

## STB FINANCE DOCKET NO. 33407

DAKOTA, MINNESOTA & EASTERN RAILROAD CORPORATION  
CONSTRUCTION INTO THE POWDER RIVER BASIN

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*Decided January 28, 2002*

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The Surface Transportation Board gives final approval to the Dakota, Minnesota & Eastern Railroad Corporation to construct and operate a 280-mile rail line into the Powder River Basin of Wyoming. The Board considers the nature and extent of the environmental issues associated with this project, and imposes extensive conditions to mitigate certain anticipated adverse environmental impacts. The Board also establishes an environmental oversight period.

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BY THE BOARD:

INTRODUCTION

In this decision, we complete our analysis of the application filed by the Dakota, Minnesota & Eastern Railroad Corporation (DM&E) for authority to construct and operate 280 miles of new rail lines and associated facilities in east-central Wyoming, southwest South Dakota, and south-central Minnesota. In a prior decision, issued in *Dakota, MN & Eastern RR–Construction–Powder River Basin*, 3 S.T.B. 847 (1998) (*1998 Decision*), we found that DM&E’s proposal satisfies the transportation-related criteria of 49 U.S.C. 10901. But we deferred final action on the proposal until we could assess the nature and extent of the environmental issues associated with this project, as required by the National Environmental Policy Act (NEPA), 42 U.S.C. 4321-43. This assessment, as well

as a determination of the financial cost of any environmental mitigation that we might impose, has now been completed.

Accordingly, in this decision we now address the environmental issues raised by the proposal. Our environmental analysis examines not only the impacts of constructing the new rail lines, but also the rehabilitation of DM&E's existing line in Minnesota and South Dakota that would only occur because of the expansion of DM&E's system approved here. As discussed below, we have carefully reviewed the Environmental Impact Statement (EIS)<sup>1</sup> prepared in this case, which examines the environmental consequences of this project in detail. As the EIS shows, DM&E's proposal would result in potentially significant environmental impacts, not all of which could be fully mitigated. However, the project has transportation and safety benefits and would further the public interest. Therefore, we are giving our final approval for DM&E to construct and operate the new line, subject to the extensive environmental mitigation conditions set forth below and in Appendix A, which include the use of environmentally preferable routings.<sup>2</sup> As part of the conditions to our approval of the construction of these new lines, we are providing for continuing environmental oversight, and requiring DM&E to file quarterly reports during the oversight period, to permit us to monitor the progress of DM&E's implementation of the various environmental conditions we are imposing and also resolve unanticipated environmental problems that could arise. Our oversight will allow communities or other interested parties to seek redress if there are unanticipated problems or if there are material changes in the facts or circumstances, and will permit us to take appropriate action, if necessary.

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<sup>1</sup> An EIS is the detailed written statement required by NEPA for "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. 4332(2)(C). *See* 40 CFR 1508.11; 49 CFR 1105.4(f).

<sup>2</sup> A map of the entire project is attached at Appendix B.

## BACKGROUND

By application filed February 20, 1998, DM&E<sup>3</sup> seeks authority under 49 U.S.C. 10901 to construct and operate some 280 miles of new rail line<sup>4</sup> and associated facilities at a projected cost of \$532 million,<sup>5</sup> so that it can reach the coal mines in Wyoming's Powder River Basin (PRB).<sup>6</sup> In connection with this new construction, DM&E plans to rebuild and comprehensively upgrade 598 miles of its existing rail lines in Minnesota and South Dakota. The projected cost of rebuilding and upgrading these existing lines, which would include additional sidings, signaling, grade-crossing protections, and other system improvements, is approximately \$876 million.<sup>7</sup> The total construction cost of the complete PRB Expansion Project would thus be approximately \$1.4 billion, not counting the cost of environmental mitigation. This is the largest and most challenging rail construction proposal ever to come before the Board.

Notice of the application was served and published on March 13, 1998. In that decision/notice, we announced that we would consider the transportation aspects of this proceeding in advance of the environmental issues, as is our practice in rail line construction cases.<sup>8</sup> The application drew both support and opposition from a wide variety of interested parties, including the Mid-States Coalition (MSC), a consortium of interests opposed to the proposal, whose pleadings are representative of the objections raised by parties. We subsequently

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<sup>3</sup> DM&E currently operates a 1,100-mile rail system located primarily in South Dakota and Minnesota. It moves approximately 60,000 carloads of traffic a year, consisting primarily of a variety of grain and mineral products.

<sup>4</sup> Specifically, DM&E proposes to build a new 262.03-mile rail line extending from a point on its existing line near Wasta, SD, extending generally southwesterly to Edgemont, SD, and then westerly into Wyoming, to connect with 11 coal mines located south of Gillette, WY, in the Powder River Basin.

DM&E also proposes to build a new 13.31-mile line in the Mankato, MN area. DM&E currently has rail lines on both sides of Mankato, accessed by trackage rights over a rail line through Mankato operated by the Union Pacific Railroad Company (UP). The proposed Mankato construction would provide DM&E direct access between its existing lines and avoid congestion on the line operated by UP.

The third proposed new line is near Owatonna, MN, to provide a short connection with the I&M Rail Link (I&M).

<sup>5</sup> See *1998 Decision* at 888.

<sup>6</sup> The PRB is currently served by UP and by The Burlington Northern and Santa Fe Railway Company (BNSF).

<sup>7</sup> See *1998 Decision* at 889.

<sup>8</sup> This two-stage process has been judicially approved. See *Missouri Mining, Inc. v. ICC*, 33 F.3d 980 (8th Cir. 1994).

issued various decisions in which we discussed the unique issues and concerns that had been raised and provided guidance for submissions in the case.

In the *1998 Decision*, we addressed the transportation aspects of DM&E's proposal to construct the new line. We made a preliminary finding that there is public demand for the proposed new line and that it would offer transportation benefits because this shorter route from the PRB to the areas served by DM&E would enable it to offer reduced transportation costs and improved service. We also preliminarily concluded that the addition of this new line would not harm existing shippers and that DM&E had demonstrated its financial fitness to carry the project through to completion. We emphasized, however, that we had not yet taken into account environmental impacts or the cost of any environmental mitigation that we might need to impose, and that we would not make an ultimate determination as to whether to authorize construction of the new line until we could consider those additional factors.

In the *1998 Decision*, we rejected the argument made by some parties that the proposed rebuilding of DM&E's existing line also requires our approval under section 10901. We explained that a rail carrier does not require Board approval to improve or upgrade an existing line,<sup>9</sup> and that just because a carrier pursues such an upgrade in conjunction with construction of a new line does not expand our jurisdictional reach. *See City of Auburn v. STB*, 154 F.3d 1025, 1033 (9th Cir. 1998), *cert. denied*, 527 U.S. 1022 (1999) (*City of Auburn*). Thus, we do not (and cannot properly) address the transportation merits of the rebuilding portion of DM&E's project.

However, consistent with our approach in similar cases, *see id.*, the EIS (prepared by our Section of Environmental Analysis (SEA) in coordination with five cooperating Federal agencies (*see* 40 CFR 1501.6))<sup>10</sup> examines the potential

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<sup>9</sup> *See Lee's Summit, MO v. STB*, 231 F.3d 39, 42-43 n.3 (D.C. Cir. 2000); *Detroit/Wayne County Port Authority v. ICC*, 59 F.3d 1314, 1316-17 (D.C. Cir. 1995); *Union Pacific RR Co.--Petition—Rehabilitation of MO-KS-TX RR*, 3 S.T.B. 646 (1998).

<sup>10</sup> The cooperating agencies in this case are: the U.S. Department of Agriculture's Forest Service; the U.S. Department of Interior's Bureaus of Land Management and Reclamation; the Army Corps of Engineers (Corps); and the Coast Guard.

Generally, we have found that adding cooperating agencies to our NEPA analysis has benefitted railroad applicants, other Federal, state, and local agencies, and the public by meshing the requirements of two or more agencies into one document. When other agencies that have special expertise participate as cooperating agencies, duplication is minimized because those agencies are not performing their own analyses independent of the Board's process. In the long run, we believe this method saves time and resources, and ultimately results in a superior environmental review, even though in the near term it can be complicated, time-consuming, and expensive to incorporate the  
(continued...)

environmental impacts resulting from increased rail operations over the portion of DM&E’s line to be rebuilt as well as the impacts from the construction of the new rail line itself. Also, one of the cooperating agencies in this case, the Corps, has responsibility under the Clean Water Act to analyze potential impacts to wetlands that would result from the proposed rebuild of DM&E’s existing line; therefore, the EIS also examines the environmental impacts that would result from upgrading DM&E’s existing line. Thus, the environmental record in this case addresses the rehabilitation, upgrade, and increased use of DM&E’s existing line, as well as the construction and operation of the proposed new line.

## DISCUSSION AND CONCLUSIONS

We first discuss environmental issues and then address how environmental concerns and the cost of addressing such concerns affect our previous assessment of the transportation aspects of this case.<sup>11</sup>

### I. ENVIRONMENTAL CONSIDERATIONS

#### *The Requirements of NEPA.*

NEPA requires Federal agencies “to the fullest extent possible” to consider the environmental consequences “in every recommendation or report on major federal actions significantly affecting the quality of the human environment.”<sup>12</sup>

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<sup>10</sup>(...continued)

information needed by all of the cooperating agencies.

<sup>11</sup> We also address in this decision a petition (filed November 16, 2001) by the Mayo Foundation (Mayo), located in Rochester, MN, to reopen the record to consider “newly defined public interest issues” as well as a petition from Mayo to provide for comments on the Final EIS (filed December 21, 2001). In addition, we address issues raised in letters submitted by the Mankato Area Coal Train Coalition (dated December 5, 2001 and January 22, 2002); the City of Owatonna, MN (dated December 11, 2001); the City of Mankato, MN (dated December 12, 2001); Congressman John P. Murtha (dated December 12, 2001 and January 18, 2002); DM&E (dated December 13, 2001 and January 7, 2002); Secretary of Health and Human Services Tommy G. Thompson (dated December 20, 2001); Senators Ernest F. Hollings, Paul David Wellstone, and Mark Dayton (dated December 21, 2001); Senator Wellstone (dated December 21, 2001); Senator Dayton (dated December 21, 2001); and the City of Waseca, MN (dated December 31, 2001). Finally, we have received a letter from the Environmental Protection Agency (EPA) reviewing the EIS pursuant to Section 309 of the Clean Air Act (dated December 27, 2001).

<sup>12</sup> 42 U.S.C. 4332(2)(C). The President’s Council on Environmental Quality has defined “major federal actions” to include projects regulated or approved by Federal agencies.

Under NEPA and related environmental laws, we must consider significant potential beneficial and adverse environmental impacts in deciding whether to approve a railroad construction as proposed, deny the proposal, or 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, in order to minimize or avoid potential negative environmental impacts. *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989). While NEPA requires that we take a “hard look” at the environmental consequences of our licensing decisions, it does not mandate a particular result. Thus, once the adverse environmental effects have been adequately identified and evaluated, we may conclude that other values outweigh the environmental cost. *Robertson v. Methow*, 490 U.S. 342, 350-51 (1989); *City of Auburn*, 154 F.3d at 1031-33.

*Overview of the Environmental Analysis In This Case.*

To assist us in identifying and assessing the potential environmental impacts of DM&E’s proposal, SEA, acting with the five Federal cooperating agencies, has conducted a detailed review evaluating the potential environmental impacts of the PRB Expansion Project. SEA and the cooperating agencies<sup>13</sup> have prepared an EIS addressing a broad range of environmental issues.<sup>14</sup>

In preparing the EIS, SEA obtained extensive public input from a broad range of interests that include Federal, state, and local agencies; various interest groups; affected communities; Indian Tribes; and members of the general public, largely from the States of Minnesota, South Dakota, and Wyoming, but also from locations throughout the United States. Their concerns included the potential for

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<sup>12</sup>(...continued)

40 CFR 1508.18.

<sup>13</sup> Further references to “SEA” in this decision encompass the efforts of the cooperating agencies.

<sup>14</sup> The issues analyzed include the impacts — both beneficial and adverse — of the railroad’s proposal on human and natural resources, rail safety, transportation, geology, soils, land use, paleontological resources, water resources, wetlands, air quality, noise and vibration, vegetation, wildlife, Federally listed threatened and endangered species, cultural resources, aesthetics, socioeconomics, and minority and low income population. SEA’s in-depth environmental review included independent environmental studies and analyses such as biological surveys; cultural resource investigations of archaeological sites and historic resources; and the compilation of data and the study of potential effects on safety (including grade-crossing safety and potential delays), wildlife migration, geological resources and soils, and potential impacts to Indian Tribes, ranches, farms, and communities.

safety impacts (including emergency vehicle access), noise/vibration increases, property value decreases, air quality impacts, effects on cultural resources and Tribal traditions,<sup>15</sup> “environmental justice” demographic issues, and general quality-of-life issues.

To account for anticipated growth in traffic as DM&E’s proposed system would begin to operate and build its customer base, SEA evaluated potential environmental impacts for three levels of projected rail operations: 20 million tons of coal transported annually (8 coal trains per day); 50 million tons (18 coal trains per day); and 100 million tons (34 coal trains per day). SEA also examined various alternatives to DM&E’s proposal, including bypasses sought by Rochester, MN, and Brookings and Pierre, SD, to route coal trains away from those communities.

As the EIS shows, the PRB Expansion Project would result in certain environmental benefits, primarily because DM&E’s expansion project would enable DM&E to completely upgrade its existing system, which is currently in poor condition.<sup>16</sup> But even with appropriate mitigation, the PRB Expansion Project would also have adverse environmental consequences.<sup>17</sup> The dramatic increase in the number of trains operating on DM&E’s existing line (from about 3 trains each day to a potential of 37 trains per day)<sup>18</sup> — and the impact caused by construction and operation of a lengthy new rail line through generally pristine rural areas — would have significant environmental consequences in the areas of highway/rail grade-crossing safety, noise, biological resources, geology and soils, land use, cultural resources, paleontological resources, air quality, water resources and wetlands, and aesthetics, some of which would be difficult to mitigate.<sup>19</sup>

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<sup>15</sup> Cultural resources usually include historic sites or structures and archaeological resources. In this case, the study of cultural resources also focused on the concerns, traditions, and cultural beliefs of the Native American peoples in the region, particularly the Lakota and Dahcotah Nations.

<sup>16</sup> Some socioeconomic impacts from the proposed project also would be beneficial, such as increased employment opportunities, increased tax base and revenues, and more spending for local goods and services. Normally, SEA’s environmental documentation analyzes only those socioeconomic issues shown to be related to changes in the physical environment as a result of the proposed action. In order to satisfy requirements of certain cooperating agencies, the analysis of socioeconomic impacts in this case has been broader.

<sup>17</sup> See the tables summarizing SEA’s analysis of impacts in the Executive Summary to the Final EIS.

<sup>18</sup> This 37-train figure includes the 3 existing trains and up to 34 coal trains.

<sup>19</sup> For example, even with mitigation, there would be visual impacts on grasslands and impacts to cultural resources. Noise, too, is difficult to mitigate.

The EIS recommends substantial mitigation to reduce or eliminate many of the potentially significant adverse environmental impacts and includes estimated costs for that environmental mitigation. It also addresses which routing alternatives would be environmentally preferable.

We have thoroughly reviewed the EIS and, with the exceptions discussed below, we concur in all of SEA's analysis and recommendations, including those not specifically addressed here. Thus, we will impose conditions on our approval of the construction of DM&E's new line that would require DM&E to use environmentally preferable routings and to comply with the other mitigation measures identified in the Final EIS.<sup>20</sup> Our environmental conditions are set forth below and in Appendix A to this decision.<sup>21</sup>

*The EIS Process.*

SEA undertook extensive public outreach activities to give interested parties, agencies, organizations, Tribes, and the general public the opportunity to learn about the project, define issues, and actively participate in the environmental process. After issuing a notice of intent to prepare an EIS, SEA conducted 14 scoping meetings<sup>22</sup> in the three affected states between April and July 1998 to solicit public involvement and ideas. In June 1998, a Draft Scope was published in the *Federal Register* for public review and comment.

In January 1999 (prior to completion of the scoping), the City of Rochester requested that a south bypass corridor (Rochester bypass) be considered as an alternative to DM&E's plan to rehabilitate its existing line (which runs through Rochester) to accommodate additional traffic, primarily coal trains. In the Final Scope, issued in March 1999, SEA provided a 30-day period for comments on the Rochester bypass. SEA also issued a Notice to the Parties in April 1999,

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<sup>20</sup> As the courts have recognized, we have broad jurisdiction to impose conditions, including environmental conditions, so long as they are supported by the record and there is a sufficient nexus between the condition imposed and the transaction before us. *See United States v. Chesapeake & Ohio Ry.*, 426 U.S. 500, 514-15 (1976); *Consolidated Rail Corp. v. ICC*, 29 F.3d 706, 714 (D.C. Cir. 1994).

<sup>21</sup> We have retained all of SEA's recommended conditions, but have made certain minor changes and clarified the language of some of the conditions.

<sup>22</sup> "Scoping" is an open process under NEPA for determining the scope of environmental issues to be addressed in an EIS and their potential for significance. Scoping affords the public an opportunity to assist in identifying important resources, issues, or concerns that could be affected by the project. Based on the information obtained, SEA developed a Scope of Study identifying the specific topics, issues, and environmental resources to be discussed in the EIS.

providing an opportunity for other affected communities to present bypass proposals. In response, three other communities submitted bypass designs to SEA: Owatonna, MN; Brookings, SD; and Pierre, SD.

On September 27, 2000, SEA issued a 5,000-page Draft EIS that identified and evaluated the potential environmental impacts of the PRB Expansion Project. In the Draft EIS, SEA considered a wide variety of interests and issues involving communities, home owners, farmers and ranchers, Tribes, and special resources affected by the project (such as the Angostura Irrigation District in South Dakota and two National Grasslands in Wyoming and South Dakota through which the proposed line would pass). SEA set forth in the Draft EIS its preliminary conclusions on potential project impacts, the various alternatives that had been considered, and possible mitigation to reduce some of the potential environmental effects of this project.

In the Draft EIS, SEA assessed each bypass proposal that had been submitted and determined that three — for Rochester, Owatonna,<sup>23</sup> and Brookings — were sufficiently feasible alternatives to be considered in the environmental analysis along with DM&E’s proposal and the No-Action Alternative (i.e., that DM&E would not be authorized to extend its system into the PRB). SEA concluded that the Pierre bypass was not feasible because of significant environmental and engineering constraints.

Issuance of the Draft EIS began a 90-day period for public review and comment (which was extended an additional 60 days to March 6, 2001).<sup>24</sup> In addition, SEA hosted 12 public meetings throughout the project area and a meeting on the Rosebud Reservation affording Tribal members an opportunity to comment. Approximately 8,600 written comments were received.<sup>25</sup>

In preparing the Final EIS, SEA reviewed all oral public meeting comments, as well as the written comments, and posted on the Board’s web site the more

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<sup>23</sup> Owatonna has since withdrawn its bypass proposal.

<sup>24</sup> SEA invited public comment on all aspects of the Draft EIS. It specifically asked for comments on which of the alternatives (including the No-Action Alternative) should be deemed environmentally preferable, comments on the reasonableness and feasibility of proposed mitigation measures, and suggestions for additional or alternate mitigation measures, including specific suggestions for mitigation tailored to the needs of individual communities.

<sup>25</sup> Throughout the environmental review process, SEA conducted extensive public outreach programs to identify the public’s environmental concerns related to the project. This included meetings and consultations, many site visits, use of the Board’s official web site, and a toll-free Environmental Hotline. SEA prepared comprehensive mailings that included post cards, press releases, a newsletter, and other information containing descriptions of the project and SEA’s environmental review process, to facilitate and encourage public understanding and participation.

significant ones, including those by cooperating agencies. SEA also made additional site visits to Pierre, Brookings, Mankato, Owatonna, and Rochester to investigate and to more fully explain in the Final EIS community concerns about issues such as noise and vibration increases, emergency vehicle access, air quality impacts, and various quality-of-life issues.<sup>26</sup> In addition, SEA consulted with other agencies, including EPA, the U.S. Fish and Wildlife Service, and the National Park Service.

