39182 SERVICE DATE – DECEMBER 18, 2008
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SURFACE TRANSPORTATION BOARD

DECISION

STB Finance Docket No. 34284

SOUTHWEST GULF RAILROAD COMPANY—CONSTRUCTION AND OPERATION EXEMPTION—MEDINA COUNTY, TX

Decided: December 17, 2008

We are granting final approval for an exemption sought by Southwest Gulf Railroad Company (SGR) to construct and operate a rail line in Medina County, TX, subject to certain environmental mitigation conditions. In doing so, we identify three environmentally acceptable routing alternatives.

BACKGROUND

By decision served and published in the Federal Register (68 FR 27141) on May 19, 2003 (May 2003 decision), the Board tentatively found, subject to later consideration of the environmental impacts, that SGR, a new company that does not own or operate any rail lines, met the standards of 49 U.S.C. 10502 for exemption from the prior approval requirements of 49 U.S.C. 10901 for the construction and operation of an approximately 7-mile line of railroad in the north central part of Medina County.

In the May 2003 decision, the Board explained that SGR intends to provide rail service primarily to a limestone quarry site that Vulcan Materials Company (Vulcan Materials) and Vulcan Construction Materials, LP (Vulcan Construction) (collectively, Vulcan) intend to develop.[1] SGR further intends to hold itself out as a common carrier and to provide service to other industries that might locate along the rail line in the future. The Board concluded that the requested exemption would promote the rail transportation policy (RTP) of 49 U.S.C. 10101, ensuring the development of a sound rail transportation system with effective competition among rail carriers and other modes (49 U.S.C. 10101(4)); fostering sound economic conditions in transportation (49 U.S.C. 10101(5)); and reducing regulatory barriers to entry (49 U.S.C. 10101(7)). May 2003 decision, slip op. at 2.

The May 2003 decision was a preliminary decision addressing only the transportation-related issues; it encouraged SGR to move forward with various engineering and other plans

[1] Vulcan Construction is a subsidiary of Vulcan Materials, which is affiliated through common ownership with SGR. Vulcan Materials is a producer of aggregate, composed primarily of crushed stone, sand and gravel.

relating to the proposed rail line, but did not authorize SGR to begin construction of the line. It explained that, upon completion of the environmental review process required by the National Environmental Policy Act, 42 U.S.C. 4321-43 (NEPA), the Board would issue a final decision addressing the potentially significant environmental impacts and, if the Board continued to find approval of the proposed line to be appropriate, make the exemption effective at that time.[2] In a decision served on August 21, 2003 (August 2003 decision), the Board denied a petition to revoke the conditional exemption filed by Medina County Environmental Action Association, Inc. (MCEAA).

Nature of the Proposal. As explained in the May 2003 decision and in the Board's Environmental Impact Statement (EIS) in this case, the proposed line will extend from Vulcan Construction's planned quarry in the north central part of the county to a connection with the Del Rio Subdivision of Union Pacific Railroad Company (UP) at approximately milepost 250 near Dunlay, TX. The planned quarry site is in excess of 1,700 acres. SGR maintains that, although there is a local market in the San Antonio area for some of the aggregate that the planned quarry would produce, the primary market would be the eastern part of Texas, including the Houston area. To get the aggregate to market efficiently, a loading loop track would be built at the quarry site to handle and load materials into rail cars. SGR also intends to construct a rail interchange area, close to the connection with the UP line, consisting of a single main track with a possible side track approximately one mile long, which could be used to temporarily store a loaded or unloaded train. See Final Environmental Impact Statement (FEIS) at ES-2.

Based on estimated rail shipments totaling 5 million tons per year, SGR expects to operate approximately four trains per day (two empty inbound trains and two loaded outbound trains), upon full operation of the proposed quarry for the reasonably foreseeable future.[3] Each train would consist of 100 railcars; each railcar would have a capacity to carry 100 to 120 tons of aggregate. See FEIS at ES-2.

SGR states that, if the proposed rail line were not built, Vulcan would use trucks to transport limestone from the quarry to the UP rail line. This "No Action Alternative" would require SGR to construct a remote truck-to-rail loading facility near the UP rail line, and to

[2] We note that, subsequent to the May 2003 decision, the Board changed its policy so that, absent unique or compelling circumstances, it will no longer address the transportation merits in construction proposals, until the entire record, including the environmental record, is completed. See Alaska Railroad Corporation–Construction and Operation Exemption–Rail Line Between Eielson Air Force Base (North Pole) and Fort Greely (Delta Junction), AK, STB Finance Docket No. 34658 (STB served Oct. 4, 2007). As we explained in that decision, the benefits to a construction applicant of conditional exemption authority are subject to question, given that the Board must decide environmental effects of the construction proposal before any final approval can be given and construction may begin, and one possible outcome of the environmental review is the denial of the construction proposal notwithstanding the prior conditional grant. Id., slip op. at 2.

[3] Vulcan states that it may at some point enter into an agreement to allow another, existing rail carrier to operate the line.

operate approximately 1,700 trucks per day (850 loaded and 850 unloaded). See FEIS at ES-2. When this proceeding began approximately 5 years ago, Vulcan had acquired much of the land for the quarry and had begun consultations concerning permits for the quarry. The quarry has since been fully licensed and could begin operations as soon as the rail line is built. See FEIS at Appendix D.

DISCUSSION AND CONCLUSIONS

As discussed above, in the May 2003 decision, the Board tentatively found, subject to completion of the environmental review process, that SGR has met the standards of 49 U.S.C. 10502. In the August 2003 decision, the Board denied a petition to revoke. No party has since challenged the findings on the transportation-related aspects of this case.

With the assistance of our Section of Environmental Analysis (SEA), the Board has now analyzed the environmental impacts associated with SGR's construction proposal and reasonably foreseeable rail operations by issuing for public review and comment a Draft Environmental Impact Statement (DEIS), Supplemental Draft Environmental Impact Statement (SDEIS), and an FEIS responding to the comments on the DEIS and SDEIS and containing additional analysis. After carefully considering the entire environmental record, we adopt all of SEA's analysis and conclusions, including those not specifically discussed below. We are satisfied that the DEIS, SDEIS, and FEIS together have taken the requisite "hard look" at the potential environmental impacts associated with this construction proposal. As discussed below, we agree with SEA's analysis of alternatives and find that SEA's final recommended environmental mitigation, all of which we are imposing, is adequate to address the potential environmental effects identified in the course of the environmental review. Accordingly, we reaffirm here the conclusion reached in the May 2003 decision addressing the transportation merits that, subject to environmental conditions, approval of this proposal is in the public interest.

The Requirements of NEPA.

