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POST ENVIRONMENTAL ASSESSMENT

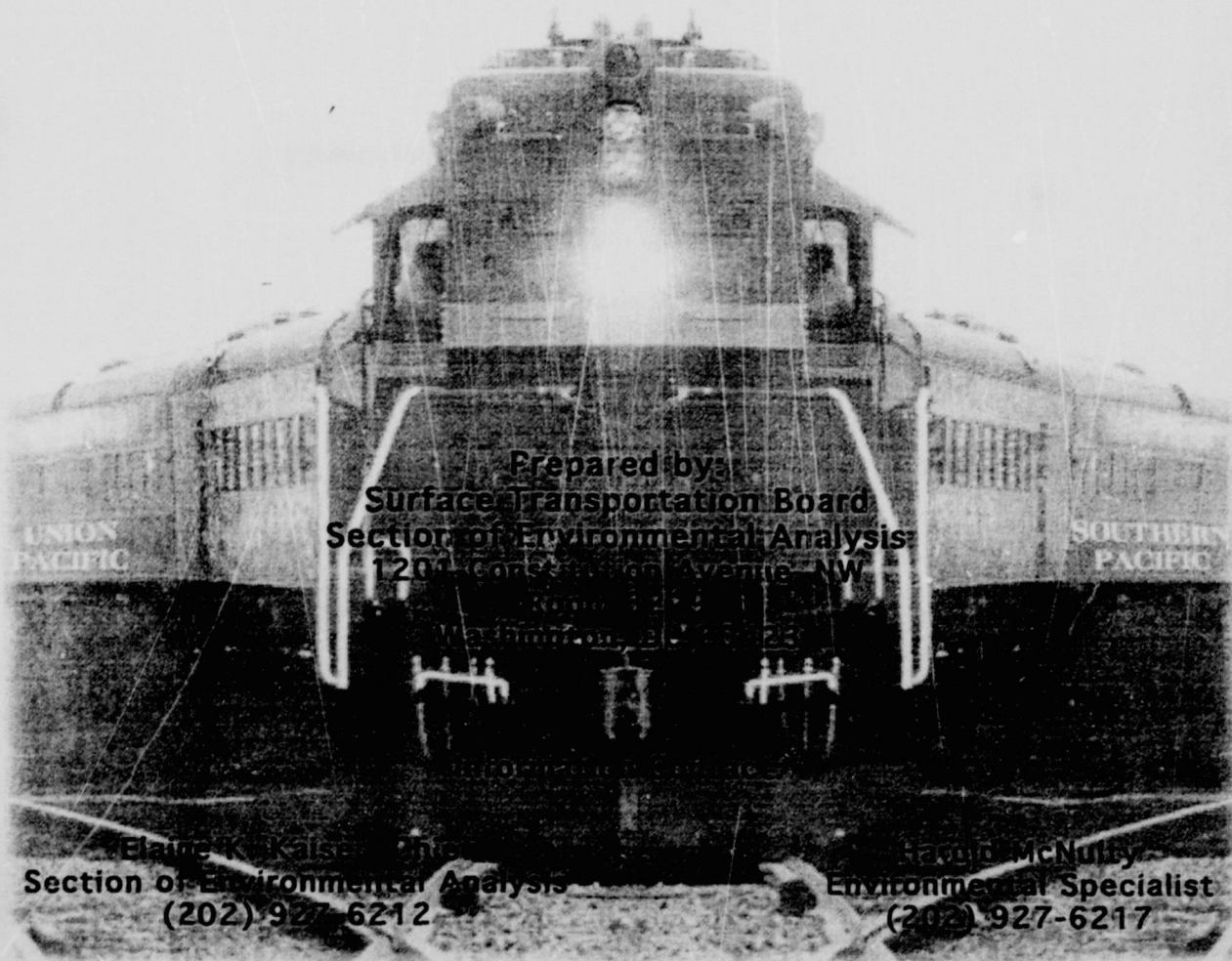
Volume 1

FINANCE DOCKET NO. 32760

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD COMPANY, AND
MISSOURI PACIFIC RAILROAD COMPANY

-CONTROL AND MERGER-

SOUTHERN PACIFIC RAIL CORPORATION,
SOUTHERN PACIFIC TRANSPORTATION COMPANY,
ST. LOUIS SOUTHWESTERN RAILWAY COMPANY,
SPCSL CORPORATION, AND
THE DENVER & RIO GRANDE WESTERN RAILROAD COMPANY



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Surface Transportation Board
Section of Environmental Analysis