An approximately 2,500-page Final EIS was issued on November 19, 2001. In it, in response to comments, SEA refined its analysis of certain issues, such as its “environmental justice” demographic analysis (where it incorporated a more conservative methodology suggested by EPA) and the discussion of potential impacts on wetlands to resolve discrepancies between information presented in the Draft EIS and in DM&E’s applications to the Corps for Section 404 permits under the Clean Water Act. The Final EIS contains updated and more comprehensive information on issues such as the karst topography<sup>27</sup> along the proposed Rochester bypass and East Staging and Marshalling Yard near Lewiston, MN (to allow SEA to assess whether a rail line could be built in these areas); the potential of PRB coal to form fugitive dust; and a recalculation of potential transportation and safety impacts, based on a detailed Grade Crossing Mitigation Plan submitted by DM&E after issuance of the Draft EIS. The status of a Programmatic Agreement (PA) and Identification Plan addressing cultural resources and a Memorandum of Agreement (MOA) on issues of concern to the Tribes is also discussed.<sup>28</sup>

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<sup>26</sup> For example, in response to concerns raised involving impacts in Rochester, SEA consulted with the manufacturer of an open-sided magnetic resonance imaging (MRI) machine being considered by the Mayo Clinic to see if the MRI could be operated effectively given the possible vibrations that could be associated with the increased rail traffic projected under DM&E’s proposal. SEA also consulted with the manufacturer of a security system used by the Federal Medical Center, and PEMSTAR, a manufacturer of vibration-sensitive equipment in Rochester, to address possible vibration concerns. Noise and vibration studies also were conducted in Mankato. Moreover, SEA contacted ski areas that operate in proximity to active rail lines to learn more about the potential effects of the rail line on their operations. Additionally, it contacted numerous communities along other rail lines over which coal is transported to obtain information on whether coal dust has been a significant problem. Communities with rail traffic comparable to DM&E’s projected levels were contacted to obtain information on the effect of trains on their emergency-service response.

<sup>27</sup> When limestone interacts with underground water, the water dissolves the limestone to form karst topography — an amalgamation of caves, underground channels, and a rough and bumpy ground surface characterized by sinkholes.

<sup>28</sup> The PA and Identification Plan establish a process under Section 106 of the National Historic Preservation Act for identification and protection of cultural resources potentially affected (continued...)

The Final EIS contains SEA’s recommended routing alternatives for DM&E’s proposed new line into the PRB. For the existing line, SEA concluded after extensive analysis that each of the proposed bypasses for the specified communities would have significant environmental and/or engineering constraints and that rehabilitation of the existing line through Rochester, Brookings, and Pierre, with the tailored mitigation that SEA had developed, would therefore be the environmentally preferred alternative for those communities. Finally, SEA made its final recommendations for environmental mitigation to reduce or eliminate potential environmental impacts that would be associated with the construction or rehabilitation and operation of the environmentally preferable routes.

*Negotiated Agreements.*

In the meantime, DM&E entered into voluntary, mutually satisfactory Negotiated Agreements with many affected communities and other entities to address potential environmental impacts and other local concerns. DM&E has submitted Negotiated Agreements executed with 51 of the 56 affected communities on the existing line.<sup>29</sup> SEA has reviewed these agreements and recommends that we require compliance with them as a condition to our approval, and we will do so.<sup>30</sup>

We encourage railroads and communities and other entities to negotiate private solutions to environmental issues. Generally, these agreements are more

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<sup>28</sup>(...continued)

by this project, including the discovery and treatment of graves under the Archaeological Resources Protection Act, Executive Order on Sacred Sites, and the Native Graves Protection and Repatriation Act. The MOA is designed to ensure that project-related concerns of Indian Tribes outside the Section 106 process are considered and addressed by DM&E. Our environmental conditions that we are imposing here require DM&E to comply with the PA, Identification Plan, and MOA, once they are executed.

<sup>29</sup> DM&E has also been negotiating agreements with some key Federal agencies, such as the Forest Service, the Bureau of Reclamation, and the National Park Service, to address project-related potential impacts on the Thunder Basin National Grasslands in Wyoming and the Buffalo Gap National Grasslands, the Angostura Irrigation District, and the Badlands National Park in South Dakota. A signed Negotiated Agreement between the Bureau of Reclamation and DM&E has been submitted, and we are requiring compliance with it in our environmental conditions (Condition No. 50).

<sup>30</sup> The site-specific mitigation measures SEA recommended (Condition Nos. 121-144) apply only to those communities and areas without Negotiated Agreements. But the other environmental mitigation measures apply across-the-board except as specifically noted in the conditions themselves.

effective, and in some cases more far-reaching, than the mitigation we might impose unilaterally. To encourage and give effect to negotiated solutions whenever possible, the opportunity to negotiate such agreements will remain available throughout the environmental oversight process.<sup>31</sup> Negotiated agreements reached after our decision here will be deemed to be an acceptable alternative to the specific local mitigation imposed here for a particular community.<sup>32</sup>

*Consideration of Alternatives.*

At the “heart” of an EIS is the consideration of alternatives,<sup>33</sup> and the EIS in this case contains an extensive and detailed evaluation of a variety of potential alternative alignments to extend DM&E’s existing system westward into the PRB.<sup>34</sup> In identifying feasible alternatives for the construction proposal in general, and more specific routing alternatives for portions of the project, SEA considered factors such as rail line design and engineering constraints, operation and maintenance costs, and potential environmental impacts.

a. *Alternatives for the New Rail Line.*

1. *Alternatives into the PRB.*

The four major alternatives for the new line considered in the Draft EIS included: the No-Action Alternative (i.e., no authorization for DM&E to construct or operate a rail line extension into the PRB) (“Alternative A”); the route proposed by DM&E in its application (“Alternative B”); the route subsequently developed by DM&E to avoid environmentally sensitive areas along the Cheyenne River (“Alternative C”); and an alternative that, although

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<sup>31</sup> The terms of Negotiated Agreements submitted to us during the environmental oversight period would be substituted for the site-specific environmental mitigation conditions imposed in this decision.

<sup>32</sup> The City of Waseca, MN, in its letter dated December 31, 2001, asks us to impose grade-crossing protection on one highway grade crossing in the County of Waseca, just outside the City limits. However, the level of traffic at this crossing does not warrant the requested protection. The City and County are free to attempt to negotiate an agreement with DM&E regarding this crossing.

<sup>33</sup> See *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 194 (D.C. Cir.), cert. denied, 502 U.S. 994 (1991).

<sup>34</sup> Tables from the Final EIS setting out the alternatives considered and SEA’s conclusions are attached to this decision as Appendix C.

about 100 miles longer than Alternatives B and C, would use existing transportation corridors to the extent practicable and avoid construction on Forest Service lands (“Alternative D”). SEA determined in the Draft EIS that, of the construction alternatives under consideration, Alternative D would have more significant environmental impacts than either Alternative B or Alternative C and that Alternative C would be less environmentally intrusive than Alternative B.

SEA received many comments on the alternatives analyzed in the Draft EIS and suggestions for alternatives not analyzed in detail in that document. These suggestions included a “Modified D Alternative” that EPA proposed (after issuance of the Draft EIS) to shorten Alternative D’s overall length and possibly reduce its potential environmental impacts. After careful consideration, SEA concluded in the Final EIS that the Modified D Alternative would have significant environmental impacts, many of which would be difficult or impossible to mitigate. *See* Final EIS at Chapter 3, p. 3-19. After considering SEA’s analysis, EPA concurred that Modified Alternative D would not be a reasonable alternative for this project. Ultimately, SEA concluded that Alternative C, specifically designed by DM&E to avoid potential environmental impacts, would be the environmentally preferable alternative for extending DM&E’s existing system westward into the PRB,<sup>35</sup> and we agree.<sup>36</sup>

Moreover, we concur in SEA’s analysis of the No-Action Alternative (Alternative A). The No-Action Alternative would prevent environmental impacts to a variety of resources. But, as SEA concluded in both the Draft and Final EIS, the No-Action Alternative could result in potentially significant environmental impacts of its own, because the existing line would likely continue to deteriorate, increasing the potential for train and train/vehicle accidents. The No-Action Alternative also would not meet the purpose of and need for this project — to allow DM&E to generate the necessary revenues to rehabilitate its existing line and to provide access to the PRB by a third competitive and efficient rail carrier.

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<sup>35</sup> SEA concluded that Alternatives B and C would each have basically the same impacts to safety, soils, paleontological resources, land use, wetlands, air quality and cultural resources. But, by avoiding the Cheyenne River, Alternative C would have less potentially significant effects on geology, water resources, vegetation, aesthetics, and Federally listed threatened and endangered species than Alternative B. Alternative C also would avoid potentially problematic geologic areas, as well as a large prairie dog complex. And Alternative C is the preferred construction alternative of the Forest Service, one of the cooperating agencies.

<sup>36</sup> We also concur in SEA’s conclusion that the following “Alternative C” route variations are environmentally preferable: the “Phiney Flat Alternative,” “WG Divide Alternative,” “Black Thunder North Mine Loop,” and the “North Antelope East Mine Loop.” *See* Appendix C.

## 2. *Mankato, MN.*

We will now discuss the more specific routing alternatives assessed for the new line, turning first to Mankato, MN. As SEA explained, DM&E currently operates over approximately 5.8-miles of existing rail line owned and operated by UP through Mankato pursuant to a trackage rights agreement with UP. DM&E's existing line ends approximately 1.2 miles northeast of Mankato, near Benning, MN, where it joins the existing UP line. DM&E's line begins again approximately 1.0 mile west of Mankato, in LeHillier, where it branches from the UP line. The UP line bridges the gap in the DM&E rail line through Mankato.

A number of alternatives have been considered for Mankato (*see* Appendix C).<sup>37</sup> As SEA concluded, "Alternative M-3," an existing corridor route involving construction of a new line within UP's right-of-way in the City, would be the environmentally preferable alternative for the Mankato area.<sup>38</sup> But Alternative M-3 could not be built without an agreement between UP and DM&E. Absent such an agreement, Alternative M-2 (new construction south of Mankato proposed by DM&E), with mitigation, would be the only other feasible alternative in Mankato,<sup>39</sup> for the reasons discussed in the Final EIS.

The City of Mankato, the Mankato Area Coal Train Coalition (Coalition), and Senator Dayton have raised concerns about the analysis of Alternative M-3 in the EIS. On December 12, 2001, the City submitted a letter arguing that we should impose a requirement that DM&E obtain the City's approval, in addition to UP's permission, before the M-3 route could be constructed. The City points to a Table in the Draft EIS (Chapter 6, Table 6-7), where SEA observed that the City should have a role in ensuring the safety of Mankato's Flood Control Project (involving a flood wall which holds back the Minnesota River) if an agreement is reached between UP and DM&E permitting construction of Alternative M-3.

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<sup>37</sup> For example, an earlier "Alternative M-4" (the Northern Route, which would provide a connection north of Mankato) was rejected by SEA and not considered in the Final EIS because it would require extensive cut and fill and would cross a major flood plain.

<sup>38</sup> "Alternative M-2" would have potentially significant impacts on the community of Skyline, MN (including the taking of homes) that would be avoided under Alternative M-3. Moreover, locating an additional line in an existing rail corridor generally is preferable and has less impact on the environment than constructing a new line on previously undisturbed land.

<sup>39</sup> SEA recommended mitigation for both Alternative M-2 and Alternative M-3, as it is not known at this point whether DM&E and UP will reach an agreement permitting construction of Alternative M-3. Mitigation will be imposed for both of these alternatives.

We see no need to require approval from the City for DM&E to construct the M-3 route.<sup>40</sup> The City's interest in preserving the integrity of the flood wall if Alternative M-3 were constructed can be addressed through the condition requiring DM&E to coordinate with the Corps and local agencies prior to construction of Alternative M-3 to prevent adverse impacts from project-related rail line construction and operation to flood control structures (Condition No. 68). We are modifying Condition No. 68 to specifically require DM&E to coordinate with the City (as well as the Corps and local agencies). The City has not shown that any additional conditions relating to this matter are warranted.<sup>41</sup>

In a letter dated December 5, 2001, the Coalition contends that SEA failed to obtain soil borings in its testing of the Mankato Flood Control Project for Alternative M-3. The Coalition also argues that the Corps, not the Board, has final review authority over potential impacts of the DM&E proposal on the Flood Control Project and that SEA's vibration analysis, which was prepared in response to comments on the Draft EIS, constitutes new information and therefore should be subject to further public review and comment.

The Coalition's arguments lack merit. In its analysis, SEA used soil borings (and soil profiles and tests on soil strength), which had been taken as part of the original design and construction of the Mankato flood wall. Because this information, which the Corps provided, was already available, it was not necessary for SEA to obtain additional borings. Furthermore, nothing in SEA's analysis undermines the authority of the Corps over the Flood Control Project.<sup>42</sup>

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<sup>40</sup> Because the M-3 route would be built on UP's right-of-way, or on property on which UP already has a rail easement from the City, only UP's permission would be needed for DM&E to construct a rail line over this route.

<sup>41</sup> The City has not supported its claim that additional testing of the Mankato Flood Control Project is needed and should be coordinated with the City and the Corps. There already has been adequate testing, and that testing supports the conclusion that potential vibration impacts would not compromise the safety of the flood wall. Furthermore, before Alternative M-3 could be constructed, the Corps would thoroughly review the Flood Control Project as part of its permitting responsibilities under the Clean Water Act.

The City and Senator Dayton also express concerns that DM&E could simply use its existing trackage rights agreement with UP to move all of its unit coal trains through Mankato. However, as discussed in Chapter 7 of the Final EIS (at pp. 7-4 and 7-5), given the amount of coal traffic contemplated by DM&E, the traffic could not move efficiently unless DM&E either avoids the UP trackage rights area entirely, by constructing a new line south of Mankato (Alternative M-2), or constructs and operates a dedicated line through the City on the UP right-of-way (Alternative M-3). Either of these options would require our approval.

<sup>42</sup> Rather, SEA has streamlined and expedited the environmental review by working with the Corps and the other cooperating agencies throughout the process and by preparing an EIS containing  
(continued...)

To the contrary, the EIS contemplates that, following issuance of this decision, the Corps will issue its own decisions on the applications DM&E has already submitted to that agency related to this project.<sup>43</sup> In reviewing DM&E's applications, the Corps will determine whether the PRB Expansion Project would impact the Mankato flood wall and could impose its own mitigation, if reasonable, in addition to the mitigation we are requiring.

Furthermore, we see no need for additional comment on the results of SEA's testing, which are presented in the Final EIS. The Mankato flood wall is not a new issue. Concerns about the flood wall were first raised during scoping and were discussed in a general manner in the Draft EIS. The Final EIS simply provided scientific validation for the preliminary conclusions in the Draft EIS, in response to the comments that had been received on that document. Therefore, the analysis in the Final EIS does not constitute new information requiring additional public review and comment. There is a need for finality in the environmental review process, especially in energy-related matters,<sup>44</sup> and, if we were required to provide for additional public review and comment every time SEA refines its analysis, the NEPA process would be endless.

Finally, Senator Dayton in his letter of December 21, 2001, asks that we impose the 17 conditions in the mitigation plan the City submitted to SEA in its comments to the Draft EIS for Alternative M-3. We have considered all of these requested conditions, but have imposed only those measures we deem reasonable and consistent with our established practice. The other conditions are not warranted.

As for Alternative M-2, EPA, in consultations with SEA, has raised concerns regarding the amount of fill that could be placed in the Blue Earth River. These concerns relate to language in DM&E's letter to SEA dated July 6, 2001. In that letter, DM&E made the following statement in discussing potential impacts to the City of Skyline:

Although final design [of Alternative M-2] has not been completed, the preliminary design information will involve utilizing the steepest slopes consistent with sound engineering 2:1 or 3:1 (based on final geotechnical data to be collected), combined with the use of retaining walls to limit the uphill slope to be impacted.

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<sup>42</sup>(...continued)  
information required by all of the cooperating agencies.

<sup>43</sup> See Condition Nos. 59 and 68.

<sup>44</sup> See Executive Order No. 13212, *Actions to Expedite Energy-Related Projects*, signed by President Bush on May 18, 2001.

EPA has indicated that the reference to slopes of 2:1 or 3:1 in DM&E's letter can be read to suggest that DM&E would try to avoid placing large quantities of fill in the Blue Earth River in conjunction with the construction of retaining walls, but that the language would not preclude DM&E from doing so if the final design requires fill in the river. In preparing the Final EIS, SEA looked into preliminary design possibilities. Based on its investigation, SEA does not believe that DM&E plans to, or would need to, place any fill in the Blue Earth River in conjunction with construction of these retaining walls. This also would be consistent with the current information in DM&E's permit application filed with the Corps.

Nevertheless, it is possible that DM&E could find, in conducting its final engineering of the M-2 route, that construction of the retaining walls would require the placement of some fill in the Blue Earth River. If this is so, it would constitute a material change in circumstances (and could affect the Section 404 permit process undertaken by the Corps). In that event, DM&E would need to provide details regarding construction of the retaining walls in its next quarterly report required as part of our environmental oversight. We would then review DM&E's information and notify EPA and the Corps. If warranted, we could prepare further environmental analysis and impose additional mitigation at that time.

### 3. *Owatonna, MN.*

Currently, DM&E does not own a rail line through Owatonna, but operates over a UP line, via a trackage rights agreement, through the town to connect the ends of its existing system on the east and west sides of Owatonna. UP does not operate trains over the section of line it owns. Thus, DM&E generally is able to operate with few, if any, restrictions upon its use of this UP rail line. As distinct from Mankato, DM&E did not propose any track changes in Owatonna to accommodate DM&E's proposed increased rail traffic through Owatonna on the UP line. Instead, DM&E proposed a new rail connection with the I&M system.

DM&E initially proposed constructing a new 2.94-mile rail line to connect the existing rail line in Owatonna to the I&M system. SEA evaluated five alternatives for construction and operation of a new rail line connection with the existing rail line. SEA concluded that "Alternative O-5" (replacing an existing rail diamond switch with a "Y" connection to connect DM&E's line with I&M) would be the environmentally preferable route through Owatonna, because it would require minimal upgrading of the existing line. *See* Appendix C. But as explained in the EIS, Alternative O-5 could not be implemented without an

agreement between UP and DM&E that would allow DM&E to connect with I&M. Therefore, SEA identified “Alternative O-4” (construction and operation of a 1.7-mile loop to connect with I&M) as the environmentally preferable route if there is no such agreement. We agree with SEA’s determinations.

#### 4. *Rail Yards.*

For project-related rail yards on the new line, we adopt SEA’s conclusion that for the West Yard in Wyoming, “Option B” would be environmentally preferable, because it avoids impacts to Thunder Basin National Grassland. *See* Appendix C.

#### b. *Alternatives for the Existing Line: Rehabilitation or Bypasses.*

As noted above and in our *1998 Decision*, the rehabilitation of DM&E’s existing line does not require authority from us under 49 U.S.C. 10901. However, because the rehabilitation of DM&E’s existing line would not occur but for the expansion of DM&E’s system, our environmental analysis covers the projected increased use of the existing line and addresses alternative routings for handling the traffic; and, because of the permitting requirements of the Corps, the EIS looks at the environmental impacts of the rehabilitation itself.<sup>45</sup>

##### 1. *Rochester, MN.*

An alternative to DM&E’s proposal to rehabilitate the existing line through Rochester is the proposed Rochester bypass to the south. For the reasons discussed below, we concur in SEA’s analysis that reconstruction and operation of DM&E’s existing line through Rochester is environmentally preferable to the bypass alternative.

As explained in the Final EIS, there is a high probability of karst topography along the Rochester bypass route, which makes it likely that there are substantial

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<sup>45</sup> Part of the analysis of the existing line includes project-related rail yards. We agree with SEA that “Option B” (construction and operation of a new rail yard east of New Ulm, MN) for the Middle East Yard (one of the project-related yards for which alternatives have been identified) is environmentally preferable. *See* Appendix C.

numbers of hidden subsurface voids that could collapse to form sinkholes<sup>46</sup> in this area.<sup>47</sup> Therefore, construction and operation of a railroad for coal transport along this route would entail a significant risk.<sup>48</sup> While construction and operation of the bypass may be theoretically possible, the Final EIS makes it clear that, given the karst topography and the possibility of sinkholes, the mitigation and monitoring that would be necessary to operate a rail line for unit coal trains along the bypass route would be prohibitively expensive. Moreover, even if the costs could be justified, the necessary mitigation — which could entail construction of a cement dam or wall under the rail line — could itself have potentially significant impacts on groundwater flow, thereby affecting wetlands, springs, streams, rivers, vegetation, and wildlife and their habitat. In any event, such a mitigation strategy would not significantly reduce the risk of potential collapse because groundwater flow is a key element in sinkhole formation, and changes in groundwater flow could cause sinkholes to form in a more accelerated fashion and/or in areas where they may not otherwise have formed.

SEA has developed tailored mitigation for rehabilitation of the existing line through Rochester, including two separated grade crossings,<sup>49</sup> grade-crossing protection devices, and noise mitigation. In addition, SEA recommends that we require DM&E's upper management to meet with Mayo Clinic representatives on a regular basis throughout the environmental oversight period to discuss how

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<sup>46</sup> Sinkholes are locations where the top of a subsurface void, or opening (formed through the dissolution of carbonate-type rock), has partially collapsed, creating an opening from the surface down to the void. Sinkholes can vary in size, and the voids under them may be only a few cubic yards or hundreds of thousands of cubic yards in size.

<sup>47</sup> In contrast, the proposed reconstruction and operation of the route through the City appears to pose no threat of sinkholes. As SEA noted, the existing route has been in operation for over 100 years, and, if there were a significant potential for sinkholes, they would presumably have developed already.