NEPA requires federal agencies to examine the environmental effects of proposed federal actions and to inform the public concerning those effects. Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, 462 U.S. 87, 97 (1983). Under NEPA and related environmental laws, we must consider significant potentially beneficial and adverse environmental impacts in deciding whether to authorize a railroad construction as proposed, to deny the proposal, or to grant it with conditions (including environmental mitigation conditions). The purpose of NEPA is to focus the attention of the government and the public on the likely environmental consequences of a proposed action before it is implemented, and to minimize or avoid potential adverse environmental impacts. Marsh v. Oregon Natural Res. Council, 490 U.S. 360, 371 (1989). While NEPA prescribes the process that must be followed, it does not mandate a particular result. Gulf Restoration Network v. DOT, 452 F.3d 362, 367 (5th Cir. 2006). Thus, once the adverse environmental effects have been adequately identified and evaluated, we may conclude that other values outweigh the environmental costs. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350-51 (1989).

The EIS Process in this Case.

SEA conducted a detailed analysis of all of the potential environmental impacts associated with the construction and operation of the proposed new rail line. That analysis involved the development of a comprehensive environmental record to consider and study the proposed route and several alternatives.

The Draft EIS. On November 5, 2004, SEA issued for public review and comment a detailed DEIS addressing a broad range of environmental issues and alternatives.[4] The alternatives that were studied in depth were four potential rail alignments (the Proposed Route, Alternative 1, Alternative 2, Alternative 3) and the No-Action Alternative (use of trucks).[5] All four "build" alternatives would traverse the historically sensitive Quihi Rural Historic District (Quihi) area, and SEA identified other potential environmental concerns as well. SEA recommended 52 mitigation measures to minimize or eliminate potential environmental impacts, five of which were voluntary mitigation measures offered by SGR.

In response to the DEIS, SEA received approximately 120 written comment letters, as well as 75 oral comments submitted at two public meetings held in Hondo, TX, on December 2, 2004. Some commenters supported SGR's proposed project; others requested modifications to particular recommended mitigation conditions or additional mitigation measures. In particular, the Texas Historical Commission (THC) and the Advisory Council on Historic Preservation (ACHP) suggested the need to look at additional rail alternatives that could potentially avoid historic properties in the Quihi area.

Supplemental Draft EIS. Based on the concerns that had been raised in response to the DEIS, SEA conducted an additional study of the rural historic landscape, after requesting additional information from SGR about potential routes to the east and west of those studied in the DEIS that might minimize or avoid potential impacts to the Quihi area. SEA issued the SDEIS containing its additional analysis on December 8, 2006. The SDEIS focused on three specific matters: (1) evaluation of three alternative rail routes that were not studied in detail in the DEIS (the Eastern Bypass Route; the MCEAA Medina Dam Alternative; and SGR's Modified Medina Dam Route (collectively, the Eastern Alternatives)) and comparison of these alternative routes to the four rail routes previously studied in the DEIS;[6] (2) a discussion of the progress of additional historic property identification efforts following issuance of the DEIS; and

[4] The issues analyzed included the impacts of SGR's proposal on transportation and traffic safety, public health and worker health and safety, water resources, biological resources, air quality, geology and soils, land use, environmental justice, noise, vibration, recreation and visual resources, cultural resources, and socioeconomics.

[5] See Chapter 2 of the FEIS for a detailed description of the Modified Eastern Bypass Route and a comparison of all of the studied alternatives. See also Figure ES-1 (FEIS at ES-4) showing a map of all studied routes.

[6] SEA used the same scope of analysis in the SDEIS to study the Eastern Alternatives that it had applied to the alternatives evaluated in the DEIS.

(3) additional noise analysis, based on updated operational data provided by SGR indicating that trains may operate at night. The SDEIS also contained a number of new and modified environmental mitigation measures based on SEA's additional analysis.

Based on its analysis, SEA concluded that the Eastern Bypass Route and the MCEAA Medina Dam Alternative would be the environmentally preferred routes and that the distinctions between them would not be significant.[7] SEA did not recommend SGR's Modified Medina Dam Route because it would have more impacts on transportation and traffic safety than the other routes, would require more higher order stream crossings, and would be the longest of the alternatives presented in the SDEIS. SEA received 237 written comments to the SDEIS.

Following issuance of the SDEIS, SGR informed the Board that it no longer supported its original Proposed Route and that it supported the Eastern Bypass Route. Subsequently, SGR suggested that the Board authorize all of the Eastern Alternatives.

Final EIS. On May 30, 2008, SEA served the FEIS. The FEIS responded to the public comments on the DEIS and the SDEIS. It also contained additional analysis of the SEA-developed Modified Eastern Bypass Route, which would make minor changes to the Eastern Bypass Route to address concerns raised in comments.[8] The Final EIS discussed SEA's conclusions about the environmental analysis and alternatives and included SEA's final environmental mitigation recommendations (including SGR's 10 voluntary mitigation measures and a number of mitigation measures that are either new mitigation measures based on SEA's additional analysis or modifications to mitigation measures previously proposed).

These mitigation measures included the implementation of a Programmatic Agreement (PA) developed by SEA in consultation with THC and the ACHP and signed by all necessary parties.[9] The executed PA detailed a process for the identification and treatment of cultural resources, if construction and operation of the Eastern Bypass Route (including the Modified Eastern Bypass Route) or the MCEAA Medina Dam Alternative is authorized. SEA's final recommended mitigation also addressed potential environmental concerns related to such issues

[7] As explained in the SDEIS, the Eastern Bypass Route would have fewer floodplain crossing points, would cross fewer aquatic features, have fewer total stream crossings, and would be slightly shorter in length. The MCEAA Medina Dam Alternative would have slightly fewer impacts to transportation and traffic safety, would cross a smaller amount of floodplain, would impact prime farmland soils to a lesser degree, would be less likely to be affected by the development of karst features, would have less overall impacts to existing land uses, and would have slightly fewer impacts on cultural resources.

[8] This route was developed to avoid disruption to the irrigation systems and irrigated farmland operation of the Weiblen Farm and to bypass a newly developed housing subdivision called Castroville West. See Chapter 2.5 of the FEIS.

[9] The PA was circulated to all of the necessary parties under section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. 470, and was published in the Federal Register on October 18, 2007.

as transportation and traffic safety, groundwater, surface water, wetlands, biological resources, land use, and noise.

The FEIS reaffirmed the conclusion reached in the SDEIS that both the Eastern Bypass Route and the MCEAA Medina Dam Alternative would be environmentally acceptable routes and added the Modified Eastern Bypass Route as an additional environmentally acceptable route. SEA determined that the No-Action Alternative of transporting the quarry materials by trucks would have a greater adverse environmental impact than any of the rail alternatives. Finally, the FEIS evaluated the quarry as a cumulative impact, see 40 CFR 1508.25(a)(2), but not as part of the rail line construction proposal, because the Board has no jurisdiction over Vulcan's development of the quarry, which could be built regardless of the Board's decision on the proposed rail line.