**Post Environmental Assessment
Volume 1**
Finance Docket No. 32760

Union Pacific Corporation, Union Pacific Railroad Company, and
Missouri Pacific Railroad Company

--Control and Merger--

Southern Pacific Rail Corporation, Southern Pacific Transportation
Company, St. Louis Southwestern Railway Company, SPCSL
Corporation, and the Denver & Rio Grande Western Railroad
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SURFACE TRANSPORTATION BOARD
Finance Docket No. 32760
Union Pacific Railroad Company
--Control and Merger--
Southern Pacific Transportation Company

GUIDE TO THE POST ENVIRONMENTAL ASSESSMENT

An Environmental Assessment (EA), which evaluated the potential environmental impacts that could result from the proposed merger of the Union Pacific Railroad Company and the Southern Pacific Transportation Company, was served on April 12, 1996. The EA was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), as amended (42 USC 4321), the Surface Transportation Board's environmental rules (49 CFR Part 1105) and other applicable environmental statutes and regulations.

This Post Environmental Assessment (Post EA) addresses the comments to the EA as well as other environmental comments that were received during SEA's ongoing environmental review. It reflects SEA's further environmental analyses, including numerous site visits and consultations. In addition, the Post EA contains SEA's final environmental recommendations to the Board. The Board will consider SEA's environmental recommendations and the environmental record before making a decision in this proceeding.

The Post EA consists of two volumes. The major sections of Volume 1 and the issues addressed in each chapter include:

Chapter 1 discusses the purpose and need for the proposed UP/SP merger, highlights related settlement agreements, summarizes SEA's environmental review process and the additional environmental review conducted by SEA since the EA was published, and discusses the alternatives to the proposed merger and related actions.

Chapter 2 outlines the anticipated benefits of the proposed merger, describes the major operating corridors that would result from a combined UP/SP railroad, describes the operational changes associated with the proposed merger, and details the locations of activities evaluated in the EA.

Chapter 3 details the potential environmental impacts by activity type (i.e., rail line segment, rail yard, or intermodal facility activity, proposed abandonments, and new rail line constructions) and then by location.

Chapter 4 summarizes the issues raised in the environmental comments, and discusses the additional data verification and technical and environmental analyses conducted by SEA.

Chapter 5 contains SEA's recommended mitigation measures, including systemwide mitigation, corridor-specific mitigation, and location-specific mitigation.

Volume 2 of the Post EA contains eight appendices. These include:

Appendix A: Responses to Environmental Comments contains a collection of environmental comments received during the comment period on the Environmental Assessment, other comments received during the environmental process, and SEA's responses.

Appendix B: Memoranda of Understanding contains copies of correspondence related to independent mitigation plans between UP/SP and local jurisdictions to address environmental impacts and mitigation.

Appendix C: Public Outreach for the Environmental Assessment outlines the publication of official notices and media releases.

Appendix D: Distribution of the Environmental Assessment includes a listing of all parties who received a copy of the EA document served on April 12, 1996 and those who will receive a copy of the Post EA.

Appendix E: Post EA Correspondence includes copies of correspondence between SEA and UP/SP after the publication and service of the EA and copies of correspondence with the Federal Railroad Administration.

Appendix F: Site Visits includes a tabular summary of visits to various locations to investigate or confirm conditions, gather information, or assess impacts.

Appendix G: Additional Analysis provides a brief reporting of SEA's supplemental surveys and analyses of environmental impacts undertaken in response to consultation, comments, and major changes since the EA.

Appendix H: List of Preparers contains a list of organizations and key individuals responsible for the preparation of the EA and Post EA documents.

CONCLUSION

Based on its independent analysis of all the information available at this time, the Section of Environmental Analysis concludes that the proposed merger of the Union Pacific Railroad Company and the Southern Pacific Transportation Company would not significantly affect the quality of the human environment if the recommended mitigation measures set forth in this document are implemented. Accordingly, the Section of Environmental Analysis recommends that the Surface Transportation Board impose these mitigation measures as conditions in any final decision approving the proposed merger and related rail abandonments and constructions.

