2009, EIS agency scoping meeting attended by TPWD (Beth Bendik). Notification to the public and agencies in regard to the applicant's proposal was published on June 25, 2009.</p> <p>As discussed in Section 3.2.5.2 of the Final EIS, the direct impacts to approximately 269,047 linear feet of ephemeral streams, 73,193 linear feet of intermittent streams, and 2,759 linear feet of perennial streams will be mitigated at a 1:1 ratio.</p>
22	TPWD	S4-29 Appropriate baseline information needed to review the project should be included in the FEIS and the Mitigation Plan (PLAN), not simply as a reference to an RCT permit application.	Baseline information presented in Sabine's RCT permit application has been incorporated into the EIS in part or by reference, as appropriate for the analysis and in accordance with the Council on Environmental Quality (CEQ) guidelines (Sec. 1502.21). The RCT permit application and environmental baseline reports are included in the administrative record for the EIS.
23	TPWD	S4-30 The response does not address the mitigation - post-mine land use conflict. However, TPWD is	See the response to above comment 18.

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		pleased that SMC has recently designated a much larger area as a Fish and Wildlife post-mine land use.	
24	TPWD	S4-31 The representative stream restoration designs included in the PLAN do not provide a sufficient level of detail regarding the mitigation streams. Specific stream performance standards should be included in the PLAN.	As discussed in previous responses, incorporation of detailed design plans for created (not restored) streams is not possible until after mining takes place and post-mining topography and hydrology are established, as post-mining conditions will dictate the appropriate and achievable design for restored WOUS planned and constructed using natural stream channel design methods. Revised stream performance standards are included in the CMP, and these standards are consistent with those used in this district.
25	TPWD	S4-32 and S4-33 TPWD consistently points out the detrimental effects of on channel impoundments. SMCRA and the RCT do not require the over-widened channels proposed. Also, if cattle cannot be excluded in the post-mining period, then cattle exclusion should not be counted toward the restoration functional assessment scoring.	As previously stated, there is no established guidance stating that on-channel basins are not appropriate for stream restoration. Ponds are proposed to be replaced at a 1:1 ratio in their approximate pre-mine locations. Channel design includes evaluation of fluvial geomorphology and factors in Surface Mining Control and Reclamation Act (SMCRA) design criteria. Section 4.2 of the CMP, as presented in Appendix C of the Final EIS, addresses livestock exclusion and management during mining and final reclamation. However, in the post-mining period, no assurance of livestock exclusion is possible on leased properties. Sabine will make an effort to exclude cattle from mitigation areas to the fullest extent possible.
26	TPWD	S4-35 The EIS should be a stand alone document.	Reproduction of all permit applications within an EIS is not practical and is discouraged under NEPA.
27	TPWD	S4-36 The USACE has indicated new minimum riparian buffer distances: 25 feet ephemeral, 50 feet intermittent, 100 feet perennial for either side of the	Section 2.5.3 of the Final EIS and the CMP in Appendix C of the Final EIS reflect this district's riparian buffer standards.

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		stream. TPWD recommends that stream buffers should be wider than the minimum standards. TPWD recommends buffers of at least 100 feet. TPWD is pleased that the document has been revised to include 100-foot buffers for perennial streams.	
28	TPWD	S4-37 TPWD is pleased that the success criteria for forested wetlands has been revised in section 2.5.3.10 and the PLAN to 250 trees per acre at the end of the five-year monitoring period. The criteria should also specify that they be five-year old trees.	See the response above to comment 17. Also, Section 5.0 of the CMP in Appendix C of the Final EIS states that “If the density is less than the minimum five years after planting, the area will be replanted as necessary to achieve the minimum density five years after the most recent remedial planting.” This is consistent with this district’s requirements.
29	TPWD	S4-39, S4-40, and S4-41 If adequate site protection in the form of a conservation easement cannot be provided for on-site mitigation, more off-site mitigation should be required. Under the Final Rule for Compensatory Mitigation for Losses of Aquatic Resources, permittee-responsible mitigation is to be held to the same standards as mitigation banks.	The applicant has revised the CMP to incorporate appropriate site protection procedures for permittee-responsible mitigation. This site protection is in accordance with the Compensatory Mitigation Rule of 2008 which takes into consideration the fundamental differences between mitigation banks, in-lieu fee programs, and permittee-responsible mitigation, and maximizes opportunities for mitigation.
30	TPWD	S4-44 TPWD supports the addition of a separate performance bond to ensure that aquatic resource mitigation can be completed successfully.	Comment noted.
31	TPWD	S4-45 The IP was not previously distributed to TPWD. TPWD requested a copy after seeing the response to comments. The IP was received mid-way through the review of the FEIS. Therefore, TPWD has not had previous opportunity to review the functional assessment data sheets. In the WRAP data sheets for "potential forest" areas, the wetland canopy should score a 1 at most, not a 1.5 or 2, given that the overstory/shrub canopy is still	See the response above to comment 21 relative to distribution of the IP. As discussed in Section 2.1 of the Functional Assessment report as presented in Appendix C of the Final EIS, the WRAP scores for potential forested wetlands created in the reclamation area of the South Hallsville No. 1 Mine were averaged with the forested wetland scores since the potential forested

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		immature on a "potential forest." How can an area with only saplings score a 2?	wetlands are likely to become forested wetlands based on the density and vigor of tree seedlings and saplings present in the wetland. Additionally, the WRAP methodology for scoring overstory/shrub canopy is based on the health, appropriateness (i.e., native versus non-native), and habitat provided by the shrub and overstory canopy. The age or maturity of the canopy is not specifically scored by this variable. Therefore, a wetland with a sapling canopy that is healthy, provides habitat, and is composed of desirable species will score moderate to high in a potential forested wetland. Based on this information, it was determined that '2' is an appropriate score.
32	TPWD	S4-46 Reclamation land is more similar to improved pasture than unimproved pasture/rangeland because the primary post-mine land use designation is Pastureland, which would primarily consist on introduced grasses such as Bahia or Bermuda to meet strict RCT production standards. Therefore, the water quality land use score should be 1 instead of 2.5.	In the WRAP procedures, the water quality land use variable is scored based on the quality of storm water runoff, such as the pollutant loading rates, which typically increase with the intensity of land use. WRAP allows for adjustment of the land use variable score based on knowledge and/or observations of land use practices. As described in the Functional Assessment report as presented in Appendix C of the Final EIS, a score of 2.5 is justified for reclamation areas due to the high standards for bond release of mine reclamation areas and the healthy condition of vegetation that ensure storm water runoff quality is moderately high and nearly that of natural undeveloped areas. The score is further justified based on field inspection of other reclaimed mine sites. "High standards for bond release" include adequate ground cover with desirable species (based on RCT technical standards), no suspended solid contribution to streams, and control of erosion which contribute to the moderately high water quality in the reclamation areas and justify a score of 2.5.

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33	TPWD	S4-47 The IP was not previously distributed to TPWD. TPWD requested a copy after seeing the response to comments. The IP was received mid-way through the review of the FEIS.	See the response above to comment 21.
34	TPWD	S4-49 Again, it is inappropriate to assess ephemeral streams as wetlands. Impacts and mitigation should be calculated in linear feet. TPWD appreciates that the linear feet of ephemeral stream impacts has now been added to the EIS.	Comment noted.
35	TPWD	S4-50 TPWD staff still believes that several inappropriate modifications have been made to adapt the Mobile SOP to the site. These inappropriate modifications will result in inaccurate data in the EIS for impacts and mitigation to streams.	Adaptation of the Mobile SOP for surface coal mine operations at the site was based on professional judgment, similar adaptations at other surface coal mine sites, and the prior approval by this district before implementation of the evaluation and was discussed with all resource agencies in the EIS scoping meeting. Adequate justification for the appropriateness of the adaptations and an explanation of the calculations used to determine impacts and mitigation for streams are provided in the Functional Assessment report presented in Appendix C of the Final EIS.
36	TPWD	S4-52 and S4-53 The Mobile SOP defines permanent impacts as "project impacts that will be permanent or will occur during spawning or growth periods of Federal and/or State protected species." State protected mussel species have been found in the Sabine River by the applicant's surveys and the several other state-protected species, such as paddlefish and alligator snapping turtles, are known to be in the area. For mussels, the spawning/growth period can be considered as encompassing the entire year, especially for the bradyctictic (long-term brooder) mussel species. These species spawn over summer and hold the larvae through winter, releasing them the following spring/summer.	State protected mussel species were not found at the Sabine River crossing at the time of the initial assessment; however, the species were found at that location during subsequent surveys. The presence of the mussel species was considered in the Final EIS impact analysis. Based on the analysis in Section 3.5.2.1 of the Draft and Final EIS, Mitigation Measure FW-4 was developed for the Final EIS to minimize project-related impacts to mussel species. Based on the Final EIS analysis, no long-term or permanent impacts to state or federal protected species were identified for the Sabine River. Net stream impacts would change less than 1 percent (from 241,562 to 241,878) as a result of changing the

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		<p>Successful reproduction is also dependent on the presence of appropriate glochidial host fish species, so impacts to fish could also affect mussels. Therefore, any impacts to the Sabine River should be classified as permanent.</p>	<p>Sabine River crossing to primary priority area and permanent duration due to the presence of state listed species.</p>
37	TPWD	<p>S4-54 The dominant impact factor should be classified as permanent fill, not morphological change. Mining through or placing on-channel impoundments on streams clearly constitutes fill. The Mobile SOP defines fill as "permanent fill of a stream channel due to construction of dams or weirs, relocation of a stream channel (even if a new stream channel is constructed), or other fill activities." In this case, the stream channels are being relocated and a new stream channel is being built. Also, some of the stream segments impounded during mining for sediment control and water quality measures would remain impounded permanently and would also count as fill by this definition. Therefore, permanent fill is a more appropriate impact factor than morphologic change.</p>	<p>As discussed in Section 2.2 of the Functional Assessment report as presented in Appendix C of the Final EIS, under the Mobile SOP, relocation of a stream is considered fill when the relocation is conducted to allow development of the area where the stream previously was located. The impacts associated with surface coal mining do not allow development (e.g., residential, commercial, or industrial uses) of the area where the stream was located, but instead functionally replace the stream during the reclamation process.</p> <p>As also discussed in Section 2.2 of the Functional Assessment report, the Mobile SOP defines impoundment as "to convert a stream to a lentic state with a dam or other detention/control structure that is not designed to pass normal flows below bankfull stage." Some stream segments are impounded during mining activities for sediment control and water quality measures; however, these impoundments are not permanent, and most would be removed (or significantly downsized) during the reclamation process following mining activities. Typically, impoundments that remain in place would be small in size and provide in-kind mitigation for on-channel ponds. RCT reclamation requirements include standards for restoration of the post-mine landscape to approximate original contour (AOC) to reestablish pre-mine drainage patterns. This district requires the reestablishment of aquatic features that meet the Regulatory Program definition of a WOUS (respectively, for each resource type). The ultimate</p>

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			<p>effect of achieving compliance with both of these requirements is more consistent with morphological change than a permanent impact. A goal of the CMP is to reestablish aquatic resources that function at or better than pre-mine levels and ensure successful replacement with appropriate success criteria and monitoring standards. Thus, morphologic change is a more appropriate impact factor than permanent fill for evaluating impacts of the surface mining operations at the site.</p>
38	TPWD	<p>S4-55 There is a time lag between when a site is impacted and when that same site is reclaimed. If reclamation of the first site is considered to constitute contemporaneous reclamation for impacts to the second site, then the impacts at the first site would effectively not be reclaimed until the whole process is complete.</p>	<p>Contemporaneous (or concurrent) reclamation refers to reclamation of previously mined areas while mining progresses to other areas, thus minimizing the overall disturbance area at any one time. This sequencing and the associated lag time are shown in Figure 2-8 of the Draft EIS. Final reclamation refers to reclamation of remaining disturbance areas at the completion of mining.</p> <p>As discussed in Section 2.2 of the Functional Assessment report, functional replacement of stream impacts in one portion of the permit area while impacts occur in another portion of the permit area can serve to limit cumulative and temporal loss. Reclamation of the first area does not offset impacts in the second area. Rather, concurrent reclamation minimizes the lag time between disturbance and reclamation in a given area. Following concurrent and final reclamation, all impacts would be offset. Although the Functional Assessment report does not consider temporal factors, the USACE and the CMP consider temporal loss in determining mitigation requirements.</p>
39	TPWD	<p>S4-56 On-channel impoundments should not be constructed on mitigation areas. These impoundments cause excess sediment deposition</p>	<p>Some on-channel impoundments can have negative influences on certain functions of the aquatic environment. However, if properly designed and</p>

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		and bank erosion, impede fish passage, and contribute to scour downstream by releasing sediment-starved water.	<p>constructed, an impoundment can contribute to the diversity of aquatic resource conditions/habitats and enhance the functions (e.g., sediment retention, aquatic species refugia, wetland fringe habitat development, energy dissipation, etc.) of a tributary system.</p> <p>There is no established guidance stating that on-channel basins are not appropriate for stream restoration. Ponds are proposed to be replaced at a 1:1 ratio in their approximate pre-mine locations, including those constructed on-channel. Pond construction in this case is a way of achieving in-kind mitigation for open water impacts. Channel design includes evaluation of fluvial geomorphology and factors in SMCRA design criteria.</p>
40	TPWD	S4-58 and S4-59 The potential forested wetland should have to actually develop the overstory/shrub cover to earn a higher score. The WRAP wetland overstory/shrub canopy rating index describes immature cover as a score of 1. Again, TPWD did not previously receive the IP and entire Functional Assessment.	<p>As described in the response to comment 31, the potential forested wetlands are likely to become forested wetlands based on the density and vigor of tree seedlings and saplings present in the wetland. Additionally, the WRAP methodology for scoring overstory/shrub canopy is based on the health, appropriateness (i.e., native versus non-native), and habitat provided by the shrub and overstory canopy. A low overstory/shrub canopy variable score is described in WRAP as minimal desirable species (i.e., primarily undesirable), little habitat support, and disease or insect damage. Therefore, a wetland with a sapling canopy that is healthy, provides habitat, and is composed of desirable species will score moderate to high in a potential forested wetland.</p> <p>See the response above to comment 21 relative to distribution of the IP.</p>
41	TPWD	S4-61 As mentioned previously. The applicant's proposed revisions to the Mobile SOP for surface	See the response to comment 35 relative to revisions of the Mobile SOP.

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		<p>coal mining operations are not appropriate. The priority classifications for the Sabine River and other perennial waters should be revised to "primary priority" due to the state listed mussel species found during surveys and the strong probability that those waters also contain other state-listed species, such as the creek chubsucker, paddle fish, and alligator snapping turtle. The fact that appropriate surveys had not been conducted at the time of the draft Functional Assessment does not mean that the score should not be revised now. A mussel sanctuary at the edge of the impact site indicated the high likelihood of finding rare mussels in that stretch of the Sabine River. The Texas Parks and Wildlife Department Annotated County Lists of Rare Species for Rusk, Panola, and Harrison counties indicate the potential for the aforementioned fish and reptile species. Also, a copy of the current mussel survey reports should be provided to TPWD.</p>	<p>See the response above to comment 36 relative to impacts to the Sabine River and mussel species. The applicant conducted preliminary presence/absence mussel surveys which were submitted to the RCT. Based on the preliminary survey, additional survey work was required and has been completed, and final reporting of the survey is pending submission to the RCT and TPWD.</p>
42	TPWD	<p>S4-62 The applicant is proposing in stream credit and riparian buffer credit. The Mobile SOP separates credit on this basis. TPWD states that separate credit for riparian buffer improvements is only appropriate if riparian buffer impacts are included in the impact calculations.</p>	<p>As discussed previously, the use of the Mobile SOP with appropriate adaptations was performed based on prior approval of this district before implementation of the evaluation. The Mobile SOP does not include a separate calculation for riparian buffer impacts nor does it specify that credits for riparian buffer improvements are only appropriate if these are included in the impact calculations. The Mobile SOP includes the clearing of stream bank vegetation as a potential dominant impact factor. However, only one dominant impact factor can be used, in this case morphologic change, which is higher (1.5) than clearing (0.05) and thus exceeds the factor to account for riparian impacts.</p>

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43	TPWD	S4-64 Following the logic presented, the first site is not replaced for the life of the mine. A multiplier (ratio greater than 1: I) should be applied to the compensation credit required to account for the temporal loss of those aquatic functions and the difficulty of restoring or establishing the desired aquatic resource type and functions (33CFR332.3(f)(2)».	See the response above to comment 38.
44	TPWD	S4-66 The Mobile SOP also specifies that "cattle are not allowed to access riparian buffers within compensatory mitigation sites." If measures cannot be taken to ensure permanent cattle exclusion from the riparian areas, then the value of riparian areas as compensatory mitigation should be reduced.	<p>The Functional Assessment report considered that cattle would be excluded from riparian buffer areas as specified by the Mobile SOP and also specified that the ultimate totals of functional replacement would be dependent on the acres of wetlands and length of streams created and/or restored through the mine planning and reclamation process at the Rusk Permit Area.</p> <p>Section 4.2 of the CMP, as presented in Appendix C of the Final EIS, addresses livestock exclusion and management during mining and final reclamation. However, in the post-mining period, no assurance of livestock exclusion is possible on leased properties. Sabine will make an effort to exclude cattle from mitigation areas to the fullest extent possible.</p>
45	TPWD	S4-70 Tables 5 through 9 in the Functional Assessment of Waters of the U.S. Report should be recalculated to correct the improper modifications to the Mobile SOP. If these recalculations will only result in a small change, they should still be applied for accuracy.	As discussed in the Functional Assessment report and the responses above, the adaptations of the Mobile SOP for the local conditions and surface coal mine operations at the project site are appropriate. See the response to comment F1-3 in the Final EIS regarding the USACE- approved methodology for the CMP. Therefore, no recalculation of data for Tables 5–9 of the Functional Assessment report is warranted.
46	TPWD	S4-67 According to the Mobile SOP, the applicant should specify the natural reference reaches that will be used for the stream restoration. If the	See the response to comment F1-3 in the Final EIS regarding the USACE-approved methodology for the CMP. This district approved the use of the Mobile