Subsequent Environmental Concerns.

Consultation under the Endangered Species Act. Following issuance of the Final EIS, the U.S. Fish and Wildlife Service (USFWS) submitted a letter dated July 15, 2008, requesting additional information and consultation in connection with the golden-cheeked warbler, a Federally listed endangered species under the Endangered Species Act (ESA). USFWS stated that it was not aware that any survey work had previously been done in the project area to document the golden-cheeked warbler, and that, following a site visit by a USFWS biologist, USFWS was concerned that the planned quarry and proposed rail loading loop might fall within a relatively large swath of oak-juniper woodland that may support breeding pairs of golden-cheeked warblers. USFWS recommended that the Board consider any direct or indirect impacts that the project area would have on the golden-cheeked warbler in accordance with section 7 of the ESA. USFWS also requested that SGR consider impacts to the quarry under section 10 of the ESA.

In follow-up conversations between USFWS and SEA, however, it became clear that the relevant area of concern is not within the area of the proposed rail line, the rail loading loop track, or phase 1 of the planned quarry, but is located to the north of the final phase (phase 5) of the planned quarry.[10] Thus, as explained in an SEA memorandum dated September 9, 2008, and a USFWS letter dated September 11, 2008, no further consultation is required under the ESA for the construction of the proposed rail line and the rail loading loop track (although Vulcan will be required to undertake additional surveys before later phases of the quarry can be developed). Although MCEAA takes issue with SEA's views,[11] we agree that USFWS has offered its official concurrence under section 7 of the ESA in the construction and operation of the proposed rail line and loading loop, as well as phase 1 of the quarry, and that it is appropriate for us to now issue this final decision.

[10] The proposed quarry has 5 phases, beginning with phase 1 at the southern end and ending with phase 5 along the northern end. Phase 1 contains the rail loading loop track and will be the first phase to be developed. According to SGR, Vulcan will not develop phase 5 for at least 20 years.

[11] See MCEAA's letter dated November 10, 2008.

SGR's proposed modifications of certain mitigation conditions. In a pleading filed on July 7, 2008, SGR requested that the Board modify four of the environmental conditions recommended in the FEIS. On July 9, 2008, MCEAA filed a response opposing certain of those modifications.

The first relates to recommended condition F-28, which as set forth in the FEIS reads: "SGR shall ensure that all wells within the rail line right-of-way are properly abandoned prior to beginning rail construction activities." SGR agrees that impacted wells should be abandoned, but it notes that some wells within the right-of-way may not be impacted by construction or operation of the line and therefore would not need to be abandoned. SGR therefore suggests modifying the recommended condition to read: "SGR shall conduct a survey prior to construction to locate all wells within the rail line right-of-way. SGR shall ensure that all functioning wells within the right-of-way are protected from damage and contamination to the extent reasonably possible during construction. Where damage or contamination to a functioning well is unavoidable, SGR shall ensure that the well is properly abandoned prior to beginning rail construction activities." MCEAA did not oppose this modification request and SEA recommends its adoption as reasonable in its September 9 memorandum because the modified condition will ensure that viable wells located within the right-of-way, but outside the area of impact, would remain in service. We agree.

SGR's second request is to modify recommended condition F-31, which as set forth in the FEIS reads: "SGR shall select and monitor appropriate points along Quihi Creek and/or along Cherry Creek that would capture any pollution that may flow downstream from the Quihi, Polecat, Elm Creek, and Cherry Creek watersheds as a result of this project. The monitoring shall include, at a minimum, analyses for oil and grease, total petroleum hydrocarbons, and total suspended solids." SGR notes that this measure was originally drafted to address concerns with runoff from the fueling and maintenance facility when the location of the rail loading loop was proposed to lie within or adjacent to the Elm Creek floodplain, and SGR asserts that it is no longer necessary now that the proposed loading loop has been re-sited. SGR also explains that it would be required to comply with the state-imposed National Pollutant Discharge Elimination System (NPDES) storm water permit. Therefore, SGR suggests modifying condition F-31 to read: "SGR shall ensure compliance with its NPDES storm water permit during construction, including any sampling requirements imposed under the permit."

MCEAA asserts that condition F-31 should be retained as proposed by SEA despite the relocation of the rail loading loop. MCEAA contends that construction and operation of the rail loading loop in its new location would cause an increase in pollutant loads to the surrounding creeks. SEA, however, advises in its September 9 memorandum that we adopt SGR's modification because SGR's compliance with the NPDES permit and with a state-required Spill Prevention, Control and Countermeasure Plan should be sufficient mitigation, in view of the 25 other mitigation measures recommended in the FEIS related to water quality and potential impacts due to storm water and spills. We agree and use the modified language in condition F-31.

SGR's third request is to modify recommended condition F-32, which as set forth in the FEIS states that SGR should use "CONVAULT-type Above Ground Storage Tanks (ASTs) at its fueling and maintenance facility. These ASTs are above-ground, concrete, full-storage tanks that have dual wall construction to provide maximum protection in the event of a leak." SGR explains that it prefers to use steel tanks, which are standard in the industry and meet the same fire, safety, and environmental specifications as CONVAULT-type concrete tanks. Therefore, SGR suggests removing the words "CONVAULT-type" and "concrete" from the condition. MCEAA does not oppose this modification, and SEA advises in its September 9 memorandum that the Board adopt this modification, as the overall integrity of the tank would be the same. We agree.

Finally, SGR proposes to modify recommended condition F-61, which as set forth in the FEIS reads: "SGR shall check the moisture content of the rail car loads of limestone prior to transportation and shall wet the surface of the rail car loads that appear to be dry prior to transporting them." SGR maintains that this measure is unnecessary. It explains that limestone generally has a natural moisture content that would prevent dust dispersion at the slow speeds that would be used during rail transportation on the line and that the limestone would be moistened during processing at the quarry. SGR also is concerned that wetting the limestone after it has been loaded onto railcars could cause deterioration of the cars and track. Therefore, SGR proposes to modify condition F-61 to read: "As agreed to by SGR, SGR shall conduct appropriate visual monitoring of the moisture content of the limestone prior to or during loading of the railcars. If necessary to prevent the dispersion of limestone dust during rail transportation, SGR shall wet the surface of the limestone prior to transportation." Although MCEAA raises concerns about the possible dispersion of limestone dust during transport, we agree with SEA's response in its September 9 memorandum that the modified condition should be sufficient to prevent dust dispersion. SGR's modified condition will be used.

