SECTION 404(b)(1) GUIDELINES EVALUATION

This Section 404(b)(1) Guideline Evaluation is for the BNSF Intermodal Facility near Gardner Kansas. This evaluation is based on the regulations found at 40 CFR 230, Section 404(b)(1): Guidelines for Specification of Disposal Sites for Dredged and Fill Material.

Project Description

a. **Location**: The project (Proposed Action) is located between the cities of Gardner and Edgerton, Kansas, on approximately 492-acres approximately one mile north of Interstate 35 (I-35). The site is bounded on the west by Four Corners Road, on the south by 191st Street, and on the east by Waverly Road (Figure 1-1). The site is in Sections 26, 27, 33, and 34, Township 14 South, Range 22 East; Sections 5, 6, and 7, Township 15 South, Range 22 East, Johnson County, Kansas. The project is adjacent to the Applicant's southern transcontinental mainline.

b. **General Description**: The BNSF Railway Company (Applicant) plans to develop an intermodal facility with associated lead tracks. The project includes the relocation of approximately 5.5 miles of the existing mainline track that travels through Mildale Park. An unnamed perennial tributary of Big Bull Creek traverses the site from northeast to southwest. Development of the project would require relocation of approximately 8,222 feet of this stream. In addition, construction of the project would result in local road closures and elimination of seven public at-grade crossings. Direct project related impacts to waters of the U.S. include the following:

A total of 17,302 linear feet of streams, including:

- 10,166 linear feet of perennial stream
- 4,273 linear feet of intermittent streams
- 2,863 linear feet of ephemeral streams

A total of 4.61 wetland acres including:

- 3.12 acres of PEM wetlands
- 1.10 acres of PFO wetlands
- 0.08 acre of PFO/PEM wetlands
- 0.03 acre of PSS wetlands
- 0.28 acre of PSS/PEM wetlands

A total of 16.65 acres of open waters

A detailed discussion of impacted waters can be found in Section 3.10 of the Draft EA. **The Proposed Action is not a water dependent activity.** A detailed analysis of alternatives is discussed in the draft Environmental Assessment (Draft EA) for this project.

c. **Authority**: This activity is regulated by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (33 USC 1344).

d. **General Description of Dredged or Fill Material**: Discharge associated with the project would include clean fill material obtained in the local vicinity of the Proposed Action. The Proposed Action would ultimately place clean fill in or pipe all water resources outside of the Conservation Corridor. Riprap and other bioengineering methods would be used to ensure stabilization of the relocated stream within the Conservation Corridor.

e. **Description of the Proposed Discharge Sites**: The discharge sites would include all waters of the U.S. within the permit area. All waters outside the conservation corridor would be filled or piped. Waters within the conservation corridor would be enhanced and preserved in perpetuity as compensatory mitigation for project related impacts. Additional information on project related impacts to waters of the U.S. can be found in Section 3.10 of the Draft EA.

f. **Disposal Method**: Construction and grading activities would be performed by appropriate heavy construction equipment. The fill activity would be performed in a manner to limit the likelihood of fill material dispersing from the disposal sites.

Factual Determinations

a. Physical Substrate Determinations

(1) **Substrate Elevation and Slope:** Wetlands on the project site would be completely filled to facilitate construction of the Proposed Action. The relocation of the perennial tributary to Big Bull Creek should result in similar slope and substrate post construction. The Proposed Action would recreate an 8,222-linear-foot channel using Rosgen-type priority 1 and 2 restoration principles as the design methodology. The restored stream would reflect the dimension, pattern, and profile indicated by natural reference reach/conditions. Where practicable, this project utilizes open channel techniques. The applicant has taken actions in project design to adequately minimize adverse effects to the substrate elevation and slope. This is in compliance with the Guidelines.

(2) **Sediment Type:** No change to sediment type is expected.

(3) **Dredged/Fill Material Movement:** It is anticipated that minor amounts of fill material associated with construction activities would move from fill locations downstream. Once construction activities are complete there should be no dredged/fill material movement downstream. The Applicant is employing many water quality Best Management Practices (BMPs) such as silt fencing and revegetation to ensure that any sediment transport

offsite is minimal. The Applicant has adequately minimized dredged/fill material movement and the project is in compliance with the Guidelines.

(4) Physical Effects on Benthos: Physical effects on the benthos would potentially consist of a temporary increase in sediment levels associated with construction activities that could have an impact on benthos. BMPs proposed by the applicant minimize the potential physical effects on benthos. The potential physical effects on benthos are minor and the project is in compliance with the Guidelines.

b. Water Circulation, Fluctuation, and Salinity Determinations

(1) Water

(a) Salinity: Not applicable.

(b) Water Chemistry: Small, localized effects to water chemistry would primarily include an increase in turbidity due to construction activities. This would be minimized by implementation of water quality BMPs.

(c) Clarity: A minor temporary increase in turbidity may occur during construction of the project that could impact clarity. This would be minimized by implementation of water quality BMPs.

(d) Color: A minor temporary change is possible due to the potential increased turbidity. This would be minimized by implementation of water quality BMPs.

(e) Odor: No impacts are anticipated.

(f) Taste: Not applicable.

(g) Dissolved Gas Levels: Any changes in dissolved gas levels would be the result of increased turbidity and would be temporary.

(h) Nutrients: Temporary and localized nutrient increase may occur due to increased sediment.

(i) Eutrophication: Although a temporary increase in nutrients is possible, no increase in eutrophication is anticipated as any increased sediment would likely be rapidly transported downstream.

(2) Current Patterns and Circulation: Current patterns and circulation should be similar to existing conditions post fill activities.