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		<p>applicant plans to use other analog or analytical methods, these should be specified. Appendix C of the Mobile SOP, Stream Mitigation Success Criteria, recommends the use of Natural Stream Channel Design, including the use of stable "reference reach" streams when designing appropriate pattern, profile, and dimension characteristics for a stream restoration project. Appendix C of the Mobile SOP also states that applicants planning an instream channel restoration project should be prepared to discuss the current Rosgen stream condition/type and the current stage in the Stream Channel Evolution Model for the impacted streams. They should provide final stream design data sheets that include stream measurement data for the currently impacted stream, the reference reach, and the target stream design. This should be provided as part of the performance standards in the Mitigation Plan.</p>	<p>SOP to assess the function/condition of streams in the Rusk Permit Area; however, this should not be construed as our intent that the applicant should follow the Mobile District's mitigation plan requirements, mitigation success criteria, or mitigation monitoring requirements. The CMP was appropriately prepared in accordance with this district's guidelines and requirements for a mitigation plan, success criteria, and monitoring. Furthermore, RCT standards for channel design apply.</p>
47	TPWD	<p>S4-68 Appendix C of the Mobile SOP states that upland riparian buffer restoration target ecological performance standards should be based upon target species composition, diversity, and structure, gathered from high quality reference upland riparian buffers in the same watershed. The Stream Mitigation Success Criteria in Appendix C specifies that the applicant should establish a Reference Forested Ecosystem that they propose to use as a guide to mimic species composition and diversity. It also recommends an initial planting density of approximately twice the final target density. This information should be provided as part of the performance standards in the Mitigation Plan.</p>	<p>See the response above to comment 46. Also, RCT standards for re-vegetation apply, and the applicant has incorporated the recommended planting densities typically approved by this district.</p>
48	TPWD	<p>S4-69 Monitoring and contingency plans should be provided for the mitigation. The parameters that will be monitored for baseline and restoration need</p>	<p>See the response above to comment 46. Also, RCT standards for monitoring apply, and the applicant has incorporated the recommended monitoring</p>

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		to be specified. Appendix D of the Mobile SOP states that "parameters to be measured include stream pattern, profile, and dimension metrics at sites above, within, and below the restored reach, water temperature, dissolved oxygen, turbidity, pH, stream substrate characteristics, erosion patterns, and biological parameters ... " This information should be provided as part of the performance standards in the Mitigation Plan.	requirements provided by this district including, but not limited to, meeting the Regulatory Program definition of a WOUS (respectively, for each resource type); stability of pattern, profile, dimension and substrate of stream channels; hydrology criteria; and functioning buffer and riparian zones. Monitoring reports would be due annually on October 1 until success standards are met or alternative mitigation is approved and completed.
49	TCEQ	Title 30, Texas Administrative Code (TAC), Chapter 279.11(C)(1), states that "No discharge shall be certified if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, " The DEIS and FEIS describe various proposed major activities (e.g., multi-year groundwater drawdown, transportation corridor construction across the Sabine River, increased surface water runoff and turbidity as a direct result of mining) and concludes in the Executive Summary that "Cumulative water quality effects are anticipated to be minor." However, as described in subsequent chapters of the DEIS and FEIS, each of the activities would have significant cumulative impacts on groundwater and surface water quantity and quality. Please provide additional information that details the measures that will be implemented to ensure that the proposed discharges would have the least adverse impact on aquatic resources and water of the United States and cumulative effects, in association with adjacent surface lignite mines in the area, would not be significant.	Appendix A of the Draft EIS describes the USACE 404(b)(1) analysis relevant to practicable alternatives. The statement on page ES-3 of the Draft and Final EIS that "Cumulative water quality effects are anticipated to be minor" is based on the impact analyses in Section 3.2 of the Draft EIS, including cumulative impact analyses. Compliance with RCT and TCEQ water quality regulations for management of runoff and sediment is clearly incorporated into the impact assessment. Additionally, as a result of the Cumulative Hydrologic Impact Assessment (CHIA) performed by the RCT, it was determined that monitoring and adaptive management would further reduce the potential for impacts. In addition, mitigation measures considered by this district for minimizing impacts to surface water are identified in Section 3.2.4.4, and mitigation measures for minimizing impacts to WUS are identified in Section 3.2.5.4 and Appendix C. Impacts on aquatic biology are specifically addressed in Section 3.5.2, with mitigation measures identified in Section 3.5.4. The final mitigation measures are stipulated in this ROD.
50	TCEQ	If the aquatic resources cannot be avoided, appropriate and practicable steps should be taken to minimize potential adverse impacts (30 TAC §279.11(C)(2)). Please provide more detailed	As discussed in Section 2.5.1.6 of the EIS, the proposed transportation and utility corridor alignment and river crossing location were determined in coordination with this office, TPWD,

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		<p>information on what options were considered to minimize impacts and why they were eliminated. According to the DEIS and FEIS, construction of the proposed transportation corridor and subsequent re-routing of the Sabine River, loss of hydrologic connectivity for streams and wetlands adjacent to the proposed project, and the direct loss of onsite aquatic resources would be major impacts to aquatic resources. As presented in the DEIS and FEIS, the only alternative proposed for the transportation corridor involves moving the Sabine River impact area approximately 1,000 feet downstream. No additional alternative transportation corridor routes are presented or evaluated for the minimization of impacts to the Sabine River, the floodplain, and numerous forested wetlands. The current proposed transportation corridor transects one of the highest concentrations of forested wetlands in the entire 20,000+ acre Rusk Permit Area. Please provide other options for impacts to the Sabine River which would substantially minimize the proposed impacts related to the construction of the proposed transportation corridor.</p>	<p>and RCT during a May 6, 2008, site visit and subsequent evaluation. As discussed in Section 2.3.1, alternative crossing locations were evaluated in coordination with the Fort Worth District and TPWD. As stated in that section, the alternative crossing locations were eliminated from further consideration due to cost, geomorphological issues, property ownership issues, as well as the associated additional environmental impacts. As discussed in Section 2.3.2, a split transportation corridor was eliminated from consideration at the direction of this office and TPWD due to the potential for increased habitat fragmentation. A number of other transportation alternatives were considered including disassembly and transportation of draglines, purchase of new draglines and an overland conveyor for transporting lignite (Section 2.3 of the DEIS). Measures to mitigate potential adverse impacts are identified in Sections 3.2.4.4 (Surface Water), Section 3.2.5.4 and Appendix C (WOUS including Wetlands) and Section 3.5.4 (Aquatic Species) of the EIS.</p>
51	TCEQ	<p>The FEIS states that specific baseline information regarding aquatic environments, wetlands, and fish and wildlife resources is not provided in the FEIS Proposed Conceptual Mitigation Plan, but is available in the applicant's Individual Permit (IP) application and Railroad Commission of Texas (RCT) permit application. The IP application (hardcopy and CD) provides detailed information and field data sheets for uplands, forested wetlands, and non-forested wetlands occurring within the Rusk Permit Area. However, no field data sheets or detailed information are provided to document the classification of approximately 530,500 linear feet</p>	<p>This district field reviewed the applicant's Jurisdictional Determination (JD). Four Regulatory project managers spent multiple days on the project site evaluating the applicant's submitted information. USACE regulations define 3 flow regimes for streams: Ephemeral streams flow only during, and for a short duration after, precipitation events and have no groundwater component; Intermittent streams flow during certain times of the year and have a groundwater component supplemented by surface runoff; Perennial streams flow year round during a typical year and groundwater is their primary source while surface runoff is a</p>

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		<p>of streams identified as waters of the U.S. According to the information provided in the IP application, Table E-1, the only two streams identified as perennial in the Rusk Permit Area are the Sabine River and Cherokee Creek. In one part of the document, Black Slough is referred to as one of the major, perennial streams in the project area. Figure 1, however, depicts all of Black Slough as open water, not perennial stream. Based on review of available aerial photography and recent site visits to the project area, many of the streams classified as intermittent by the applicant are, in fact, perennial and some of the streams classified as ephemeral are intermittent with perennial pools. Many of these streams provide high quality aquatic resource functions and values. Documentation for the assessment of the waterbodies classified as streams should be provided for review and evaluation. Accurate stream classifications and associated functions and values are necessary to evaluate impacts to waters of the U.S. and to determine appropriate compensatory mitigation for unavoidable impacts to aquatic resources.</p>	<p>supplemental source. Field verification of wetland delineations were conducted according to methodology described in the USACE 1987 Wetland Delineation Manual (USACE 1987) and the Atlantic and Gulf Coastal Plain Interim Regional Supplement (USACE 2008). Based on the findings and field observations, this district requested changes to the JD, which were subsequently provided by the applicant. A Preliminary Jurisdictional Determination (PJD) documenting this district's concurrence with the applicant's amended information is included in Appendix D of the DEIS. The maps and plans included in the EIS and IP submittals accurately reflect the limits of WOUS.</p>
52	TCEQ	<p>Mitigation of impacts is considered for" ... all unavoidable adverse impacts that remain after all practicable avoidance and minimization has been completed ... " (30 TAC §279.11(C)(3)). The proposed mitigation ratios for forested wetlands, non-forested wetlands, ponds, and streams are presented in Table 2-10. The proposed ratios are also provided on Table 1 in the Proposed Conceptual Mitigation Plan (Appendix C) of the document. Projected results of the mitigation efforts for the first five-year period of the proposed mine expansion are presented in Table 2 of Appendix C. The criteria used to determine the proposed</p>	<p>Based on our evaluation, it has been determined that the applicant's mitigation proposal is environmentally preferable due to its replacement of aquatic resources in the same approximate location as pre-project waters and follows a watershed approach. Proposed compensatory mitigation ratios and predicted improvement over pre-mine condition assessments were determined to be sufficient to replace impacted aquatic resources and compensate for risk of mitigation failure and temporal losses due to phased mining sequences. Also, this district, historically lacking any single recommended conditional assessment protocol, has approved these</p>

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		<p>mitigation and compensatory mitigation ratios assume minimization of temporal aquatic resource functions and the creation and restoration of higher quality hydrologic and wetland resources compared to pre-mine conditions. Table E-1 in the applicant's Individual Permit (IP) Application identifies all impacts to ephemeral and intermittent streams (50,155 linear feet and 18, 634 linear feet, respectively) projected to occur during the first five-year term of mining as direct and permanent. The FEIS states that the projected lag time for reclamation activities is approximately 24 months for regrading and contouring, 15 months for placement of suitable growth media, an additional 2 months for seeding and planting, and approximately 12 years for overall reclamation activities. Please provide a revised compensatory mitigation plan and success criteria proposal that adequately assesses the value and function of existing aquatic resources and specifies the appropriate time frame required to assess the level of environmental or ecological lift obtained through the creation and restoration proposals.</p>	<p>replacement ratios and found them to be sufficient. In addition, the applicant has proposed long-term site protection and financial assurance measures to further ensure short- and long-term success of compensatory mitigation sites. The financial assurance measures would be incorporated into special conditions of any authorization issued. See also the response to comment 48 above concerning success criteria and monitoring.</p>
53	TCEQ	<p>The functional assessment section of the Proposed Conceptual Mitigation Plan (Appendix C) assumes that the proposed stream impacts are not considered permanent and that a calculated average factor for impacts of 0.175 is appropriate. However, Attachment E in the applicant's IP application identifies all impacts to streams in the first five-year term of the project as direct and permanent, except for the sequential disturbances to the Sabine River for the dragline walkway. In addition, the IP application and FEIS state that "Due to delays in finalizing the interim methodologies, the data summary and report is not complete at the time of</p>	<p>The table in Attachment E of the IP identifies linear feet of stream impacts as direct and permanent based on the definition for that table. However, the Functional Assessment report (Appendix C of the Final EIS) identifies impacts using the Mobile SOP with adaptations approved by the Fort Worth District. As discussed in Section 2.2 of the Functional Assessment report, since mining impacts do not fit the Mobile SOP definition of permanent duration, and recovery of stream functions is anticipated following relocation and/or reclamation, it is necessary to adapt a "long-term" duration factor, for which the average of the temporary and</p>

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		<p>submittal of this IP application" and "this information will be allowed to be submitted at a later date and will be included in Appendix 3 of the Conceptual Mitigation Plan." Since this functional assessment information is not provided in the FEIS, it is assumed that the document is incomplete and will be revised accordingly. The proposed functional assessment also assumes, in general, that existing streams (perennial, intermittent, and ephemeral) are at least marginally impacted under current conditions and that the newly created or enhanced streams will provide complete, if not additional, compensatory mitigation for adverse impacts to aquatic resources. The functional assessment also assumes that the dominant impact factor to streams is morphological change. This assessment is not consistent with the Mobile District Compensatory Stream Mitigation and Standard Operating Procedures (SOP). The dominant impact factor to streams should be identified as permanent fill. It is recommended that this section of the mitigation plan be revised to include a detailed assessment of all potential impacts to the physical, chemical, and biological integrity of the existing streams and their functions.</p>	<p>permanent factors is appropriate. While the duration of impacts can be up to 5 to 10 years, the reclamation process requires that natural and aquatic resources be replaced per SMCRA and Clean Water Act Section 404 guidelines; therefore, considering the impacts to be permanent is neither accurate nor supported by existing regulatory guidelines and requirements.</p> <p>The assessment methodology was performed in the field for 9 of the 11 perennial and intermittent streams proposed to be adversely impacted. Based on this evaluation, it was determined that the perennial streams (Sabine River and Cherokee Bayou) have an existing baseline condition of fully functional, whereas the majority of the intermittent streams have an existing condition of somewhat impaired due to past land use, oil/gas activities, and crossings for county roads and highways. The Functional Assessment methodology also was performed in the field for streams restored in the reclamation area at the existing South Hallsville No. 1 Mine and determined that the well-established reclamation streams are fully functional with stable banks and comparable in-stream and riparian habitat to natural streams in the area. The streams in reclamation that are recently restored have an existing condition of somewhat impaired with moderately stable banks; however, they are anticipated to become fully functional and develop in-stream and riparian habitat comparable to natural streams within 5 to 10 years as reclamation and vegetation establishment of the watershed progresses.</p> <p>Adaptation of the Mobile SOP for surface coal mine operations at the site was performed based on professional judgment, similar adaptations at other surface coal mine sites, and the prior approval of this office before implementation of the evaluation.</p>

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			<p>Adequate justification for the appropriateness of the adaptations and an explanation of the calculations used to determine impacts and mitigation for streams are provided in the Functional Assessment report in Appendix C of the Final EIS.</p> <p>See the response to comment 37 above regarding the selection of impact factors for morphological change versus permanent fill for evaluating impacts of the surface mining operations at the site.</p>
54	TCEQ	<p>Both Texas Parks and Wildlife Department (TPWD) and National Park Service (NPS) recognize this reach of the Sabine River as having scenic, ecological significant and historical values and, therefore, a candidate for protection under the Texas State Water Planning Program. However, the DEIS and FEIS continue to categorize the Sabine River and Cherokee Bayou as secondary priority areas with only moderate importance to the biodiversity of the stream ecosystem. TCEQ does not agree with this assessment of the importance of these perennial streams as presented and recommends a more extensive evaluation of the functions and values associated with both the Sabine River and Cherokee Bayou. It is also recommended that natural stream channel design be used for the creation and restoration of all intermittent and perennial stream impacted by the project. Recent resource agency site visits at surface mining sites in the State indicate that many of the reclaimed and restored streams do not incorporate bed and bank morphologies nor ordinary high water marks, and therefore, do not adequately compensate for the impacted stream functions and services.</p>	<p>As stated in the response to comment 4 above, this stream classification is clearly noted in the Draft EIS in Section 3.2.4.1 on page 3.2-30.</p> <p>Intermittent and perennial streams will be restored using natural stream design. Design criteria must meet the requirements of RCT stream restoration criteria and the desires of the landowner. As detailed in the CMP (Appendix C of the Final EIS), restored aquatic resources must meet the definition of WOUS and achieve or exceed pre-mine conditions. In the event the applicant is unsuccessful in meeting these requirements, additional mitigation will be accomplished offsite.</p>
55	TCEQ	<p>As stated in the previous DEIS comment letter, the success and performance criteria for streams,</p>	<p>This district's success criteria standard for trees on forested wetlands is 250 trees per acre at the</p>

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		<p>wetlands, and ponds as presented in Section 5.0 of the DEIS and FEIS are inadequate. Simply stating that stream restoration practices will be utilized when necessary is not sufficient to ensure that the impacted aquatic resource functions are replaced and will continue to function, at a minimum, to premine standards. Success criteria for forested wetland trees should be at least 3 inches DBH after five years of planting and non-native invasive species growth in both forested and non-forested wetlands should be limited to less than 10% of the total coverage. In addition, simply stating that ponds proposed for permanent structures will not exhibit excessive bank erosion or silt accumulation is not adequate. Pond banks should be vegetated and stabilized to minimize erosion and siltation. Section 5.0 should be revised for streams, wetlands, and ponds with measurable, quantifiable metrics and monitoring frequency for compliance.</p>	<p>conclusion of the required monitoring period. This minimum density would be met within 5 years of the most recent remedial planting, and supplemented by successful hydrology, should result in trees greater than 3 inches DBH. Although not explicitly stated, the CMP states that none of the three most dominant species may be non-native, noxious or invasive and that no one species may constitute more than 30% of surviving trees. Therefore, non-native, noxious or invasive species would be limited to less than 10 % of total coverage. Fringe wetlands surrounding ponds have a proposed 80% groundcover revegetation success standard which would minimize erosion and siltation. These and other parameters are reflected in the CMP (Appendix C of the Final EIS). The CMP also includes an annual monitoring proposal as described in the response to comment 48 above.</p>
56	USEPA	<p>SECTION 404 PERMIT (SWF-2007-00S601 EPA continues to have environmental concerns with regard to wetland impacts as addressed in the FEIS. EPA's comments are based on our original concerns listed below and the information provided in the FEIS, specifically in Appendix G, Draft EIS Public Comments and Responses and Appendix C, Proposed Conceptual Mitigation South Hallsville No. I Mine Rusk Permit Area. EPA Region 6 provided substantial Section 404 comments on the Draft EIS and had significant concerns on the following issues:</p> <ol style="list-style-type: none"> 1. The conditional assessment methods utilized in the EIS had not been previously used or calibrated for use in the project area. The term "Functional Assessment" was used incorrectly to describe the methodologies. The incorrect use of reclaimed 	<p>Please see responses to the individual issues below.</p> <ol style="list-style-type: none"> 1. See response to comment 19 above and reference to comment response F1-3 in the Final EIS. Due to the lack of an ecoregion-specific conditional assessment methodology, the applicant proposed and was approved to utilize the WRAP and modified Mobile District Stream Mitigation SOP in preparation of the IP application and CMP. The term "reference" was removed from the CMP for clarity. 2. Hydric soils are products of landscape position, hydrologic influences, and other pedogenic processes that influence physio-chemical properties. Texture or previous oxidation does not preclude a reclaimed soil