Status of Memorandum of Understanding Between the Parties. In its July 9, 2008 letter, MCEAA asks us to delay issuing this final decision until resolution of negotiations between SGR, Vulcan and Medina County intended to result in a Memorandum of Understanding (MOU) that would specify the county's own mitigation requirements regarding roadway crossings, maintenance of warning devices, and road upgrades. MCEAA further asks us to incorporate the final MOU into our decision.[12]

The Board is not a party to the MOU currently being negotiated and has no control over the timing of when the parties may come to terms. Although the parties have been in discussions for many months now over a number of issues, apparently no resolution has yet been reached. In its September 9 memorandum, SEA advises, and we agree, that mitigation measures F-4, F-5, and F-8 should be sufficient to address the environmental concerns covered in the MOU. We agree that these mitigation measures should be imposed and that we need not delay issuance of our final decision in this proceeding, or the date that construction may begin, until after an MOU has been finalized.

[12] MCEAA filed additional letters in support of its position on July 17th and 28th, and SGR filed an additional letter on July 16, 2008.

The Board's Analysis of the Environmental Issues.

Environmentally Preferable Alternatives and Mitigation. As previously stated, SGR has informed the Board that it no longer favors its originally proposed route and would support any of the environmentally preferable Eastern Alternative routes that SEA recommends. The FEIS recommended that the Eastern Bypass Route, the Modified Eastern Bypass Route, and the MCEAA Medina Dam Alternative should each be designated environmentally preferable routes. We find, based on the comprehensive environmental analysis in this proceeding, that construction and operation of the proposed rail line along any of these three routes would cause minimal harm to the environment. Further, we are satisfied that SGR's voluntary mitigation and SEA's extensive recommended conditions, including the post-FEIS modifications discussed above, all of which will be imposed, would adequately address any potential harm that the construction and operation of the rail line might cause.

Of particular note, throughout the EIS process, commenters raised concerns that construction and operation of the proposed rail line would have impacts on water resources, arguing, for instance, that the proposed rail line would alter the hydrology and water quality of neighboring streams and increase the flood risk to surrounding communities. In the DEIS, SDEIS, and FEIS, SEA provided a comparison of all of the studied route alternatives in terms of the number and type of floodplain crossings for each alternative, the length to which each route would intercept the floodplain, and conclusions as to which route(s) would be easier to engineer in a manner that would mitigate potential impacts to the floodplain. The EIS determined that, with implementation of SEA's final recommended mitigation conditions, impacts to existing flood conditions under any of the studied routes would not be significant, and that the Eastern Alternatives would cross fewer floodplains than the four alternatives studied in the DEIS. See Table 2-11, FEIS at 2-42.

The relevant mitigation conditions that we impose include Voluntary Mitigation Measure #2, in which SGR has committed to design stream crossings in a manner that would not exacerbate pre-existing flooding risks, and to conduct appropriate pre-construction hydrological modeling that it would incorporate into the design of the selected route to avoid or minimize adverse impacts to existing floodplain conditions. The final mitigation also includes Mitigation Measure #38, which requires SGR to conduct a floodplain study, in consultation with the Medina County Floodplain Administration pursuant to the regulations of the Federal Emergency Management Agency at 44 CFR 60.3. Together, these measures ensure that: SGR will coordinate with the Medina County Floodplain Administrator and the U.S. Army Corps of Engineers; SGR will develop a Storm Water Pollution Prevention Plan for water quality during and after construction of the rail line; and that the rail line construction will not cause more than a 12-inch rise in the current 100-year floodplain elevation, consistent with Medina County floodplain permitting standards.[13]

[13] Some commenters have expressed concern that locating the proposed rail loading loop and fueling and maintenance facility at the southern end of the quarry and initially in the floodplain would exacerbate flooding in Elm and Polecat Creeks and contaminate the Edwards

(continued . . .)

Consideration of the Quarry. Finally, we note that, throughout the EIS process, various commenters have suggested that SGR's rail line construction project and Vulcan's quarry project are interconnected, and that, therefore, the DEIS and SDEIS should have evaluated the two projects together. We adopt the analysis in the EIS concluding that the quarry should not have been assessed as a connected action, i.e., the planned quarry and the rail line proposal are not two interdependent parts of a single project within the meaning of the rules of the Council on Environmental Quality, 40 CFR 1508.25(a)(1). As the EIS explains, the Board's jurisdiction is limited to rail transportation by rail carriers. 49 U.S.C. 10501. Accordingly, SGR properly petitioned the Board, under 49 U.S.C. 10502, for authority to construct and operate a rail line that will service the quarry. The Board has no authority over Vulcan's development and operation of the quarry, and Vulcan can develop the quarry regardless of the Board's decision on the proposed rail line. Indeed, SGR has stated that, if the rail line is not built, Vulcan would still develop the quarry and would transport limestone from the quarry to the UP line entirely by trucks. Further, the Board has no authority to consider alternatives to the quarry itself or to mitigate directly any potential harms resulting from the development and operation of the quarry.

The EIS, however, does examine the potential cumulative impacts of the quarry because, under 40 CFR 1508.7 and 1508.25(a)(2), the quarry is a reasonably foreseeable related action to the proposed rail line. We are satisfied that the EIS took an appropriate look at the combined environmental impacts of the quarry and the rail line. See Chapter 3 of the FEIS. Based on the cumulative impact analysis, we find that the construction and operation of the quarry (as mitigated by the permit requirements of the State) would not contribute additional significant impacts on the environment beyond those that would result from the construction and operation of the rail line under any of the environmentally preferable routes (as mitigated by the Board).

(. . . continued)
Aquifer with diesel fuel and other contaminants. Subsequently, on October 30, 2007, the Medina County Floodplain Administrator indicated to SEA that the quarry was designed to meet applicable floodplain regulations. In addition, SGR agreed to relocate the rail loading loop and fueling and maintenance facility to higher ground, outside the floodplain limits. SGR also agreed to relocate all the tanks within the fuel storage areas off the Edwards Aquifer Recharge Zone (EARZ) to areas where fuels from an unlikely catastrophic release would flow away from the EARZ, and to place above-ground fuel and oil storage tanks in a specialized containment system designed to prevent ground leakage, should the integrity of the tanks be breached. Further, Vulcan received approval for a Water Pollution Abatement Plan (WPAP) from the Texas Commission on Environmental Quality (TCEQ) which requires, among other things, the implementation of best management practices for water quantity and quality control and the preparation of a Spill Prevention and Countermeasure Control Plan (SPCC) in accordance with EPA regulations at 40 CFR Part 112. Thus, the concerns raised by the commenters have been addressed.