(3) **Normal Water Level Fluctuations**: Normal water level fluctuations should remain similar to existing conditions.

(4) **Salinity Gradients**: Not applicable.

(5) **Actions to Minimize Impacts**: The applicant has taken steps to minimize impacts that include implementation of water quality BMPs. Several measures would be implemented during facility construction and operation to minimize water quality impacts that would include both structural and non-structural BMPs. Structural BMPs include: perimeter controls that may include straw bales and/or silt fencing, check dams, earth dikes, stabilization of cut-and-fill slopes, and spill containment. Non-structural BMPs would include: keeping equipment out of the waterway whenever possible, protecting construction materials from precipitation, and stabilizing bare soil by mulching, re-vegetating exposed soil. Rapid revegetation, vegetated buffers within the conservation corridor, water quality wetlands, and infiltration trenches are examples of BMPs that would be used to reduce the amount of potential pollutants that reach the water resources downstream of the project area.

c. Suspended Particulate/Turbidity Determination

(1) **Change at Placement Site:** Discharge associated with the project would be located in ephemeral, intermittent, and perennial streams as well as adjacent wetlands as shown in the Draft EA. The placement site for all waters located outside the conservation corridor would change from waters to uplands. The clean fill to be used for construction activities should not violate any general criteria of the Water Quality Standards, 10 CSR 20-7.037 (3) (A)-(H). For waters within the conservation corridor, suspended particulates and turbidity may increase during construction activities; however, any increases in suspended particulate matter and turbidity resulting from construction activities would be short-term.

(2) **Effects on Chemical and Physical Properties of the Water Column**: The clean fill to be used for construction activities should not violate any general criteria of the Water Quality Standards, 10 CSR 20-7.037 (3) (A)-(H). All waters outside the conservation corridor would either be filled or piped and would not remain waters of the U.S. For waters within the conservation corridor, suspended particulates and turbidity may increase during construction activities; however, any increases in suspended particulate matter and turbidity resulting from construction activities would be short-term. Compensatory mitigation achieved in the conservation corridor should offset all negative effects on chemical and physical properties of the water column.

(3) **Effects on Biota**: All waters outside the conservation corridor would either be filled or piped and would not remain waters of the U.S. This would have a negative affect on the biota for the impacted waters. For waters within the conservation corridor, suspended particulates and turbidity may increase during construction activities; however, any increases in suspended particulate matter and turbidity resulting from construction activities would be short-term. Compensatory mitigation achieved in the conservation corridor should offset all negative effects on biota.

(4) **Actions to Minimize Impacts**: The applicant has adequately minimized negative impacts through avoidance, minimization and compensatory mitigation. Several measures would be implemented during facility construction and operation to minimize water quality impacts that would include both structural and non-structural BMPs. Structural BMPs include: perimeter controls that may include straw bales and/or silt fencing, check dams, earth dikes, stabilization of cut-and-fill slopes, and spill containment. Non-structural BMPs would include: keeping equipment out of the waterway whenever possible, protecting construction materials from precipitation, and stabilizing bare soil by mulching, re-vegetating exposed soil. Rapid revegetation, vegetated buffers within the conservation corridor, water quality wetlands, and infiltration trenches are examples of BMPs that would be used to reduce the amount of potential pollutants that reach the water resources downstream of the project area.

d. **Contaminant Determination**: Clean fill would be used for all fill activities. The fill material would be of local materials and should not violate any general criteria of the Water Quality Standards, 10 CSR 20-7.037 (3) (A)-(H).

e. **Aquatic Ecosystem and Organisms Determination:** The aquatic ecosystem and organisms would be completely lost for locations outside the conservation corridor; however, these impacts should be adequately mitigated through construction of the conservation corridor. Organisms present in the conservation corridor would be subject to temporary construction impacts due to sediment suspension. However, re-colonization by affected organisms would be expected after construction of the conservation corridor is completed.

f. **Proposed Disposal Site Determination**: The discharge sites would include all waters of the U.S. within the permit area. All waters outside the conservation corridor would be filled or piped. Waters within the conservation corridor would be enhanced and preserved in perpetuity as compensatory mitigation for project related impacts.

g. **Determination of Cumulative Effects on the Aquatic Ecosystem**: No significant negative cumulative effects would be anticipated as a result of the

Proposed Action. Additional information on expected cumulative effects on the aquatic ecosystem can be found in the Section 4.10 of the Draft EA.

h. **Determination of Secondary Effects on the Aquatic Ecosystem**: The Proposed Action should not result in significant secondary effects on the aquatic ecosystem. The applicant has taken appropriate steps to mitigate potential secondary effects or indirect effects by including the conservation corridor as compensatory mitigation. Additional information on the secondary or indirect effects can be found in Chapter 3 of the Draft EA.

Findings of Compliance or Non-compliance

a. There are no less environmentally damaging practicable alternatives that would fulfill the overall project purpose. A detailed analysis of alternatives is discussed in Chapter 2 of the Draft EA.

b. The Proposed Action would not violate any applicable state water quality standards or effluent standards. The Kansas Department of Health and Environment has issued Section 401 Water Quality Certification for this project.

c. The Proposed Action would not result in significant adverse impacts on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife and special aquatic sites.

d. All appropriate steps to minimize adverse environmental impacts have been taken.

e. The Proposed Action would not jeopardize the existence of Federally listed endangered or threatened species or their habitat.

f. No significant adaptations of the guidelines were made relative to this evaluation.

Conclusions

Based on all of the above, the Proposed Action is determined to be in compliance with the Section 404(b)(1) Guidelines.