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		<p>wetlands and streams as "reference" for evaluating mitigation requirements (compensatory mitigation acres and linear feet).</p> <p>2. Lack of hydric soils for reclamation.</p> <p>3. Mitigation credit for incremental mining.</p> <p>4. Lack of detail for location and design of mitigation features.</p> <p>5. Sabine River Crossing/Transportation and Utility Corridor.</p> <p>6. Failure to identify linear feet of stream impacts.</p> <p>7. Use of long-term site protection for mitigation areas.</p>	<p>from meeting the NRCS criteria for hydric soils with the existence of appropriate hydrologic conditions. Thus, an assignment of mitigation "risk" should not be based solely on a perceived absence of hydric soils.</p> <p>3. Per comment 61 below from the USEPA, the USEPA accepts revisions/clarifications in the Final EIS in regard to this issue.</p> <p>4. Per the RCT permit approved July 26, 2011: "The reclamation and restoration of WUS will be through mitigation accomplished off-site except on properties where WUS reconstruction is possible. Where AEP has property ownership in the flood plain, the best postmine land uses for WUS mitigation areas are fish and wildlife habitat and developed water resources land uses. As described under 147(a)(3), where applicable to the restoration of WUS, including wetlands, postmine land use will be returned to the documented premine land use. Reclamation activities will develop postmine streams in accordance with postmine topography."</p> <p>The locations of reconstructed wetlands are shown on Exhibits 144-1 and 147-1 in RCT Permit 55. Designs for reconstructed streams (with drainage areas greater than 640 acres) and wetlands will be submitted to RCT prior to construction. Designs require actual postmine topography and therefore projected locations as shown on Exhibits 144-1 and 147-1 are preliminary.</p> <p>5. The selection of the location and design of the haul road, dragline crossing, and utility corridor was addressed in Section 2.5.1.6 of</p>

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			<p>the Draft EIS and in responses to comments on the Draft EIS presented in Appendix G of the Final EIS. See the response above to comment 50.</p> <p>6. As discussed in the response to USEPA comment F2-7 in the Final EIS, the linear feet of perennial, intermittent, and ephemeral stream impacts by stream impact were added to Section 3.2.5.2 of the Final EIS.</p>
56 cont.			<p>7. As identified in Section 6.0 of the CMP (Appendix C of the Final EIS): “As the owner in fee, SWEPCO will provide site protection in the form of conservation easements (when possible) or deed restrictions. The use of conservation easements will be pursued; however, this may not be a viable option in the short- or long-term if willing third-party conservation groups or other approved entities cannot be engaged.”</p> <p>Relative to leased tracts: “SWEPCO does not have any legal right to leverage against a lessor; therefore, any formal requirements placed on Sabine/SWEPCO by the USACE Fort Worth District that would mandate long-term site protection on leased properties (through conservation easements or protective covenants) would be imposing on Sabine/SWEPCO an obligation which Sabine/SWEPCO could not ensure would be met, due to the inability of Sabine/SWEPCO to unilaterally force landowners to accept long-term site protection obligations on their property. In essence, formal requirements placed on leased properties compromise private property rights of landowners, cannot</p>

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			<p>legally be placed on leased properties without landowner permission, and are not warranted for leased properties.</p> <p>For mitigation areas located on lease properties, this district has the latitude, via permit conditions, to require additional mitigation as compensation for the lack of site protection that meets Fort Worth District requirements.” Any authorization issued would contain a special condition requiring a conservation easement (when possible, pending securing a willing third party to hold the binding contract) or deed restriction as long-term protection of mitigation sites.</p>
57	USEPA	<p><u>Conditional Assessment Methods</u> EPA has discussed the authorization of the assessment methods with the Fort Worth District Corps of Engineers (COE). Based on that discussion and EPA's inability to verify or deny that earlier meetings between the agencies may have resulted in an agreement to allow the methods used in this project, EPA withdraws its concerns on this matter.</p>	Comment noted.
58	USEPA	<p><u>Conditional Assessment Methods</u> The applicant has proposed the following mitigation ratios to offset project impacts; 2: 1 for forested wetlands, 1: 1.S non-forested wetlands and 1: 1 for streams. While EPA does not favor the approach used to justify those ratios, EPA does believe the ratios would be adequate provided that the performance standards for determined mitigation success are based on natural reference site conditions (Standards) and not those sites used in the assessment as "reference" at the South Hallsville Mine.</p>	Comment noted.

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59	USEPA	<p><u>Conditional Assessment Methods</u> EPA notes that the FEIS page 2.49 states, "Sabine, in coordination with the USACE, would identify and inventory appropriate waters of the U.S. (including wetlands) reference sites for use in evaluating reclamation success for developed water resources in the proposed Rusk Permit Area. The reference sites would be specific to the projects Section 404 permit requirements." This statement indicates that at some point (perhaps after permit issuance) an inventory of natural wetlands and streams would be conducted for the purpose of establishing mitigation performance standards. EPA believes that such action must occur prior to issuance of a permit to ensure that the permit conditions clearly establish the level of mitigation performance required for permit compliance.</p>	<p>Identification, assessment and inventory of additional natural stream and wetland reference sites would be completed before aquatic resource mitigation activities are begun. This reference data would supplement data already contained in the IP application.</p>
60	USEPA	<p><u>Hydric Soils</u> EPA's concern for the lack of storage and reuse of hydric soils in reclamation for wetlands to help ensure success still remains. However, if a special permit condition is included in the permit that requires that all mitigation lands meet the regulatory criteria for determining jurisdiction, i.e. the three parameters of a wetland (presence of hydric soils, sufficient hydrology and predominance of hydrophytic vegetation) EPA will withdraw its concern.</p>	<p>USACE Fort Worth District places a standard condition on all authorizations issued for surface coal mining operations requiring that all streams and wetlands restored on a reclaimed mine meet the Regulatory Program definition of a water of the U.S. to achieve release from annual monitoring requirements. Due to the large scale of surface disturbance proposed by the project, stockpiling of hydric soils would not be practicable and would likely result in substantial drying of the materials, thus becoming counterproductive.</p>
61	USEPA	<p><u>Mitigation Credit for Incremental Mining</u> EPA accepts the clarification offered in Appendix G, F2-4 with regard to incremental losses</p>	<p>Comment noted.</p>
62	USEPA	<p><u>Location and Design of Mitigation Features</u> Regarding proposed location and design of mitigation features, the FEIS does not identify</p>	<p>Comment noted.</p>

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		<p>specific locations for wetland and mitigation features and only provides general descriptions as to mitigation designs (both streams and wetlands). As to addressing the location of mitigation features, apparently the lack of long term control of lands leased for coal extraction prevents the applicant from ensuring such features will be incorporated during reclamation or if incorporated then protected, as required by the current mitigation guidance, with a conservation easement. The applicant has stated that the Clean Water Act 404 program would be sufficient to protect the mitigation lands once released from bond. However, 404 only "protects" from activities that involve placement of fill into waters of the U.S. It does not protect from mismanagement or ecological degradation. However, since the nature of the project is not to permanently convert waters of the U.S. but to extract subsurface resources and then return the landscape to pre-mine uses, EPA does not believe it warrants any more mitigation beyond that required to offset the initial impacts and temporal losses incurred during the reclamation timeline.</p>	
63	USEPA	<p><u>Stream Impacts and Mitigation</u></p> <p>The most critical remaining concern for EPA is stream restoration. It has become apparent that little has been done in the past 30 years of surface mining in Texas in the way of successfully restoring streams. What has in most cases been called stream restoration has been the creation of highly engineered grassed waterways often with large concrete grade stabilization structures. EPA is aware that at least one mining company in Texas is now designing streams using natural stream channel design principles in its reclamation work but that work has yet to be fully completed. Additionally,</p>	<p>Stream restoration for the Rusk Permit Area as discussed in Section 4.0 of the CMP (see Appendix C of the Final EIS) meets the requirements of this district. In a broader context, the Texas lignite mining industry, resource agencies and this office have discussed and worked on measures to improve stream restoration practices. The applicant proposes the use of natural stream channel design principles, planting riparian buffers with native tree, shrub and groundcover species; and annual monitoring to ensure success criteria are met. Field inspection of sites restored or being constructed utilizing these stream restoration practices has found them to be</p>

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		<p>EPA is aware that the mining industry claims that the Railroad Commission of Texas, Surface Mining and Reclamation Division (RCT) has prevented mining companies from practicing natural stream channel restoration because the RCT considers bed and bank channels erosion and as such not allowed. EPA was concerned that such a policy or rule was in direct conflict with the CWA and 404 mitigation requirements. In an effort to determine if such a situation existed, EPA contacted the RCT. John E. Caudle, Director of the Surface Mining and Reclamation Division was contacted and participated in a field visit to a mining a company near Jewett, Texas at which he clearly articulated that the RCT was in fact supportive of natural stream channel reclamation and that the development of channel bed and bank features was not prohibited, but in fact they are encouraged.</p> <p>During a meeting with the applicant on this topic, the applicant maintained the position that the RCT would not allow for natural stream channel design that involved a bed and bank feature. Instead they want to construct a flat bottom trapezoidal channel with the hopes that over time a channel will form on its own and that, once vegetated, the RCT would not require that it be leveled and grassed.</p> <p>The RCT has made it quite apparent to EPA that there is no conflict in reclaiming streams utilizing natural stream channel design to ensure appropriate dimension, pattern and profile for the size of stream type needed in relationship to the watershed size. While the FEIS conceptual mitigation plan suggests that natural stream channel design will be used, the plan also would allow for a grassed waterway to be created. In fact such a waterway would meet the proposed performance standards listed on page 18</p>	<p>overall successful.</p>

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		<p>of Appendix C, Conceptual Mitigation Plan: (1. Stream channels will not exhibit adverse impacts from erosion, head cutting, and excessive silt accumulation. 2. Planted riparian zones will be measured to ensure they exhibit the following: a minimum of 25 feet on either side of created ephemeral streams, a minimum of 50 feet on either side of created intermittent streams, a minimum of 100 feet on either side of created perennial streams.)</p>	
64	USEPA	<p>EPA believes that those performance standards do not establish an appropriate standard for mitigation success. EPA strongly recommends at the minimum that the following be added as performance measures: Stream mitigation will be considered successful if the restored stream banks are stable with no substantial degradation, the stream is maintaining the pattern, profile and dimension of the reference reach stream, riparian buffer vegetation is achieving the reference reach target habitats in plant species diversity, density and structure, and stream habitats and aquatic populations indicate a positive trend in composition, density, and diversity.</p>	<p>This district believes the performance standards included in the revised CMP are sufficient to ensure that restored aquatic resources will function at an appropriate level, commensurate to offset anticipated adverse impacts. Success criteria and annual monitoring details are discussed above in comment responses 48 and 55.</p>
65	USEPA	<p><u>Sabine River Crossing and Linear Feet Stream Impacts</u></p> <p>The Sabine Crossing Walkway and Haul Road are two features that pose long-term impacts. EPA understands that between crossings (moving draglines) that the walkway will be removed from jurisdictional areas and that several stockpiles will be maintained on non-jurisdictional areas in the active floodplain. During subsequent crossings the material would be reused to re-form the walkway. After the last crossing all material will be removed</p>	<p>Mitigation measure SW-3 has been modified to reflect the monitoring and reporting indicated in this comment. See the final measure in Table 1 of this ROD.</p>

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		<p>from the floodplain and the disturbed area will be resorted to forested wetlands. EPA also understands that the Haul Road will span the Sabine floodplain and consist of a bridge and elevated roadway utilizing multiple 10 foot culverts. EPA recommends that during the life of the walkway and Haul Road that monitoring be conducted up and down stream of the structures on an annual basis and following any out of bank flow of the Sabine River for changes in the dimension, pattern and profile of the Sabine River. The monitoring should be conducted by a certified fluvial geomorphologist. Annual and major flood event reports should be provided to the Corps of Engineers indicating channel and floodplain stability and any corrective actions taken to address impacts resulting from the structures.</p>	
66	USEPA	<p><u>Sabine River Crossing and Linear Feet Stream Impacts</u> EPA acknowledges that the FEIS has included linear calculations for stream impacts.</p>	Comment noted.
67	USEPA	<p><u>Sabine River Crossing and Linear Feet Stream Impacts</u> EPA understands the walkway will be removed when the last dragline has crossed. However, it is not clear from the FEIS as to what will happen to the Haul Road. EPA recommends that it be removed since the purpose of the road will have ended. If however, the road is to remain in place, then additional mitigation would be warranted as the impacts would be permanent.</p>	As discussed in Section 2.5.3.8 of the Draft EIS, in addition to removal of the dragline walkway, the bridge structure, culverts, fill, and riprap used to construct the haul road would be removed following the completion of mining, and the associated disturbance area would be reclaimed.
68	USEPA	<p><u>Sabine River Crossing and Linear Feet Stream Impacts</u> As touched on in our remarks above in #4., the</p>	See the response above to comment 67. Furthermore, the applicant has committed to mitigation site protection on company owned properties through the application of a conservation easement (pending

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		majority of impacts resulting from this project are temporary in the sense that the purpose of the project is not to permanently fill waters of the U.S., EPA believes that only those areas that may be permanently impacted by fill or hydrologic alteration such as the area to be impacted by the Haul Road and Walkway require mitigation secured by a conservation easement.	securing a willing third party to hold a binding contract). The applicant has provided information documenting ownership of approximately 90% of the haul road and walkway corridor property, while the remaining 10% may be purchased in the future. This would result in most, if not all, aquatic resource mitigation being protected by conservation easement.
69	USEPA	<u>Conclusion</u> EPA believes that until its remaining Section 404 permit concerns listed above are satisfactorily addressed the project does not fully comply with the 404(b)(1) Guidelines. Issuance of the Section 404 permit should be conditional with modifications to address these remaining concerns. If you have any technical questions concerning these comments, please contact Richard Prather.	See the responses above to USEPA’s comments.
70	USEPA	<u>ENVIRONMENTAL JUSTICE ASSESSEMENT</u> Although this FEIS makes clear the financial benefit that the impacted counties will receive, the Office of Environmental Justice and Tribal Affairs has some general and specific concerns regarding environmental and Tribal issues, including the following:	Please see responses to specific comments below.
71	USEPA	<u>Lease or Purchase of Land./Residences</u> The EIS implies that landowners in the permit area will be forced to either lease or sale their property. Apparently the 256 dwellings would be torn down whether the land is sold or leased. Residents made clear their displeasure during the public meeting. The residents will have to relocate to areas of their choice, provided they can afford housing and/or land. The EIS states that there is ample housing available in the general area, as well as 300	No landowner will be forced to lease or sell his/her property. Neither SMC nor AEP has a right of eminent domain for obtaining right of entry; therefore, the property owners have right of refusal to any and all offers. Right of entry to properties for the purpose of mining is a negotiated agreement with individual landowners. Right of entry from landowners is typically acquired through one of the following scenarios: 1. Lease Agreement: Leases are acquired through

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		<p>undeveloped acres near Tatum.</p> <p>The cost of land and housing has greatly increased, however, since most of the residents located in the permit area. The lease or purchase money they receive may offset that cost, but it will entail a complete disruption of their lives for several years or a loss of their way of life if they have to move into a city from this bucolic rural area. "Residents ... would be displaced for the duration of project operations (30 years) and reclamation (approximately 5 years)." This area is located in Block Group 1 in Census Tract 9501. The percentage of African Americans living there is 18.9% compared with the State's 11.3%. This Block Group also has an 18.4% Hispanic population, compared with the State's 32%; however the four counties where the project is located have Hispanic populations of only 3.5%, 5.3%, 8.4% and 9.1%. Since Block Group 1 only a 13.1% rate of those living below the poverty line, the EIS concludes that no disparate adverse impacts will be experienced by low-income and minority populations. A closer look is merited. This Block Group will experience a disproportionate and, in many ways, adverse impact of this project compared with others impacts experienced by others living elsewhere. The EIS states that the residents can negotiate the terms of the lease or sale with the mining company. It is likely that residents who are undereducated, politically naive, inexperienced in finance/business and many possibly with limited English language skills will not be capable of negotiating the best terms possible for themselves with the company attorneys. This will be an additional disproportionate adverse impact on Block Group 1 of Census Tract 9501.</p>	<p>negotiated agreements whereby the terms of the lease are agreed upon by both the lessor and lessee. Terms typically include compensation for right of entry and lignite royalties. Lease payments for right of entry are made annually to landowners. Royalty payments are typically paid on a quarterly basis following lignite extraction. Royalty payments are based on tons of lignite recovered from the property. In addition to annual lease payments, landowners are paid negotiated fair market value for home and improvements prior to taking the property under possession. In many cases, in addition to fair market value, other negotiated terms (e.g., relocation assistance) are paid to the landowners. Fair market values are determined through certified appraisals. Oftentimes, landowners elect to provide their own certified appraisal for use in the negotiation process. Under the terms of the lease, landowners are typically given a minimum of 180 days notice prior to taking possession for mining purposes. Following completion of reclamation activities, in accordance with Railroad Commission of Texas requirements, the property is returned to the landowner. It should be noted that the AEP has held many of the leases in the Rusk Permit Area since the mid-1970s including approximately 70 percent of Block Group 1 Census Tract 9501. Landowners with existing leases have received lease payments since their leases were established.</p>