<sup>48</sup> Sinkholes present a risk during rail line construction and operation because heavy construction equipment and coal trains could cause the collapse of underground caverns. In addition, if new sinkholes form in the future, train derailments could result. Indeed, as noted in the Final EIS (at Chapter 9, p. 9-13), it appears that unstable geologic formations may have played a role in a recent Amtrak derailment elsewhere.

<sup>49</sup> Under the recommended condition, DM&E would be required to install the first grade-separated crossing prior to transporting more than 20 million tons of coal annually through Rochester for more than a year. The second grade-separated crossing must be installed prior to DM&E transporting more than 50 million tons of coal annually through Rochester for more than a year. Also, the grade-separated crossings must be designed and located to facilitate the movement of emergency vehicles to and from medical facilities providing emergency services in Rochester, including St. Mary's Hospital and Methodist Hospital.

best to minimize project-related impacts on the Clinic, one of the premier health care facilities in the world.

We recognize that, even with this mitigation — which is more far-reaching than that which we normally impose — there would be impacts on the City if the route through Rochester is reconstructed and coal trains operate over it.<sup>50</sup> Nevertheless, we agree with SEA that, in light of the potential risk of sinkholes associated with the Rochester bypass and the fact that mitigation to fill sinkholes would have its own potentially significant effects, the bypass route option simply cannot be adopted. Moreover, we are satisfied that certain impacts of the route through town, such as vibration, likely would be less severe than originally thought.<sup>51</sup> And some of the potential impacts to Rochester associated with rebuilding the existing line might never occur, as DM&E has stated that it could interchange at least some of its coal traffic at points west of Rochester, in which case coal traffic through Rochester would not rise to the full projected level of 100 million tons annually. Finally, as SEA pointed out, construction and operation of the Rochester bypass, which would cross rural agricultural land, would have other potentially significant impacts (primarily to natural resources, farmland, and wetlands). Also, as pointed out in the EIS, the effects of the bypass on emergency-vehicle response would be similar to, or worse than, the impacts of increased operations over the existing line.

In a joint letter dated December 21, 2001, Senators Hollings, Wellstone, and Dayton suggest that we provide an additional 90-day period for the Mayo Clinic and others to submit scientific and medical information to support their assertion that DM&E's proposal would severely impact the Mayo Clinic, Rochester, and other communities in Minnesota.<sup>52</sup> But, as previously noted, SEA has undertaken an extensive analysis of Rochester and the other affected communities in Minnesota. Indeed, as part of its assessment (*see* n.26, *supra*), SEA thoroughly addressed the potential impacts of this project on the Mayo Clinic and the Federal Medical Center in Rochester in response to specific

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<sup>50</sup> Impacts along this largely developed urban route would include noise and potential delay to emergency-vehicle response.

<sup>51</sup> For example, Mayo expressed concerns related to the potential health-related risks that construction and operation of the route through the City could have to patients of the Mayo Clinic and the community. In response, SEA conducted extensive additional analysis and found that the Mayo Clinic would not experience significant project-related noise and vibration impacts because it is located several blocks from the rail line.

<sup>52</sup> *See also* the similar request by Mayo in its petition filed December 21, 2001. Mayo, however, fails to identify any issues that it believes warrant further comment. Its petition to reopen, which does raise specific issues, is addressed below.

concerns raised in comments to the Draft EIS regarding the health and safety of patients at the Mayo Clinic, the impact on sensitive scientific diagnostic equipment, and the future viability of the Mayo Clinic.

The concerns raised regarding potential impacts on Rochester and the Mayo Clinic are not new issues.<sup>53</sup> Similar concerns were raised as far back as 1998, during the scoping process, and the Rochester bypass was first proposed in January 1999. The Mayo Clinic and all other interested parties have had ample opportunity to submit any information they deem relevant, including alternative alignments, during the EIS process, and they have availed themselves of this opportunity in numerous pleadings. As previously noted, there is a need for finality in the environmental review process, and no legitimate purpose would be served here by permitting the submission of still more information on the same issues that have already been addressed. The conclusions and recommendations reached in the Final EIS are adequately supported, and no need has been shown for a formal comment period to allow for the submission of additional information by the Mayo Clinic or any other parties before we issue our final decision in this case.

In a separate letter also dated December 21, 2001, Senator Wellstone contends that, if there is no formal comment period on the Final EIS, we should deny the proposed PRB Expansion Project because the anticipated environmental impacts have not been adequately addressed and SEA's final mitigation recommendations are unsatisfactory. We disagree. SEA conducted an extensive analysis of — and devoted an entire chapter of the Final EIS to — the anticipated effects of this project on Rochester and the Mayo Clinic. Moreover, the mitigation we are imposing is unprecedented in its breadth. Senator Wellstone suggests that we should impose all of the mitigation proposed by Rochester (i.e., 3 to 5 grade separations, noise mitigation at 65 decibels, mitigation to address alleged vibration impacts, establishment of a quiet zone, and construction of pedestrian/bicycle trails). But we are satisfied that two separated crossings would be adequate; noise mitigation at the 70 decibel level is sufficient and consistent with our established practice in other cases; and our mitigation already includes measures to address vibration concerns. We do not believe that requiring quiet zones or the construction of the requested pedestrian or biking

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<sup>53</sup> A petition to reopen the record, filed by Mayo on November 16, 2001, and recent correspondence from Secretary Thompson and from Congressman Murtha, suggest that recent train accidents involving hazardous materials and security issues relating to the terrorist attacks of September 11, 2001, raise new issues that require further study. We will address these concerns below as part of our transportation analysis.

trails would be appropriate here. Quiet zones are a matter that should be (and will be) addressed by the Federal Railroad Administration (FRA), the federal agency with the expertise and responsibility for determining the safety of such measures. As to the request for additional trails, we are not persuaded that the increase in the number of trains operating through Rochester would so impede use of existing trails there that other trails should be required.

Finally, in a separate letter dated December 21, 2001, Senator Dayton raises many of the same concerns raised by Senator Wellstone, addressed above.<sup>54</sup> But, despite ample opportunity to do so, no one has suggested an alternative alignment in the Rochester area that would avoid impacts to the City and the Mayo Clinic without introducing them elsewhere and that would also avoid the karst topography located south of the City.

For these reasons, we concur in SEA's analysis and recommendations. The EIS provides us with the information we need to make a fully informed decision on the environmental issues involving Rochester and the other communities in Minnesota.

## *2. Brookings, SD.*

Turning to alternatives involving Brookings, the Final EIS addresses the potential environmental effects of the bypass originally proposed by Brookings, as well as the slightly shorter "Railco Bypass" Alternative (which the City submitted as a comment to the Draft EIS) and rehabilitation of DM&E's existing line. Both the original Brookings bypass and the Railco Bypass would have greater environmental effects than the proposed reconstruction of the existing line to handle unit coal trains.<sup>55</sup> Therefore, we conclude that rehabilitation of the existing line (with SEA's recommended mitigation) would be environmentally preferable.

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<sup>54</sup> Senators Wellstone and Dayton also raise concerns relating to the transportation merits. In addition, Senator Dayton suggests specific mitigation for Eagle Lake, and Winona, MN. We address those concerns below.

<sup>55</sup> Either bypass would require the taking of prime agricultural land, and both bypasses would disrupt agricultural lands along either side of the bypass route. Moreover, weight restrictions on the existing line that prevent the use of rail cars large enough to meet newer industry standards (a capacity of 286,000 pounds versus 263,000 pounds) would deprive Brookings shippers of the benefits of the upgrade in the event either bypass were constructed. And one existing shipper would lose the spur serving its facility because it would be cut off by the proposed bypass.

### 3. *Pierre, SD.*

Finally, it is clear that the proposed Pierre bypass, which would cross rural and agricultural land, would have significant environmental and engineering constraints. In particular, the Pierre bypass would have potentially significant impacts on cultural resources, Lake Sharpe, aesthetics, land use, and geology and soils. Moreover, these impacts would be more difficult to mitigate than the impacts that would be caused by rehabilitating the existing route to permit unit coal trains.<sup>56</sup>

We have considered the claim of a number of commenters that upgrading DM&E's existing line through Pierre and Fort Pierre would cause substantial disruption to the citizens and visitors to those communities.<sup>57</sup> But based on all the problems with the bypass detailed in the EIS, we conclude that the Pierre bypass would not be workable. Accordingly, rehabilitation of DM&E's existing line, with appropriate site-specific mitigation, would be the environmentally preferable alternative for Pierre.<sup>58</sup>

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<sup>56</sup> For example, the Pierre bypass would require building a new bridge, more than 1.5-miles in length, across one of the widest points of the Missouri River, permanently impacting wetlands and resulting in significant erosion and sedimentation problems. In contrast, use of the existing line for unit coal trains could be accomplished by rehabilitating DM&E's existing bridge across the Missouri River, which is approximately 1/5th the length of the new bridge and is located in a previously disturbed area.

<sup>57</sup> As the capital of South Dakota, Pierre is a regional commercial center, and large numbers of visitors attend conventions and meetings and consult with legislators in Pierre. The State government has offices on both sides of DM&E's track, and the Governor of South Dakota has raised concerns about increased rail traffic through Pierre hindering access to State offices. Also, the rail line is located in close proximity to Pierre's only hospital.

<sup>58</sup> The mitigation for Pierre includes the installation of a grade-separated crossing in Pierre and wayside noise mitigation. This mitigation is appropriate because all unit coal trains associated with this project would pass through Pierre and Fort Pierre and, as SEA's analysis shows, a grade-separated crossing is the most reasonable way to address safety concerns, facilitate emergency vehicle access, and minimize traffic disruptions and noise for citizens and visitors to the State Capitol. Fort Pierre has entered into a Negotiated Agreement with DM&E addressing environmental concerns in that community. Therefore, we are not including any site-specific mitigation for Fort Pierre.

*Environmental Mitigation.**a. The Nature of Our Mitigation.*

SEA has developed extensive mitigation measures to address the potential significant adverse environmental impacts related to this project.<sup>59</sup> SEA's final recommended mitigation — 147 conditions in all — reflects the variety and complexity of the environmental issues associated with the PRB Expansion Project, which spans three states, would affect rural, farm, ranch, and traditional Tribal lands, as well as communities, and involves five Federal cooperating agencies.<sup>60</sup> This mitigation includes both general and site-specific measures. And it addresses both short-term construction-related environmental impacts and impacts related to long-term operation of unit coal trains. Some measures are dependent upon the amount of coal DM&E would transport.

Due to the unique circumstances involved in the PRB Expansion Project, SEA has recommended, and we are imposing, far-reaching and extensive mitigation measures. For example, to address potential safety concerns, we are requiring three grade-separated crossings (one in Pierre and two in Rochester), and extensive grade-crossing improvements in numerous locations (with the cost to be borne largely by DM&E).<sup>61</sup> There is also mitigation to reduce wayside noise for specific noise receptors in communities without Negotiated

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<sup>59</sup> Our general practice, which we follow here, is to mitigate only those environmental impacts that would result directly from an approved transaction, and not existing conditions and existing railroad operations.

<sup>60</sup> The mitigation includes conditions requiring DM&E to obtain various approvals from the cooperating agencies and other agencies that participated in the environmental review process and raised concerns that should be addressed.

<sup>61</sup> DM&E submitted a Grade Crossing Mitigation Plan addressing all grade crossings on both the new line and the existing line that will be rebuilt. DM&E states that its plan would provide a level of grade-crossing protection significantly better than that found on any comparable rail line in the United States. Furthermore, DM&E indicates that it would pay for 90% of the cost of the crossing-protection upgrades on the existing line provided for in its plan (which is significantly greater than railroads' typical contributions), resulting in significant savings for State and local entities. For grade-crossing protections on the new line, DM&E states that it would fund 100% of the cost. The mitigation that we are imposing generally requires DM&E to comply with the grade-crossing safety plans and funding commitments in its plan. DM&E would have to complete specified grade-crossing protections prior to moving trains at the 20-million, 50-million, or 100-million annual coal tonnage levels, and must certify to us such completion in the quarterly reports that would be required.

Agreements,<sup>62</sup> and to address water quality, wetlands,<sup>63</sup> fencing, and biological and cultural resource concerns. And DM&E would be required to establish a community liaison and a Tribal liaison to facilitate ongoing consultations between DM&E and affected communities and Indian Tribes. Indeed, in its December 27, 2001 letter EPA specifically praised the extensive mitigation we are imposing here to protect the environment.

Even with all of this mitigation, there could be some significant adverse environmental impacts. However, the nature and extent of these effects are not so severe that they warrant denying the application, given the transportation and safety benefits of the project, which, as discussed below and in the *1998 Decision*, would further the public interest.

In view of the complexity of this project, its geographic scope, and the environmental issues, we agree with SEA that a formal environmental oversight process is warranted in this case. Through this continuing environmental oversight process, we would monitor DM&E's progress in implementing the environmental mitigation and also resolve unanticipated environmental problems that could arise during implementation of this major rail construction project.<sup>64</sup> Additionally, communities or other interested parties could seek redress if there are unanticipated problems or if there is a material change in the facts or circumstances upon which we have relied here in imposing specific environmental conditions.<sup>65</sup> The environmental oversight period will continue through the first 2 years of project-related operations,<sup>66</sup> and we are expressly reserving jurisdiction to take appropriate action, if necessary.<sup>67</sup> We will require

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<sup>62</sup> The City of Owatonna, in a letter dated December 11, 2001, asks us to impose noise mitigation for specific noise receptors in Owatonna, notwithstanding the fact that it has a Negotiated Agreement with DM&E. But our practice is not to get involved in setting the terms of mutually acceptable Negotiated Agreements or to impose site-specific mitigation for communities with Negotiated Agreements, and Owatonna has not shown a reason to impose site-specific noise mitigation here. Owatonna, however, is not without any noise mitigation, as the general noise mitigation conditions (Condition Nos. 86-94 and 96) would apply to it.

<sup>63</sup> As EPA notes in its letter reviewing the EIS, there will be additional scrutiny and more specific mitigation by the Corps, in the Corps' ongoing Section 404 permitting process, to ensure adequate wetland restoration. EPA will be participating in the Corps' process.

<sup>64</sup> However, the environmental oversight is not intended as a vehicle for parties to raise environmental issues that could have been, but were not, raised in the environmental review process.

<sup>65</sup> For example, in a letter dated December 27, 2001, EPA has notified us that there have been recent violations of the National Ambient Air Quality Standards for "PM10" in the PRB, following issuance of the Final EIS, but that the significance of these violations has not been determined.

<sup>66</sup> By this we mean 2 years of rail operations after DM&E begins hauling coal from the PRB.

<sup>67</sup> We have added language clarifying SEA's recommended oversight conditions.

DM&E to submit quarterly reports during the oversight period detailing compliance with our mitigation conditions.

In his letter dated December 21, 2001, Senator Dayton requests that we impose extensive mitigation for Eagle Lake, MN. But some of the conditions suggested by Senator Dayton would not be appropriate (i.e., relocating businesses and residences and building a pedestrian overpass). Others, such as fencing conditions and weed control, are similar to conditions that will apply to this entire project, including Eagle Lake.

Senator Dayton also asks that we impose mitigation for Winona, MN. However, Winona is not located on the DM&E line. While Winona would experience down-line impacts if DM&E should interchange coal traffic with the Canadian Pacific Railroad (CP) line, which goes through Winona, we cannot require DM&E to take action on property it does not own. Nor can we impose requirements on CP, which is not before us in this proceeding. Therefore, while potential project-related impacts on Winona have been analyzed in the EIS, no mitigation for Winona will be imposed.<sup>68</sup>

b. *DM&E's Concerns.*

By letter dated December 13, 2001, DM&E also has raised concerns about some of the mitigation recommended in the Final EIS. DM&E's primary concern<sup>69</sup> is that the consultation requirement in Condition Nos. 121 and 138 would mean that the communities of Rochester and Pierre would have to agree to the design, location, and funding of the required grade separations and would therefore be able effectively to veto, or at least unreasonably delay, the entire project.<sup>70</sup> We do not believe that would be the case. We are confident that

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<sup>68</sup> However, Winona is free to negotiate a mutually satisfactory private agreement with CP, DM&E, or both.

<sup>69</sup> DM&E also requests that we add language to the grade separation conditions to include the Federal Highway Administration as one of the parties with whom DM&E must consult. We will do so.

<sup>70</sup> DM&E also suggests in its letter that SEA made erroneous assumptions about DM&E's current train speeds through Rochester and Pierre and that it was these erroneous assumptions that led SEA to recommend grade separations in those communities. We note that DM&E failed to question the data used to calculate potential traffic delay (i.e., the amount of time vehicles must wait for trains to pass) in its comments on the Draft EIS. More importantly, however, as the Final EIS specifically states (in Chapter 12 at pp. 12-10 and 12-11), SEA's vehicular delay calculations were not the basis for recommending grade-separated crossings in Rochester and Pierre. Rather, the Final EIS makes it clear that grade-separated crossings are warranted here because of the totality of the  
(continued...)

DM&E and the affected communities will work together and adopt reasonable plans to implement the grade-crossing separation conditions in a timely fashion so that the grade separations can be completed by the time the project reaches the specified coal tonnage levels. Although DM&E questions whether the communities will cooperate in good faith, we believe that Pierre and Rochester will find it to be in their best interests to provide their full support to make these grade-separated crossings a reality, given that bypasses are not a viable option. But if they do not, DM&E could bring that to our attention in the environmental oversight process, and, if it has taken reasonable steps to work with Pierre and Rochester but the communities are uncooperative or unreasonable, or our time requirements for completing the grade-separation structures turn out not to be realistic, DM&E could seek appropriate redress, including modification of the conditions.<sup>71</sup>

DM&E is also concerned that the grade-crossing separation conditions could be read to require DM&E to bear 100% of the costs associated with designing and constructing these grade separations. This is not the case. Although our conditions do not specify how the grade-separations costs should be borne, it is not our intention to place an unreasonable burden on DM&E. The grade separations in Pierre and Rochester will benefit those communities. Therefore, it is reasonable to expect entities other than DM&E to bear a substantial share of the costs. The communities, DM&E and other interested parties can, of course, seek assistance under the Federal Aid Highway Program or pursue other funding opportunities. If funding is obtained, DM&E has offered to pay 100% of the normal and customary local cost share. This appears to be a reasonable approach. However, if DM&E and the communities cannot arrange for adequate funding and/or reasonable cost sharing within a reasonable time, either DM&E or the communities could bring the matter to our attention during the environmental oversight period and we will take appropriate action. Applicant and the communities are expected to cooperate in good faith throughout the implementation of this project.

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<sup>70</sup>(...continued)

particular circumstances relating to those two communities. In any event, SEA properly used the FRA data base here, as it has in prior cases, to provide a consistent source of information for all the grade crossings analyzed.

<sup>71</sup> As previously noted, DM&E (or any other party) also could seek redress through the environmental oversight process if any other conditions are found to be unworkable after attempts to implement them.

DM&E argues that we lack jurisdiction to impose conditions related to the existing line. However, as previously noted, we have broad power to impose conditions, so long as they are supported by the record and there is a sufficient nexus between the condition imposed and the transaction before us. Accordingly, we plainly have authority to impose mitigation to address the effects of increased operations on the existing line that would not occur but for the expansion of DM&E's system authorized here. *See City of Auburn*. Thus, where appropriate, we have properly made our final approval of this project subject to conditions designed to mitigate project-related environmental impacts on both DM&E's existing line and the new line.<sup>72</sup>

Finally, DM&E requests various minor changes to certain conditions recommended in the Final EIS. We believe that some of these requests are reasonable and, where appropriate, we are modifying the conditions.<sup>73</sup>

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<sup>72</sup> Most of the mitigation that applies to the existing line addresses the impacts of increased use of the existing line that would result from the expansion of DM&E's system into the PRB. However, we recognize that, as DM&E points out, some of the conditions that SEA recommended, and we are imposing, relate to upgrade components of the project. As we have explained, the EIS looked at the upgrade components because of the participation of cooperating agencies. Some of the conditions relating to upgrade activities were specifically requested by cooperating agencies. Others are simply notification or coordination requirements or conditions requiring best management practices, which we feel should be consistent on both the construction of the new line and rehabilitation of the existing line. Having looked at the impacts or upgrade activities as part of the EIS process here, we do not believe that we can or should ignore impacts that can be easily mitigated. In short, conditions that do not specify the activity to which they apply (construction or reconstruction) involve activities that should be conducted uniformly (*see, e.g.*, Condition Nos. 45, 66, and 93). Therefore, they apply to both the new construction and the upgrade of the existing line.

<sup>73</sup> Specifically, we have made some or all of DM&E's requested modifications to Condition Nos. 18, 33, 55, 56, 73, and 92. Furthermore, we agree that we should substitute "to the extent practicable" for "to the extent possible" in our conditions and have modified our conditions accordingly as DM&E requested. We will not make the other modifications or deletions DM&E requests. For example, contrary to DM&E's request to modify Condition No. 31, DM&E should inspect its fencing regularly (as the condition specifies), not simply annually, as DM&E suggests. We find Condition No. 37 reasonable as written, because it is not mandatory and simply requires that DM&E be guided by the Land Use Mitigation Policy and Plan. Condition No. 104, involving native prairie remnants, is not excessive and responds to the concerns raised by the state agencies mentioned in the condition. Finally, Condition No. 127 has been retained, as no Negotiated Agreement involving Courtland, MN, has been submitted to us.