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GLOSSARY

ballast	Top surface of rail bed, usually composed of aggregate (i.e., small rocks and gravel).
Best Management Practices	Techniques recognized as very effective in providing (BMPs) environmental protection.
Board	Surface Transportation Board, the licensing agency for the proposed merger.
borrow material	Earthen material used to fill depressions to create a level right-of-way.
bulk train	Also known as unit train. A solid consist of a single non-breakable commodity (such as coal, grain, semi-finished steel, sulfur, potash, or orange juice) being transported at a trainload rate.
consist	The make-up of a train, usually referring to the number of cars.
construction footprint	The area at a construction site subject to both permanent and temporary disturbances by equipment and personnel.
criteria pollutant	Any of six substances (lead, carbon dioxide, sulfur dioxide, nitrogen dioxide, ozone and particulate matter) regulated under the Clean Air Act, for which areas must meet national air quality standards.
dBA	Adjusted decibel level. A sound measurement that adjusts noise by filtering out certain frequencies to make it analogous to that perceived by the human ear.
decibel	A logarithmic scale that comprises over one million sound pressures audible to the human ear over a range from 0 to 140, where zero decibels represents a reference sound level necessary for a minimum sensation of hearing and 140 represents the level at which pain occurs.
deciduous	Any plant whose leaves are shed or fall off during certain seasons; usually used in reference to tree types.
emergent	An aquatic plant with vegetative growth mostly above the water.
endangered	A species that is in danger of extinction throughout all or a significant portion of its range and is protected by state and/or federal laws.

GLOSSARY, Continued

fill	The term used by the United States Army Corps of Engineers that refers to the placement of suitable materials (e.g., soils, aggregates, formed concrete structures, sidecast material, etc.) within water resources under Corps jurisdiction.
flat yard	A system of relatively level tracks within defined limits provided for making up trains, storing cars, and other purposes which requires a locomotive to move cars (switch cars) from one track to another.
Flood Insurance Rate Maps	Maps available from the Federal Emergency Management Agency that delimit the land surface area of 100-year and 500-year flooding events.
floodplain	The lowlands adjoining inland and coastal waters and relatively flat areas and flood prone areas of offshore islands, including, at a minimum, that area inundated by a one percent (also known as a 100-year or Zone A floodplain) or greater chance of flood in any given year.
frog	A track structure used where two running rails intersect that provides flangeways to permit wheels and wheel flanges on either rail to cross the other.
habitat	The place(s) where plant or animal species generally occur(s) including specific vegetation types, geologic features, and hydrologic features. The continued survival of that species depends upon the intrinsic resources of the habitat. Wildlife habitats are often further defined as places where species derive sustenance (foraging habitat) and reproduce (breeding habitat).
haulage right	The limited right of one railroad to operate trains over the designated lines of another railroad.
hump yard	A railroad classification yard in which the classification of cars is accomplished by pushing them over a summit, known as a "hump," beyond which they run by gravity.
interlocking	An arrangement of switch, lock, and signal appliances interconnected so that their movements succeed each other in a predetermined order, enabling a moving train to switch onto adjacent rails. It may be operated manually or automatically.
intermodal facility	A site or hub consisting of tracks, lifting equipment, paved areas, and a control point for the transfer (receiving, loading, unloading, and dispatching) of intermodal trailers and containers between rail and highway or rail and marine modes of transport.

GLOSSARY, Continued

intermodal train	A train consisting or partially consisting of highway trailers and containers or marine containers being transported for the rail portion of a multi-modal movement on a time-sensitive schedule. Also referred to as piggyback, TOFC (Trailer on Flat Car), COFC (Container on Flat Car), and double stacks (for containers only).
L_d	Level of noise (measured in decibels) averaged over the "daytime" period (7 a.m.-10 p.m.).
L_{dn}	Nighttime noise level (L _n) adjusted to account for the perception that a noise level at night is more bothersome than the same noise level would be during the day.
LOS	Level of Service (ratings A through F). A measure of the functionality of an intersection that factors in vehicle delay, intersection capacity and effects to the street/highway network.
lift	A lift is defined as an intermodal trailer or container lifted onto or off a rail car. For calculations, lifts were used to determine the number of trucks using intermodal facilities.
locomotive, road	One or more locomotives (or engines) designed to move trains between yards or other designated points.
locomotive, switching	Locomotive (or engine) used to switch cars in a yard, industrial, or other area where cars are sorted, spotted (placed at a shipper's facility), pulled (removed from a shipper's facility), and moved within a local area.
merchandise train	A train consisting of single and/or multiple car shipments of various commodities.
mitigation	Actions to prevent or lessen negative effects.
National Wetlands Inventory	An inventory of wetland types in the United States compiled by the United States Fish and Wildlife Service.
nonattainment	An area that does not meet NAAQS specified under the Clean Air Act.
non-point source discharge	Pollution not associated with a specific outfall location, such as a sewer pipe.