Comment Number	Organization	Comment	Response
71 cont.			<p>Cont.</p> <p>2. Lease/Purchase Agreement: Similar to lease agreements, lease/purchase agreements are acquired through negotiated agreements whereby the terms of the lease are agreed upon by both the lessor and lessee. Compensation schedules are identical to those described above. However, in some cases, encumbrances or other situations such as leaving a sedimentation pond or road, arise where it is in the best interest of the lessor and/or the lessee to agree upon a negotiated purchase price. Landowners are compensated for negotiated fair market value of land, home and improvements, other negotiated payments (e.g., relocation assistance), and lignite royalties. Royalties are typically either paid upfront (i.e., advance royalties) based on a negotiated lignite recovery rate or are severed from the purchase agreement and paid to the land owner on an actual lignite recovery rate on a quarterly basis. The company retains the property following completion of reclamation activities. In some instances, previous landowners are given first right of refusal should the company subsequently elect to sell the property. Many landowners elect to sell their property out right and have no interest in re-purchase options.</p> <p>3. Purchase Agreement: Purchase price of property is based on negotiated fair market value for home and improvements, other negotiated payments, and lignite royalties. As described above, landowners are compensated through advance royalty payments based on negotiated lignite recovery rates or quarterly on actual lignite recovery rates following lignite extraction. Anticipated lignite reserves on the property are disclosed to the landowner as part of the purchase negotiation process. The company retains the property following completion of reclamation</p>

Comment Number	Organization	Comment	Response
			<p>activities. In some instances, previous landowners are given first right of refusal should the company elect to sell the property. Many landowners elect to sell their property out right and have no interest in re-purchase options.</p> <p>To the degree that the cost of land and housing in the area has increased since many of the residents located in the Rusk Permit Area, the increase will be reflected in the fair market value of the properties and, therefore, in the compensation received for lease or sale of properties.</p> <p>The suggestion in the comment that residents in the area are “undereducated, politically naïve, inexperienced in finance/business and many possibly with limited English language skills [who] will not be capable of negotiating the best terms possible for themselves with company attorneys” is unsubstantiated. Classifying oneself as a minority in a census response does not necessarily indicate a person has these limiting qualities in the absence of further supporting evidence.</p> <p>Demographic issues noted in this comment are addressed below in the response to comment 73.</p>
72	USEPA	<p><u>Groundwater Drawdown</u> Because of the 30 - 150 feet excavation of the pit mines, it will be necessary to remove water in the bottom of the pits. An estimated 5 feet of water drawdown from the Carrizo-Wilcox aquifer is expected to occur. It will extend about 2,000 feet north of the town of Tatum, just to the south of the permit area. This will cause springs, seeps, and small creeks to dry up, along with shallow water wells in the area. Although many of the residents are clients of a small water supply corporation, they still depend on well water for their farm animals,</p>	<p>In response to USEPA’s question regarding impacts to Crystal Farms Water Supply of Tatum, the primary mechanism to be used is a decommission fee to include loss of infrastructure and loss of revenue from reduced customer base. SMC’s review and discussion with Crystal Farms Water Supply, notably Jesse Inman, indicates that the reduced customer base would not result in a revenue loss sufficient to terminate business operations. A written agreement stating compensation schedules and amounts will be in place prior to actual impacts to Crystal Farms Water Supply.</p>

Comment Number	Organization	Comment	Response
		<p>gardens, and for their pasture land, and many of these are low income residents, since 13.1% of the residents of Block Group I of Census Tract 9501 (within the permit area) are low income. Small Crystal Farms Water Supply of Tatum, which services this area, will be severely impacted by the relocation of residents in the permit area, and will be forced to cease operations, according to comments made at the public meeting. Although the mining company will replace well water, etc., it is not clear how this small water supply corporation will be compensated when its customers are relocated</p>	<p>The 13.1 percent of residents classified as low-income does not qualify the Rusk Permit Area as having a “meaningfully greater” low-income population under USEPA’s guidance for implementation of Executive Order 12898 in the context of the 4-county reference area; all 4 counties have higher percentages of low-income residents. See the response below to comment 73 for additional information on demographics and potential Environmental Justice impacts.</p> <p>As the comment notes, SMC is required to replace well water for local residents, due to mining-related impacts.</p>
73	USEPA	<p><u>Demographics</u> Of the 10 Block Groups of Census Tracts in or adjacent to the permit area, 7 have African American populations that far exceed those of the State's (11.3%, US Census, 2000). These are the percentages of African Americans within those Block Groups: 31.2%, 35.6%; 23.4%, 25.6%, 37.1%, 18.9%, and 22.4%. Only one (18.9%) is less than two times the State rate, and three are approximately three times the State rate. Of these, Block Group 2 of Census Tract 9502, in Panola County, with its 37.1% African American population, has an 18.2% rate of those living below the poverty level, in contrast with the State's 15.4%. In Block Group 4 of Census Tract 9501, the Hispanic population is 22.5%. Although this is lower than the State's rate of 32%, the four counties (and 8 of the 10 Block Groups of Census Tracts) have much lower Hispanic percentages. Gregg County has a 9.1% Hispanic population, Harrison County has 5.3%, Rusk County has 8.4%, and Panola County has a 3.5% Hispanic population. The town of Tatum itself has a 17.6% Hispanic rate and</p>	<p>The EIS acknowledges that minority and low-income populations may exist in the study area. The CEQ defines minority populations where either: (a) the minority population of the affected area exceeds 50 percent of the total population or, (b) the minority population percentage of the service area is meaningfully greater than the minority population percentage in the general population (CEQ 1997). None of the Census block groups within the permit area or adjacent to it have minority populations greater than 50 percent of the total population. Block Groups 1 and 4, Census Tract 9501 make up most of the Rusk Permit Area and have sufficiently large minority populations that they may be considered “meaningfully greater” than the general population of the surrounding 4-county area. In addition, Block Group 4, Census Tract 9501 could be characterized as having a larger low-income population than the surrounding 4-county area. Consequently, the EIS identifies and acknowledges that both minority and low-income populations exist in the study area.</p> <p>The mere existence of a minority or low-income population is not sufficient to conclude that an</p>

Comment Number	Organization	Comment	Response
		<p>Block Group 4 of Census Tract 9501, not only has a 22.5% Hispanic population rate, it also has a 28% rate of those under the poverty level, (compared with the State's 15.4%). Because of these statistics, coupled with the fact that these communities will bear the brunt of the adverse impacts brought about by the mine's construction, operation and reclamation activities, additional mitigation efforts should be undertaken. Some of the adverse impacts include the apparently forced relocation of some residents, and the excess noise, dust, traffic and dangers of heavy equipment operation experienced especially by those in or near the permit area during the sequential construction/mining/reclamation efforts. Those living away from the permit area will not experience these adverse conditions, and those living nearby will experience them to a lesser degree. Moreover, the minority and low-income residents will suffer more from any negative impacts than will others because of their increased vulnerability and lack of many of the resources needed to withstand these challenges.</p>	<p>unacceptable environmental justice impact would occur, however. The USEPA provides the following guidance for making such a determination: "... the term disproportionately high and adverse effects or impacts means an adverse effect or impact that: (1) is predominately borne by any segment of the population, including a minority population and/or a low-income population; or (2) will be suffered by a minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect or impact that will be suffered by a non-minority population and/or non-low-income population." (Toolkit for Assessing Potential Allegations of Environmental Injustice EPA 300-R-04-002. EPA. 2004)</p> <p>The EIS correctly concluded that neither of these situations would occur. The primary adverse effect on local residents will be displacement, which will affect all displacees similarly, regardless of race, ethnicity, or income level. And, as noted in the response above to comment 71, no one can be required to move without their acquiescence and agreement to terms. Further, the "adverse impacts" cited in the comment will not reach thresholds of significance; there will be no "forced relocation." Noise effects will be short-term, geographically very limited, and those few individuals affected will experience comparable effects, regardless of demographic circumstances. Dust effects will be similarly localized, will not exceed established standards, and will be comparable for all individuals affected. Traffic effects will be minor and will affect all motorists to a comparable degree. Heavy equipment operations will not cause danger to the public, regardless of race, ethnicity, or income, because it will occur within the Rusk Permit Area,</p>

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			which will be closed to public access.
74	USEPA	<p><u>Conclusion</u> We conclude these facts contradict the EIS's conclusion that "... analyses have not identified adverse environment effects that would disproportionately affect these minority communities." The mitigation plan should be modified to take into account these concerns and fully addressed in the Record of Decision Document. If you have any technical questions concerning these EJ comments, please contact Nelda Perez for assistance.</p>	<p>See responses above to comments 71, 72, and 73. The conclusion that there will not be disproportionate effects on minority or low-income populations from the proposed action is supported by the EIS analyses conducted in accordance with the 'Toolkit for Assessing Potential Allegations of Environmental Injustice EPA 300-R-04-002'. EPA. 2004.</p>
75	USEPA	<p><u>TRIBAL ISSUES</u> EPA has been contacted by the Caddo Nation Tribal Historic Preservation Officer (THPO) regarding cultural resources of importance to the Tribe in the mining and surrounding areas. The Caddo Nation has a history of occupation in the area as evidenced by the discovery of significant sites in the original mining area which is adjacent to the new proposed expansion site for which this permit covers. <i>Section IV.D.</i> Of the Memorandum of Agreement between Texas Commission on Environmental Quality (TCEQ) and EPA states that TCEQ agrees to mail a copy of draft permits to the State Historic Preservation Officer (SHPO). Although we do not know at this time whether or not there may be cultural resources of importance to the Caddo Nation within the proposed permit area, and because of the equivalent legal status and the authority of the THPO and SHPO per section 102(d)(2) of the National Historic Preservation Act, EPA requests that TCEQ provide the THPO with an opportunity to comment, if it has not already done so.</p>	<p>This district has reviewed and responded to the EPA comments on tribal issues. The following documents were reviewed to ensure the Corps was complying with Federal guidance (EO 13084, 13175); Memoranda (3 October 2002, 10 May 2010); Policy (Department of Defense American Indian and Alaska Native Policy); and Regulations (36CFR800). The proposed mine expansion does not take place on Federal land. It also does not impact Indian land or trust lands, treaty rights, or ceded rights to for any known federally recognized Indian tribes. The tribal consultation issues generated by this Regulatory action are triggered by the archeological and ethnographic evidence of tribal use of the area, not by right, treaty, or ownership. The USACE contacted the Caddo Tribe of Oklahoma as part of the DEIS development. The Caddo have been the primary contact in east and northeast Texas for USACE projects for many years. The Caddo presence in the area is well-documented ethnographically, as well as the physical presence of multiple prehistoric hamlet and mound sites with Caddo-related artifacts and human burials. The EPA</p>

Comment Number	Organization	Comment	Response
			<p>recognized the Caddo as the primary tribal contact in a current MOA (1997) for the treatment of the Pine Tree Mound archeological complex on the South Marshall Lignite Mine. Within Texas, the Caddo are archeologically and historically represented from Fannin County, on the Red River, south to about San Augustine, County, on the Sabine River. Trade contacts were even more extensive.</p>
76	USEPA	<p>In addition, while the Caddo have established a former presence, EPA suggests efforts be made to inform/contact additional Tribes who may also have historical ties to the area. This may have already occurred, but if not, a list of Tribes with contact information is at the bottom of this page. In closing, we suggest allowing the below listed Tribes determine for themselves whether or not they may have interest in the area. We suggest the following tribes also be contacted if they haven't already:</p> <p>Quapaw Tribe of Oklahoma P.O. Box 765 Quapaw, OK 74363 Ph.: 918-542-1853 Fax: 918-542-4694</p> <p>Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 Fax: 318-253-9791 Fax: 936-563-1139</p> <p>Comanche Nation P.O. Box 908</p>	<p>In 2007, the applicant, through its historic properties contractor, Prewitt and Associates of Austin, Texas (PAI), contacted the following tribes, on behalf of the SMC, in 2007 (ref. forwarded email, Jennifer Walker via Eric Anderson, 4 Aug 2011): the Quapaw, the Alabama-Coushatta, and the Comanche. While the efforts of PAI and the applicant do not constitute a federal contact or an invitation to consult, the tribes' responses (or lack thereof) do provide a relative measure of interest by these groups. The EPA recommended the Corps contact the following tribes: Comanche, Quapaw, Alabama-Coushatta, and Jena Band of the Choctaw. The Corps provided email (20 July 2011) and follow-up phone calls to Mr. Jean Lambert, THPO of the Quapaw Tribe of Oklahoma. As with the contact by the SMC, the Quapaw did not respond. The Comanche Nation was contacted by phone (12 Aug 2011). Mr. Jimmy Arterberry, THPO, said the Comanche Nation did not generally claim interest in areas that far east unless there was an instance of documented trade associations. Mr. Arterberry was provided the DEIS information via email for his reference on 12 Aug 2011.</p> <p>After reviewing the internal Corps document for tribal contacts (Native American Territorial Ranges in the Central Region of Texas, May 2001, USACE), the Alabama-Coushatta and the Jena Band of the</p>

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		<p>Lawton, OK 73502 Ph: 580-492-4988 Fax:580-492-3796</p> <p>Jena Band of Choctaw Indians P.O. Box 14 1052 Chanaha Hina St. Jena, La 71342 Ph: 318-992-2763</p>	<p>Choctaw Tribe were not contacted. Based on previous Regulatory work in the area, the USACE is also addressing the previous decision not to contact the Cherokee Nation, based on the proximity of the Cherokee Trace to the project area.</p> <p>The Cherokee Nation is based in Oklahoma, but originated in the American southeast (Georgia, Carolinas, and Tennessee). Forced relocation of the Cherokee (among other tribes) created the infamous ‘Trail of Tears.’ Projects in their traditional homeland, or the Trail of Tears complex itself, are reason enough to trigger consultation elsewhere. Within Texas, the Cherokee Trace ran from Nacogdoches County, north toward Camp and Upshur Counties. It is historically unclear if the late migratory Cherokee were directly associated with the trail, or if the name was applied to an existing Native American trade route by later Anglo settlers. There are no documented sites in Texas with specific Cherokee materials, though some trade throughout northeast Texas was known. ‘Cherokee’ is a popular place name in the region.</p> <p>Likewise, the Alabama-Coushatta Tribe is currently based in Livingston, Texas. Their traditional lands are in the Alabama/Mississippi area, though they migrated across Louisiana and Texas in a force retreat from French and Anglo fighting in the late 17th and early 18th centuries. The proposed project does not impact any of their current land in Texas. They were not contacted by the USACE after review of documents. Likewise, they did not respond to the applicant’s 2007 request for comments on the mine.</p> <p>Finally, the Jena Band of the Choctaw Indians is based in Louisiana. The tribe is based in east-central Louisiana in Catahoula and LaSalle Parishes. As with the Alabama-Coushatta and the Cherokee, the</p>

Comment Number	Organization	Comment	Response
			<p>tribe is displaced from its original homelands in Mississippi and Alabama. The Jena Choctaw are not known to have ever occupied or claimed lands west of their present location in Louisiana. Their current counties of residence do not border the project area and no ethnographic evidence of their presence has ever been documented in or near the project area.</p> <p>An agreement document (Programmatic Agreement or Memorandum of Agreement) for historic properties will be established for the treatment of historic properties in the proposed mine expansion. The Caddo Tribe of Oklahoma will be the only tribe involved in the consultation as per their replies and our review of additional tribal contacts. The agreement document will become a condition of the permit when it is completed and signed by all parties, including the USACE, the Caddo, and the SHPO.</p>

- (3) Site was/was not visited by the Corps to obtain information in addition to delineating jurisdiction.

May 6, 2008 – Interagency preapplication meeting and site visit including discussion of location of proposed haulroad and dragline walkway crossings of the Sabine River.

June 29 – July 2, 2009 – Field verification of Jurisdictional Determination.

July 8, 2009 – Interagency meeting at applicant’s office following EIS scoping meeting which included a field visit to proposed project areas.

August 11, 2009 – Overview of project for new Fort Worth District project manager.

May 13, 2010 – Site inspection of existing South Hallsville Mine and applicant’s permittee responsible on-site mitigation efforts.

November 16, 2010 – Site visit as part of public meeting/hearing for DEIS which included viewing a Caddo cultural site.

June 1, 2011 – Interagency meeting and site visit to view proposed aquatic resource impact sites in the Rusk Permit Area and existing reclamation/aquatic resource restoration on the South Hallsville Mine.

- (4) **Issues identified by the Corps**

It was determined that additional clarification of site protection and financial assurances would be necessary. These are outlined in the CMP and Appendix C of the FEIS. Further detail is provided in this document in Paragraph 3(d)(2), above, and Paragraph 10(e).

- (5) **Issues/comments forwarded to the applicant.** NA/Yes.

- (6) **Applicant replied/provided views.** NA/Yes. Appropriate financial assurances would be required as a special condition of any authorization issued for the proposed mine expansion.

- (7) **The following comments are not discussed further in this document as they are outside the Corps purview.** NA/ Yes

4. Alternatives Analysis.

The USACE has three available alternatives relative to our consideration of the applicant’s application for an Individual Permit pursuant to Section 404 of the CWA: 1) issue the permit; 2) issue the permit with special conditions; or 3) deny the permit. Permit denial is referred to as the No Action Alternative, as described in the DEIS in Section 2.6 and Section 1.5.1 of Appendix A.

The applicant considered a variety of alternatives during feasibility studies for the Rusk Permit Area, including the No Action Alternative. In addition, the USACE identified potential alternatives to the Rusk Permit Area based on issues identified during project

evaluation. No alternatives were identified during the public scoping process. Alternatives to the proposed project are described in the DEIS in Section 2.3 and in Section 1.5.2 of Appendix A. Based on our evaluation, all the action alternatives to the Proposed Action were considered but subsequently eliminated from detailed analysis in the EIS. Rationale for their elimination is provided in Section 2.3 of the DEIS. Table 2-13 of the DEIS summarizes and compares the projected environmental impacts of the Proposed Action and the No Action Alternative.

a. Basic and Overall Project Purpose (as stated by applicant and independent definition by Corps).

Same as Project Purpose in Paragraph 1.

Revised:

b. Water Dependency Determination:

Same as in Paragraph 1.

Revised:

c. Applicant preferred alternative site and site configuration.

Same as Project Description in Paragraph 1.