## II. TRANSPORTATION ANALYSIS

### *Preliminary Matters.*

On November 16, 2001, Mayo filed a petition to reopen the record to consider what it claims are “newly defined public interest issues.” In essence, Mayo argues that recent train accidents involving hazardous materials, coupled with heightened concerns for public safety following the terrorist attacks of September 11, 2001, necessitate reopening the record to receive additional evidence on safety and security matters before we issue our final decision in this case. Secretary Thompson and Congressman Murtha raise similar security issues in their letters.<sup>74</sup> They argue that the transportation of hazardous materials near Mayo’s facilities raises potential security issues, and therefore ask us to review these matters again before reaching a final decision here.

No need has been shown to reopen or to have the record supplemented. In the *1998 Decision*, we specifically found that approval of the proposal would lead to improved facilities and increased safety on DM&E’s existing rail line, because revenues generated from the new rail line would enable DM&E to institute system-wide improvements. Nothing in Mayo’s pleading or the correspondence that we have received demonstrates that this finding is incorrect or that there is a need for further evidence and argument on such matters. Safety has also been a paramount concern in our environmental review process, and 24 of the environmental conditions that we are imposing address safety concerns. Allowing this transaction to go forward will improve overall safety, rather than hinder it.

With respect to concerns raised involving the transport of hazardous materials,<sup>75</sup> nothing in the record suggests that any hazardous materials shipments would originate or terminate on DM&E’s new line. The purpose of building a new rail line into the PRB is to transport coal, not hazardous materials. Although DM&E currently hauls some hazardous materials on its present system, these shipments are part of DM&E’s existing railroad operations, and there is no indication that the amount of these materials transported is likely to

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<sup>74</sup> Secretary Thompson, Congressman Murtha, and Mayo refer to recent train derailments in Baltimore, MD, and other locations involving different railroads. They do not cite any accidents involving DM&E or the states affected by this project. See also the letter of the Mankato Area Coal Train Coalition, dated January 22, 2002.

<sup>75</sup> Similar concerns were raised during the environmental review process and addressed in the Final EIS.

increase. As such, hazardous materials shipments are a preexisting condition and are not part of the PRB Expansion Project. In any event, we are imposing mitigation (Condition Nos. 11-16) to address the safe handling of hazardous materials during project-related construction and reconstruction activities.

Finally, while we are directed to promote a safe rail transportation system in discharging our regular duties involving rail constructions and other matters that require action by us,<sup>76</sup> FRA has primary authority to ensure railroad safety under the Federal Rail Safety Act (FRSA), 49 U.S.C. 20101 *et seq.* Railroads are legally bound to comply with the comprehensive across-the-board safety measures adopted under FRSA on all of their lines, regardless of any specific mitigation that we may impose in our case-specific environmental review of individual proposals that require Board approval.

In sum, we have already taken public safety and hazardous materials transport into account in our consideration of this proposal. Moreover, we do not see any security issues relating to DM&E's proposed expansion and increased use of its existing system that are separate and distinct from security issues facing the railroad industry generally, or that are specific to the Mayo Clinic. And, with respect to rail security, Mayo acknowledges that the risks to public health and safety associated with the transportation of hazardous materials are being examined by the Department of Transportation.<sup>77</sup> We see no need to engage in a separate study here.<sup>78</sup> Thus, Mayo and its supporters have not demonstrated the need for yet another round of evidentiary filings, and Mayo's petition to reopen will be denied.

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<sup>76</sup> The Rail Transportation Policy (RTP) provides, in relevant part, that, "[i]n regulating the railroad industry, it is the policy of the United States Government \* \* \* to promote a safe and efficient rail transportation system" \* \* \* [by requiring rail carriers to] operate transportation facilities and equipment without detriment to the public health and safety \* \* \*." 49 U.S.C. 10101(3) and (8). The RTP also instructs us "to encourage \* \* \* safe and suitable working conditions in the railroad industry." 49 U.S.C. 10101(11).

<sup>77</sup> DM&E, like any other railroad, has to comply with all regulations in place covering transportation safety, security, and the handling of hazardous materials.

<sup>78</sup> As Congressman Murtha notes in his letter dated January 18, 2002, any railroad line through a populated area can have a derailment resulting in potential public safety and security issues. But our licensing of railroad construction projects would come to a standstill if we were to hold up all proposals involving populated areas to launch additional studies because of a generalized possibility that a security breach or derailment due to other causes could potentially occur.

*Final Consideration of DM&E's Proposal.*

As discussed above and in the EIS, we now have detailed information on the nature and extent of the potential environmental effects of this project, as well as the costs associated with the mitigation imposed here, the mitigation likely to be required by the cooperating agencies, and the 51 Negotiated Agreements.<sup>79</sup> Now we must assess whether the potential environmental impacts and/or the projected cost of the environmental mitigation lead us to change our preliminary determination in the *1998 Decision* or give final approval to the proposal under 49 U.S.C. 10901.

As noted in the *1998 Decision*, this construction application is governed by 49 U.S.C. 10901(c), which, as amended by the ICC Termination Act of 1995,<sup>80</sup> provides that “[t]he Board shall issue a certificate authorizing [the construction and operation of a new rail line] unless the Board finds that such activities are inconsistent with the public convenience and necessity.”<sup>81</sup> While the statute does not define the term “public convenience and necessity,” a three-part test has evolved under which we evaluate whether the applicant is financially fit to undertake the construction and provide service; whether there is a public demand or need for the proposed service; and whether the proposal is in the public interest and will not unduly harm existing services.<sup>82</sup> The interests of shippers are accorded substantial importance in assessing the public convenience and necessity in railroad construction applications.<sup>83</sup>

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<sup>79</sup> As detailed in the Final EIS, SEA has projected that the costs for its recommended mitigation, together with the mitigation that could be imposed by the cooperating agencies, are likely to total about \$140 million (approximately 10% of the \$1.4 billion cost of this project). Extrapolating from those cost estimates, we have also made a rough estimate of the cost of compliance with the 51 Negotiated Agreements. As shown in Attachment D, compliance with the 51 Negotiated Agreements could add up to \$33.5 million to the cost of environmental mitigation.

<sup>80</sup> Pub. L. No. 104-88, 109 Stat. 803 (1995).

<sup>81</sup> To give full effect to Congress’ intent that construction applications be approved unless they are inconsistent with the public interest, we have stated that rail construction proposals are to be given the benefit of the doubt, so that there is now a presumption that a rail construction proposal will be approved. *Class Exem. for the Construction of Connecting Track*, 1 S.T.B. 75, 79 (1996).

<sup>82</sup> See *Tongue River RR Co.—Const. & Oper.—Ashland-Decker, MT*, 1 S.T.B. 809 (1996) (*Tongue River*).

<sup>83</sup> *Burlington Northern, Inc.—Construction and Oper.*, 348 I.C.C. 388, 400 (1976), citing *Chesapeake & O. Ry. Co. Construction*, 267 I.C.C. 665 (1947).

a. *Public Transportation Benefits.*

In our *1998 Decision*, we preliminarily found that DM&E had demonstrated that there is a need for this new rail line, that the project would not harm existing service, and that DM&E should be able financially to carry the project through to completion, thus satisfying the three-part test. There is no need here to reconsider our determination that there would be public and transportation benefits from the proposed construction due to improved productivity and efficiency, and that the public interest would be well served by this construction due to the potential for increased competition, lower costs, and improved service to shippers. Our prior decision thoroughly addressed these matters, and nothing that has been identified during the EIS process calls those findings into question.

Indeed, the EIS confirms that, if the new line is not constructed, DM&E's existing line likely will continue to deteriorate because DM&E would not be able to generate the necessary revenues to rehabilitate that line. Many parts of DM&E's system currently are in poor condition and operate under speed and weight restrictions, thus making it difficult to provide reliable and efficient rail service to existing shippers and attract additional business.<sup>84</sup> The demand for cleaner-burning, lower cost, low-sulfur coal from the PRB mines should provide DM&E with the opportunity to expand its revenue base, because DM&E's PRB Expansion Project would enable it to offer competitive rail service to midwestern utilities.

As the EIS shows, the PRB Expansion Project would result in some potentially significant environmental impacts. We believe that our final environmental mitigation conditions are reasonable and feasible measures to reduce, or in some respects eliminate, the potential adverse environmental impacts of this rail construction project. They provide appropriate safeguards to ensure that DM&E will maintain safe operations and protect the environment and the quality of life in affected communities to the extent practicable following the construction and operation of DM&E's new rail line into the PRB.

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<sup>84</sup> Senator Wellstone suggests, in his letter dated December 21, 2001, that DM&E would not meet the needs of farmers, grain elevators, and producers in Minnesota because it has refused to make specific commitments to move agricultural commodities and implies that we should require DM&E to make such a commitment. We do not believe such a condition is necessary or appropriate. We have no reason to believe that DM&E would not continue to fulfill its common carrier obligation to provide adequate service to all shippers on the line. Moreover, an integral part of our approval of this project is to provide a way for DM&E to finance the requisite upgrade of its existing system so that it can provide for the long-term needs of all shippers, including agricultural shippers.

We recognize that, even with the mitigation measures we are imposing, some significant adverse environmental effects could remain, particularly if DM&E were able to move the full projected level of coal (100 million tons annually). However, we do not find these impacts severe enough to warrant denying the application, in view of the significant transportation and public benefits associated with this project. As discussed in the *1998 Decision* and Chapter 2 of the Final EIS, the PRB Expansion Project would allow the development of viable, safe, and competitive rail service by a third carrier,<sup>85</sup> offering a reliable fuel source to midwestern utilities in a period of increased energy demand, particularly for low sulphur PRB coal. Nothing in the environmental record has persuaded us that the environmental impacts that could not be fully mitigated would be so great as to outweigh the public benefits of the new line.

b. *Financial Fitness.*

We must now consider whether the costs of complying with the environmental mitigation conditions might alter our analysis of the remaining prong of the public convenience and necessity test — DM&E’s financial fitness to carry out the proposed construction.<sup>86</sup> In our *1998 Decision* we reviewed the parties’ evidence on the cost of this project, the potential traffic DM&E might carry, and the revenues it might earn. We presented our restatement of DM&E’s projections with regard to its financial fitness in Table II of that decision, and determined that the proposed construction and operation appeared to be feasible based on the information available at that point.<sup>87</sup> We stated, however, that following the conclusion of the EIS process and the development of cost

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<sup>85</sup> As previously noted, both UP and BNSF now serve the PRB. However, depending on the destination of coal being shipped, individual utility customers may now lack a competitive alternative. Competitive alternatives would increase if DM&E’s PRB Expansion Project goes forward.

<sup>86</sup> As we noted in the *1998 Decision* at 866, citing *Tongue River* at 828, the purpose of the financial fitness test is not to protect the carrier or its investors. Rather, it is to protect existing shippers from carrier actions that could have an adverse impact on the carrier’s ability to continue to fulfill its common carrier obligation to those shippers.

<sup>87</sup> We also examined the more pessimistic scenario posited by MSC, which predicted a lower share of PRB traffic for DM&E and lower coal rates, thus producing concomitantly lower profits, in Table III of the *1998 Decision*, and concluded that, even under that scenario, DM&E’s ability to fulfill its common carrier obligation to its existing shippers would not be impaired.

estimates for environmental mitigation, we would review the feasibility of the project again in light of those additional costs.

The range of potential environmental mitigation costs has now been determined, and we can analyze the financial implications of this additional cost on the post-construction viability of DM&E.<sup>88</sup> While mitigation costs will depend on the amount of traffic DM&E would carry,<sup>89</sup> for this analysis we have used the highest potential mitigation costs, i.e., the costs associated with DM&E's transporting the full amount projected by DM&E (100 million tons of coal annually).<sup>90</sup> Assuming this higher traffic level and the most expensive of the various mitigation alternatives provided here, the potential mitigation cost could be as much as \$173.5 million. The actual costs would likely be somewhat less, however, for two reasons. SEA's estimates include 100% of the cost of the grade-separations in Pierre and Rochester, but as discussed above, we do not expect DM&E to bear an unreasonable percentage of the entire cost. Some of the Negotiated Agreements provide for the same sort of mitigation that is also included in the conditions we are imposing, thus creating some double counts.

The Revised Table below restates Table II of the *1998 Decision* to include this \$173.5 million in additional costs. The Revised Table also moves the

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<sup>88</sup> Chapter 12 of the Final EIS and Attachments C-G to that chapter present estimated costs of environmental mitigation for the routes SEA recommended (excluding the cost of the 51 Negotiated Agreements DM&E entered into with affected communities). Where costs could not be pinpointed, SEA developed a reasonable range of the potential environmental mitigation costs. SEA's estimates show that the cost of the mitigation we are imposing here, together with the mitigation likely to be imposed by the cooperating agencies, would range from \$103.3 to \$139.1 million (which, for convenience, we have rounded up to \$140 million). We estimate that compliance with the Negotiated Agreements would add up to an additional \$33.5 million to the cost of environmental mitigation. See Appendix D. Thus, the total environmental mitigation costs could be as high as \$173.5 million.

EPA suggests that we should have included costs for two air quality mitigation measures (Condition Nos. 82 and 83). But Condition No. 82 involves emission standards for locomotives that would have to be bought or rebuilt regardless of our mitigation. Therefore, the cost of this is not actually a mitigation cost. As for Condition No. 83, it would not be appropriate to place a price tag on requiring efficient fuel saving practices, which likely would result in cost savings.

<sup>89</sup> Not all estimated mitigation costs would be incurred as part of initial rail line construction and rehabilitation. Rather, certain costs (including grade separations, grade-crossing warning device upgrades, and noise mitigation) would not need to be incurred until DM&E achieves specified levels of annual unit coal-train operations.

<sup>90</sup> The 100-million ton figure is the most annual tonnage that DM&E anticipates it would haul. DM&E projects that it would not attain this traffic level until the line has been in operation for 6 years (i.e., in 2010, assuming the line is completed by 2005). Because certain mitigation costs would vary in direct proportion to traffic volumes, using this tonnage figure results in a worst case scenario for mitigation costs, i.e., this is the greatest amount we expect DM&E would need to expend.

original coal tonnage forecasts back by 3 years to account for the time that has elapsed.<sup>91</sup> It shows coal tonnage increasing from 40 million tons in 2005 to 100 million tons in 2010, and reflects DM&E's originally projected netbacks,<sup>92</sup> and interest payments based on a debt rate of 9.5%.<sup>93</sup> The Revised Table reflects the financial impact of the costs of environmental mitigation on DM&E's income projections. Because the environmental mitigation cost figures are somewhat overstated (for the reasons mentioned above), this revised analysis overstates total costs and understates net income. Nonetheless, it illustrates that DM&E should garner significant net income from its proposed PRB service.<sup>94</sup> By 2010, at which point DM&E has forecast that it would move 100 million tons of coal, its projected net income would reach approximately \$180 million.

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<sup>91</sup> This Revised Table assumes that the DM&E would begin construction in 2002 and initiate service to the PRB in 2005.

<sup>92</sup> Netbacks are the mills per ton-mile DM&E believes it could earn if it attracts a utility's traffic. Basically, DM&E contends that, because of its mileage advantage in certain markets, it would have a competitive advantage and could take traffic away from BNSF and UP while earning higher netbacks based on prevailing rail rates. The concept of netbacks, together with specific examples, is discussed in the *1998 Decision*, at 885, n.89.

<sup>93</sup> We assume that the additional \$173.5 million in environmental mitigation costs would be financed through the issuance of additional debt at the rate previously endorsed by MSC.

<sup>94</sup> In creating the Revised Table, we relied on the same data used to produce Table II in the *1998 Decision*. We assumed the DM&E would initiate service from the PRB in 2005 and adjusted the original data to reflect that fact. These adjustments result in DM&E incurring losses for the 2002 through 2004 period.

REVISED TABLE <sup>1</sup>  
DM&E's Pro Forma Income Statement  
Revised to Include Mitigation Costs

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Tons of Coal Traffic (000) <sup>2</sup>	---	---	---	40,000	60,000	70,000	80,000	90,000	100,000
Rate per Ton-mile for Coal (\$) <sup>3</sup>	---	---	---	0.00884	0.00896	0.00899	0.00902	0.009050	0.009081
Average Miles	---	---	---	810	810	810	810	810	810
Coal Revenue (\$000)	---	---	---	286,416	435,456	509,733	584,503	659,767	735,529
Other Revenue (\$000)	65,873	68,571	71,381	78,282	79,800	81,384	82,981	84,557	86,217
Total Revenue (\$000)	65,873	68,571	71,381	364,698	515,256	591,117	667,484	744,324	821,746
Operating Expense (\$000)	64,157	78,967	97,197	132,018	178,249	201,850	225,466	249,097	272,742
G&A Expense (Net) (\$000)	5,198	6,080	7,113	30,146	36,141	39,053	41,947	43,686	45,972
Non-Mitigation - Deprec. & Amort. (\$000)	7,067	7,378	7,704	49,899	71,465	82,377	93,367	104,357	115,415
Environmental Mitigation - Deprec. & Amort. (\$000) <sup>4</sup>	---	---	---	4,957	4,957	4,957	4,957	4,957	4,957
Income Before Interest/Tax (\$000)	(10,549)	(23,854)	(40,633)	147,678	224,444	262,880	301,747	342,227	382,660
Interest (\$000) <sup>5</sup>	4,747	4,103	3,437	104,323	99,358	94,076	88,520	82,599	76,230
Interest on Environmental Mitigation Debt (\$000) <sup>6</sup>	---	---	---	18,905	18,108	17,236	16,281	15,234	14,088
Income Tax 38.2 % (\$000)	(5,843)	(10,680)	(16,835)	9,340	40,866	57,899	75,233	93,359	111,675
<b>Net Income (\$000)</b>	<b>(9,453)</b>	<b>(17,277)</b>	<b>(27,235)</b>	<b>15,110</b>	<b>66,112</b>	<b>93,669</b>	<b>121,713</b>	<b>151,035</b>	<b>180,667</b>

## Notes to Revised Table

<sup>1</sup> For consistency with the original table, this Revised Table assumes that all costs (including environmental mitigation costs) associated with the PRB Expansion Project need not be reflected until the expanded system is operational (2005).

<sup>2</sup> Tons have been revised from the tonnages used in Table II of *1998 Decision* by using 2005 in lieu of 2002 as the first year of coal operations.

<sup>3</sup> The rates per ton-mile for 2005 through 2007 are the same as used in Table II of *1998 Decision* for those years (although the rate was expressed in mills in that table). These rates are not adjusted from the original table because they reflect DM&E's assumptions regarding market-based rate increases likely to be taken by BNSF and UP, and thus are not dependent upon DM&E's commencement of coal operations. The rates per ton-mile for 2008 through 2010 are based on extrapolation, applying the percentage change between 2006 and 2007 to each succeeding year.

<sup>4</sup> For simplicity, we assume that the entire \$173.5 million in mitigation expenses, which includes various land costs, would be amortized over 35 years (an approximation of the average life of such items as signals, interlockers, and grade crossings).

<sup>5</sup> The non-mitigation interest figures include interest on existing debt as well as interest on the \$1.07 billion in new construction debt (the \$1.4 billion total construction cost estimate we have used includes over \$300 million in capital stock in addition to \$1.07 billion in debt). The interest set forth in Table II of *1998 Decision* contained an error, which we have corrected in this table. This is why the interest figure for 2005 in this table does not agree with the interest for 2002 from Table II of *1998 Decision*.

<sup>6</sup> Interest on the new debt issued to pay for environmental mitigation is based on calculations that assume that one half of the new debt would be issued in 2003 and the other half in 2004, a 9.5% interest rate, a 13-year loan period, and that payments would be made at the end of each year. Interest for 2003 and 2004 accumulates and is added to principal; payments would begin the first year of PRB operations.

These figures indicate that DM&E should be able to produce a positive annual income shortly after its service into the PRB begins, even after taking into consideration the costs of mitigating the environmental impacts of this project, and achieve net income of around \$180 million by 2010. Accordingly, DM&E's proposal to expand its system does not appear to threaten the ability of DM&E to fulfill its common carrier obligation to serve its present customers.

As noted above, MSC has argued that the traffic and rate profitability projections reflected in Table II of the *1998 Decision* are overly optimistic. The shippers who have participated in this proceeding do not share MSC's skepticism, however, and we are confident that the proposed new rail line would attract a considerable share of the PRB traffic moving to the area served by DM&E, in light of its geographic advantages in certain markets. Neither we nor any of the parties can predict the future with certainty, as we have recognized. See *Arizona Public Service Co. v. Atchison, T. & S.F. Ry. Co.*, 3 S.T.B. 70, 78 (1998). But we know that, if the financial community is not persuaded that this line would attract the levels of traffic needed to justify the investment, this line will not be built, notwithstanding our approval. On the other hand, were we to disapprove the construction of this line because of MSC's pessimistic projections, the public benefits of this project would never be realized. Because we do not wish to deprive shippers of the anticipated improved rail service that would result from the addition of this new line and attendant rehabilitation of DM&E's existing lines, we will not stand in the way of DM&E's going forward with this project if it can obtain the necessary financing.