CONCLUSION

For the reasons discussed above, we adopt SEA's analysis and conclusions as set forth in the DEIS, SDEIS, and FEIS, with respect to potential environmental impacts associated with this project. We agree with SEA's recommendations regarding the environmentally preferable alternatives, and we are giving our final approval to the Eastern Bypass Route, the Modified Eastern Bypass Route, and the MCEAA Medina Dam Alternative as the environmentally preferred routes. SGR is authorized to build any one of these routes, subject to compliance with the environmental mitigation measures that condition our approval. We therefore impose both SGR's voluntary mitigation and SEA's final recommended conditions, with the modifications proposed by SGR, which together are fully adequate to address the environmental effects associated with this construction proposal. A list of all of the conditions is attached in the Appendix to this decision.

As conditioned, this action will not significantly affect either the quality of the human environment or the conservation of energy resources.

It is ordered:

1. We adopt the environmental mitigation measures set forth in the Appendix to this decision.

2. The exemption conditionally approved in our decision served on May 19, 2003, and given final approval in this decision, will be effective January 17, 2009, subject to the condition that petitioners comply with the mitigation measures adopted in the Appendix to this decision.

3. The due date for filing any administrative appeals in this case will be January 7, 2009.

By the Board, Chairman Nottingham, Vice Chairman Mulvey, and Commissioner Buttrey.

Anne K. Quinlan
Acting Secretary

APPENDIX

ENVIRONMENTAL MITIGATION MEASURES

Voluntary Mitigation Measures

1. As agreed to by SGR, SGR shall conduct all maintenance and fueling activities at a designated area off the Edwards Aquifer Recharge Zone (EARZ) and SGR shall ensure that the fueling and maintenance activities occur at a facility with secondary containment to meet the requirements of an approved Texas Commission on Environmental Quality (TCEQ) Water Pollution Abatement Plan (WPAP) and a Spill Prevention, Containment, and Countermeasures Plan (SPCC).

2. As agreed to by SGR, SGR shall conduct appropriate hydrological modeling prior to beginning construction and shall incorporate the resulting design criteria into the design of the rail line to avoid or minimize adverse impacts to existing floodplain conditions. As part of this modeling, SGR shall:

   (a) Compile information regarding existing land use, topography, drainage features, impervious surfaces, and other information needed for the modeling effort.
   (b) Conduct additional surveying, as required, to obtain data related to existing channel geometry.
   (c) Coordinate with the Medina County Floodplain Administrator and the U.S. Army Corps of Engineers (Corps) to discuss the project and address reasonable mitigation requirements.
   (d) Delineate the overall watershed and sub-watersheds, and related drainage patterns corresponding to relevant points of interest.
   (e) Compile an existing-conditions hydrologic model, based on existing watershed characteristics and regional design storm information to determine the 2, 5, 10, 25, 50, 100, and 500-year design storm intensities and related stream or flood-flow rates for these recurrence intervals.
   (f) Develop existing-conditions hydraulic models of appropriate points of interest, such as stream crossings, so that the existing conditions-hydraulic model can be compared to the existing floodplain data.
   (g) Analyze the proposed bridges and other proposed structures on the rail line that may impact the floodplain and the watershed, producing a technical report addressing the estimated extent of the existing floodplains in the project vicinity and providing appropriate design criteria for minimum bridge openings, culvert locations and sizes, bridge lengths and low chord heights, bank stabilization, scour protection, and erosion control measures.
   (h) Design a WPAP and a Stormwater Pollution Prevention Plan (STPPP), and provide a narrative description of plans to mitigate water quality impacts during and after construction of the rail line.

3. As agreed to by SGR, SGR shall use continuously welded rail for construction of the rail line other than the loading area.

4. As agreed to by SGR, SGR shall maintain native grass and shrubs inside the rail line right-of-way to allow the rail line to blend with the natural surroundings.

5. As agreed to by SGR, SGR shall control weeds and vegetation along its right-of-way, consistent with rail industry standards and the need to minimize fire hazards.

6. As agreed to by SGR, SGR shall maintain the right-of-way consistent with the Manual for Railway Engineering issued by the American Railway Engineering and Maintenance of Way Association (AREMA).

7. As agreed to by SGR, SGR shall work with local utilities, and review crossing protocols that may already be in place for each such utility to ensure that its rail line does not interfere with the operation of any utility line that might be crossed.

8. As agreed to by SGR, SGR shall develop emergency evacuation plans following the completion of final engineering prior to beginning construction. SGR's operational plans shall require the routine monitoring of weather reports and conditions, and SGR shall temporarily cease operations along the line when warranted by weather conditions, including flooding. Rail operations shall not resume until any flooding has ceased and an inspection is made of the rail line to ensure that it is safe to resume operations. SGR shall not park trains along the rail line in areas that would block emergency evacuation routes.

9. As agreed to by SGR, SGR shall prepare and implement a SPCC in compliance with the EPA regulations at 40 CFR Part 112, and provide the map requested by EPA in its comments to the DEIS. SGR's operational plans shall incorporate appropriate measures to protect groundwater from contamination.

10. As agreed to by SGR, SGR shall utilize above-ground fuel and oil storage tanks, and locate them in concrete containments of adequate height, volume, and thickness to prevent leakage into the ground should the integrity of the tanks be breached. SGR's SPCC shall include fencing and/or other security measures for the containment area, and require tanks to have fill gauges to prevent overfilling. SGR shall also adopt procedures to clean up incidental spills.

Mitigation Measures Developed by the Section of Environmental Analysis

Transportation and Traffic Safety

1. SGR shall conduct track safety inspections and maintenance in accordance with the Federal Railroad Administration (FRA) standards set forth at 49 CFR Part 213 to detect potential problems and minimize derailment potential.

2. SGR shall consult with the owner of the pipeline that would be crossed prior to beginning rail line construction and shall make appropriate modifications to the design of the rail line necessary to ensure that the rail line will not affect the integrity of the pipeline.

3. SGR shall consult with the Texas Department of Transportation (TxDOT) prior to beginning rail line construction regarding the rail line crossing of Farm-to-Market Road (FM) 2676 and shall adhere to TxDOT's reasonable recommendations regarding the design of this crossing.

4. SGR shall consult with Medina County prior to beginning rail line construction regarding the rail line crossing of county roads and shall adhere to Medina County's reasonable recommendations regarding the design of these crossings.

5. Prior to beginning rail construction activities, SGR shall consult with the TxDOT and Medina County regarding how to minimize vehicular traffic delay during rail line construction across roadways, and shall adhere to their reasonable requirements.