Revised:

Criteria. See alternatives comparison in Table 2-13 in the DEIS.

d. Off-site locations and configuration(s) for each. (e.g., alternatives located on property not currently owned by the applicant are not practicable under the Section 404(b)(1) Guidelines as this project is the construction or expansion of a single family home and attendant features, such as a driveway, garage, storage shed, or septic field; or the construction or expansion of a barn or other farm building; or the expansion of a small business facility; and involves discharges of dredged or fill material less than two acres into jurisdictional wetlands.)

See Paragraph 3(a)(1)(ii) regarding the location of the proposed project relative to the location of existing lignite reserves and existing facilities.

e. NA) Site selected for further analysis and why.

f. On-site configurations.

See discussion at Paragraph 4 and 3(a)(1)(ii).

g. Other alternatives not requiring a permit, including No Action.

Description	Comparison to criteria
No Action	The No Action Alternative would not meet the project purpose and need. Also see alternatives comparison Table

h. Alternatives not practicable or reasonable.

The applicant considered various alternatives during feasibility studies for the construction and operation of the proposed Rusk Permit Area. In addition, the USACE identified potential alternatives to the Rusk Permit Area based on issues identified during our evaluation. No alternatives were identified during the public scoping process. The alternatives considered included alternatives in the method of constructing and operating the Rusk Permit Area including: the Sabine River crossing location, dragline and haul road corridors, dragline scenarios, lignite transport scenarios, mining scenarios, lignite resource areas, and use of public roads. All of these alternatives were considered relative to their technological and economic feasibility as well as their apparent likelihood to reduce environmental impacts. The USACE has reviewed the data and analyses provided by the applicant including review of the associated costs. Based on the available data, the USACE believes the applicant's analysis to be reasonable. Based on the USACE's evaluation, all action alternatives except for the Proposed Action were considered but subsequently eliminated from detailed analysis in the EIS. A more detailed discussion can be found in Section 2.3, of the DEIS.

i. Least environmentally damaging practicable alternative.

There are no practicable alternatives that would have less adverse impacts on the aquatic ecosystem without other significant adverse environmental consequences that do not involve discharges into WOUS. The applicant has demonstrated that there are no practicable alternative sites elsewhere (see Appendix A of the DEIS).

5. Evaluation of the 404(b)(1) Guidelines. (NA)

a. Factual determinations.

(1) Physical and Chemical Characteristics and Anticipated Effects (Subpart C):

1. Substrate: The substrate of streams that would be excavated and reclaimed consists of sandy to silty and clayey alluvium. Lignite outcrops occur within the Sabine River bed. The substrate of ponds and wetlands that would be filled are comprised of a combination of silts and clays, with minor components of organic debris or gravel. The streams, ponds, and wetlands would be filled with on site dredged material (selected overburden underlain by interburden). This work would eliminate the current stream, pond, and wetland substrate. During reclamation, conformance with the CMP and selective handling of overburden and growth media would ensure that restored streams, ponds, and wetlands would be restored with substrate conditions similar to those that existed prior to disturbance (Sections 3.2.4.2 and 3.2.5.2 of the DEIS, Section 3.2.5.2 of the FEIS, and Appendix C of the DEIS and FEIS).
2. Currents, Circulation, or Drainage Patterns: The excavation, filling, and relocation of approximately 65 miles (41.0 acres) of ephemeral, intermittent,

and perennial streams, approximately 175 ponds (48.3 acres), approximately 151.2 acres of forested wetlands, and 62.6 acres of non-forested wetlands, in addition to the construction of surface water control structures, would substantially alter the circulation and drainage patterns of the project site. These filling activities would occur in phases, and the removal of surface water features would be mitigated in accordance with the replacement approaches and ratios identified in the CMP (Appendix C of the FEIS). Impacted waters of the U.S. (including wetlands) would be reconstructed within the reclaimed project area in their approximate pre-disturbance locations through the use of creation, restoration, enhancement, or preservation techniques. In addition, enhancement and preservation of existing on or off site resources would be implemented at higher ratios that would be approved by this district on a site-specific basis. Watershed modifications associated with the proposed project would result in the control of runoff from 21.3 square miles of the Cherokee Bayou/Black Slough drainages along the Sabine River, Tatum Creek, and Caney Branch. These effects are described in detail on Sections 2.5.1.1 of the DEIS and Section 3.2.4.2 of the DEIS and FEIS.

3. **Suspended Particulates/Turbidity:** Due to the extensive areas of proposed surface disturbance, including clearing, grading, pit excavation, dewatering, and reclamation activities, this project has the potential to result in increased sediment transport (Section 3.2.4.2 of the DEIS and FEIS). In an effort to ensure that mine discharges would not degrade downstream waters, the applicant proposes to implement environmental protection measures described in Section 3.2.4.2 of the DEIS and FEIS and summarized in Table 1 of this ROD that would minimize these effects, including construction or installation of erosion control features prior to ground-disturbing activities; use of a portable water treatment system, as needed, to ensure discharges meet applicable effluent limitations; and between dragline crossing, partial removal and stabilization of fill used to construct the dragline walkway. Implementation of the reclamation plan (Section 2.5.3 of the DEIS and FEIS), CMP (Appendix C of the FEIS), and additional mitigation measures as discussed in Section 3.2.4.4 of the DEIS and FEIS and summarized in Table 1 of this ROD would further minimize sediment transport. It is expected that with implementation of such measures all discharges would occur within the Total Suspended Solids (TSS) and Total Dissolved Solids (TDS) standards, and other effluent limits stipulated in the proposed TPDES permit to be issued by TCEQ. These measures in addition to the required monitoring and reporting would ensure that the project would not result in substantial temporary or long-term effects to water quality.
4. **Water Quality (temperature, salinity patterns, and other parameters):** The summary provided above describes the project's sediment-related water quality effects. In addition to sediment transport, the project has the potential to result in fertilizer and pesticide effects to runoff water quality, release of metals and metalloids, and acid-generation potential accompanied by a decrease in pH and an increase in the levels of iron and manganese (Sections

3.2.3.2 and 3.2.4.2 of the DEIS and FEIS). Any migration of backfill water out of the reclaimed pits would result in dilution of the water with surrounding groundwater, and this dilution should limit any short-term impacts to groundwater quality outside of the reclaimed pits to the proposed permit boundary. Because resaturation is expected to be mostly complete within approximately 7 to 8 years after cessation of mining, any impacts to groundwater quality outside of the backfilled pits are anticipated to be short-term. Through implementation of the applicant's selective handling plan, any spoils material removed during mining that is found to have acid-generating capability would be buried in the mine pits and covered with at least 4 feet of cover material to prevent entry of rainwater. This material handling should limit the potential of this material for acid-generation, and burial of the material within the permit boundary would limit the potential impacts to groundwater quality to the permit boundary (Section 3.2.3.2 of the DEIS and FEIS). Sabine's commitment of growth media restoration, revegetation, proper handling of fertilizers and pesticides, and the measures described above relating to sediment transport also would serve to address these other water quality factors.

5. **Flood Control Functions:** The proposed project would result in a number of watershed changes as a result of the construction of surface water control structures and river crossings. Based on hydraulic and hydrologic analyses, minimal changes to the 100-year, 24-hour peak flow conditions for the Sabine River would be anticipated. This evaluation included the survey of stream cross-sections and modeling of hydrologic data and hydraulic conditions in accordance with the U.S. Water Resources Council Bulletin 17B, USGS computer program PeakFQ, and the USACE HEC-RAS River Analysis Model. Severe storm conditions on the proposed disturbed areas were investigated using a standard SEDCAD4 modeling approach as approved by the federal Office of Surface Mining. Overland runoff volumes and peak flow rates from disturbed surfaces would increase for smaller flood events such as the 10-year, 24-hour storm. These changes would be controlled and attenuated over the short term and long term by proposed water management features such as reinforced ditches, ponds, and outlets designed for this purpose. Larger events, such as the 100-year, 24 hour event, would cause slight increases from existing conditions. These events also would be controlled and attenuated by proposed water management features and other measures. As a result, flows from storm events in receiving waters would be maintained for slightly longer durations compared to existing conditions. The pre- and post-disturbance runoff volumes and peak flow rates are shown in Tables 3.2-8 and 3.2-9 of the DEIS. Groundwater pumping contributions were included in the analysis of the overall runoff event modeling. It is expected that such discharges would be quite small in comparison with peak storm runoff estimates, and would not otherwise affect the conclusions described above.
6. **Storm Wave and Erosion Buffers:** These features, which are characteristically placed on large water bodies, would not be directly or

indirectly affected by the project, since such control features do not occur within the proposed area of disturbance.

7. Erosion and Accretion Patterns: Erosion and accretion patterns would be substantially altered within the proposed areas of earth disturbance, as streams, ponds, and wetlands would be filled and incrementally restored. It is expected that downstream reaches of waterways would experience relatively minor changes in erosion and accretion patterns; the overall channel geometry would remain essentially unchanged. Because the proposed watershed modifications would result in increased peak flows compared with pre-disturbance conditions, erosive conditions generally would occur on adjacent receiving water reaches. These conditions would be avoided or mitigated by proposed retention structures, channel control measures, and associated monitoring. The main areas that could sustain limited increases in erosion would be those stream reaches located immediately downstream of the proposed retention ponds, which also would function as sediment control features. Under pre-disturbance conditions, natural erosion currently occurs within the streams in the project area. These erosive conditions are caused by relatively high peak flows combined with the erosive soils that underlie much of the project area. Consequently, construction of impoundments on streams such as these likely would result in local changes in channel geometry accompanied by stream bank instability for relatively short distances downstream. This would occur as a result of changes in watershed dynamics causing the stream to replace sediment captured within the retention impoundments. Again, these conditions would be avoided or mitigated by designed outfalls at retention structures, channel control measures, and associated monitoring (Sections 3.2.4.2, 3.2.4.3, and 3.2.4.4 and 3.2.5.2 of the DEIS and FEIS and Table 1 of this ROD), and by stream restoration practices developed, implemented, and monitored in accordance with the CMP (Appendix C of the FEIS).
8. Aquifer Recharge: The proposed project would result in direct impacts to three aquifer zones: water-bearing alluvial deposits along the Sabine River, the Carrizo Sand, and water-bearing zones in the underlying Wilcox Group above the lignite seams. Collectively, these can be grouped as the overburden aquifer. Recharge, primarily as a result of precipitation, would continue to occur over the undisturbed portions of the overburden aquifer and from infiltration of water from proposed retention ponds (Section 3.2.3.2 of the DEIS). As described in Section 3.2.3.2 of the DEIS, the elevation of the potentiometric surface of the overburden aquifer would decrease in the vicinity of the mine during active mining. After completion of mining, mine pits would be backfilled. Following re-saturation of the backfill, pre-mining groundwater flow patterns gradually would be re-established, possibly with somewhat different gradients near the backfilled pits. Groundwater levels in the reclaimed overburden aquifer materials are anticipated to rebound to pre-mining levels in approximately 7 or 8 years after the cessation of mining and dewatering (Section 3.2.3.2 of the DEIS).

9. Baseflow: Ephemeral streams in the project area flow solely in response to precipitation events, and therefore do not exhibit baseflows. Based on analysis of intermittent and perennial streams within the area of disturbance and stream reaches surrounding the project area, short portions of Cherokee Bayou, Black Slough, Tatum Creek, and Caney Branch likely would experience minor decreases in baseflows as a result of groundwater withdrawal from the alluvial deposits and the Carrizo/Wilcox aquifers. Groundwater drawdown effects from dewatering are anticipated to be limited to the proposed life-of-mine disturbance area and a small perimeter zone. Minor impacts to baseflows within this area (the 5-foot drawdown zone) are anticipated from project activities during mining and until the end of the groundwater recovery period (Sections 3.2.3.2 and 3.2.4.2 of the DEIS and FEIS). Seeps, springs, and streams outside of the modeled 5-foot drawdown area are not anticipated to be affected by the projected mine-related groundwater drawdown (Section 3.2.3.2 of the DEIS).
10. Mixing Zone: No direct impacts would occur to mixing zones on perennial streams.

(2) Biological Characteristics and Anticipated Effects (Subparts D and E):

1. Special Aquatic Sites: The project would directly impact a total of 303.1 acres of waters of the U.S., including 151.2 acres of forested wetlands; 62.6 acres of non-forested wetlands; 22.1 acres of ephemeral streams, 13.5 acres of intermittent streams, and 5.4 acres of perennial streams (approximately 269,047; 73,193; and 2,759 linear feet, respectively); and 48.3 acres of ponds. These impacts would be minimized by limiting surface disturbance in the mine areas to a maximum of 500 acres at any one time, through implementation of the reclamation program that would be initiated following backfill of the initial mine pit and would continue concurrent with mine operations, and through replacement of impacted WOUS in accordance with the replacement approaches and ratios identified in the CMP. Impacted WOUS would be reconstructed within the reclaimed project area in their approximate pre-disturbance locations through the use of creation, restoration, enhancement, or preservation techniques. This 1:1 direct mitigation ratio would result in the restoration of 151.2 acres of forested wetlands; 62.6 acres of non-forested wetlands; 22.1 acres of ephemeral streams, 13.5 acres of intermittent streams, 5.4 acres of perennial streams (approximately 269,047; 73,193; and 2,759 linear feet, respectively), and 48.3 acres of ponds within the project disturbance area. Compensatory mitigation ratios of 1:1 and 0.5:1 also would be required for direct impacts to forested wetlands and non-forested wetlands, respectively, resulting in the creation of approximately 151.2 additional acres of forested wetlands and 31.3 additional acres of non-forested wetlands. Compensatory mitigation would be implemented within the permit boundary, to the extent possible, or at an off-site location approved by this district on a site-specific basis. Total composite mitigation ratios would be 2:1 for forested wetlands and 1.5:1 for non-forested wetlands, resulting in 302.4 acres of forested wetlands and 62.6 acres of non-forested wetlands. In addition, enhancement and preservation of

existing on or off site resources would be implemented at higher ratios that would be approved by this district on a site-specific basis. Mitigation typically would be in-kind for each resource type. Out-of-kind mitigation could be considered a last resort for replacement of aquatic resources. Based on groundwater modeling results, mining-related groundwater pumping would result in a 5-foot drawdown area that primarily would be limited to the project disturbance boundary plus a small perimeter zone on the west, south, and east sides. It is anticipated that the projected mining-related groundwater drawdown would have minor impacts to surface water resources, inclusive of WOUS, as discussed in Section 3.2 of the DEIS.

2. **Fish and Wildlife Habitat:** The most significant adverse impact to wildlife would be temporary and permanent loss or alteration of habitat caused by project construction and operation. This would include the phased (over the 30-year life of the mine) direct disturbance of up to approximately 14,392 acres of vegetation and aquatic resources. Of this total, approximately 500 acres would be disturbed for surface mining at any one time, based on sequential backfilling and concurrent reclamation of the mine pits. These impacts could result in the direct loss of small less mobile terrestrial wildlife species and the displacement of more mobile species. However, if surrounding habitats are already at carrying capacity, these species may be forced to use marginal habitat, migrate, or they may represent indirect mortality impacts related to the project. Habitat incrementally would be recreated throughout the area as concurrent reclamation proceeds behind mining operations. Of the 2,840 acres of proposed disturbance within the initial 5-year RCT permit area, approximately 545 acres would be reclaimed to fish and wildlife habitat (Section 2.5.3 of the FEIS). The final post-mining land uses for the proposed disturbance area outside of the initial 5-year RCT permit area would be determined based on landowner agreements. Fish and wildlife habitat also would be provided through mitigation of WOUS, which would be reclaimed in accordance with the applicant's CMP (see Appendix C of the FEIS). Relative to aquatic species, direct and indirect impacts would occur as a result of the removal and sequenced restoration of streams, ponds, and wetlands, in addition to the overall changes in watershed dynamics (Section 3.5.2.1 of the DEIS and FEIS). There also would be a lag time between disturbance and restoration for any given phase of the project. During this time, and for some period following, habitat for both terrestrial and aquatic species would be reduced. To compensate for these temporal impacts, the applicant has proposed environmental protection measures (see Table 1 of this ROD) as well as measures in the CMP (Appendix C of the FEIS) that would benefit both terrestrial and aquatic species.
3. **Threatened and Endangered Species:** The direct and indirect impacts to threatened and endangered species associated with the proposed project have been evaluated. It has been determined that a total of 19 federal and/or state-listed terrestrial species, including 1 federal candidate species, potentially occur in the project area. Project-related impacts for these species are anticipated to be low to minimal, with the following exceptions. The

potential for future impacts to the state-listed bald eagle are anticipated to be moderate. Impacts primarily would be related to the short-term, incremental loss of habitat as a result of mine construction and operation. Implementation of applicant's proposed environmental protection and mitigation measures (see Table 1 of this ROD) would minimize these impacts. Potential impacts to three state-listed mussel species as a result of the haul road bridge and dragline walkway crossings of the Sabine River are anticipated to be moderate to high; mitigation measures (see Table 1 of this ROD) have been identified to address these impacts. The United States Department of the Interior (USDOI) provided comment on the DEIS regarding threatened, endangered, or rare species on December 21, 2010. As a result, an additional mitigation measure related to the Texas heelsplitter (*Potamilus amphichaenus*) is included in Section 3.5.4 of the FEIS. Mitigation measures identified in Table 1 of this ROD will minimize potential impacts to these species. Additional discussions relative to special status species and species of special concern are presented in Section 3.5.2.1 of the DEIS and FEIS.

4. Biological Availability: This issue considers possible contaminants in dredged or fill material. Factors considered include: hydrography in relation to known or anticipated sources of contaminants; results of previous testing of on-site materials; known significant sources of persistent pesticides from land runoff or percolation; spill records for petroleum products or hazardous substances pursuant to Section 311 of the Clean Water Act; and other public records of significant introduction of contaminants from industries, municipalities, or other sources. The material proposed for fill into waters of the U.S. would not introduce, relocate, or increase contaminants in the material itself or in the aquatic environment at the proposed disposal sites.

b. Restrictions on discharges (230.10).