As we noted in the *1998 Decision*, DM&E has maintained that there are a variety of financing sources available, and it has submitted evidence and testimony from several sources concerning funding. These sources included Morgan Stanley (an investment firm), Schroder & Co. (an investment advisory company), and Lombard Investments (an institutional investment manager). While no firm financing commitments have been made, the evidence suggests that there is interest in the financial community in providing the requisite equity financing. It is, of course, the financial marketplace that will ultimately determine whether this project is attractive enough financially to investors for DM&E to obtain the needed capital.<sup>95</sup>

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<sup>95</sup> In his separate letter dated December 21, 2001 (the principal aspects of which we have previously addressed in our environmental analysis), Senator Dayton expresses concerns about DM&E's financial ability to undertake the proposed construction project and subsequent operations.  
(continued...)

In sum, our primary role here is to evaluate the project in terms of the public interest. Based on the above Revised Table and the other information before us, we are satisfied that, if this project is undertaken, the new construction and attendant upgrade of DM&E's lines from Wasta, SD, to Winona, MN, would have a positive impact on DM&E's existing shippers by providing them with more efficient service. The record shows substantial support by DM&E's existing shippers, who are concerned that DM&E might be unable to continue to operate for long without a large infusion of capital to rehabilitate its existing system. The PRB Expansion Project should provide that needed capital. Thus, we reaffirm our preliminary conclusion in the *1998 Decision* that the public convenience and necessity test is met here, and our final approval under 49 U.S.C. 10901 is hereby granted, subject to the conditions specified below.

### CONCLUSION

For the reasons discussed above and in the EIS, we are giving approval to DM&E's application on the condition, *inter alia*, that DM&E use the environmentally preferable routing set forth below. Specifically, DM&E must use "Alternative C" for extending DM&E's existing system westward into the PRB. In addition, the following Alternative C route variations must be used: the "Phiney Flat Alternative," "WG Divide Alternative," "Black Thunder North Mine Loop," and "North Antelope Mine Loop." For Mankato, MN, "Alternative M-3" must be built if UP and DM&E can reach an agreement. Absent such an agreement, Alternative "M-2" is the route that should be built. For Owatonna, MN, Alternative "O-5" must be implemented if UP and D&ME can reach an agreement. Absent an agreement, Alternative "O-4" should be used. DM&E must rehabilitate its existing lines through the Cities of Rochester, MN, and Brookings and Pierre, SD, rather than construct bypasses, to permit the operation of unit coal trains. Finally, for the project-related rail yards where

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<sup>95</sup>(...continued)

He correctly notes that neither the Draft nor the Final EIS contain an assessment of the financial strength of DM&E or its proposed plan to finance the project. However, we did conduct just such an assessment in the *1998 Decision* and preliminarily concluded that the project satisfied the governing transportation-related criteria of 49 U.S.C. 10901. We recognize that DM&E would have to undertake significant financial obligations if this project goes forward. But based on all the evidence available, including the cost of the environmental mitigation we are imposing, we are satisfied that, if DM&E obtains the financing that it needs to go forward with this project, its ability to provide service to its current shippers would not be impaired. To the contrary, proceeding with this project would enhance DM&E's ability to provide that service in the future.

there are alternatives, DM&E must use “Option B” for the Middle East Yard in Minnesota and “Option B” for the West Yard in Wyoming. DM&E also must satisfy all of the various other environmental conditions set forth in Appendix A to this decision.

The issuance of this decision concludes the Board’s proceeding. The cooperating agencies now will issue decisions under their own governing statutes, based on the information set forth in the EIS and our environmental mitigation here, and the various applications submitted to them by DM&E.

*Vice Chairman Burkes, Commenting:*

This is an important decision that grants final approval to the Dakota, Minnesota & Eastern Railroad Corporation (DM&E) to construct and operate 280 miles of new rail line that will allow it to serve the Powder River Basin coal fields in Wyoming. I applaud the hard work of our dedicated staff in this complex proceeding, which involved the processing and review of nearly 3,000 letters, statements, comments and other filings.

In his second week of office, President George W. Bush established a National Energy Policy Group to assist the President in the establishment of a National Energy Policy. The report of this group cites the growing rail capacity problems in the Powder River Basin that have created a bottleneck in the coal transportation system because of the increased demand for clean coal. When completed, this project should significantly help alleviate this capacity problem in the Powder River Basin.

In conjunction with his National Energy Policy, the President signed an Executive Order that requires agencies to “expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections.” I believe that this is exactly the type of project that should have involved an expedited review under the President’s Executive Order.

DM&E filed its Notice of Intent, which initiated this proceeding, on May 29, 1997 and filed its formal application on February 20, 1998. It is my understanding that, before DM&E has laid a single new rail, it has paid or accrued over \$40 million in environmental engineering, environmental consulting, legal and other expenses associated with the environmental review process. Certainly, there are unique and controversial aspects associated with

this multi-million dollar project that required detailed scrutiny, however, in my mind, approval of this important energy-related project took too long and cost too much.

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*It is ordered:*

1. The application is granted, subject to the environmental conditions and routing conditions set forth above and in Appendix A.

2. We expressly reserve jurisdiction over this proceeding to implement the oversight condition imposed in this decision to allow us to monitor DM&E's progress in implementing the environmental mitigation and resolve any unanticipated environmental problems that arise. Our oversight will allow communities or other interested parties to seek redress if there are unanticipated problems or if there are material changes in the facts or circumstances. We will impose additional environmental conditions or modify our conditions to the extent that we determine that such action is warranted.

3. To assure compliance with our environmental mitigation conditions, DM&E must file the quarterly reports specified in Environmental Condition No. 147 for the duration of the environmental oversight period.

4. The petition to reopen filed by the Mayo Foundation is denied.

5. This decision is effective 30 days from the date of service.

By the Board, Chairman Morgan and Vice Chairman Burkes. Vice Chairman Burkes commented with a separate expression.

## APPENDIX A: ENVIRONMENTAL CONDITIONS

## GENERAL MITIGATION MEASURES

## SAFETY

## Grade Crossing/Warning Devices

- 1A. To address potential safety impacts at highway/rail grade crossings, Applicant, in accordance with its Grade Crossing Mitigation Plan, shall apply its proposed PCAPS-based grade-crossing protection formula to the crossings on the existing rail line in South Dakota and Minnesota, for the anticipated tonnage levels of coal to be moved (20 million tons, 50 million tons, or 100 million tons annually).

Applicant shall consult with appropriate Federal and State transportation agencies to determine the final design and other details of the grade-crossing protections. Implementation of all grade-crossing protections shall be subject to the review and approval of FRA and the appropriate State Departments of Transportation. As agreed to by Applicant, Applicant shall pay 90 percent of the costs associated with these project-related grade-crossing protection upgrades on Applicant's existing line.

This Condition shall not apply to crossings in communities that have executed Negotiated Agreements with Applicant that address the communities' safety concerns. In those cases, the terms of the Negotiated Agreement will apply, so long as implementation of the Negotiated Agreement achieves at least an equivalent level of grade-crossing protection. Applicant shall complete these grade-crossing protections upon reaching the annual tonnage level of coal (20 million tons, 50 million tons, or 100 million tons annually) specified in its plan and shall certify to the Board such completion as part of its quarterly reports required by Condition 147.

- 1B. To address potential safety impacts at highway/rail grade crossings, Applicant shall apply its proposed PCAPS-based grade-crossing protection formula to the crossings on the new rail line in Wyoming, South Dakota, and the Mankato area of Minnesota (assuming that Alternative M-2 is approved and constructed), for the anticipated tonnage levels of coal to be moved (20 million tons, 50 million tons, or 100 million tons annually).

Applicant shall consult with appropriate Federal and State transportation agencies to determine the final design and other details of the grade-crossings protections and grade separations on the new rail line. Implementation of all grade-crossing protections and separations on the new rail line shall be subject to the review and approval of FRA and the appropriate State Departments of Transportation. As agreed to by Applicant, Applicant shall pay 100 percent of the costs associated with these project-related grade-crossing protections along the new rail line.

This Condition shall not apply to crossings where communities or other entities have executed Negotiated Agreements with Applicant that address safety concerns. In those cases, the terms of the Negotiated Agreement will apply, so long as implementation of the Negotiated Agreement achieves at least an equivalent level of grade-crossing protection. Applicant shall complete these grade-crossing protections upon reaching the annual tonnage level of coal (20 million tons, 50 million tons, or 100 million tons annually) specified in its plan and shall certify to the Board such completion as part of its quarterly reports required by Condition 147.

2. Applicant shall maintain the new and existing rail line and grade-crossing warning devices according to FRA track-safety standards (49 CFR Part 213).

#### Emergency Response

3. At least one month prior to initiation of construction activities in the area, Applicant shall provide the information described below, as well as any additional information, as appropriate, to each local emergency response organization or other similar body for communities within the project area regarding project-related construction and operation of both the new and existing rail line:
  - The schedule for construction throughout the project area, including the sequence of construction and reconstruction of public grade crossings and approximate schedule for these activities at each crossing.
  - Expected schedule for change in rail line operations along Applicant's existing system, including when changes in train speeds and levels of traffic are anticipated to occur, and current and new train speeds and levels of rail traffic.

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- A toll-free number for the Applicant's contact who shall be available to answer questions or attend meetings for the purpose of informing emergency-service providers about the project construction and operation.
  - Revisions to this information, including changes in construction schedule, as appropriate.
4. Applicant shall consult with the communities of Rochester, Owatonna, and Mankato, Minnesota, and Brookings and Pierre, South Dakota, and any other affected communities that so request, to coordinate train movements and emergency response and discuss the possible installation by the Applicant of a state-of-the-art electronic display board, or equivalent technology, such as a real time or Global Positioning System (GPS) train location monitoring system in the local emergency-response center of each community showing the location of trains and/or the position of grade crossing warning signals.
  5. Applicant shall coordinate with the appropriate State Departments of Transportation, counties, and affected communities to develop a program for installation of temporary notification signs or message boards on railroad property at public grade crossings, determined by the State and/or County to warrant such measures, clearly advising motorists of the impending increase in train traffic and train speeds along its existing system and commencement of operations along its new rail line. The format and lettering of these signs shall comply with the U.S. Department of Transportation (DOT), Federal Highway Administration's Manual on Uniform Traffic Control Devices, and shall be in place no less than 30 days before, and 6 months after, completion of project-related construction and reconstruction activities in the area. As an alternative, Applicant shall coordinate with the State Departments of Transportation to develop a mutually satisfactory media campaign to be conducted by Applicant throughout the counties and communities surrounding the rail line providing information and notice to the public of project-related changes along its existing system and commencement of operations along its new rail line. This campaign shall include the use of different media (radio, television, newspaper, public meetings, etc.) and may include such things as public-service announcements, advertisements, or legal notices. Prior to moving coal trains to and from the PRB, Applicant shall certify to the Board that it has complied with this condition as part of its quarterly reports required by Condition 147.

6. For each of the public grade crossings on the new and existing rail line, Applicant shall provide and maintain permanent signs prominently displaying both a toll-free telephone number and a unique grade-crossing identification number in compliance with Federal Highway Regulations (23 CFR Part 655). The toll-free number shall be answered 24 hours per day by Applicant’s personnel. Where Applicant’s right-of-way is close to another rail carrier’s crossing, Applicant shall coordinate with the other rail carrier to establish a procedure regarding reported accidents and grade-crossing device malfunctions.
7. Applicant shall consult with interested communities along its new and existing rail line to identify alternative safety measures to eliminate the need to sound train horns in the community, in accordance with FRA’s final rule on the *Use of Locomotive Horns at Highway-Rail Grade Crossings*.
8. Applicant shall install reflective material on the back of all passive crossing warning devices, such as crossbucks, on the new and existing rail line. Reflective material shall be installed so that headlights from vehicles approaching the grade crossing on the opposite side of the rail line will strike the material and illuminate it to provide a continual illumination in the absence of a passing train and a flashing appearance when a train is passing due to the space between the rail cars. Prior to moving coal trains to and from the PRB, Applicant shall certify to the Board that it has complied with this condition as part of its quarterly reports required by Condition 147.
9. To the extent practicable, Applicant shall minimize trains blocking grade crossings throughout its system.

Track Warning Devices and Track Infrastructure

10. Applicant shall properly maintain its new and existing rail line. Maintenance shall include trimming vegetation on railroad property that obscures visibility of oncoming trains and assuring that rail, railroad ties, track fastenings, and ballast material are in good repair, and that warning devices operate properly and are legible.

Hazardous Material Handling Issues

11. Prior to initiating any project-related construction and reconstruction activities, Applicant shall develop a Spill Prevention, Control, and

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Countermeasure Plan (Plan) to prevent spills of oil or other petroleum products and other hazardous materials during construction and reconstruction activities, and operation and maintenance of the rail line. At a minimum, the Plan shall address the following:

- 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 where the equipment is located.
- List of government agencies and Applicant's management personnel to be consulted with in the event of a spill.

In the event of a spill, Applicant shall comply with its Plan and applicable Federal, State, and local regulations pertaining to containment of the spill and appropriate clean up.

12. Applicant shall comply with DOT Hazardous Materials regulations (49 CFR Parts 171 and 179) when handling, storing, or disposing of hazardous materials. Applicant shall dispose of all materials that cannot be reused in accordance with applicable Federal, State, and local waste management regulations.
13. Applicant shall coordinate with the U.S. Environmental Protection Agency, Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, South Dakota Department of Environment and Natural Resources, and Wyoming Department of Environmental Quality to determine the exact location of hazardous-material sites known to occur within the existing or proposed rail line rights-of-way and comply with applicable laws concerning these sites.
14. Applicant shall develop internal emergency-response plans to allow for agencies and individuals to be notified in an emergency and to locate and inventory emergency equipment for use in dealing with emergencies. Applicant shall provide the emergency-response plans to the relevant State and local entities prior to moving coal trains to and from the PRB.
15. Applicant shall notify the United States Fish and Wildlife Service, and the appropriate State departments of natural resources, in the event of a reportable hazardous materials release with the potential to affect wetlands or wildlife habitat(s), particularly those of Federally threatened or endangered species.

16. Applicant shall use established standards for recycling or reuse of construction materials such as ballast and rail ties. When recycling construction materials is not a viable option, Applicant shall use disposal methods that comply with applicable solid hazardous waste regulations.

Fire Prevention

17. Prior to initiating any construction activities related to this project, Applicant shall, in consultation with the Natural Resource Conservation Service, local grazing organizations, appropriate Federal agencies, and local fire and emergency response departments, develop an adequate plan for fire prevention and suppression and subsequent land restoration, including natural habitats, during construction and operation of both the new and existing rail line. To the extent practicable, Applicant's plan shall ensure that all locomotives are equipped with functioning spark arresters on exhaust stacks and fire extinguishers suitable for flammable liquid fires and provide for the installation of low-spark brake shoes.

Miscellaneous

18. During project-related construction at grade crossings, when practicable, Applicant shall maintain at least one open lane of traffic at all times or provide for detours and associated signage, as appropriate, to allow for the quick passage of emergency and other vehicles.
19. In undertaking project-related construction activities, Applicant shall use construction materials and safety practices recommended by the American Railway Engineering and Maintenance of Way Association (AREMA) and the recommended standards for track construction in the AREMA Manual for Railway Engineering. Applicant shall maintain the track and provide for track inspection in compliance with AREMA and FRA requirements at 49 CFR 213.
20. Applicant shall adhere to Federal Occupational Safety and Health Administration (OSHA), FRA, and State construction and operational safety regulations to minimize the potential for accidents.
21. Where practicable, Applicant shall refuel locomotives at designated refueling locations. Applicant shall exercise care during refueling to prevent overflows. In no event shall Applicant conduct refueling

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- activities in a location where an inadvertent spill would enter a watercourse, wetland, or other environmentally sensitive area.
22. Applicant shall make Operation Lifesaver programs available to communities, schools, and other organizations located along the new and existing rail line.
  23. Applicant shall consult and coordinate with school districts regarding placement on railroad property of equipment to permit use of in-vehicle warning devices on school buses.
  24. Applicant shall assure that roadway approaches and rail line crossings for both new and existing grade crossings are constructed or re-constructed according to the standards of the American Association of State Highway and Transportation Officials (AASHTO) design manual, applicable State rules, guidelines, or statutes, and the AREMA standards. The goal of grade-crossing design should be to eliminate rough or humped crossings to the extent practicable.

#### TRANSPORTATION

25. To the extent practicable, Applicant shall confine all project-related construction traffic to a temporary access road within the right-of-way or established public roads. Where traffic cannot be confined to temporary access roads or established public roads, Applicant shall make necessary arrangements with landowners to gain access from private roadways. The temporary access roads shall be used only during project-related construction. Any temporary access roads constructed outside the rail line right-of-way shall be removed upon completion of construction, unless otherwise agreed to in accordance with Condition 80.
26. Applicant shall consult with the State Departments of Transportation in Minnesota, South Dakota, and Wyoming and local road authorities in the affected counties or townships to ensure that project-related construction and reconstruction activities are consistent with State and local transportation plans, projects and proposals.
27. Applicant shall coordinate with FRA, the State Departments of Transportation in Minnesota, South Dakota, and Wyoming, and local road authorities to develop a plan for the identification and eventual closure of limited-use public crossings, particularly those at or below 100 Average Daily Traffic, where appropriate alternative public crossings are available.

28. To provide access for the safe movement of farm equipment to fields and pastures which otherwise would have to operate on public highways, as a result of road closures following construction and during operation of Applicant's rail yards, Applicant shall provide or develop appropriate alternative access to these fields and pastures. Alternatives for access could include development of frontage roads adjacent to yard boundaries, agreements for farmers to coordinate with the yard master to cross through the yard, if rail operations and safety conditions permit, or development of additional access roads.

#### LAND USE

29. Prior to initiation of construction or reconstruction activities related to this project, Applicant shall establish Community Liaison(s) to consult with affected communities, farmers, ranchers, businesses, landowners, and agencies; develop cooperative solutions to local concerns; be available for public meetings; and conduct periodic public outreach. The Community Liaison(s) shall have access to Applicant's upper management. Applicant shall provide the name and phone number of the Community Liaison(s) to mayors and other appropriate local officials in each community through which the new and existing rail line passes.
30. In many communities, adjacent property owners have encroached on Applicant's existing right-of-way. Applicant shall make reasonable attempts to identify and notify these individuals of its proposed project-related reconstruction schedule through these areas prior to beginning reconstruction activities in the area.
31. Applicant shall erect temporary construction fencing, where appropriate, or permanent fencing, prior to initiation of construction or reconstruction activities related to this project. If practicable, in incorporated areas, permanent fencing shall consist of 8-foot high chain link fence installed along all rail line right-of-way adjacent to residential property. Applicant shall consult with appropriate State and local authorities in unincorporated areas to determine appropriate fencing design. Applicant shall inspect all fencing regularly and promptly repair any damaged fencing. This condition shall not apply to those communities that have executed Negotiated Agreements with Applicant.

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32. In rural areas, Applicant shall minimize the installation of fencing to areas where safety is a concern and areas where fencing is required to prevent livestock wandering on to the rail line. Applicant shall consult with Tribal wildlife officials, the South Dakota Department of Game, Fish and Parks, the Wyoming Game and Fish Department, and the Minnesota Department of Natural Resources, other applicable agencies, and affected landowners to determine appropriate fencing designs for each State. Fencing in rural areas should generally consist of 5-strand barbed wire fence. In order to protect antelope and other big game, Applicant shall encourage landowners in areas where antelope are present to allow construction of 4-strand fence with a smooth bottom wire at least 16 inches above ground level and the top wire not more than 42 inches high, or other designs approved by the applicable State wildlife agency. Applicant shall consult with appropriate State and local authorities in rural areas to determine appropriate fencing design. In areas where the rail line is not fenced, appropriate signage shall be installed to protect the public.
33. At least 48 hours prior to initiating herbicide applications, Applicant shall make reasonable attempts to notify property owners adjacent to the right-of-way of its anticipated schedule for herbicide application. Reasonable attempts could include posting a notice on its web site or publishing its schedule in local newspapers.
34. Applicant shall ensure that all areas disturbed by project-related construction or reconstruction activities which are not owned by the railroad (such as access roads, haul roads, crane pads, and borrow pits), are promptly restored as closely to their original condition as is practical following conclusion of project-related construction or reconstruction activities.

Applicant shall coordinate with the State Departments of Transportation and Federal and State land management agencies, subject to approval of the land owner, to determine if temporary access roads developed for project-related construction should be removed and the area restored to its previous condition or retained for maintenance by the agency, State, or county to provide additional access to public lands.