6. SGR shall develop internal emergency response plans for use during rail line construction and operation to ensure that appropriate agencies and individuals are notified in case of an emergency. SGR shall provide the emergency response plan to appropriate state and local entities prior to any rail construction activities.

7. SGR shall consult with local fire, police, and Emergency Medical Services (EMS) officials prior to beginning construction activities in order to develop a plan to minimize impacts to area emergency response capabilities during construction and operation of the rail line.

8. Prior to beginning construction activities, SGR shall consult with TxDOT and Medina County to develop a plan that specifies the responsibility of each party concerning the maintenance and repair of grade-crossing warning devices and the grade crossings along the new rail line, consistent with recognized highway safety standards, taking into account the level of highway traffic at the crossing.

9. SGR shall take into account maintenance of emergency response capabilities and school bus schedules in planning and executing the necessary roadwork for construction and maintenance activities on the rail line. SGR shall station equipment so as to minimize the need for any total road closures and to allow the disturbed areas to be quickly restored for passage by emergency vehicles.

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10. SGR shall consult with local school officials in Medina County prior to construction, to take school bus schedules into consideration in its plans and to minimize rail operations when school buses are on area roadways.

11. SGR shall be responsible for the cost of all permits, detours, coordination with local officials and agencies, and public notifications related to temporary lane restrictions or road closures necessitated by rail construction activities.

12. SGR shall maintain the vegetation along and within the railroad right-of-way to provide a clear line of sight for train operators and vehicle drivers at all at-grade crossings (including public roadways, private roadways, and driveways).

13. Prior to beginning any rail construction activities, SGR shall perform an engineering evaluation at each private roadway and driveway crossing, and shall consult and negotiate with the respective landowners to implement appropriate changes to roadway geometry and to install and maintain appropriate warning signs and/or signals.

14. Prior to beginning rail construction activities, SGR shall consult with UP to ensure that the design of the connection and rail interchange area with the UP line is safe. During construction, maintenance, and rail operations, SGR shall coordinate with UP regarding all activities in the vicinity of the UP line and shall comply with all applicable safety laws.

15. SGR shall notify local authorities immediately in the event that a train malfunction causes a roadway to become blocked; shall clear the blocked roadway crossing as soon as possible; and shall work with local authorities to set up warning signs and detour routes for area vehicles so that drivers are made aware of the situation and would not be cut off while a crossing is blocked.

Public Health and Safety

16. SGR shall take appropriate measures to prohibit public access to the construction site during rail line construction activities.

17. As recommended by the EPA, SGR shall conduct construction and waste disposal activities in accordance with applicable local, state, and Federal statutes and regulations.

Hazardous Materials/Waste Site and Existing Energy Resources

18. Prior to initiating rail construction activities, SGR shall survey the location of the transmission line poles and avoid them during the construction of the rail line right-of-way.

19. SGR shall consult with utility companies serving the area prior to beginning rail construction and shall develop a plan to provide area residents with advance notice prior to any necessary disruption of utility services during construction. In the event of any unscheduled disruption of utility services during construction and operation of the rail line, SGR shall contact the appropriate utility companies as

soon as it becomes aware of the situation and shall work with the utility companies to restore service to area residents as soon as possible.

Worker Health and Safety

20. SGR shall comply with appropriate Occupational Safety and Health Administration standards (OSHA) General Industry Standards (GIS) at 29 CFR Part 1926 and OSHA Construction Industry Standards at 29 CFR Part 1926 during rail line construction and operation activities.

Groundwater

21. SGR shall develop a SWPPP prior to initiating rail line construction activities and implement the measures in the plan during construction and maintenance activities.

22. SGR shall use Best Management Practices (BMPs) during rail line construction and maintenance activities to minimize impacts of sediment runoff.

23. SGR shall require construction contractors and maintenance crews to maintain their equipment in good operating condition and to operate the equipment safely.

24. Prior to beginning rail construction, SGR shall develop a SPCC specifically for stream crossings and for portions of the route constructed over the EARZ. The SPCC shall include planning for flood conditions.

25. SGR shall include, at a minimum, the following provisions in the SPCC: definition of what constitutes a spill; requirements and procedures for reporting spills to appropriate government agencies; methods of containing, recovering, and cleaning up spilled material; equipment available to respond to spills and where the equipment is located; and a list of government agencies and SGR's management personnel to be consulted with in the event of a spill.

26. During both rail construction and operation, SGR shall monitor the stream beds, land, and water quality in the vicinity of the rail line for indications of diesel or gasoline releases; shall take appropriate action to prevent diesel or gasoline releases; and shall remediate any soils contaminated by any diesel or gasoline release for which SGR is responsible as soon as practicable.

27. Prior to initiating any rail line construction activities, SGR shall develop a contingency plan to protect the health and safety of well owners, should any contamination to wells occur as a result of rail line construction and operation.

28. SGR shall conduct a survey prior to construction to locate all wells within the rail line right-of-way. SGR shall ensure that all functioning wells within the right-of-way are protected from damage and contamination to the extent reasonably

possible during construction. Where damage or contamination to a functioning well is unavoidable, SGR shall ensure that the well is properly abandoned prior to beginning rail construction activities.

29. SGR shall comply with the Edwards Aquifer rules as presented in Title 30 Texas Administrative Code (TAC) Chapter 213 for all construction activities for the rail line and associated fuel supply facility that occur within the EARZ.

30. SGR shall conduct a recharge zone delineation study by a qualified hydrogeologist, under the supervision and oversight of the Edwards Aquifer Authority (EAA), to determine the exact boundaries of the recharge zone, in order to locate the fueling and maintenance area completely off the recharge zone.

31. SGR shall ensure compliance with NPDES storm water permit during construction, including any sampling requirements imposed under the permit.

32. SGR shall use Above Ground Storage Tanks (ASTs) at its fueling and maintenance facility. These ASTs are above-ground, full-storage tanks that have dual wall construction to provide maximum protection in the event of a leak. These ASTs are also equipped with sensors that will "alarm" if leakage is detected and that have instruments to show fuel level and multiple safety devices to prevent overfilling and rupture, and superior flame-arrested venting ports. These ASTs shall also be located within a third concrete-walled container that holds 1-1/2 times the volume of the AST maximum volume to provide extra protection to contain a fuel leak in the unlikely event of multiple containment failures. All ASTs shall be located off of the EARZ and on areas where fuels from an unlikely catastrophic release would flow away from the EARZ (generally areas south of the Balcones Escarpment on outcrops of Del Rio Clay, as determined by a geologist). SGR's fueling and maintenance facility shall also have an established SPCC in place in addition to any STPPP appropriate to the location.