- (1) It has/has not been demonstrated in paragraph 5 that there are no practicable nor less damaging alternatives which could satisfy the project's basic purpose. The activity is/is not located in a special aquatic site (wetlands, sanctuaries, and refuges, mudflats, vegetated shallows, coral reefs, riffle & pool complexes). The activity does/does not need to be located in a special aquatic site to fulfill its basic purpose.

See Section 3.0, Preliminary Determination of Compliance or Non-compliance with the Restrictions on Discharge, in Appendix A of the DEIS.

- (2) The proposed activity does/does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards (based on information from the certifying agency that the Corps could proceed with a provisional determination). The proposed activity does/does not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat. The proposed activity

does/does not violate the requirements of a federally designate marine sanctuary.

See Section 3.0, Preliminary Determination of Compliance or Non-compliance with the Restrictions on Discharge, in Appendix A of the DEIS.

- (3) **The activity will/will not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, esthetic, and economic values.**

With the inclusion of environmental protection measures to be implemented by the applicant as part of the Proposed Action, as described in Section 2.5 of the DEIS, the Proposed Action would not cause or contribute to significant degradation of the WOUS. The proposed project would not discharge pollutants resulting in significant adverse effects on: 1) human health or welfare; 2) life stages of aquatic life and other wildlife dependent on aquatic ecosystems; 3) aquatic ecosystem diversity, productivity, and stability; or 4) recreational, aesthetic, and economic values.

- (4) **Appropriate and practicable steps have/have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (see Paragraphs 1 and 8 and Appendix C of the FEIS for description of mitigative actions).**

Steps to minimize potential adverse impacts of the project on aquatic ecosystems include BMPs to limit erosion and siltation and the mitigation of unavoidable impacts as discussed in the applicant's proposed CMP (see Appendix C of the FEIS). The proposed mitigation actions include reclamation of the Rusk Permit Area, channel relocations and restorations, riparian habitat enhancements, and the creation of new wetlands.

- 6. Public Interest Review:** All affected public interest factors have been reviewed as summarized here. Both cumulative and secondary impacts on the public interest were considered. Public interest factors that have had additional information relevant to the decision are discussed in their respective Sections of the DEIS and FEIS.

				+ Beneficial effect
				0 Negligible effect
				- Adverse effect
				M Neutral as result of mitigative action
+	0	-	M	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conservation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Economics.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Aesthetics.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	General environmental concerns.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wetlands.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Traffic/Transportation patterns.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Noise.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Air quality.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soils and prime farmland.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Historic properties.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fish and wildlife values
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Flood hazards.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Floodplain values.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Land use.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Navigation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shore erosion and accretion.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Recreation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water supply and conservation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water quality.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy needs.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Safety.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Food and fiber production.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Considerations of property ownership.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Needs and welfare of the people.

- a. Economics: The applicant has estimated that 4 million tons of lignite would be recovered annually for a period of 30 years. The project also would provide continued direct employment and income for the applicant's existing workforce of 260 employees, a life-of-mine increase of 40 contract construction workers, and a temporary (1- to 1.5-year) increase of 150 contract construction workers and related income. Mine service, supply and equipment vendors would also continue to be supported for the life-of-mine. Increased income to Panola and Rusk Counties and Tatum Independent School District (ISD) also would be realized through assessment of local taxes. For the existing South Hallsville No. 1 Mine for the 2009 tax year these taxes were approximately 1 million dollars cumulatively. Also, surface property owners would be paid lease fees or offered outright purchase contracts for their properties which would be based on local market values or greater.
- b. Aesthetics: The proposed project would affect the visual aesthetic value of the area for the life of the mine. The greatest effect would occur within the mining area, with

lesser effects in the permit boundary beyond the area of disturbance. These visual impacts would occur as a result of the construction of the mine and ancillary facilities and mine operation and would include the following: clearing of vegetation, construction of mine and ancillary facilities, operation of draglines, fugitive dust generated by mining and transport of lignite, use of night lighting, and earthwork associated with reclamation activities. The extent and location of these effects would change over the 30-year life of the mine (Section 3.12.2.1 of the DEIS). The applicant proposes a number of environmental protection measures for suppression of fugitive dust, as identified in Table 1 of this ROD. Among these, a mitigation measure (VR-1) requiring the applicant to implement visual screening where the edges of active mining would be near the permit boundary where there are potentially sensitive public viewpoints nearby, particularly near Tatum and Easton and along SH 149.

- c. **General Environmental Concerns:** General environmental concerns have been addressed through the specific and detailed analysis of individual environmental factors within the EIS. Identified potential adverse impacts have been addressed through the applicant's proposed CMP (Appendix C of the FEIS) and environmental protection and mitigation measures (Table 1 of this ROD).
- d. **Wetlands:** See Paragraph 5(a)(2)1 above.
- e. **Traffic/Transportation Patterns:** The project would generate an increase in trips to and from the proposed mine on area roads during construction and a smaller increase during operation of the mine. Most trips to and from the mine would be via FM 2625 to the current site headquarters; traffic to the project area via other external routes would be minimal and would occur only on an occasional basis. The additional light vehicle and truck trips would have short-term, minimal effects on area roadways. The proposed project also would extend the period over which materials would be transported to the existing South Hallsville No. 1 Mine area by approximately 15 years. The deliveries would be expected to occur throughout the day, so the effect on peak traffic would be minor. With the estimated project-related increase in peak hour traffic, FM 2625 would continue to operate well within an acceptable level of service both during the 1-year construction period and throughout the mine life. During construction and operation, 25 county roads within the permit boundary, including all roads in mine areas, would be closed incrementally (by the jurisdictional agencies) as the mining operation progresses through the three mine areas (Section 3.11.2 of the DEIS). The county roads subject to closure are all local access roads and do not provide effective shortcuts in most cases. Alternate access routes would be provided prior to road closure if needed for access to occupied properties; therefore, the closure of the county roads would not be anticipated to adversely affect the traveling public. Most roads that would be closed for the project would be reopened within approximately 7 to 10 years following completion of mining in the affected areas. Of the two SHs and three FM roads within or adjacent to the Rusk Permit Area, only FM 782 would be closed and removed during the proposed mining operation; the other four would remain open and unaltered. The closure of FM 782 near the southwestern boundary of the Rusk Permit Area would be the only road closure likely to affect public travel; it is the most direct route between Easton and Henderson and provides access to the east side of Cherokee Lake. Fire and

emergency service access to individual homes and businesses would not be affected by any of the roadway closures due to the distribution of existing volunteer fire departments and stations. Medical access to hospitals and routine doctor visits could be marginally affected by the additional travel distance necessitated by closure of FM 782. Effects of the project on the BNSF railroad across the Rusk Permit Area would be minimal. There would be a 24- to 48-hour closure of the railroad to safely “walk” the dragline(s) across the railroad.

- f.** Noise: The project would result in noise emissions associated with mine construction, operation, and reclamation activities. Based on the modeled maximum project-related noise levels, 54 noise-sensitive receptors, not owned or leased by SWEPCO, would experience an increase in noise levels of 10 dBA (TXDOT guideline) or more above measured ambient levels. Modeling results indicate that 45 of these noise-sensitive receptors also would be expected to experience noise levels exceeding the HUD standard of 65 dBA L_{dn} . Mitigation to minimize noise impacts to nearby noise-sensitive receptors was described in Section 3.12.4 of the DEIS and is presented in Table 1 of this ROD.
- g.** Air Quality: The project would result in temporary air quality impacts. These effects would be associated with the storage and use of gas and diesel to operate equipment, clearing of vegetation, the release of fugitive dust associated with the mining and transport of lignite, and particulate emissions related to potential spontaneous lignite combustion (Section 3.8.2.1 of the DEIS). The applicant proposes to perform a number of environmental protection measures described in Section 3.8.2.1 of the DEIS and summarized in Table 1 of this ROD that would minimize these effects, including the control of fugitive dust and the prevention/control of potential spontaneous lignite combustion.
- h.** Soils and Prime Farmland: The project would involve the disturbance of a total of 14,392 acres of soils during the life of the mine. These activities have the potential to result in changes in soil chemistry and soil displacement by erosion. Potential adverse impacts associated with these disturbances would be minimized through the implementation of erosion control measures, the growth media restoration program, and concurrent reclamation (Sections 2.5.1.4, 2.5.3.2, and 3.3.2.1 of the DEIS and FEIS). Although approximately 4,144 acres of prime farmland soil types have been identified by the NRCS within the proposed permit area, further investigations indicate that none of these areas have been historically used as croplands within the 10 years prior to project environmental studies (Section 3.3.1.3 of the DEIS). A temporary decrease in soil productivity would occur in association with soil replacement activities due to reduced microbial activity. To further ensure reclamation success, testing would occur after the growth media is restored, and amendments would be added as necessary to encourage revegetation. Appropriate erosion control practices would further help stabilize restored growth media (Section 3.3.2.1 of the DEIS and FEIS). Proposed reclamation practices potentially would improve the physical and chemical characteristics of restored growth media above existing soil conditions.
- i.** Historic Properties: Impacts to cultural resources would include the loss of 126 identified archaeological sites and historic resources within the initial 6,925-acre cultural resources survey area. Of these sites, 18 are eligible or potentially eligible

for listing on the National Register of Historic Places (NRHP), 11 of which are located in the life-of-mine disturbance boundary. Additional archaeological sites and historic resources in as yet unsurveyed portions of the permit boundary would be identified following future investigations of these areas as described in Section 3.7.2.1 of the FEIS and summarized in Table 1 of this ROD. In consultation with the Texas Historical Commission (THC), this district will determine whether construction and operation of the project would have an adverse effect on any properties eligible or potentially eligible for listing on the NRHP. If the USACE and THC determine that a property would be adversely affected, then avoidance would be recommended. If avoidance is not feasible, mitigation would be developed and implemented in accordance with a site protection or treatment plan developed in coordination with this district and THC. Potential indirect effects to NRHP-eligible sites as a result of runoff or water discharge are anticipated to be minor based on the proposed surface water control system and implementation of erosion control measures.

- j.** Fish and Wildlife Values: See Paragraph 5(a)(2)2 above.
- k.** Flood Hazards: See Paragraph 5(a)(1)5 above.
- l.** Floodplain values: See Paragraph 5(a)(1)5 above.
- m.** Land Use: Existing land uses include forestry, which accounts for nearly 64 percent of land use within the permit boundary. Additional land uses include pasture land (28 percent) and residential uses (less than 1 percent) (Section 3.9.1 of the DEIS). Additional land uses include utility and transportation corridors and oil and gas facilities (Section 3.1.1.4 of the DEIS). Following mining, impacted lands within the mine would be reclaimed to support post-mine land uses according to a plan to be determined in coordination with individual property owners. Post mine land uses are expected to be similar to existing land uses (Section 3.9.2.1 of the DEIS and FEIS).
- n.** Navigation: The dragline walkway and haul road corridor would intersect the Sabine River. Boating or canoeing on the river would be blocked by construction and use of the dragline walkway for up to 2 months and for brief periods during operations to facilitate subsequent dragline crossings of the river (Section 3.9.2 of the DEIS). The river would be open for boating and canoeing during the remainder of the project life. All other disturbance and all of the mining areas would be at least 1.5 miles from the river.
- o.** Recreation: As described in Section 3.9.2.1 of the DEIS, the project would result in minimal effects on recreation resources; there are no developed public recreation facilities in the permit boundary. The dragline walkway and haul road corridor would intersect the Sabine River. Boating or canoeing on the river would be blocked by construction and use of the dragline walkway for up to 2 months and for brief periods during operations to facilitate subsequent dragline crossings of the river. The river would be open for boating and canoeing during the remainder of the project life. Recreationists on the river would be largely unaffected during most of the 30-year life of the mine, except near the haul road crossing, where trucking activity and noise would be noticeable.
- p.** Water Supply and Conservation: The proposed project may adversely affect existing water supply facilities, including private wells and water supply facilities in the Crystal Farms and Chalk Hill water supply districts, depending on the specific

location of the facilities relative to the mine disturbance area and groundwater drawdown area. An analysis of potential effects is provided in Section 3.2.3.2 of the DEIS. The applicant is required, in compliance with RCT regulations, to replace water supply wells affected by mining. The applicant's proposal contains a mitigation measure (GW-1) requiring coordination with the potentially affected water district(s) to ensure the mitigation is implemented in a timely manner.

- q.** **Water Quality:** Due to the expansive areas of proposed earth disturbance, including clearing, grading, pit excavation, surface dewatering, and reclamation activities, this project has the potential to result in increased sediment transport. In addition to sediment transport, the project has the potential to result in nutrient and pesticide loading, release of metals and metalloids, and the production of acid or toxic drainage, accompanied by a decrease in pH and an increase in the levels of iron and manganese contained in TDS. The applicant proposes to undertake a number of measures identified in project designs, the program for selective handling of overburden and interburden, water management and pollution prevention plans, and the CMP to address sediment and other constituents. For example, adequate water treatment technologies (including retention, settling, and the use of flocculants) have been demonstrated at the existing South Hallsville No.1 Mine and would be implemented as part of the applicant's proposed water management system, as described in Section 2.5 of the Draft EIS. It is expected that through the implementation of such measures, discharges would occur within the TPDES permit effluent limits, for the constituents outlined above, ensuring that the project would result in minimal short-term or long-term adverse water quality impacts (Section 3.2.4.2 of the DEIS).
- r.** **Energy Needs:** The project would provide a long-term, reliable, continuous, and economically stable fuel source to SWEPCO's Pirkey Power Plant, thus supporting SWEPCO's efforts to supply dependable, affordable electricity to its customers.
- s.** **Safety:** The proposed project has minimal potential to affect the safety of the general public. To address the issue of workplace safety, the applicant would employ a mine safety plan that would incorporate numerous workplace safety measures. These measures are currently implemented at Sabine's existing South Hallsville No. 1 Mine and have been shown to be effective at minimizing risk to workers.
- t.** **Mineral Needs:** As result of the project, approximately 138.2 million tons of lignite would be removed. Access to oil and gas resources located beneath the lignite seams would be restricted during active mining (Section 3.1.2.1 of the DEIS).
- u.** **Needs and Welfare of the People:** Public health issues associated with the project include potential water quality effects from the mining operation, including use of chemicals during reclamation; air quality effects from project related air emissions; and noise and lighting effects on sensitive receptors. With implementation of environmental protection measures and mitigation measures as discussed in Section 3.14 of the DEIS and presented in Table 1 of this ROD, no project-related adverse health impacts are anticipated due to water quality, air quality, noise, or lighting effects.

7. Effects, policies and other laws.

a. NA

b. **Endangered Species Act.** NA

The proposed project:

(1) **Will not affect these threatened or endangered species:**

Any/

(2) **May affect, but is not likely to adversely affect:**

Species: Louisiana black bear (*Ursus americanus luteolus*) and Earth fruit (*Geocarpon minimum*)

(3) Will/ Will not adversely modify designated critical habitat for the

No critical habitat of any federally listed endangered or threatened species occurs in the proposed project boundary (see Page 3.5-8 of the DEIS).

(4) Is/ Is not likely to jeopardize the continued existence of the

(5) **The Service** concurred/ provided a **Biological Opinion(s).**

On December 21, 2010, the USFWS stated as part of their comprehensive comments on the DEIS “The USFWS believes, given the description of habitat in the footprint of the proposed mine, effects to the Louisiana black bear and Earth fruit would be negligible.” (See letter F1 in Appendix G of the FEIS).

c. **Essential Fish Habitat.** Adverse impacts to Essential Fish Habitat will/ will not result from the proposed project. Essential Fish Habitat is not present within the project site, nor within areas that could experience indirect adverse effects as a result of the project.

d. **Historic Properties.** The proposed project will/ will not have an effect on sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state, or local significance based on letter from SHPO Texas Historical Commission.

As discussed in Section 3.7 of the DEIS, based on surveys completed to date there are 18 sites or resources eligible or potentially eligible for the NRHP, 11 of which are located in the life-of-mine disturbance boundary. If any direct and indirect effects were to alter, directly or indirectly, any of the characteristics of a NRHP-eligible site that qualify the site for inclusion in the National Register, the effects would be considered adverse under Section 106 of the NHPA.

Cultural resources investigations of the unsurveyed portions of the proposed Rusk Permit Area would be phased according to the applicant's planned schedule for mining. Cultural resources survey, report preparation, and report review would be completed 1 year in advance of any mine disturbance to allow time for additional work that may be necessary to evaluate identified cultural resources for the NRHP and implement mitigation measures, if needed.

In consultation with the Texas State Historic Preservation Office, the USACE will determine whether historic properties will be adversely affected by the Proposed Action. Development of an agreement document for the treatment of adverse effects for historic properties, including protection and avoidance measures, will be developed in coordination with the SHPO, the Advisory Council on Historic Preservation, and in consultation with the Caddo Tribe of Oklahoma. The agreement document shall become a condition of the permit.

e. Cumulative & Secondary Impacts.

RCT approval of their Permit Number 55 includes a Cumulative Hydrologic Impact Assessment (CHIA) in which TDS concentration was used as the indicator parameter for changes to the chemical quality of surface water. The CHIA found that any predicted cumulative impacts to water quality would be ameliorated by the large dilution effects from substantial runoff within the Sabine River drainage area. The CHIA also projects that physical changes within the mine area would cause only minor changes in the quantity of surface water available for downstream users. Similarly, the CHIA found that impacts to quality, quantity and transmissivity of groundwater would be insignificant.

Analyses of direct, indirect, and cumulative impacts were conducted for the EIS. Past, present, and reasonably foreseeable future actions are described in Section 2.7 of the DEIS, and Chapter 3.0 of the DEIS and FEIS provides specific resource-by-resource analyses. The discussion in Section 2.7 considers USACE-permitted projects within a 15-mile buffer of the proposed permit boundary.

The Rusk Permit Area is entirely within the Middle Sabine watershed (#12010002). This watershed is 1,766,992 acres in size, and the 15-mile buffer of the proposed project boundary covers approximately 37 percent of the watershed. This 15-mile buffer of the proposed permit boundary is approximately 93 percent contained within the Middle Sabine watershed.