Agriculture/Ranching

35. Applicant shall provide its project-related reconstruction and construction schedule to affected farmers and ranchers to allow them to determine whether they should continue to crop or graze in right-of-way areas or discontinue such activities due to impending construction and reconstruction activities.
36. Applicant's Community Liaison(s), established by Condition 29, shall work with farmers and ranchers to remedy any damage to crops, pastures, or rangelands caused by Applicant's project-related construction or reconstruction activities and develop appropriate measures to prevent encroachment into the rail line right-of-way. The Community Liaison(s) also shall have authority to provide information on anticipated train schedules to farmers and ranchers to facilitate movement of equipment or livestock from one side of the rail line to the other.
37. In negotiations with farmers and ranchers, Applicant shall be guided by the Land Use Mitigation Policy and Plan negotiated between the Applicant with the Landowner Advisory Board, which addresses the following areas of concern:
  - Direct and indirect land loss.
  - Displacement of capital improvements (wells, windmills, corrals, outbuildings, irrigation systems, etc.).
  - Noxious weed control.
  - Fencing.
  - Livestock casualty.
  - Fire prevention and suppression.
  - Fire casualty.
  - Construction-related impacts.

Residential

38. Applicant's project-related construction vehicles, equipment, and workers shall not access work areas by crossing residential properties unless negotiated with and agreed to by the property owner.
39. In residential areas, Applicant shall store its equipment and materials in established storage areas or on Applicant's property to the extent practicable.

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40. The Community Liaison(s), established in Condition 29, shall work with affected landowners to appropriately redress any damage to the landowner's property caused by Applicant's project-related construction or reconstruction activities.

#### Business and Industrial

41. Applicant's project-related construction vehicles, equipment, and workers shall not access work areas by crossing business or industrial areas, including parking areas or driveways, unless negotiated with, and agreed to by, the business owner.
42. In business and industrial areas, Applicant's project-related equipment and materials shall be stored in established storage areas or on Applicant's property. Parking of Applicant's equipment, or vehicles, or storage of materials along driveways or in parking lots is prohibited unless agreed to by the property owner.
43. The Community Liaison(s), established in Condition 29, shall work with affected businesses or industries to appropriately redress any damage to the business's property caused by Applicant's project-related construction or reconstruction activities.
44. Applicant shall insure that entrances and exits for businesses are not obstructed by project-related construction activities, except as required to move equipment.

#### Minerals and Mining

45. To help maintain the existing natural environment to the extent practicable, Applicant shall utilize materials such as rock, gravel, and sand available from local sources in its project-related activities.
46. Applicant shall consult with the owners of existing mines and quarries in the project area, particularly the quarry in Mankato, Minnesota, if Alternative M-3, the existing rail corridor alternative through Mankato, is built, to ensure that project-related construction and reconstruction activities minimize impacts to mine-related operations.
47. Prior to initiating construction of the new rail line, Applicant shall obtain any necessary permits from the U.S. Department of Interior, Bureau of Land Management (BLM) regarding mineral removal and oil and natural gas lessees.

48. Prior to undertaking project-related construction and reconstruction activities, Applicant shall make a reasonable effort to notify all mineral lessees/claimants where BLM has mineral ownership.

Federal Lands

49. Applicant shall obtain a Special Use Permit from the U.S. Forest Service (USFS) granting an easement for the rail line to cross lands administered by the USFS designated as National Grasslands prior to initiating any project-related construction activities on USFS lands. Any conditions required under this Special Use Permit, in addition to those imposed by the Board, shall be adhered to by Applicant for activities on USFS lands.
50. Applicant shall obtain a permit from the U.S. Department of Interior's Bureau of Reclamation (Reclamation) for crossing any facilities, irrigation ditches, or canals which are part of the Angostura Irrigation Project. Any conditions required under this permit, in addition to those imposed by the Board, shall be adhered to by Applicant for activities affecting Reclamation lands. In addition, Applicant shall comply with the Memorandum of Agreement executed by Applicant and Reclamation.
51. Applicant shall obtain a right-of-way grant from BLM for the rail line to cross any public lands administered by BLM prior to initiating any project-related construction activities on public lands. Applicant shall comply with the terms and conditions required of this right-of-way grant, in addition to the mitigation imposed by the Board, for activities on public lands administered by BLM.
52. No USFWS lands, such as waterfowl production areas and wetland easements, will be crossed by the project-related construction or reconstruction. However, a new rail yard facility under Alternative C could be located across a wetlands easement. In that event, Applicant shall acquire and provide to the USFWS additional wetlands easement(s), replacing in kind, function, and value, and subject to USFWS approval and necessary environmental reviews and permitting, the wetland easement(s) lost from project-related rail yard construction.

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#### State Lands

53. If any project-related construction activities, including location of new rail line, staging or laydown yards, or access points, either temporary or permanent, are required on State lands, Applicant shall consult with the appropriate State personnel prior to conducting these activities. To the extent practicable, Applicant shall avoid use of public lands as part of project development.
54. Applicant shall consult with managers of State lands to determine peak use periods for the State lands that provide for over-night use. Applicant shall attempt to schedule project-related construction activities to avoid these periods, to the extent practical.

#### Utility Corridors

55. Applicant shall make reasonable efforts to identify all utilities that are reasonably expected to be materially affected by the proposed construction within its existing right-of-way or that cross its existing right-of-way. Applicant shall notify the owner of each such utility identified prior to project-related construction and reconstruction activities and coordinate with the owner to minimize damage to utilities. Applicant shall also consult with utility owners to design the rail line so that utilities are protected during project-related construction and reconstruction activities and subsequent maintenance and operation of Applicant's rail line.
56. Should such previously unidentified utilities be discovered during project-related construction activities, Applicant shall cease construction, take appropriate action to protect the utility, and contact the utility owner immediately. In the event of damage to any utility during project-related construction, reconstruction, or operation, Applicant shall contact the utility owner immediately and take appropriate remedial action.
57. Applicant shall make reasonable efforts to protect existing drainage tile systems present in agricultural lands adjacent to the rail line right-of-way during project-related construction and reconstruction activities. Applicant shall repair, as quickly as practicable, any damage to these systems due to project-related rail construction and reconstruction activities.

58. Applicant shall dispose of all non-recyclable and non-reusable solid waste generated during project-related construction and reconstruction activities in permitted landfills or other disposal sites in accordance with all applicable Federal, State, and local regulations.

WATER RESOURCES

59. Applicant shall obtain all Federal permits, including the Clean Water Act Section 404 and Rivers and Harbors Act of 1899 Section 10 permits, required by the U.S. Army Corps of Engineers, for project-related alteration or encroachment of wetlands, ponds, lakes, streams, or rivers, including the Missouri River, prior to initiation of any project-related construction and reconstruction. Additionally, Applicant shall obtain appropriate permits from the State of Minnesota, including Protected Waters Permits, for impacts to water resources in Minnesota due to project-related construction and reconstruction activities.
60. Applicant shall obtain a National Pollutant Discharge Elimination System (NPDES) permit from each State (Minnesota, South Dakota, Wyoming) affected by project-related construction or reconstruction activities.
61. To minimize sedimentation into streams and waterways, Applicant shall use best management practices, such as silt screens and straw bale dikes, to minimize soil erosion, sedimentation, runoff, and surface instability during project-related construction and reconstruction activities. Applicant shall disturb the smallest area possible around any streams and tributaries, and shall consult with the Natural Resource Conservation Service, Minnesota Department of Natural Resources, South Dakota Department of Game, Fish, and Parks, Minnesota Pollution Control Agency, Wyoming Department of Game and Fish, and the State Departments of Transportation to ensure proper revegetation of disturbed areas as soon as practicable following project-related construction or reconstruction activities.
62. Applicant shall establish staging areas for project-related construction equipment in areas that are not environmentally sensitive in order to control erosion. When project-related construction activities, such as culvert and bridge work, require work in stream beds, Applicant shall conduct these activities, to the extent practicable, during low flow or periods when the stream is dry.

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63. When engaging in any project-related construction activities near streams, Applicant shall construct temporary stream crossings as close to a right angle with the stream as possible. Applicant also shall design temporary bridges to span across the ordinary high water elevations of waterways to the extent practical. Following the project-related construction, Applicant promptly shall remove all temporary construction crossings and restore the area to as close to its original condition as possible.
64. Applicant shall ensure that, when used in its project-related construction activities, cofferdams or check dams consist of native material, sheet pile, sandbags, or other engineered designs matching the local site conditions. All materials used in the construction of cofferdams or check dams shall be completely removed upon completion of construction.
65. Applicant shall establish staging and laydown yards for project-related construction at least 300 feet from wetlands or waterways, if topography permits. If topographic conditions do not permit a 300-foot distance, these areas shall be located no less than 50 feet from the water's edge. Applicant shall not clear any vegetation between the yard area and the waterway or wetlands.
66. Applicant shall inspect all equipment for any oil, gas, diesel, anti-freeze, grease, hydraulic fluid, and other petroleum product leaks. If leaks are found, Applicant shall immediately remove the equipment from the construction zone, and repair or replace it.
67. Applicant shall ensure that all culverts and bridges are clear of debris to avoid potential flooding and stream flow alteration. Applicant shall design all project-related drainage crossing structures to pass a 100 year flood. Applicant shall reconstruct the existing rail line and construct the new rail line in such a way as to maintain current drainage patterns to the extent practicable and not result in new drainage of wetlands. Applicant shall inspect all drainages, bridges, and culverts semi-annually (or more frequently, as seasonal flows dictate) for debris accumulation. Applicant shall promptly remove debris and properly dispose of it in an upland area.
68. To ensure the integrity of the Flood Control Project in Mankato, Minnesota if Alternative M-3, the existing rail corridor alternative through Mankato, is built, Applicant shall coordinate with the U.S. Army Corps of Engineers, the City of Mankato, and other appropriate local agencies in Mankato and obtain any necessary permits to prevent

- adverse impacts from project-related rail line construction and operation to flood control structures.
69. Applicant shall employ best management practices to control turbidity and disturbance to bottom sediments during project-related construction or rehabilitation of Applicant's bridge over the Missouri River at Pierre, South Dakota.
  70. Applicant shall obtain a Bridge Permit from the U.S. Coast Guard for any project-related activities that would result in the extensive modification of Applicant's existing rail bridge over the Missouri River in Pierre, South Dakota or for construction of a new rail bridge over the river.
  71. Applicant shall complete project-related construction and reconstruction activities through wetlands, when such wetlands extend outside the rail line right-of-way in continuous segments, in order to minimize both the time required to complete construction and the time land adjacent to wetlands is disturbed.
  72. Applicant shall ensure that any herbicides used in right-of-way maintenance to control vegetation are approved by EPA and are applied by licensed individuals who shall limit application to the extent necessary for rail operations. Applicant shall ensure that only herbicides determined by EPA to be acceptable for use around waterways shall be applied within 150 feet of perennial streams, rivers, and wetlands. Herbicides shall be applied so as to prevent or minimize drift off of the right-of-way onto adjacent areas.
  73. Applicant shall ensure that any wells that could be affected by project-related construction or reconstruction activities are appropriately protected or capped to prevent well and groundwater contamination. If these wells are located on private land, Applicant shall first secure permission from the landowner before undertaking any such activities. In the event that Applicant does not receive such permission upon reasonable request, it may petition the Board to be relieved of this obligation.
  74. Applicant shall ensure that new project-related stream, river, and floodplain crossings are appropriately designed to minimize impacts to community-designed floodways. In those areas where a community-designed floodway does not exist, Applicant shall ensure that new waterway crossing structures are sufficient to pass a 100 year flood without increasing the flood level by more than one-half foot.

75. Applicant shall consult with the Minnesota Department of Natural Resources to design project-related waterway crossing structures to allow passage of fish.
76. Applicant shall prohibit project-related construction vehicles from driving in or crossing streams at other than established crossing points.
77. Applicant shall, to the extent practicable, ensure that any fill placed below the ordinary high water line of wetlands and streams is clean and free of fine materials. Applicant also shall use fill from local sources where practicable. All stream crossing points shall be returned to their pre-construction contours to the extent practicable, and the crossing banks reseeded or replanted with native species immediately following project-related construction.

#### RECREATION

78. Applicant shall ensure that adequate clearances and access are provided for safe navigation of recreational boats on the Missouri River at the location of any project-related rehabilitation or construction of Applicant's bridge across the Missouri River at Pierre, South Dakota. Applicant also shall install appropriate warning devices to notify boaters of project-related bridge construction activities and the location of a safe navigation route.
79. If Alternative M-3, the existing rail corridor alternative through Mankato, Minnesota is built, Applicant shall provide appropriate fencing along the rail line in Mankato adjacent to parks, trails, or other recreational areas to provide a safe environment for users of the facilities. Applicant shall consult with the City of Mankato about appropriate fencing design and the possibility of providing landscaping, including vegetative screening.
80. Applicant shall consult with Federal land managers such as the U.S. Forest Service and Bureau of Land Management, and State land managers including the Minnesota Department of Natural Resources, South Dakota Game, Fish and Parks, and Wyoming Game and Fish Department to determine locations where project-related construction and reconstruction activities will result in lost or reduced access to public lands due to temporary road closures or other construction related activities. Applicant shall develop a plan to provide alternative access to these lands during project-related construction and reconstruction activities and operation of unit coal trains to the extent practicable.

## AIR QUALITY

81. Applicant shall continue to consult with the Air Quality Working Group, consisting of agencies with appropriate technical expertise which was established for this project, to develop a mutually satisfactory approach to minimize the impacts of regional haze on Class I airsheds resulting from the locomotive emissions of Applicant's PRB coal trains. If no mutually satisfactory approach is developed within one year of the effective date of the Board's decision giving final approval to the PRB Expansion Project, then Applicant shall fund 50 percent of the cost of a mediator to assist the parties to reach an agreement. However, the parties jointly may seek more time to continue their negotiations without a mediator if they believe that would be more productive. If the Working Group and Applicant jointly decide that further consultations and/or mediation would be fruitless, then the Working Group may be disbanded. Applicant shall apprise the Board of the status of the ongoing Working Group consultations in the quarterly reports required by Condition 147, and shall also notify the Board if a Memorandum of Agreement is executed, or if the Working Group is disbanded.
82. Applicant shall meet the Environmental Protection Agency emissions standards for diesel-electric railroad locomotives (40 CFR Part 92) when purchasing and rebuilding locomotives for movement of unit coal trains throughout its system.
83. Applicant, to the extent practicable, shall adopt fuel saving practices, such as throttle modulation, dynamic braking, increased use of coasting trains, isolation of unneeded horsepower, and shutting down locomotives when not in use for more than an hour when temperatures are above 40 degrees, to reduce overall emissions during project-related operations.
84. To minimize fugitive dust emissions created during project-related construction and reconstruction activities, Applicant shall implement appropriate fugitive dust suppression controls, such as spraying water, applying a magnesium chloride treatment, tarp covers for haul vehicles, installation of wind barriers, or other State-approved measures. Applicant shall also regularly operate water trucks on haul roads to reduce dust.

85. Applicant shall obtain appropriate burning permits from the applicable State and local agencies, including the Minnesota Department of Natural Resources, Division of Forestry, South Dakota Department of Environment and Natural Resources, and Wyoming Department of Environmental Quality, prior to any project-related open burning. Open burning shall only be used by Applicant if no other reasonable means of solid waste disposal is available. Applicant also shall notify local fire departments at least four hours before any project-related open burning and obtain verbal or written permission from the fire departments prior to open burning activities.

#### NOISE AND VIBRATION

86. Applicant shall consult with affected communities regarding Applicant's project-related construction schedule, including the hours during which construction takes place, to minimize, to the extent practicable, construction-related noise disturbances in residential areas.
87. Applicant shall ensure that curves are lubricated where doing so would reduce noise for residential or other noise sensitive receptors.
88. Prior to initiating project-related construction activities, Applicant shall develop a Construction Noise and Vibration Control Plan (the Plan) to minimize construction noise and vibration within the communities along the rail line. Applicant shall designate a noise control officer/engineer to develop the Plan, whose qualifications shall include at least five years' experience with major construction noise projects, and board certification membership with the Institute of Noise Control Engineering or registration as a Professional Engineer in Mechanical Engineering or Civil Engineering.
89. Applicant shall comply with FRA regulations (49 CFR Part 210) establishing decibel limits for train operations.
90. Applicant shall consult with interested communities along its new and existing rail line to identify measures to eliminate the need to sound train horns consistent with FRA standards.
91. Applicant shall regularly inspect rail car wheels to maintain wheels in good working order and minimize the development of wheel flats (areas where a round wheel becomes no longer round but has a flat section, leading to a clanking sound when a rail car passes). Prior to moving PRB coal trains, Applicant shall inspect new and existing rail for rough

- surfaces and grind these surfaces to provide a smooth rail surface during project-related rail operations.
92. As proposed by Applicant, continuously welded rail shall be used, unless it is impractical, in Applicant's project related construction and reconstruction activities.
  93. Applicant shall maintain project-related construction and maintenance vehicles in good working order with properly functioning mufflers to control noise.
  94. Because rail switches contain a break in the continuously welded rail which can often create additional noise and ground vibration as trains pass over or through the switch, during project-related rehabilitation of the existing rail line, Applicant shall remove or consolidate switches determined to no longer be needed.
  95. Applicant shall mitigate train wayside noise (locomotive engine and wheel/rail noise) for the noise-sensitive receptors along Applicant's existing rail line and project-related new rail line construction that fall within the 70 dBA Ldn noise contour for wayside noise, as specified below. With the written concurrence of the responsible local government(s), Applicant shall mitigate wayside noise with building sound insulating treatments, including insulated windows. The design goal for noise mitigation shall be a 10 dBA noise reduction. The minimum noise reduction achieved shall be 5 dBA.

The receptors that will require mitigation will depend on the anticipated tonnage levels of coal to be moved (20 million tons, 50 million tons, or 100 million tons annually). As coal train operations increase, the 70 dBA Ldn noise contour will widen. Therefore, within 2 years of transporting 20, 50, or 100 million tons of coal annually, Applicant shall certify to the Board in its quarterly reports required by Condition 147 that it has met this condition for all affected receptors that fall within the 70 dBA noise contour for the level of coal then being moved.

Noise barrier performance shall be determined in accordance with ANSI S12.8-1987, *American National Standard Methods for Determination of Insertion Loss of Outdoor Noise Barriers*. Sound insulation performance shall be determined in accordance with ASTM 966-90, *Standard Guide for Field Measurements of Airborne Sound Insulation of Building Facades and Facade Elements*. This condition shall not apply to those communities or other entities that have executed Negotiated Agreements with Applicant.

Should noise mitigation be required at locations identified as containing structures that are potentially eligible for listing on the National Register of Historic Places, Applicant shall consult with the appropriate State Historic Preservation Officer to assess effects and implement appropriate mitigation measures.

The total number of noise sensitive receptors that meet the wayside noise mitigation criteria at the three applicable tonnage levels are listed below:

<b>County<sup>a</sup> Community<sup>b</sup></b>	<b>Total Number of Receptors - 20 million tons</b>	<b>Total Number of Receptors - 50 million tons<sup>c</sup></b>	<b>Total Number of Receptors - 100 million tons<sup>c</sup></b>
<b>MINNESOTA</b>			
<b>Winona</b>	2	5	1
<b>Olmsted</b>	11	0	1
Chester	0	1	1
Rochester	15	29	44
<b>Dodge</b>	3	0	4
<b>Steele</b>	0	0	6
Meriden	2	4	5
<b>Waseca</b>	1	0	2
Smiths Mill	0	1	1
<b>Blue Earth - Existing Rail Line</b>	1	4	0
Smiths Mill	1	2	1
Judson	0	2	4
Cambria	0	0	3
<b>Blue Earth - Alternative M-2</b>	13	9	9
<b>Blue Earth - Alternative M-3</b>	1	5	3
Eagle Lake	3	4	11
Mankato	31	7	40

<b>Table 12-1 Number of Noise Sensitive Receptors that Meet Wayside Noise Mitigation Criteria</b>			
<b>County<sup>a</sup> Community<sup>b</sup></b>	<b>Total Number of Receptors - 20 million tons</b>	<b>Total Number of Receptors - 50 million tons<sup>c</sup></b>	<b>Total Number of Receptors - 100 million tons<sup>c</sup></b>
<b>Brown</b>	0	4	6
Essig	0	0	1
<b>Redwood</b>	0	0	0
<b>Lyon</b>	0	0	1
Burchard	0	0	0
<b>Lincoln</b>	0	0	1
Verdi	0	0	2
<b>SOUTH DAKOTA</b>			
<b>Brookings</b>	0	7	22
<b>Kingsbury</b>	0	0	0
Manchester	0	0	2
<b>Beadle</b>	0	0	1
<b>Hand</b>	0	2	0
Vayland	0	0	0
<b>Hyde</b>	0	0	1
Holabird	0	0	0
<b>Hughes</b>	0	0	1
Canning	0	0	0
Alto	0	0	0
Pierre	0	13	29
<b>Stanley</b>	0	1	0
Wendte	0	0	2
<b>Jones</b>	0	0	0
Capa	0	0	0
<b>Haakon</b>	0	2	0
Nowlin	0	0	0
Powell	0	0	0

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<b>Table 12-1</b>			
<b>Number of Noise Sensitive Receptors that Meet Wayside Noise Mitigation Criteria</b>			
<b>County<sup>a</sup> Community<sup>b</sup></b>	<b>Total Number of Receptors - 20 million tons</b>	<b>Total Number of Receptors - 50 million tons<sup>c</sup></b>	<b>Total Number of Receptors - 100 million tons<sup>c</sup></b>
<b>Jackson</b>	0	0	0
<b>Pennington</b>	0	1	0
<b>Custer</b>	0	0	0
<b>Fall River</b>	0	1	0
Smithwick	0	0	0
Heppner	0	0	0
Dudley	0	1	1
Marietta	0	1	0
<b>WYOMING</b>			
<b>Niobrara</b>	0	0	0
<b>Weston</b>	0	0	0
<b>Campbell</b>	0	0	0
<b>Converse</b>	0	0	0
<b>TOTAL</b>	<b>36<sup>d</sup></b>	<b>81<sup>e</sup></b>	<b>143<sup>f</sup></b>
<sup>a</sup>	Represents number of noise sensitive receptors located outside the limits of established communities within the county.		
<sup>b</sup>	Represents number of noise sensitive receptors located within the limits of the established community for which the receptor(s) are listed.		
<sup>c</sup>	Represents number of noise sensitive receptors eligible for mitigation and not mitigated under previous levels of rail operations.		
<sup>d</sup>	Add 13 noise sensitive receptors for Alternative M-2. Add 35 noise sensitive receptors for Alternative M-3.		
<sup>e</sup>	Add 9 noise sensitive receptors for Alternative M-2. Add 16 noise sensitive receptors for Alternative M-3.		
<sup>f</sup>	Add 9 noise sensitive receptors for Alternative M-2. Add 54 noise sensitive receptors for Alternative M-3.		