33. SGR shall locate its fueling and maintenance facility on a site to the south of the EARZ over the upper confining units of the Edwards Aquifer within the general location depicted in Figure 5-2 of the FEIS, and shall implement permanent BMPs to prevent and/or abate the release of potential pollutants or sediment from the site. In addition, SGR shall establish a STPPP appropriate to the site to address potential stormwater runoff concerns.

34. Prior to construction, SGR shall conduct a comprehensive karst feature inventory (including springs, seeps, and sink holes) and evaluation in compliance with 30 TAC Chapter 213, administered by the TCEQ for the area of the selected rail line alignment.

Surface Water

35. SGR shall use BMPs during rail line construction, operation, and maintenance activities to minimize soil erosion and to reduce the potential for oil and fuel spills.

36. SGR shall use Best Engineering Practices in the design of rail line stream crossings to avoid increasing the floodplain width.

37. Prior to initiating any rail line construction activities, SGR shall design and implement site-specific "scour and instability countermeasures" to minimize local and downstream instability from stream crossings.

38. Prior to initiating any rail line construction activities, SGR shall conduct a floodplain study, as described in Voluntary Mitigation Measure # F-VM2, in consultation with the Medina County Floodplain Administrator. SGR shall comply with the reasonable requirements of the Medina County Floodplain Administrator, as delegated to the Medina County Floodplain Administrator pursuant to the regulations of the Federal Emergency Management Agency at 44 CFR 60.3. These requirements will include, but not be limited to, ensuring that SGR's construction plans will not cause more than a 12-inch rise in the current 100-year floodplain elevation, consistent with the Medina County Floodplain Administrator's permitting standards, as set forth during the environmental consultation process for this project.

39. SGR shall obtain all required Corps permits for stream crossings prior to initiating any rail line construction activities.

40. SGR Company shall use environmentally friendly solvents and/or absorbent pads to minimize ground contact by the materials used to clean the engine and to clean excess oil from lubricated parts of the train.

41. SGR shall repair and resurface its railroad tracks using manual resurfacing and switch-cleaning methods.

42. SGR shall use manual vegetation cutting methods (rather than chemicals or herbicides) for weed control and other right-of-way clearing activities.

43. SGR shall incorporate specific BMPs into the SPCC to address the possibility of sediment runoff or diesel spills flowing into privately owned stock watering ponds.

44. In response to the request of the USEPA, SGR shall:

    (a) Use span bridges where possible to minimize impacts to streams, including all perennial streams;

(b) Take precautions to avoid channel degrading from head-cutting (such as ensuring that grades at the culverts and bridges remain at their existing elevation);
(c) If a series of box culverts is installed to carry high flows, make one culvert lower than the others to handle frequent flows (i.e., "bankfull" or less) and the other culverts at higher elevations for less frequent events;
(d) Plan the route and design of the rail line crossings to avoid the need to cut off meanders and channelize stream reaches;
(e) Minimize impacts to the riparian corridor, especially by forested areas for example, not clearing entire right-of-way through the riparian area or floodplain, and only clearing what is needed for construction and access;
(f) Minimize impacts to the creek banks (soil and vegetation) and stabilize and replant disturbed banks with native vegetation as soon as construction in the creek bank is completed.
(g) Minimize erosion of banks and bare soil, and reduce siltation of streams; stabilize and revegetate bare soil as soon as possible; inspect and repair hay bales and silt fences as needed after each rainfall that creates runoff; install multiple rows of silt fences as necessary, parallel to contours on long and steep slopes; and
(h) Avoid using wetlands or forested floodplains for staging areas or for borrow areas.

45. SGR's plans for maintaining drainage structures associated with the rail line shall provide for regular maintenance (i.e., removal of debris, rock, and sediment) of ditches and crossings.

46. SGR shall consult with appropriate Medina County officials prior to beginning rail construction to identify the location of emergency evacuation routes in the project area. When flood conditions prevail in the area, SGR shall ensure that train operations do not obstruct identified emergency evacuation routes, even if this may require SGR to cease rail operations during periods of flooding.

Wetlands

47. Prior to initiating rail construction activities, SGR shall survey the location of privately owned stock ponds and irrigation systems within the project area. If avoidance is not possible, SGR shall minimize intrusion to these water bodies and to important sources to these water bodies to the extent practicable, and shall consult with the Corps to determine if a full wetland delineation study is required. In addition, SGR shall negotiate with affected landowners regarding the appropriate replacement of these stock ponds/irrigation systems.

48. Prior to initiating rail line construction activities, SGR shall develop a plan to prevent erosion and sediment runoff from disturbed areas and shall implement the measures in its plan during the rail construction activities. Any hay used for erosion control shall be certified weed free. Slopes for graded embankments shall

be established based upon standard engineering practices, environmental considerations, and consultation with Texas Parks and Wildlife Department (TPWD). Runoff control measures shall be maintained until native vegetation has been established in all disturbed areas.

49. Prior to the completion of final engineering plans, SGR shall conduct surveys of stream channels and associated wetlands along the railroad right-of-way. These surveys shall include photographs of the sites, general descriptions of the dominant vegetation species and percent cover, and the elevations of the sites. SGR shall submit a written report of the surveys to TPWD and the Medina County Floodplain Administrator, as well as to SEA. SGR shall then consult with TPWD and the Medina County Floodplain Administrator and shall incorporate into its final engineering plans methods of restoring each site to the pre-project elevations, contours, and hydrologic conditions or other conditions that may more appropriately take into consideration the engineering needs of the rail line and post-construction hydrology.

Biological Resources

50. Prior to finalizing construction plans and before beginning rail construction activities, SGR shall review specific aspects of its construction plans, including temporary construction features, and shall instruct the preparers of the plans to fully review areas to be affected such that losses of stands of woody vegetation and other forms of natural buffers, including areas along waterways, will be held to a minimum. During rail construction, SGR shall minimize disturbance of natural buffers contiguous to floodplains in order to prevent soil erosion and to preserve wildlife cover, food sources, and travel corridors.

51. During rail construction, SGR shall replace mature trees at a 3:1 ratio and shall monitor these replacement trees to ensure a survival rate of 80 percent. If the removal of old timber trees is unavoidable, SGR shall replace old timber trees at a ratio of 10 trees for each one lost and shall monitor these replacement trees to ensure a survival rate of 80 percent.

52. To protect migratory birds in the area, if rail construction activities take place during the March-August migratory bird nesting season, SGR shall consult with the TPWD to develop and implement measures to avoid impacts on nesting birds prior to initiating construction activities.

53. During rail construction, SGR shall promptly reseed the native grasses on the portion of the right-of-way that does not consist of the roadbed (tracks and ballast) or the 10-foot access area on either side of the roadbed.