- (1) **Baseline.** According to data acquired from the USGS National Land-Cover Data Set, approximately 13.5% (239,200 acres) of the watershed area is wetland. Also, according to the USGS National Hydrographic Data Set, there are approximately 8,605 stream miles contained within the watershed composed of 28% (2,381 miles) perennial and 72% (6,224 miles) intermittent/ephemeral tributaries. Corps permits for the period 1985-2009

have authorized the fill of approximately 730 acres of WOUS (Due to protocol of historical data entry, linear feet of streams could not be accurately determined). The projection is that authorizations will continue at the current rate/ increase/ because historical data show that development in the region has been consistent for 25 years or more.

- (2) **Context.** The proposed project is typical of/a precedent/very large compared to other activities in the watershed. Developments similar to the proposal have occurred since 1970. Future conditions are expected to be similar. Besides Corps authorized projects, other activities include oil and natural gas drilling, transportation and residential/commercial development.
- (3) **Mitigation and Monitoring.** Information regarding avoidance, minimization and compensatory mitigation is summarized in Paragraph 1 above and detailed in the EIS. Monitoring of the reclaimed mine site is provided in Section 2.5.3.10 of the DEIS and FEIS.
- f. **Corps Wetland Policy.** Based on the evaluation of information contained in the EIS, including proposed compensatory mitigation, and the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.
- g. (NA) **Water Quality Certification under Section 401 of the Clean Water Act**
has/has not yet been issued by State/Commonwealth.
TCEQ water quality certification: This project is a Tier II project as detailed in the Memorandum of Agreement between the U.S. Army Corps of Engineers and the TCEQ on Section 401 certification procedures dated 17 August 2000 (MOA). The TCEQ has not yet acted on the applicant's request for water quality certification under Section 401 of the Clean Water Act. In accordance with the MOA, this district will provide the TCEQ with a copy of this ROD when finalized. The TCEQ will then make its determination whether the project will comply with the state surface water quality standards in accordance with Section 401 of the Clean Water Act. The USACE will provide a permit decision to the applicant when the procedures outlined in the MOA have been completed.
- h. **Coastal Zone Management (CZM) consistency/permit: N/A**
- i. **Other authorizations.**
1. U.S. Coast Guard, Authorization Act of 1982, Public Law 97-322 for construction of bridges. Exemption letter issued June 22, 2009.
 2. U.S. Fish and Wildlife Service Threatened and Endangered Species relocation permit. SPR-0790-169 and SPR-0393-586.

3. RCT permit under Title 16, Part 1, Chapter 12 of the Texas Administrative Code (TAC). Permit #55 issued July 26, 2011 which includes TPDES and Stormwater General Permit for Industrial Activities, Multi-Sector GP No. TXR050000.
4. Texas General Land Office, permit for easement under Texas Natural Resources Code (TNRC) §51.291. ME20110145 (Bridge) and ME20110142 (Dragline Walkway) issued July 1, 2011.
5. TCEQ Water Rights Exemption under Texas Water Code Chapter 11. Issued September 18, 1986.
6. TCEQ Water supply contract, Contract # 1557, Permit No. 3618.
7. TPWD Marl, Sand, and Gravel Permit 31 TAC Part 2, Chapter 69 Subchapter H Rule §69.105. Permit #2011-G001 issued January 20, 2011.
8. Mine Safety Health Administration (MSHA) Identity Report Training Plan, MSHA 41-03101-01L issued November 2, 1981.
9. TCEQ open burning notification under 30 TAC §§ 111.201 – 111.221. Notification would be provided per specified procedure prior to commencing activity.
10. Harrison County permit for floodplain modifications under Texas Water Code § 16.3145. Permit #10-003 issued April 8, 2011.
11. Panola County permit for floodplain modifications under Texas Water Code § 16.3145 issued June 30, 2010.
12. Gregg County permit for floodplain modifications under Texas Water Code § 16.3145 issued August 24, 2010.
13. City of Easton permit for floodplain modifications under Texas Water Code § 16.3145 issued August 23, 2010.
14. Rusk County permit for floodplain modifications under Texas Water Code § 16.3145. Permit #2010-1 issued March 30, 2010.
15. Harrison County Sheriff open burning notification under the Texas Clean Air Act, Subchapter E, Authority of Local Governments (see Health and Safety Code, Title 2, §382.115). Notification would be provided per specified procedure prior to commencing activity.
16. Panola County Sheriff open burning notification under the Texas Clean Air Act, Subchapter E, Authority of Local Governments (see Health and Safety Code, Title 2, §382.115). Notification would be provided per specified procedure prior to commencing activity.
17. Rusk County Sheriff open burning notification under the Texas Clean Air Act, Subchapter E, Authority of Local Governments (see Health and Safety Code, Title 2, §382.115). Notification would be provided per specified procedure prior to commencing activity.

18. Rusk County Commissioners Court approval for county road relocations under Transportation Code § 251.051. Approved June 13, 2011.

j. (NA) Significant Issues of Overriding National Importance.

8. Compensation and other mitigation actions.

a. Compensatory Mitigation

- (1) **Is compensatory mitigation required?** yes no [If “no,” do not complete the rest of this section]
- (2) **Is the impact in the service area of an approved mitigation bank?** yes no
- (i) **Does the mitigation bank have appropriate number and resource type of credits available?** yes no
- (3) **Is the impact in the service area of an approved in-lieu fee program?**
 yes no
- (i) **Does the in-lieu fee program have appropriate number and resource type of credits available?** yes no
- (4) **Check the selected compensatory mitigation option(s):**
 mitigation bank credits
 in-lieu fee program credits
 permittee-responsible mitigation under a watershed approach
 permittee-responsible mitigation, on-site and in-kind
 permittee-responsible mitigation, off-site and out-of-kind
- (5) **If a selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6), explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) (i.e., the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project):**

Proposed work involves large scale watershed alterations that necessitate compensation at or near the proposed impact sites. As such, the applicant's CMP is environmentally preferable due to its replacement of aquatic resources in the same approximate location as pre-project waters and follows watershed approach. Proposed compensatory mitigation ratios and predicted improvement over pre-mine condition assessments were determined to be sufficient to replace impacted aquatic resources relative to temporal losses and appropriately offset

any potential risk of mitigation failure. Also, field inspection of existing large-scale, on-site, permittee responsible mitigation projects has confirmed the applicant's and industry's success with completing such mitigation. Furthermore, because of the scale of landscape disturbance and size of equipment utilized in construction, costs of completing the mitigation is relatively less than other options.

(6) Other Mitigative Actions

Applicant's proposed environmental protection measures are provided in Table 1 of this ROD; see Paragraph 1 - Avoidance and Minimization. Direct and compensatory mitigation for WOUS, including wetlands, are presented in the CMP in Appendix C of the FEIS.

9. General evaluation criteria under the public interest review. We considered the following within this document:

- a. The relative extent of the public and private need for the proposed structure or work.** (e.g., Public benefits include employment opportunities and a potential increase in the local tax base. Private benefits include land use and economic return on the property; for transportation projects benefits include safety, capacity and congestion issues.)

The project would provide a long-term, reliable, continuous, and economically stable fuel source to SWEPCO's Pirkey Power Plant, thus supporting SWEPCO's efforts to supply dependable, affordable electricity to its customers. The applicant has estimated that 4 million tons of lignite would be recovered annually for a period of 30 years. The project also would provide continued direct employment and income for the applicant's existing workforce of 260 employees, a life-of-mine increase of 40 contract construction workers, and a temporary (1- to 1.5-year) increase of 150 contract construction workers and related income. Mine service, supply and equipment vendors would also continue to be supported for the life-of-mine. Increased income to Panola and Rusk Counties and Tatum Independent School District (ISD) also would be realized through assessment of local taxes. For the existing South Hallsville No. 1 Mine for the 2009 tax year these taxes were approximately 1 million dollars cumulatively. Also, surface property owners would be paid lease fees or offered outright purchase contracts for their properties which would be based on local market values or greater. The public need to protect and preserve environmental resources would be met through the successful implementation of the CMP, which incorporates extensive measures to protect, restore and enhance the aquatic environment, other environmental resources and public interest items identified above.

- b. There are no unresolved conflicts as to resource use.**

- c. The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is**

suited. Detrimental impacts are expected to be minimal although they would be permanent in the construction area. The beneficial effects associated with utilization of the property would be permanent.

The proposed project would not affect the long-term potential for development of mineral resources in the area. Access to oil and gas resources would be temporarily restricted during geographically sequenced mining and reclamation (Section 3.1.2.1 of the DEIS), but would be restored upon completion of mining and reclamation activities (with the exception of protected compensatory mitigation sites). Impacts to vegetation, groundwater, surface water, air quality and fish and wildlife resources would also occur incrementally with the sequenced progression of mining. Successful implementation of the applicant's proposed reclamation activities and CMP would offset these impacts over the long-term. Soil productivity would be impacted short-term and would improve upon successful revegetation of mined areas. The proposed project would permanently adversely impact paleontological and cultural resources within the mine permit area; however, sites eligible for listing on the NRHP would be avoided or mitigated per the above-referenced programmatic agreement. Land use of the proposed project area would be converted to lignite extraction incrementally, but would be restored to pre-mine use after reclamation unless directed otherwise by the landowner. The maintenance of existing employment and economic activity would accrue for the duration of the project while residents in 256 dwellings would be displaced until mining and reclamation are complete. There would also be short-term adverse impacts to transportation infrastructure as a result of road closures and temporary detours, but traffic patterns and flow would return to pre-mine levels once reconstructed roads are opened. Noise levels would increase in the project area for the life-of-mine, but would revert to pre-mine levels upon final reclamation and closure. Aesthetic and visual degradation would occur during active mining; but the rural landscape character would be reestablished incrementally as reclamation progresses behind mining.

10. Determinations.

a. **Public Hearing Request:** NA

I have reviewed and evaluated the requests for a public hearing. There is sufficient information available to evaluate the proposed project; therefore, the requests for a public hearing are denied.

The USACE previously determined that a public hearing should be held and conducted a formal public hearing on November 16, 2010, at Tatum High School in Tatum, Texas. A transcript of the hearing and responses to comments are found in Appendix G of the FEIS. All comments were addressed in the FEIS.

b. **Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de**

minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

c. Relevant Presidential Executive Orders.

- (1) **EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians.** This action has no substantial direct effect on one or more Indian tribes.

Consultation and coordination with Indian tribal governments is discussed in Sections 3.7.1.4 and 4.3 of the DEIS, respectively. The DEIS comment letter from the Tribal Historic Preservation Officer for the Caddo Tribe, and responses to the letter, are presented in Appendix G of the FEIS.

- (2) **EO 11988, Floodplain Management.** Not in a floodplain. (Alternatives to location within the floodplain, minimization, and compensation of the effects were considered in the EIS.)

The proposed corridor alignment and associated crossing of the Sabine River were located in consultation and review with the USACE, TPWD, and RCT through a site visit on May 6, 2008, and subsequent coordination. Adverse impacts due to the proposed project include an increased potential for flooding and scour, affecting sediment transport, turbidity and downstream deposition. The applicant's proposed environmental protection and mitigation measures SW-1 through SW-4 are provided in Table 1 of this ROD which detail efforts to avoid, minimize and compensate for these impacts. Also see Paragraph 1 relative to direct and compensatory mitigation for WOUS and Paragraph 7(i) for a summary of local floodplain construction approvals.

- (3) **EO 12898, Environmental Justice.** In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

The proposed project would displace 256 households from the mine permit area, which is predominantly located in Block Group 1 in Census Tract 9501. The population of this block group is approximately 18.9 percent Black or African American, which is higher than the statewide average of 11.3 percent. However, it is somewhat lower than the percentages for all of Rusk, Harrison and Gregg counties; it is only slightly higher than the percentages for Panola County and Tatum (See Table 3.15-1 of the DEIS); and it is notably lower than the percentages for 6 of the 9 other census blocks within 2 miles of the proposed project boundary (See Table 3.15-2 of the DEIS). The displacement effects are unlikely to fall disproportionately

on the minority community. All property owners and residents would be in a comparable position to negotiate the terms of selling or leasing their properties, as well as the terms of their moves out of the mine permit area. Residents would experience similar circumstances of environmental, noise and visual effects, depending on the locations of their properties relative to active mining, irrespective of their ethnicity. See Section 3.15.2.1 of the DEIS.

(4) **EO 13112, Invasive Species.**

- There were no invasive species issues involved.
- The evaluation in the EIS included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.
- Through special conditions, the permittee will be required to control the introduction and spread of exotic species.

Encroachment of noxious weeds or invasive plant species would be minimized to the extent possible through prompt revegetation of disturbance areas and pesticide (inclusive of herbicide) use as outlined in the proposed Reclamation Plan.

- (5) **EO 13212 and 13302, Energy Supply and Availability.** The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety. (The review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy-related (including pipeline safety) project while maintaining safety, public health, and environmental protections.)

d. National Environmental Policy Act Determination.

The permit action has the potential to significantly affect the quality of the human environment; therefore, an EIS was prepared. Based on a review of the full range of practicable alternatives, it has been determined the applicant's preferred alternative to be the least environmentally damaging practicable alternative that would achieve the purpose and need of the proposed project. This determination considers cost, existing technology, and logistics, in addition to the consideration of impacts to aquatic resources and other public interest factors. It has been further determined that all administrative requirements have been met and that issuance of a permit for the project, with the inclusion of the special conditions identified below, is consistent with national policy, statutes, and administrative directives, and is not contrary to the public interest.

e. Compliance with 404(b)(1) guidelines. NA

The discharge complies with the guidelines, with the inclusion of the appropriate and practicable mitigation measures, including the special conditions listed below to minimize pollution or adverse effects to the affected ecosystem:

1. The permittee shall implement and abide by the mitigation plan included as Appendix C of the Rusk Permit Area FEIS prepared by HDR Engineering, dated

May 2011. The permittee shall implement the mitigation plan concurrently with the construction of the project and complete the initial construction and plantings associated with the mitigation work prior to completion of construction of the project. Completion of all elements of this mitigation plan is a requirement of this permit.

2. The permittee shall be responsible for maintaining the mitigation areas restored and created to comply with Special Condition 1 above until such time as the permittee provides documentation to, and receives verification from, the USACE, that areas within the mitigation area intended to become:
 - a. waters of the United States meet the definition of a waters of the United States under the Regulatory Program regulations applicable on the date of this letter;
 - b. wetlands that are waters of the United States meet the definition of a wetland under the Regulatory Program regulations applicable on the date of this letter;
 - c. waters of the United States are functioning as the intended type of waters of the United States and at an acceptable level of ecological performance; and
 - d. buffer and riparian zones and other areas integral to the enhancement of the aquatic ecosystem are functioning as the intended type of ecosystem component and at an acceptable level of ecological performance.
3. Following completion of reclamation and compensatory mitigation activities, and upon meeting success criteria and performance standards, a conservation easement (when possible, pending securing a willing third party to hold the binding contract) or deed restriction will be approved by the USACE and recorded in the appropriate local government repository within 1 year of release of the property from its respective RCT performance bond.
4. The permittee shall provide financial assurances in the amount of \$78,657.00 in an appropriate financial instrument to be approved by the USACE within 60 days of permit issuance.
5. The permittee shall develop an agreement document for the treatment of historic properties adversely affected by the Rusk Permit Area expansion. This document – either a Memorandum of Agreement or Programmatic Agreement - shall be developed in consultation with the Texas State Historic Preservation Office, the Sabine Mining Company, and the Caddo Tribe of Oklahoma. When signed by all parties and accepted by the Advisory Council on Historic Preservation, the agreement document shall become a condition of this permit. This document will satisfy Section 106 of the National Historic Preservation Act through verification of the requirements of 33CFR325 (Appendix C) and 36CFR800.
6. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized

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representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

Having completed the evaluation in paragraph 5 and including the special conditions, I have determined that the proposed discharge complies/does not comply with the 404(b)(1) guidelines.

f. Public Interest Determination: I find that issuance of a Department of the Army permit is not/is contrary to the public interest.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
<p>Water Resources</p> <p><i>Surface Water (Cont.)</i></p>	<ul style="list-style-type: none"> • During periods between dragline moves, approximately 60 percent of the fill material used to construct the walkway will be removed and stockpiled on top of the remaining portion of the walkway, thus allowing openings to maintain the function of the floodplain. Stockpiled fill will be seeded with a temporary seed mix to minimize erosion and sediment transport. • To the extent possible, pre-mine stream drainage configurations will be retained, and slopes similar to pre-mine conditions will be achieved when practical during reclamation, to facilitate stream-flow regimes consistent with pre-mining rates. • Jurisdictional WOUS impacted by mining and mining-related activities will be reconstructed within the reclaimed mine area in their approximate pre-mine locations through the use of creation, restoration, enhancement, or preservation techniques in accordance with Sabine’s proposed CMP developed per the requirements of the USACE’s Section 404 permitting process. (See Table 2-10 of the DEIS for proposed mitigation ratios.) 	<p>will incorporate reasonable estimates of the hydraulic effects of woody debris on bridge and culvert conveyance, local scour, and backwater conditions. Since mean daily flow observations were used in preliminary designs, ongoing design efforts will distribute the mean daily peak flow into an hourly flow hydrograph based on existing representative data or accepted practice. Bridge and roadway freeboard values will accommodate the hourly peak flow in final design.</p> <ul style="list-style-type: none"> • SW-2: Work in the Sabine River floodplain will cease during severe storms or out-of-bank flows. If after a storm event, construction traffic on the river floodplain causes soil ruts deeper than 3 inches, equipment mats will be used or construction delayed until drier conditions occur.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures ¹	Additional Mitigation Measures
Water Resources <i>Surface Water (Cont.)</i>		<ul style="list-style-type: none"> • SW-3: Channel conditions upstream and downstream of embankments, the haul road bridge, and culverts will be monitored using scheduled periodic field observations and a sequence of historical aerial photos (such as from the Texas Natural Resources Information System). A professionally qualified fluvial geomorphologist will be retained to provide input regarding monitoring methods and protection for channels and stream banks during project design and the development and implementation of a river monitoring program. During the life of the dragline walkway and haul road, monitoring will be conducted by a professionally qualified fluvial geomorphologist upstream and downstream of the structures crossing the Sabine River and its floodplain. Monitoring will be done on an annual basis and following any out-of-bank flow of the Sabine River nearby. Any changes in the dimension, pattern, and profile of the river reach will be noted. As needed and if notable changes in the trends of planform (plan view) banks/bars are observed from the existing and historical conditions, upstream and downstream stabilization will be implemented according to accepted engineering/geomorphic practices. Annual and major flood event reports will be provided to this office indicating channel and floodplain stability and any corrective actions taken to address impacts resulting from the structures. In addition, water quality conditions in the Sabine River downstream of any project-related disturbance in the river or floodplain will be monitored for sedimentation impacts or other reductions in background water quality. In cooperation with TPWD and this district, Sabine will develop and satisfactorily implement a water quality monitoring plan to inform the agencies of project activity schedules and to characterize turbidity and suspended sediment concentrations in the Sabine River flow both upstream and downstream of