96. To minimize noise and vibration, Applicant shall install and properly maintain rail and rail beds according to the AREMA standards and shall regularly maintain locomotives, keeping mufflers in good working order to control noise.

**BIOLOGICAL RESOURCES**

97. Applicant shall comply with the Biological Assessment that has been prepared under Section 7 of the Endangered Species Act, 16 U.S.C. 1531, and the Biological Opinion prepared by the U.S. Fish and Wildlife Service for this project.
98. Applicant shall develop and implement, in consultation with the U.S. Fish and Wildlife Service, South Dakota Department of Game, Fish and Parks, Wyoming Game and Fish Department, and Minnesota Department of Natural Resources, a habitat restoration plan designed to compensate for the loss of trees, shrubs, and other woody vegetation, prairies, and other important wildlife habitats as a result of construction and reconstruction related to this project. Applicant's plan shall focus in particular on riparian areas or other areas that are not addressed as part of wetland mitigation.
99. Applicant shall conduct a survey for raptor nests, including bald eagles, prior to the initiation of project-related construction activities. Applicant also shall attempt to minimize disturbance to active nests until after active nesting has been completed for the season. Applicant shall consult and coordinate with the applicable State agency (South Dakota Department of Game, Fish and Parks, Wyoming Game and Fish Department, or Minnesota Department of Natural Resources) to determine the appropriate action to compensate for raptor nests removed or destroyed during project-related construction activities.
100. Prior to initiating project-related construction activities, Applicant shall consult with the Natural Resource Conservation Service, local grazing associations, and interested landowners, to develop an adequate plan for controlling noxious weeds. The plan should include an approved list of herbicides.
101. Prior to initiating new rail line construction activities in South Dakota and Wyoming, Applicant shall consult with the South Dakota Department of Game, Fish and Parks, Wyoming Department of Game

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- and Fish, and Tribal wildlife officials to develop mutually acceptable under- and overpass designs and locations to protect wildlife, particularly big game. Considerations for under- and overpass locations should include providing access to wildlife water sources, particularly for big game. Applicant shall develop additional water sources for wildlife to replace those lost, adversely affected, or rendered inaccessible to wildlife due to new rail line construction if suitable alternative sources are not available to wildlife.
102. Prior to initiating new rail line construction activities in South Dakota and Wyoming, Applicant shall coordinate with the South Dakota Department of Game, Fish and Parks, Wyoming Game and Fish Department, and Tribal wildlife officials to develop adequate fencing standards and designs to allow for movement of wildlife, particularly big game, across the right-of-way. Applicant shall encourage the use of these types of fencing when negotiating with landowners on fence installation on private property. (See also Condition 32.)
103. Applicant shall remove carcasses from the rail line right-of-way as part of normal rail line inspection and maintenance activities.
104. Prior to initiation of project-related reconstruction activities in Minnesota and South Dakota, Applicant shall conduct a survey of the existing rail line right-of-way to identify native prairie remnants within the existing right-of-way. To the extent practicable, these areas shall be avoided during project-related reconstruction activities. Applicant also shall coordinate with the Minnesota Department of Natural Resources and the South Dakota Department of Game, Fish and Parks to develop a plan for the re-establishment of prairie vegetation in prairie remnants which cannot be avoided during project-related reconstruction activities. Such a plan should include, as appropriate, the stripping and stockpiling of topsoil for placement in the disturbed area during revegetation and the use of seed previously taken from the area or other local prairie remnants to revegetate disturbed prairie remnants within the existing right-of-way.

#### CULTURAL RESOURCES

105. Applicant shall provide written or other resources to inform its workers (both temporary and full-time) of the applicable Federal, State, and local requirements for the protection of archaeological resources, graves, other cultural resources, and wildlife (including those concerning

threatened and endangered species), as well as the applicable requirements of trespass laws, traffic regulations (such as speed limits and weight restrictions), and regulations pertaining to waste disposal. Applicant's resources shall inform construction workers of the importance of protecting archaeological resources, graves and other cultural resources, and how to recognize and treat these resources. Applicant shall also establish policies to deter casual collection by construction workers of cultural resources.

106. Applicant shall comply with the Programmatic Agreement and Identification Plan that has been developed through the Section 106 consultation process under the National Historic Preservation Act.
107. Applicant shall implement all the mitigation included in the Memorandum of Agreement that has been developed to ensure that the concerns of Native American Tribes related to the proposed project which are outside the Section 106 process under the National Historic Preservation Act are considered and addressed.
108. Prior to initiating project-related construction or rehabilitation of Applicant's bridge over the Missouri River located at Pierre, South Dakota, Applicant shall ensure that the Section 106 process of the National Historic Preservation Act is completed for all archaeological sites and historic structures that would be impacted by the proposed project.

#### ENVIRONMENTAL JUSTICE

109. Applicant shall consult and coordinate with the Lakota Sioux Tribe to develop a Hazardous Material Emergency Response Plan to account for the special needs of Tribal members on the Pine Ridge Reservation in South Dakota, particularly those inhabiting Red Shirt, South Dakota. This plan shall include Applicant-sponsored training in hazardous materials response for appropriate Tribal personnel with emphasis on methods to protect the Cheyenne River, an important resource to the Pine Ridge Reservation, in the event of a spill of petroleum products such as oil or diesel fuel, or other hazardous materials.
110. Prior to initiation of project-related construction or reconstruction activities, Applicant shall establish a Tribal Liaison to consult with interested and affected Tribes, develop cooperative solutions to the Tribes' concerns, discuss possible job opportunities for Tribal members, be available for Tribal meetings, conduct public outreach to educate the

public on the importance of archaeological and paleontological resources to Native American Tribes, and conduct periodic Tribal outreach. This Tribal Liaison shall have access to Applicant's upper management. Applicant shall provide the name and phone number of the Tribal Liaison to Tribal officials including Tribal chairmen, Tribal Historic Preservation Officers, and other Tribal designees.

#### GEOLOGY AND SOILS

111. Applicant shall limit ground disturbance only to the areas necessary for project-related construction and reconstruction activities.
112. During project-related earthmoving activities, Applicant shall remove topsoil and segregate it from subsoil. Applicant shall also stockpile topsoil for later application during reclamation of the right-of-way. Applicant shall place the topsoil stockpiles in areas that would minimize the potential for erosion, and use appropriate erosion control measures around all stockpiles to prevent erosion.
113. Applicant shall commence reclamation of disturbed areas as soon as practicable after project-related construction ends along a particular stretch of rail line. The goal of reclamation shall be the rapid and permanent reestablishment of ground cover on disturbed areas. Applicant shall attempt to reclaim disturbed areas prior to cessation of project-related construction activities for the winter to avoid disturbed soils being subject to erosion throughout the winter. If weather or season precludes the prompt reestablishment of vegetation, Applicant shall use measures such as mulching, netting, or ground blankets to prevent erosion until reseeding can be completed.
114. Prior to initiating project-related construction activities, Applicant shall consult with the local offices of the Natural Resources Conservation Service, State Departments of Natural Resources, Fish and Game, and State Departments of Transportation, to develop an appropriate plan for restoring and revegetating the disturbed areas (including appropriate greenstrip seed mix specifications). Applicant shall monitor reclaimed areas for three years following the revegetation. For those areas where efforts to establish vegetative cover have been unsuccessful after one year, Applicant shall reseed annually until vegetative cover is established.
115. Applicant shall take reasonable steps to ensure that fill material used in project-related construction activities is free of contaminants.

116. Applicant shall design and construct the new rail line so as to consider local geologic potentials for slumping and landslides and develop and implement adequate measures to minimize the potential for these to occur.

PALEONTOLOGICAL RESOURCES

117. Prior to engaging in any project-related construction across Federal lands, Applicant shall conduct testing within the proposed right-of-way where there is a potential for paleontological resources of Class 3 or higher. This testing shall be done to the depth below ground surface at which the rail line is anticipated to be constructed. Prior to initiating project-related construction activities in the areas that warrant testing, Applicant shall prepare a paleontological resources report identifying any resources encountered, as well as the strata most likely to contain significant paleontological resources. Applicant shall submit the report to the Board and the appropriate Federal land managing agency. After submitting the report, Applicant shall consult with the appropriate Federal land managing agency to develop appropriate measures to minimize damage to paleontological resources during project-related construction. These measures may include a requirement that the Applicant retain a paleontologist to be present during earthmoving activities affecting the strata most likely to contain significant fossil resources.
118. If paleontological resources are encountered during project-related construction activities on Federal lands, Applicant shall immediately cease construction activities, inform the appropriate Federal land managing agency of the identified resource, and arrange for evaluation of the resource and determination of how to protect the resource by a qualified paleontologist. The paleontologist may be employed by the Federal land managing agency, the relevant State Historic Preservation Office, or may be retained by Applicant. Any paleontological resources recovered from project-related construction activities across Federal lands shall remain the property of the United States Government.
119. If significant paleontological resources are encountered during project-related construction activities on private lands, construction crews shall notify the appropriate agencies and take appropriate actions at the work site to protect paleontological resources.

## NEGOTIATED AGREEMENTS

120. Applicant shall comply with the terms of all Negotiated Agreements developed with local communities regarding environmental issues associated with the PRB Expansion Project. The following list provides the Negotiated Agreements received by the Board to-date:

<b>Table 12-2 Negotiated Agreements</b>			
<b>Minnesota</b>			
Balaton	Byron	Claremont	Cobden
Dodge Center	Dover	Eyota	Garvin
Janesville	Kasson	Lake Benton	Lamberton
Lewiston	Minnesota City	New Ulm	Owatonna
Revere	Sanborn	Sleepy Eye	Springfield
Stockton	St. Charles	Tracy	Tyler
Utica	Walnut Grove	Waseca	
<b>South Dakota</b>			
Arlington	Aurora	Blunt	Cavour
Cottonwood	Desmet	Elkton	Ft. Pierre
Harrold	Hetland	Highmore	Huron
Iroquois	Lake Preston	Midland	Miller
Phillip	Quinn	Ree Heights	St. Lawrence
Volga	Wall	Wessington	Wolsey

**SITE-SPECIFIC MITIGATION MEASURES**

**Minnesota**

- 121. Applicant shall install two grade separated crossings in Rochester, Minnesota, at Broadway Avenue, East Circle Drive, West Silver Lake Drive/2nd Avenue NE, 6th Avenue, or another mutually acceptable location. Applicant shall consult with FRA, Federal Highway

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- Administration (FHWA), appropriate State and local transportation authorities, and the City of Rochester on the design (for example, whether the road would go over or under the rail line), location, and funding of these grade separations. Applicant shall complete installation of one grade separated crossing prior to transporting more than 20 million tons of coal annually through Rochester for more than one year. Applicant shall complete installation of a second grade separated crossing prior to transporting more than 50 million tons of coal annually through Rochester for more than one year. These grade separated crossings should be designed and located to facilitate the movement of emergency vehicles to and from medical facilities providing emergency services in Rochester, including St. Mary's Hospital and Methodist Hospital, which are both facilities of the Mayo Clinic. During the Board's oversight period, Applicant shall apprise SEA of the progress being made toward implementation of this condition in the quarterly reports required by Condition 147.
122. Prior to initiation of project-related reconstruction activities in Rochester, Minnesota, Applicant's upper management shall meet with representatives of the Mayo Clinic to consult and coordinate with the Mayo Clinic on how best to minimize project-related impacts on the Clinic. Applicant's upper management shall continue to meet with Clinic representatives on a regular basis during the Board's oversight period.
123. Applicant, prior to transporting 50 million tons of coal annually through Rochester, Minnesota, shall coordinate with the City of Rochester, Olmsted County, Minnesota Department of Transportation, and FRA to develop additional grade-crossing protection devices at the existing grade crossing of Broadway Avenue. This is necessary because the accident frequency at this crossing would exceed the Board's criteria of significance, even with the protection proposed in DM&E's Grade Crossing Mitigation Plan, which is discussed in Condition 1.
124. In determining the final design and location of sidings constructed as part of project-related rail line reconstruction, Applicant shall consider the feasibility of shifting the location of the siding proposed in the area of Minneopa State Park in Minnesota to avoid the park. If Applicant determines that it is necessary to build a siding in the park, Applicant shall consider the feasibility of constructing the siding on the south of the tracks on the eastern end, to avoid channel changes in the Minnesota River, or on the north side of the existing track on the west end, to

- minimize wetland impacts. Applicant shall report the results of its considerations to the Board as part of its reporting under Condition 147.
125. In determining the final design and location of sidings constructed as part of project-related rail line reconstruction, Applicant shall consider locating the siding proposed in the area between Sanborn and Lamberton in Redwood County, Minnesota, on the north side of the existing rail line to avoid impacting the well-vegetated, intact riverbanks on the south side of the existing line. Applicant shall report the results of its considerations to the Board as part of its reporting under Condition 147.
  126. If Applicant determines that the bridge over the access road to Lake Benton, Lincoln County, Minnesota requires reconstruction to permit the movement of unit coal trains, Applicant shall consult with the Minnesota DOT to consider ways to design and construct the bridge so as to ensure the safe passage of emergency vehicles.
  127. Applicant shall coordinate with the City of Courtland, Minnesota to ensure protection of the city's sewer line during project-related reconstruction of the existing rail line.
  128. If Alternative M-2, the Mankato, Minnesota southern route, is built, Applicant shall consult with Blue Earth County, Minnesota, to explore the feasibility and cost effectiveness of constructing any new rail line on a trestle or bridge rather than fill in the Blue Earth River valley.
  129. If Alternative M-2, the Mankato, Minnesota southern route, is built, Applicant, prior to transporting 50 million tons of coal annually over Alternative M-2, shall coordinate with Blue Earth County, Minnesota DOT and the FRA to develop additional grade-crossing protection devices at the proposed crossing of Township Road 194. This is necessary because the accident frequency at this crossing would exceed the Board's criteria of significance, even with the protection proposed in DM&E's Grade Crossing Mitigation Plan, which is discussed in Condition 1.
  130. If Alternative M-2, the Mankato, Minnesota southern route, is built, Applicant shall coordinate with Mount Kato Ski Area to minimize, to the extent practicable, the potential impacts of construction of Alternative M-2 across ski area property.
  131. Applicant shall consider installation of a pedestrian and bike underpass of the Red Jacket Trail in Blue Earth County, south of Mankato, Minnesota, if Alternative M-2, the Mankato, Minnesota southern route, is built. At a minimum, Applicant shall install and maintain warning

- signs clearly advising the public to proceed with caution due to the possible presence of trains.
132. If Alternative M-2, the Mankato, Minnesota southern route, is built, Applicant shall attempt to avoid the holding pond for County Highway 90 at Saddle Club, Blue Earth County, Minnesota. If the holding pond cannot be avoided, Applicant shall consult with Blue Earth County regarding its replacement and be responsible for the costs associated with replacing the holding pond.
  133. If Alternative M-2, the Mankato, Minnesota southern route is built, Applicant shall consult with Blue Earth County, Minnesota regarding whether the portion of Alternative M-2 west of Mankato, Minnesota can be constructed so as to avoid or minimize impacts to the proposed Minneopa Trail.
  134. Applicant shall work with the City of Mankato, Minnesota to determine if additional access can be developed to Land of Memories Park. Should a mutually acceptable plan for additional access be developed, Applicant shall work with the City to help the City secure funding for the project.
  135. If Alternative M-3, the existing rail corridor alternative through Mankato, is built and Applicant determines that it must rebuild the existing bridge over the Blue Earth River to permit operation of unit coal trains, Applicant shall consider incorporating a pedestrian/bicycle crossing as part of the new rail bridge design.
  136. If Alternative M-3, the existing rail corridor alternative through Mankato, Minnesota is built, for the pedestrian crossings of the Sakatah Singing Hills State Trail in Blue Earth County, Applicant shall install and maintain warning signs clearly advising the public to proceed with caution due to the possible presence of trains.
  137. Applicant shall consider locating the Middle East Staging and Marshaling Yard near New Ulm, Minnesota in such a way to allow residents of Shag Road access to Shag Road from both ends of the rail yard. Applicant shall report the results of its considerations to the Board as part of its reporting under Condition 147.

#### South Dakota

138. Applicant shall install a grade separated crossing in Pierre, South Dakota, at Sioux Avenue or another mutually acceptable location, to be completed within one year after DM&E transports more than 50 million

- tons of coal through Pierre annually for more than one year. Applicant shall consult with the FRA, FHWA, appropriate State and local transportation authorities, and the City of Pierre on the design (for example, whether the road would go over or under the rail line), location, and funding of this separation. Applicant shall apprise SEA of the progress being made toward implementation of this condition in the quarterly reports required by Condition 147.
139. Applicant shall consider improving the existing rail line underpass off of Park Street in Fort Pierre, South Dakota to allow a paved crossing suitable for passage of emergency vehicles as part of any project-related reconstruction or replacement of the existing Bad River Bridge.
  140. Applicant shall consult with the City of Wall, South Dakota and the South Dakota Department of Transportation to consider whether the proposed new rail line west of Wall can be designed and constructed to allow the expansion of the Wall Municipal Airport, as currently proposed.
  141. Applicant shall consult with the South Dakota Department of Transportation to consider whether the grade separation of US Highway 18 east of Edgemont, South Dakota proposed in Applicant's Grade Crossing Mitigation Plan can be designed so as to accommodate future expansion of this highway to four lanes.
  142. If Applicant determines that the bridge over 6th Avenue in Brookings, South Dakota, requires reconstruction to permit movement of unit coal trains, Applicant shall coordinate with the City of Brookings and the South Dakota Department of Transportation to explore whether the bridge can be designed and constructed to permit the passage of all emergency vehicles.
  143. For the pedestrian crossings at 12th Avenue, 6th Avenue, and the Interstate 29 pedestrian and bike trail in Brookings, South Dakota, Applicant shall install and maintain warning signs clearly advising the public to proceed with caution due to the possible presence of trains.