54. SGR shall consult with the U.S. Fish and Wildlife Service (USFWS) and the EAA during final engineering of the rail line and prior to beginning construction to ensure that the material used for the track, ties, and ballast does not pose hazards

to the water quality of the Edwards Aquifer or species dependent upon the aquifer (e.g., use of ties not preserved with creosote).

55. SGR shall use only Vulcan Material's existing Edwards Aquifer water rights or any other existing Edwards Aquifer water rights that may be acquired when using water from the Edwards Aquifer during construction, maintenance, and operation of the rail line.

56. SGR shall consult with the TPWD and affected landowners prior to beginning rail construction activities regarding appropriate measures to protect livestock and wildlife in the area during rail construction and operation activities. Appropriate measures could include the use of specific types of fencing or barriers.

57. During rail construction and operation, SGR shall maintain native grass and shrubs within the right-of-way and mow only essential use areas.

Air Quality

58. SGR shall comply with all applicable Clean Air Act requirements for burning debris generated by construction of the rail line.

59. During rail line construction, SGR shall take appropriate measures to control fugitive dust, including the use of water trucks.

60. SGR shall implement best practices to minimize the impact of any air pollutants released during rail construction and operation.

61. As agreed to by SGR, SGR shall conduct appropriate visual monitoring of the moisture content of the limestone prior to or during loading of the railcars. If necessary to prevent the dispersion of limestone dust during rail transportation, SGR shall wet the surface of the limestone prior to transportation.

Land Use

62. Where construction of the rail line would cause unavoidable property severance, damage to a home or to an irrigation system, or property demolition and/or destruction, SGR shall negotiate with the appropriate land owner(s) to ensure access to the severed property and/or replacement of the irrigation system, and, if appropriate, realign the track to avoid taking houses and/or to minimize the impacts.

63. Prior to beginning rail construction, SGR shall consult with the TPWD and with affected landowners to determine whether the rail line would separate livestock and wildlife from water supplies. If the rail line would separate livestock and wildlife from water supplies and suitable alternative sources are not available, SGR shall develop additional water sources for livestock and wildlife to replace

those lost, adversely affected, or rendered inaccessible to wildlife and livestock due to the rail line construction.

Noise

64. SGR shall equip all noise-producing project construction equipment and vehicles using internal combustion engines with mufflers, air-inlet silencers, and other shrouds, shields, or other noise-reducing features, and keep them in good operating condition that meets or exceeds original factory specifications. SGR shall equip mobile or fixed package equipment (e.g., arc-welders, air compressors) with shrouds and noise control features that are readily available for that type of equipment.

65. SGR shall comply with all applicable local, state, or Federal regulations that apply to the noise produced by mobile or fixed equipment used during rail construction activities.

66. SGR shall use electric-powered equipment instead of pneumatic or internal combustion-powered equipment during rail construction activities, where electric-powered equipment is available to perform the function.

67. SGR shall minimize noise by locating material stockpiles, mobile equipment staging areas, parking areas, and maintenance areas as far as practicable from noise sensitive receptors.

68. SGR shall establish and enforce a 10 mile per hour construction site and a 25 mile per hour private construction access road speed limit during the rail construction period.

69. SGR shall not engage in rail construction activities between 7:00 p.m. and 7:00 a.m. Monday through Saturday or at any time on Sunday or on Federal holidays, except for emergency situations.

70. SGR shall use noise-producing signals, including horns, whistles, alarms, and bells for safety warning purposes only.

71. SGR shall ensure that no project-related fixed, mobile, or portable public address or music system is audible at any adjacent noise sensitive receptor, except for emergency situations.

72. To minimize wheel squeal, if a loop track is used, SGR shall design the loop track with a radius greater than 1000 feet or 10 times the wheelbase of the largest car used on the tracks.

73. SGR shall provide a track lubrication system for any track that is used to mitigate wheel squeal noise. However, this lubrication system shall only be used over the EARZ with prior approval from the EAA.

74. SGR shall provide a movable point crossover (a crossover designed with a spring loaded piece to eliminate the noise producing gap) to mitigate excess noise from the crossover at the neck of any loop track (where the curved track reconnects with the tangent or straight track).

Vibration

75. Prior to beginning rail construction, SGR shall conduct a survey to locate nearby wells and shall monitor the vibration levels at these wells during any pile driving activities related to rail construction to ensure that the peak particle velocity limit of 2.72 inches per second in any axis (in either of the two lateral directions or in the vertical direction) is not exceeded during construction.

Recreational and Visual Resources

76. Prior to initiating construction activities, SGR shall identify the location of privately owned stock ponds within the project area and attempt to avoid them. If avoidance is not possible, SGR shall minimize intrusion to these water bodies to the extent practicable and minimize disturbances to important sources of influent to these water bodies.

Cultural Resources

77. SGR shall comply with the terms of the PA, developed pursuant to 36 CFR 800.14(b), which has been executed by all required parties.

Karst Features

78. SGR shall identify potential risk areas for sinkhole formation prior to initiating rail construction activities along the two-mile loading loop or one-mile parallel loading tracks and the first 1,500 feet of rail line south of the loading loop or loading tracks, and shall implement engineering design measures to protect the rail line from future sinkhole development. SGR shall conduct its identification efforts by one of the following two methods:

    a) If SGR identifies a significant void or cave during the grading and construction of the rail line, SGR shall undertake additional investigation by using qualified personnel to determine the potential risk of construction causing a sinkhole to develop; or
    b) SGR shall conduct geophysical and geotechnical analysis to identify areas of sinkhole risk prior to construction. SGR shall further inspect any identified suspect voids by using geotechnical borings to determine the

hazard probability. For locations at which the geotechnical borings reveal voids of significant enough size and proximity to the ground surface to pose a risk of collapse to the rail line, SGR shall identify and implement additional hazard-mitigation efforts, such as moving the rail line to avoid the hazard area; intentionally collapsing or digging out and then filling in the void; grouting the void closed; or developing additional engineering controls to reinforce the rail line and to distribute the weight away from the void.

79. If SGR identifies a significant karst feature during the grading and construction of the two-mile loading loop or one-mile parallel loading tracks and the first 1,500 feet of rail line south of the loading loop or loading tracks, SGR shall consult with a karst feature specialist and implement appropriate mitigation measures. These include developing an inventory of caves for endangered species and complying with the reasonable requirements of the State of Texas for construction activities in the recharge and transition zones of the Edwards Aquifer.

Monitoring and Enforcement

80. SGR shall submit quarterly reports to SEA documenting the progress of its implementation of all of the environmental mitigation measures during rail construction and for three years after rail operations have begun.

81. SGR shall retain a community liaison to work with the community in addressing any concerns related to SGR's rail construction and operation activities, and assist in the implementation of the environmental mitigation measures.