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures ¹	Additional Mitigation Measures
		<p>project-related disturbance. Monitoring activities will extend sufficiently far downstream to ascertain and quantify any sedimentation impacts to the mussel sanctuary 4 miles downstream, as well as other zones that may support aquatic special status species and aquatic species of special concern within a distance to be prescribed by TPWD. The timing of these water quality monitoring activities will include pre-, during, and post-activity monitoring at timeframes prescribed by TPWD. This district will encourage Sabine to invite resource agencies to participate in field monitoring activities. A written summary report and data compilation will be submitted to TPWD and this office by Sabine within 1 month of any monitoring sequence. Thresholds that will trigger mitigation activities will be developed in cooperation with TPWD. Criteria could include, for example, increases in turbidity and/or total suspended solids concentrations above upstream sample values (or normal values for the flow and season), an incremental depth of burial from sedimentation in occupied downstream habitat, or some other measurable stressor.</p>
<p>Water Resources <i>Surface Water (Cont.)</i></p>		<ul style="list-style-type: none"> • SW-4: Scheduled periodic monitoring will be conducted to evaluate potential impacts to vegetation or flow paths from restricted surface/subsurface drainage around the main haul road and dragline walkway crossing embankments. Revisions to an approved mitigation plan will be made in coordination with USACE if monitoring over time indicates impacts greater than local and minor.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
<p>Water Resources</p> <p><i>Surface Water (Cont.)</i></p>		<ul style="list-style-type: none"> • SW-5: The Spill Prevention, Control, and Countermeasures (SPCC) Plan will include a separate section for the Sabine River floodplain. The section will emphasize response protocols, training and communication; the location and availability of cleanup kits and other control equipment or materials at the north end of the haul road for spills involving haul trucks, fuel trucks, or other supply vehicles. No movable equipment will be parked or staged overnight within the floodplain boundaries; refueling within the floodplain boundary will be conducted on a limited basis; and no fuels, solvents, or other potentially hazardous materials will be stored within the floodplain boundaries during haul road and dragline walkway construction or operations. • SW-6: Storm water controls and, if needed, sediment control ponds will be installed on drainage pathways along the haul road and dragline walkway. These facilities will be designed, constructed, and monitored to control runoff and water quality to within state standards before road and embankment drainage empties into the Sabine River. • SW-7: The locations and characteristics of permanent sediment control ponds will be defined on final project plans and narratives, and incorporated into mitigation and monitoring plans for the Section 404 permit. Embankment heights, typical retention volumes, and design-event storm water retention volumes will be defined and incorporated into designs for state and federal agency review. Typical normal outlet and

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
Water Resources <i>Surface Water (Cont.)</i>		emergency spillway configurations will be defined to meet state dam safety requirements, and outlet controls to minimize downstream channel adjustments will be defined and incorporated into designs for state and federal agency review. Long-term post-reclamation ownership responsibilities will be detailed in mitigation and reclamation plans.
Soils	<ul style="list-style-type: none"> • Potential impacts to soils will be minimized by limiting the acreage of mining disturbance at any given time and prompt revegetation of disturbance areas in accordance with the proposed Reclamation Plan and proposed CMP for WOUS • Selective materials handling and testing will be implemented to ensure placement of suitable growth media in the upper 4 feet of the reclaimed spoil material. • Temporary oxidized overburden (growth media) stockpiles will be graded to 3H: 1V slopes, seeded with a temporary crop cover, and mulched to prevent erosion. • Replaced growth media will be tested to ensure no acid- or toxic-forming materials are present in the upper 4 feet of the regraded spoils. • To minimize erosion, rills and gullies deeper than 9 inches in final graded areas will be filled, graded, or otherwise stabilized as soon as field conditions allow. The area subsequently will be reseeded or replanted during the first favorable planting period. • Fertilizer and other soil amendments will be used, as needed, to ensure successful re-establishment of vegetation. 	<ul style="list-style-type: none"> • S-1: Rough and final grading only will occur when the soils are dry, below the plastic limit to reduce soil compaction during reclamation. • S-2: Compacted surface or subsurface soil will be decompacted by deep ripping or subsoiling, prior to revegetation efforts.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
Vegetation	<ul style="list-style-type: none"> • Potential impacts to vegetation will be minimized by limiting the acreage of mining disturbance at any given time and prompt revegetation of disturbance areas in accordance with the proposed Reclamation Plan and proposed CMP for WOUS • Permanent revegetation will be initiated during the first favorable planting period following placement, testing, amendment, and final regrading of suitable growth media. • In temporary disturbance areas, or during periods unfavorable for re-establishment of permanent vegetation on prepared backfill areas, a temporary crop cover will be established. • Permanent ponds will be designed with graded slopes and shallow shelves to promote propagation of aquatic and wetland vegetation. 	<ul style="list-style-type: none"> • V-1: Prior to ground-disturbing activities, surveys will be conducted by a qualified biologist for the Neches River rose-mallow and the Texas trillium in areas of potentially suitable habitat within the Rusk Permit Area. If either species is identified during the surveys, Sabine, in coordination with the USFWS and TPWD, as appropriate, will develop appropriate mitigation to minimize impacts and a management plan for monitoring and reporting.
Fish and Wildlife Resources	<ul style="list-style-type: none"> • Potential impacts to fish and wildlife species will be minimized by limiting the acreage of mining disturbance at any given time, limiting disturbance (to the extent possible) within high-value habitat, and prompt revegetation of disturbance areas in accordance with the proposed Reclamation Plan and proposed CMP for WOUS • Sabine’s proposed Fish and Wildlife Plan will be implemented to minimize impacts to fish and wildlife species and aquatic communities, including special status species. This plan includes the restoration, enhancement, and maintenance of natural riparian habitats associated with streams, lakes, and other wetland areas. 	<ul style="list-style-type: none"> • FW-1: If vegetation clearing activities should be required during the migratory bird breeding season (March through July), pre-construction breeding bird surveys will be conducted prior to these activities. A qualified biologist will survey potentially suitable habitat for nesting activity and other evidence of nesting. If active nests are located, or other evidence of nesting is observed, appropriate protection measures, including establishment of buffer areas and constraint periods, will be implemented until the young have fledged and dispersed from the nest area.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures ¹	Additional Mitigation Measures
	<ul style="list-style-type: none"> • Permanent ponds will be designed with graded slopes and shallow shelves to promote propagation of aquatic and wetland habitats. 	
Fish and Wildlife Resources (Cont.)	<ul style="list-style-type: none"> • Wildlife habitat enhancement projects, including removal of cattle from the mine area and prohibiting hunting of indigenous non-migratory species, will be implemented by Sabine. Enhancement measures related to development of aquatic and riparian habitats will be implemented in accordance with the proposed CMP for WOUS (See Table 2-10 of the DEIS for proposed mitigation ratios.) • To minimize potential power line- or transmission line-related impacts to raptor species, these facilities will be designed and constructed in accordance with guidelines presented in: Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA; and APLIC. 1994. Mitigating Bird Collisions with Power Lines: the State of the Art in 1994. Edison Electric Institute. Washington D.C. In addition, Sabine will use bird-flight diverters to mark the transmission lines in areas of potential high bird use, such as across the Sabine River and floodplain. 	<ul style="list-style-type: none"> • FW-2: TPWD-approved bird flight diverters will be installed on the proposed transmission line in areas of high bird use (e.g., across the Sabine River and its floodplain). • FW-3: Prior to construction of the proposed haul road bridge, the proposed dragline walkway crossing of the Sabine River, and subsequent dragline crossings of the Sabine River, mussel surveys will be conducted by a qualified biologist within the proposed disturbance areas and immediately downstream of the crossings. Mussels found during the survey will be relocated to appropriate habitat in coordination with TPWD. • FW-4: Prior to construction of the transportation and utility corridor, a mussel survey will be conducted by a qualified biologist in the affected reach of the perennial tributary to Hendricks Lake and Hendricks Lake. Mussels found during the survey will be relocated to appropriate habitat in coordination with TPWD.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
Fish and Wildlife Resources (Cont.)	<ul style="list-style-type: none"> • To maximize wildlife use and aesthetics and to minimize soil erosion, timber and brush clearing will be conducted at the minimum critical distance in front of mining and avoided where practical. Brush piles and/or windrows will be constructed for wildlife cover, where possible. • The proposed alignments and river crossings for the main haul road and dragline walkway were located in consultation and review with the USACE, TPWD, and RCT. • Potential impacts to breeding and nesting migratory bird species will be minimized through the avoidance of rookeries and raptor nest sites during the breeding season, to the extent possible, and by increasing the availability of water sources away from active mining areas. Also, to the extent possible, clearing operations will be conducted during non-breeding periods to avoid the peak migratory bird breeding season. • Should a Louisiana black bear be observed on site, TPWD and the RCT will be notified. If needed, Sabine in coordination with TPWD will develop a strategy for avoidance or relocation of the bear, as applicable. • Should Bachman’s sparrow nesting activity be observed on site, the area will be marked for avoidance and the young allowed to fledge before additional activity is allowed in the area. 	

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Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
Fish and Wildlife Resources (Cont.)	<ul style="list-style-type: none"> • Sabine environmental staff will monitor the mine area for the interior least tern each year from April 1 through July 31. Monitoring will be conducted in accordance with the USFWS’s published profile for the interior least tern, dated May 1989. If nesting birds are found, the USFWS will be contacted and Sabine will develop a management strategy for the species in coordination with the USFWS. Outside of nesting season, any confirmed observations will be noted. • Any bald eagle or wood stork sighting in the mine area will be reported to the RCT and TPWD, and the area avoided, if possible, or activity minimized to the extent possible. • During the spring, areas along the proposed transportation/utility corridor and near sediment control ponds will be monitored for nesting female alligator snapping turtles. If an alligator snapping turtle or its nest is observed, it will be marked for avoidance and the RCT will be notified. If the nest is located in an area where disturbance potential exists, TPWD will be contacted for assistance in relocating the nest to a protected area. During Sabine River flow bypass operations for the dragline walkway, the construction area will be surveyed and any stranded turtles will be monitored or relocated to the river bed where water flow is available. The survey and potential relocation will be performed by a biologist and/or Sabine staff permitted by TPWD to handle this species. A report will be filed with the RCT of any occurrences or relocations by the end of the calendar year when such activity occurred. 	

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Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
Fish and Wildlife Resources (Cont.)	<ul style="list-style-type: none"> • The RCT will be notified if a canebrake rattlesnake is observed on site. If observed in an area proposed for disturbance, a biologist and/or Sabine staff permitted by TPWD to handle this species will conduct surveys of the area and relocate individuals to potential habitat well away from active mine areas. • During river flow bypass operations for the dragline walkway crossing of the Sabine River, any paddlefish observed stranded in the riverbed will be relocated to the river flow above or below the bypass. This activity will be performed by a biologist and/or Sabine staff permitted by TPWD to handle this species. • Surveys of construction footprints in the river bed will be conducted prior to commencing construction, and all individuals of the targeted threatened species located and identified will be collected and moved to areas of the river bed not impacted by construction activities. Results of these relocation surveys will be reported to RCT. Observations of any other threatened or endangered species identified within the permit area will be reported to the RCT. 	
Paleontological Resources	<ul style="list-style-type: none"> • No environmental protection measures are proposed. 	<ul style="list-style-type: none"> • No monitoring or mitigation.
Cultural Resources	<ul style="list-style-type: none"> • Cultural resource surveys will be completed on any remaining areas to be disturbed by mining activities, prior to surface disturbance in the area. These surveys will be phased in coordination with Sabine’s proposed mining schedule. Field surveys, report preparation, and review of reports by regulatory agencies (including Texas Historical Commission [THC]) will be completed 5 years in advance of disturbance in each 5-year mine block, thus providing time for implementation of THC-approved mitigation or avoidance measures for any identified National Register of Historic Places (NRHP)-eligible sites prior to surface disturbance. • No cultural resource sites will be disturbed until 	<ul style="list-style-type: none"> • CR-1: To minimize the potential for indirect effects to cultural resources as a result of illegal collection or vandalism, Sabine will educate project-related personnel as to the sensitive and confidential nature of the resources and implement a strict policy against illegal collection and against revealing the location of any cultural resources located in the Rusk Permit Area.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
	<p>written authorization to proceed has been obtained from the THC, USACE, and RCT.</p> <ul style="list-style-type: none"> • In the event that previously unknown archaeological deposits are discovered during construction, all construction activities will cease within the vicinity of the discovery, and the USACE will notify the THC of the discovery. Steps will be taken to protect the site from vandalism and further damage until the THC can evaluate the nature of the discovery. Construction will not resume in the area of the discovery until the THC has issued a notice to proceed. 	
Cultural Resources (Cont.)	<ul style="list-style-type: none"> • If construction or other project personnel discover what might be human remains, construction will cease within the vicinity of the discovery, and the THC will be notified of the find. Construction will not resume in the area of the discovery until the THC has issued a notice to proceed. • Relocation of marked and unmarked interments in the Ware Cemetery may be necessary. 	
Air Quality	<ul style="list-style-type: none"> • Fugitive dust emissions from haul roads will be controlled by the application of water sprays, chemical dust suppressants, or slow-curing liquid asphalt as allowed by TCEQ. Other controls will include prompt removal of lignite, rock, or soil from roads; compaction of unpaved roads, as needed; and restriction of travel of unauthorized vehicles on other than established roads. • Fugitive dust emissions from disturbance areas will be controlled by minimizing the acreage of lignite mining disturbance at any given time, prompt revegetation of regraded lands, and restricting fugitive dust causing activities during periods of air stagnation. • Particulate emissions related to potential coal combustion will be minimized by promptly extinguishing areas of burning or smoldering coal and 	<ul style="list-style-type: none"> • No additional monitoring or mitigation.

Table 1 Sabine’s Environmental Protection and Mitigation Measures

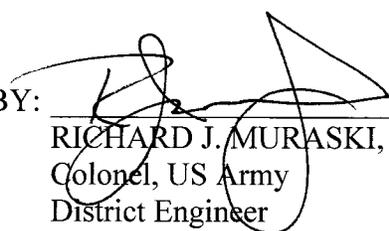
Environmental Resource	Sabine’s Committed Environmental Protection Measures¹	Additional Mitigation Measures
	conducting periodic inspections for burning areas whenever the potential for spontaneous combustion is high.	
Land Use and Recreation	<ul style="list-style-type: none"> • Sabine will continue to provide access to undisturbed cemeteries during operations. 	<ul style="list-style-type: none"> • No additional monitoring or mitigation.
Social and Economic Values	<ul style="list-style-type: none"> • No environmental protection measures are identified. 	<ul style="list-style-type: none"> • No monitoring or mitigation.
Transportation	<ul style="list-style-type: none"> • Sabine will provide alternate public and landowner access prior to closure of a road. 	<ul style="list-style-type: none"> • No additional monitoring or mitigation.
Noise and Visual Resources <i>Noise</i>	<ul style="list-style-type: none"> • No environmental protection measures are identified. 	<ul style="list-style-type: none"> • N-1: Noise Mitigation. Noise effects at sensitive receptors will be reduced somewhat by minimizing the simultaneous operation of major noise sources in proximity to each other when operating near occupied residences. Care should be taken to ensure that all motorized equipment is operating in good condition with effective mufflers intact. • N-2: Noise Barriers. To the degree possible, mine planning shall use temporary spoil piles and topsoil stockpiles as berm-type noise barriers between mine activities and nearby residences. This will be particularly effective when equipment is operating at or near the surface rather than deeper in pits, and whenever mining activity will be occurring near residential areas identified as being subject to project-related noise in excess of the applied criteria.
Noise and Visual Resources <i>Visual Resources</i>	<ul style="list-style-type: none"> • No environmental protection measures are identified. 	<ul style="list-style-type: none"> • VR-1: Visual Screening. In addition to the proposed reclamation procedures included in plans for the proposed project, visual screening shall be employed where the edges of active mining will be near the permit boundary and there are potentially sensitive public viewpoints nearby. In particular, existing vegetation shall be preserved and augmented, as necessary, to maximize visual screening near Tatum and Easton and along SH 149. Planting shall mimic natural vegetative patterns and

Table 1 Sabine’s Environmental Protection and Mitigation Measures

Environmental Resource	Sabine’s Committed Environmental Protection Measures ¹	Additional Mitigation Measures
		plant materials to the degree possible to provide the most natural appearing screening effects. Existing groves of trees shall be retained where possible to provide visual buffers.
Hazardous Materials	<ul style="list-style-type: none"> • In accordance with TCEQ regulations, fuel storage tanks will be installed within a concrete containment structure to provide for secondary containment of accidental spills. 	<ul style="list-style-type: none"> • HM-1: To minimize the potential for worker exposure or environmental impacts in the event of an unanticipated discovery of a contaminated site during project construction or operation, Sabine will develop a protocol for the handling of contaminated sites to ensure protection of workers and to minimize potential environmental impacts.
Public Health	<ul style="list-style-type: none"> • See environmental protection measures for air quality and hazardous materials. 	<ul style="list-style-type: none"> • No additional monitoring or mitigation.
Environmental Justice	<ul style="list-style-type: none"> • No environmental protection measures are identified. 	<ul style="list-style-type: none"> • No monitoring or mitigation.

¹ Includes BMPs that will be implemented in compliance with regulations and permit requirements to minimize environmental impacts, as well as additional measures identified by Sabine that will be implemented as standard procedures during the life of the mine to further minimize environmental impacts.

APPROVED BY:



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6 Sept 2011

DATE