#### Wyoming

144. Applicant, prior to transporting 50 million tons of coal annually over Alternative C, shall coordinate with Niobrara County, Wyoming Department of Transportation (Wyoming DOT), and FRA to develop additional grade-crossing protection devices at the proposed crossing of U.S. Highway 85. Additionally, Applicant, prior to transporting 50

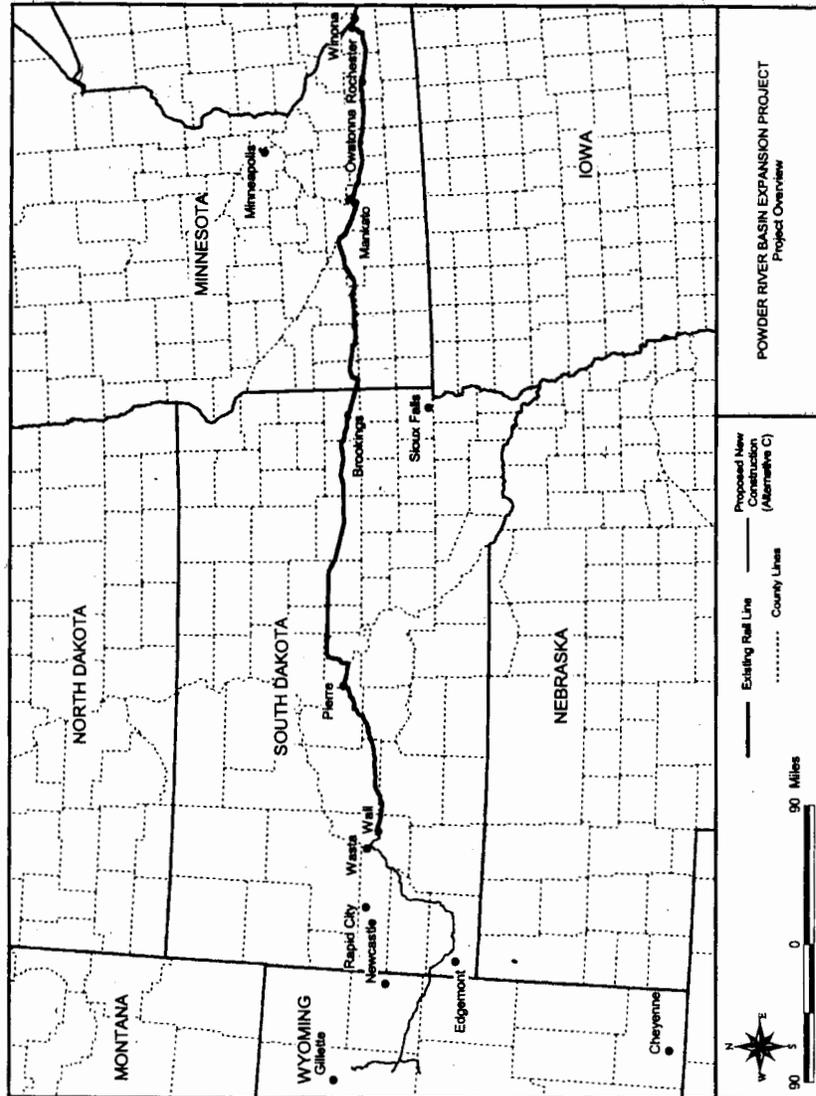
million tons of coal annually over Alternative C, shall coordinate with Campbell County, Wyoming DOT and the FRA to develop additional grade-crossing protection devices at the proposed crossing of Bishop Road, and shall do the same for State Highway 450 prior to transporting 100 million tons of coal annually. This is necessary because the accident frequency at these crossings would exceed the Board's criteria of significance, even with the protection proposed in DM&E's Grade Crossing Mitigation Plan, which is discussed in Condition 1.

#### MONITORING AND ENFORCEMENT

145. If there is a material change in the facts or circumstances upon which the Board relied in imposing specific environmental mitigation conditions, or if there are unanticipated environmental problems that arise during the oversight period, the Board will take appropriate action. Any community or other interested party may seek redress by filing a petition to demonstrate material change or unanticipated problems during the environmental oversight period. The Board may review the continuing applicability of its final mitigation and impose additional or modified conditions if warranted.
146. Applicant shall retain a third-party contractor to assist SEA in the monitoring and enforcement of mitigation measures on an as-needed basis until Applicant has completed project-related construction and reconstruction activities, as well as during the environmental oversight period.
147. To ensure Applicant's compliance with the environmental mitigation conditions imposed by the Board, Applicant shall submit to SEA reports on a quarterly basis for the duration of the oversight period, documenting the status of its mitigation implementation for each condition. The oversight period in this case shall be the first two years of project-related operations.

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APPENDIX B: MAP OF THE PROJECT AREA



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APPENDIX C: TABLE OF ALTERNATIVES

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Extension Alternatives<sup>96</sup> (Wyoming and South Dakota)</b>				
Alternative B	Proposed route, extends southwest from Wall, South Dakota along the Cheyenne River and westward into Wyoming to access the coal mines.	Extend DM&E's existing system westward to access the coal mines in the Powder River Basin of Wyoming.	Should it be determined that the project meets the purpose and need identified for the project, Alternative C appears to be the least environmentally intrusive alternative.	SEA concludes that all of the Extension Alternatives would have significant environmental impacts. However, significant impacts would generally be similar or less for Alternative C (which was developed to avoid a number of environmentally sensitive areas). As a result, if the Board decides to give final approval to the PRB Expansion Project, Alternative C would be the environmentally preferred alternative.
Alternative C	Modified proposed route similar to Alternative B but with the alignment modification to avoid the environmentally sensitive areas along the Cheyenne River.	Extend DM&E's existing system westward to access coal mines in the Powder River Basin of Wyoming and avoid environmentally sensitive areas along the Cheyenne River.		
Alternative D	Existing corridor alternative that utilizes existing rail line from Wall to Rapid City to Smithwick, new alignment west to Edgemont and then parallel existing rail line to access the mines.	Extend DM&E's existing system westward to access coal mines in the Powder River Basin of Wyoming while utilizing existing rail lines as practicable.		

<sup>1</sup> SEA concluded that Alternative A, the No-Action Alternative, would not meet the purpose and need for this project and would result in potentially significant environmental impacts of its own.

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Extension Sub-Alternatives, Spring Creek Alternatives (South Dakota)</b>				
Spring Creek Segment	Segment of Alternative B, crosses and follows Spring Creek floodplain.	Provide efficient grade for new rail line extending DM&E's existing system.	While both alternatives would have potentially significant impacts to environmental resources, the Phiney Flat Alternative would have far fewer impacts and those impacts would be more capable of being mitigated. Therefore SEA preliminarily concludes that the Phiney Flat Alternative would be environmentally preferable.	The Phiney Flat Alternative would have far fewer impacts, particularly to wetlands, riparian areas, and cultural resources than the Spring Creek Segment. Additionally, because impacts due to the Phiney Flat Alternative can be more readily mitigated, SEA reaffirms its conclusion in the Draft EIS that Phiney Flat is the environmentally preferred alternative, with SEA's recommended mitigation.
Phiney Flat Alternative	Segment of Alternative B moved out of Spring Creek drainage area.	Avoid sensitive environmental areas (wetlands, riparian areas) along Spring Creek.		

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<b>Table ES-8</b>				
<b>Summary of Powder River Basin Expansion Project Alternatives</b>				
<b>Alternative</b>	<b>Description</b>	<b>Purpose</b>	<b>Recommendation in the Draft EIS</b>	<b>SEA's Final Recommendation</b>
<b>Hay Canyon Alternatives, (South Dakota)</b>				
Hay Canyon Segment	Alignment following Hay Canyon drainage from north of the Cheyenne River south to Smithwick.	Provide suitable alignment while avoiding environmentally sensitive areas along the Cheyenne River.	Each of the alternatives would have significant environmental impacts, but to different resources. Because SEA would have to make a value judgement between wetlands/ riparian areas or irrigated lands, SEA requests additional comments from agencies and the public to assist in identifying an environmentally preferable alternative.	As a result of a Memorandum of Agreement between DM&E and the Bureau of Reclamation, it now appears that significant impacts to irrigated lands and the Angostura Dam, Reservoir, and facilities can be effectively mitigated. Thus, SEA has determined that the WG Divide Alternative is the environmentally preferred route variation.
Oral Segment	Alignment following the Cheyenne River to Oral, then using existing rail line south to Smithwick.	Provide suitable alignment while using as much of the existing DM&E rail line as practicable, avoiding irrigated lands and environmentally sensitive areas along Hay Canyon.		
WG Divide Alternative	Alignment following WG Divide drainage from north of the Cheyenne River south to Smithwick.	Provide suitable alignment while avoiding environmentally sensitive areas along the Cheyenne River and Hay Canyon.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Black Thunder Alternatives (Wyoming)</b>				
Black Thunder South	Two spurs, one north of Hwy. 450 to access Jacobs Ranch Mine, one south along Hwy. 450 creating a second rail loading loop to access the Black Thunder Mine.	To provide access to Black Thunder Mine, avoiding need to cross existing Jacobs Ranch Mine Loop.	Overall, neither alternative would have significant environmental impacts. However, because the North Mine Loop would have less overall environmental impacts, SEA preliminarily concludes the Black Thunder North Mine Loop would be the preferred environmental alternative.	SEA reaffirms its conclusion in the Draft EIS that the Black Thunder North Mine Loop is the environmentally preferred alternative.
Black Thunder North	Rail spur north of Hwy. 450 connecting to Jacobs Ranch Mine, continuing to the existing Black Thunder rail loop on the north side of Hwy 450.	To provide access to Black Thunder Mine, minimizing new rail line construction.		

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<p align="center"><b>Table ES-8</b>  <b>Summary of Powder River Basin Expansion Project Alternatives</b></p>				
<b>Alternative</b>	<b>Description</b>	<b>Purpose</b>	<b>Recommendation in the Draft EIS</b>	<b>SEA's Final Recommendation</b>
<b>North Antelope Alternatives (Wyoming)</b>				
North Antelope East	Mine connection spur connecting to existing mine loop just west of Porcupine Reservoir.	Provide rail access to the North Antelope Mine.	Overall, neither alternative would have significant environmental impacts. However, because the East Mine Loop would have less overall environmental impacts, SEA preliminarily concludes the North Antelope East Mine Loop would be the preferred environmental alternative.	SEA reaffirms its conclusion in the Draft EIS that the North Antelope East Mine Loop would be the environmentally preferred alternative.
North Antelope West	Mine connection spur connecting to existing mine loop west of Porcupine Reservoir.	Provide rail access to the North Antelope Mine.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Mankato Alternatives - (Minnesota)</b>				
M-1	No Build Alternative.	Maintain current condition which involves operational inefficiencies due to DM&E operating over another rail carrier (UP).	Based on information to-date, Alternative M-2 appears to be environmentally preferred. Should DM&E reach agreement with UP and the City of Mankato and implement measures to ensure safety of flood control projects, Alternative M-3 could become environmentally preferred alternative.	Absent an agreement between UP and DM&E, Alternative M-2 is the only feasible action alternative. SEA recommends that, should the Board approve the project and should no agreement exist between UP and DM&E, Alternative M-2 be approved. However, in the alternative, should the Board approve the project and UP and DM&E have an agreement permitting DM&E to construct and operate within the UP right-of-way, SEA recommends Alternative M-3.
M-2	Southern Mankato Route, provide a connection route south of Mankato.	Bypass DM&E's trackage rights on UP rail line, while avoiding existing rail corridor.		
M-3	Existing Corridor Route, provide a connection route within UP's existing rail corridor.	Bypass DM&E's trackage rights on UP rail line by confining rail construction to existing corridor.		

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Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Owatonna Alternatives - (Minnesota)</b>				
O-1	No action alternative, DM&E would be unable to interchange rail traffic with I&M, existing rail line would not be reconstructed.	Maintain environmental status quo, DM&E rail interchange would be limited to existing location.	Assuming DM&E could implement Alternative O-5, SEA preliminarily concludes that Alternative O-5 appears to be the environmentally preferable alternative because it would not require any additional right-of-way and would have generally minimal environmental impacts. If Alternative O-5 could not be implemented, SEA believes Alternative O-4 would be the environmentally preferable alternative because it would have less environmental impacts and minimize new rail line construction.	Absent an agreement between UP and DM&E, Alternative O-5 is not a feasible action alternative. SEA recommends that, should the Board approve the project and should no agreement exist between UP and DM&E, Alternative O-4, which minimizes environmental impacts, be approved. However, in the alternative, should the Board approve the project and UP and DM&E have an agreement permitting DM&E to construct and operate within the UP right-of-way, SEA recommends Alternative O-5.
O-2	Reconstruction of existing rail line, but no interchange with I&M.	Improve rail operations through Owatonna, DM&E rail interchange would be limited to existing locations.		
O-3	Reconstruction of existing rail line and construction of 3.2-mile rail line connection with I&M.	Enable rail interchange between DM&E and I&M using connecting track long enough to accommodate an entire train.		
O-4	Reconstruction of existing rail line and construction of 1.7-mile rail line connection with I&M.	Enable rail interchange between DM&E and I&M, minimizing new rail line construction.		
O-5	Reconstruction of existing rail line and construction of rail connection with I&M within existing rail line right-of-way of another rail carrier (UP).	Enable rail interchange between DM&E and I&M minimizing new rail line construction and confining construction to existing rail right-of-way.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Rochester, Minnesota Alternatives</b>				
R-1	No action alternative, existing rail line not reconstructed.	To maintain the environmental status quo, rail operations in Rochester remain unchanged.	SEA believes use of existing rail corridor is generally environmentally preferable to new rail line construction. However, the reconstruction and by-pass alternatives would both have significant although different environmental impacts. Therefore, SEA requests further comments on which alternative would be environmentally preferable and the extent to which the community should share the cost of a bypass, if one is approved.	Because of the potential threat of sinkholes and the difficulty involved in mitigating sinkholes, SEA cannot recommend Alternative R-4. Accordingly, should the Board approve the PRB Expansion Project, Alternative R-2 would be the environmentally preferable route. SEA has developed extensive mitigation for the impacts to Rochester associated with Alternative R-2.
R-2	Reconstruction of existing rail line through Rochester.	Improve rail service and operation through Rochester.		
R-3	Construction of new rail line by-pass around the South side of Rochester, no change in rail line or operations in Rochester.	Minimize environmental impacts from increased rail traffic by routing it around Rochester.		
R-4	Construction of a new rail line by-pass for all rail traffic around the south side of Rochester.	Minimize environmental impacts by rerouting new and existing rail traffic around Rochester.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Brookings, South Dakota Alternatives</b>				
B-1	No-Action Alternative, existing rail line not reconstructed.	To maintain the environmental status quo, rail operations in Brookings would remain unchanged.	Based on differences in the potential environmental impacts, SEA preliminarily concludes that Alternative B-4 appears to be the environmentally preferred alternative. However, this alternative may not contribute to the overall purpose and need defined for the project because it would not improve rail service to Brookings shippers. SEA specifically requests further comments on the Brookings alternative, including the extent to which the community should share the cost of a bypass.	While the bypass has different environmental impacts than the existing rail line, the bypass would also create substantial environmental impacts. Because the bypass does not provide obvious benefits or advantages to reduce environmental impacts or improve rail operations, SEA concludes that, should the Board approve the project, Alternative B-2 is the preferred alternative.
B-2	Reconstruction of existing rail line through Brookings.	Improve rail service and operation through Brookings.		
B-3	Construction of new rail line bypass around the north side of Brookings, no change in rail line or operations in Brookings.	Minimize environmental impacts from increased rail traffic by routing it around Brookings.		
B-4	Construction of a new rail line bypass for all rail traffic around the north side of Brookings.	Minimize environmental impacts by rerouting new and existing rail traffic around Brookings.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Pierre, South Dakota Alternatives</b>				
P-1	No- Action Alternative, existing rail line not reconstructed.	To maintain the environmental status quo, rail operations in Pierre would remain unchanged.	The Pierre bypass would require significant cut and fill, an extensive new bridge across the Missouri River, and would likely have a severe impact on a substantial amount of significant cultural resources. Therefore, SEA determined the bypass to be unreasonable and removed it from further consideration in the Draft EIS.	While the bypass has different environmental impacts than the existing rail line, the bypass would also create substantial environmental impacts. Because the bypass does not provide obvious benefits or advantages to reduce environmental impacts or improve rail operations and would be substantially more expensive than reconstruction of the existing rail line, SEA concludes that, should the Board approve the project, Alternative P-2 is the preferred alternative.
P-2	Reconstruction of existing rail line through Pierre.	Improve rail service and operation through Pierre.		
P-3	Construction of a new rail line bypass to the south of Pierre and Fort Pierre for all rail traffic.	Minimize environmental impacts by rerouting new and existing rail traffic around Pierre.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Middle East Yard Options (Minnesota)</b>				
Option A	Construction and operation of new rail yard west of Mankato, Minnesota.	Provide facilities for train crew changes and efficient interchange of rail traffic with UP.	After considering the potential environmental impacts of the yard options, SEA determined impacts to Minneopa State Park would be significant and difficult to mitigate. Other environmental impacts could be mitigated. Therefore, SEA preliminarily concludes that Option B would be the environmentally preferable alternative.	Upon further analysis, SEA determined that both yard options would have potentially substantial impacts to water resources, Option A having a combined impact to surface waters and wetlands, Option B to wetlands. However, Option A would significantly impact Minneopa State Park. While wetland impacts could be mitigated, impacts to the State park would be difficult or impossible to mitigate. SEA, therefore, reaffirms its conclusion in the Draft EIS that Option B is the environmentally preferable alternative.
Option B	Construction and operation of a new rail yard east of New Ulm Minnesota.	Provide facilities for train crew changes and efficient interchange of rail traffic with UP, while avoiding State Park lands.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>West Yard Options (Wyoming)</b>				
Option A	Construction and operation of a new rail yard on the Campbell/Weston County line, Wyoming.	Provide facilities for train staging and dispatch westward to the coal mines and eastward to coal users.	Based on the information available to date, SEA considers Option B to be environmentally preferable because it would have less impact on public lands, particularly Thunder Basin National Grassland. In the event DM&E would exchange land elsewhere for National Grasslands at the Option A site and the USFS would agree to Option A, SEA would reconsider which yard alternative would be preferable.	Because Option A would have greater impact on public lands, particularly Thunder Basin National Grassland, SEA reaffirms its conclusion in the Draft EIS that the Option B yard alternative is environmentally preferable.
Option B	Construction and operation of a new rail yard slightly south of Option A.	Provide facilities for train staging and dispatch westward to the coal mines and eastward to coal users, avoiding impacts to National Grasslands.		

Table ES-8 Summary of Powder River Basin Expansion Project Alternatives				
Alternative	Description	Purpose	Recommendation in the Draft EIS	SEA's Final Recommendation
<b>Missouri River Bridge Alternatives (South Dakota)</b>				
Rehabilitation of Existing Bridge	Reinforce existing rail bridge to accommodate unit coal trains.	Enable transport of unit coal trains over the Missouri River.	SEA believes it is preferable to avoid impacts, even if temporary. Therefore, SEA preliminarily concludes that rehabilitation of the existing rail bridge is the environmentally preferred alternative. If DM&E submits information indicating rehabilitation of the existing rail bridge is not reasonable and feasible, SEA would re-evaluate this conclusion.	SEA reaffirms its conclusion in the Draft EIS that it is preferable to avoid impacts, even temporary, whenever possible. Therefore, SEA finds rehabilitation of the existing bridge environmentally preferable.
New Construction/ New Ownership	Construction and operation of a new rail bridge and transfer of ownership of existing bridge.	Enable transportation of unit coal trains over the Missouri River and development of alternative use for the existing rail bridge.		
New Construction/ Bridge Removal	Construction and operation of a new rail bridge and removal of existing rail bridge.	Enable transportation of unit coal trains over the Missouri River with no alternative use for the existing rail bridge.		

APPENDIX D: COSTS FOR MITIGATION MEASURES INCLUDED IN NEGOTIATED AGREEMENTS

Mitigation Measure	Units	Quantity	Unit Cost	Total Cost
Grade-Crossing Warning Devices				
Nothing to crossbucks	each	1	\$1,800	\$1,800
Crossbucks to crossbucks and stop signs	each	4	\$200	\$800
Crossbucks to flashing lights	each	19	\$112,950	\$2,146,050
Crossbucks to flashing lights/gates	each	1	\$126,450	\$126,450
Flashing lights to flashing lights/gates	each	7	\$22,500	\$157,500
Installation of Four-Quadrant Gates and Flashing Lights <sup>1</sup>	each	102	\$165,000	\$16,830,000
Close Crossing	each	16	\$10,000	\$160,000
Close Crossing - install locking gate	each	1	\$7,000	\$7,000
Grade Separations	each	2	\$6,500,000	\$13,000,000
Installation of Warning Signs	each	1	\$1,000	\$1,000
Fencing: 8-foot Chain Link	per mile	653	\$71,280	\$465,458
Landscaping	per foot	1,850	\$20	\$37,000
Bike Underpass	each	1	\$175,000	\$175,000
Construct Frontage Road (paved)	per foot	2,200	\$91	\$200,000

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<sup>1</sup> The cost estimate conservatively assumes that completely new installation of active warning devices is necessary.

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Mitigation Measure	Units	Quantity	Unit Cost	Total Cost
Construct Frontage Road (gravel)	per foot	1,000	\$45	\$45,000
Construct 300 feet of road, crossing 4 sets of tracks (50%)	each	1	\$37,500	\$37,500
Install gates and flashing lights (25% of cost)	each	1	\$31,500	\$31,500
Evergreen Trees	-	-	-	\$2,000
Bike Path	per foot	2,100	\$14	\$30,000
Total <sup>2</sup>				\$33,454,058

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<sup>2</sup> Includes total estimated cost in 2001 dollars. However, only a portion of these costs would be incurred at project initiation or start of coal transport operations. DM&E and the various communities have negotiated implementation and installation of various mitigation measures at various levels of coal transport, including 20, 40, 50, 60, and 70 million tons. Therefore, mitigation costs associated with negotiated agreements would be spread over several years as DM&E coal tonnages increase.