GLOSSARY, Continued

palustrine wetland	Non-tidal wetland dominated by trees, shrubs or persistent emergent vegetation. Includes wetlands traditionally classified as marshes, swamps, or bogs.
passby	The passing of a train past a specific reference point.
pick up	To add one or more cars to a train from an intermediate (non-yard) track designated for the storage of cars.
rail spur	A track that diverges from a main line, also known as a spur track or rail siding, which typically serves one or more industries.
railbanking	A set-aside of abandoned rail corridor for recreational and/or transportation uses, including reuse for rail.
receptor/receiver	A land use or facility where sensitivity to noise or vibration is considered.
right-of-way	The right held by one person over the lands of another for a specific use; rights of tenants are excluded. The strip of land for which permission has been granted to build and maintain a linear structure, such as a road, railroad, or pipeline.
riparian	Relating to, living, or located on, or having access to, the bank of a natural water course, sometimes also a lake or tidewater.
riprap	A loose pile or layer of broken stones erected in water or on soft ground as a guard against erosion.
riverine wetland	All wetlands and deepwater habitats contained within a channel, either naturally or artificially created.
ruderal	An introduced plant community dominated by weed species, typically adapted to disturbed areas.
scrub-shrub	Areas dominated by woody vegetation less than 6 meters (20 feet) tall, which includes true shrubs and young trees.
set out	To remove one or more cars from a train at an intermediate (non-yard) location such as a siding, interchange track, spur track, or other track designated for the storage of cars.

GLOSSARY, Continued

take	Loss of individuals of a plant or wildlife species and/or any direct or indirect action that results in mortality and/or injury. Further defined to include actions that disrupt normal patterns of wildlife species behavior; specifically those that reduce the survival and reproductive potential of an individual. Also refers to loss and/or degradation of species' habitat.
threatened	A species that is likely to become an endangered species within the foreseeable future throughout all or part of its range, and is protected by state and/or federal law.
trackage rights	The right or combination of rights of one railroad to operate over the designated trackage of another railroad including, in some cases, the right to operate trains over the designated trackage; the right to interchange with all carriers at all junctions; the right to build connections or additional tracks in order to access other shippers or carriers.
turnout	A track arrangement consisting of a switch and frog with connecting and operating parts, extending from the point of the switch to the frog, which enables engines and cars to pass from one track to another.
unit train	A train consisting of cars carrying a single commodity, e.g., a coal train.
water resources	All-inclusive term that refers to many types of permanent and seasonally wet/dry surface water features including springs, creeks, streams, rivers, ponds, lakes, wetlands, canals, harbors, bays, sloughs, mudflats, and sewage-treatment and industrial waste ponds.
wetland	As defined by 40 CFR Part 230.3, wetlands are "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs and similar areas.
wye track	A principal track and two connecting tracks arranged like the letter "Y" on which locomotives, cars and trains may be turned.

LIST OF ACRONYMS AND ABBREVIATIONS

A&S	Alton & Southern Railway Company
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AHPP	Arkansas Historic Preservation Program
AQCR(s)	Air Quality Control Region(s)
BIA	Bureau of Indian Affairs
BMPs	Best Management Practices
BN	Burlington Northern Railroad Company
BN/SF	The new railroad system created by the merger of the holding companies of BN and Santa Fe.
BRGI	Brownsville and Rio Grande International Railroad
CAAA	Clean Air Act and Amendments
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (the "Superfund" Act)
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CMTA	Capital Metropolitan Transportation Authority
CNW	Chicago and Northwestern Railway Company
CO	Carbon Monoxide
COE	United States Army Corps of Engineers
CTC	Centralized Traffic Control
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
db	Decibel
dBA	Decibels (of sound) A range
DNL	Day-night equivalent level
DOT	United States Department of Transportation
DRGW	Denver and Rio Grande Western Railroad Company
EA	Environmental Assessment
EPA	Environmental Protection Agency
ER	Environmental Report
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FRA	Federal Railroad Administration
GWWR	Gateway Western Railway Company
HC	Hydrocarbons (in air)
IBP	Iowa Beef Producers
HBT	Houston Belt Terminal

LIST OF ACRONYMS AND ABBREVIATIONS, Continued

IC	Illinois Central
ICC	Interstate Commerce Commission (former licensing agency for the proposed merger; merger approval authority now with the Surface Transportation Board)
IHPA	Illinois Historic Preservation Agency
KCS	Kansas City Southern Railway Company
KSHS	Kansas State Historical Society
L_{dn}	Day-night equivalent sound level
L_{max}	Maximum sound level during train passby, dBA
LOS	Level of Service
LUST	State Inventory of Leaking Underground Storage Tanks
MOU	Memorandum of Understanding
MP	Mile Post or Missouri Pacific
MPH	Miles per Hour
MPRR	Missouri Pacific Railroad Company
MRL	Montana Rail Link, Inc.
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NO₂	Nitrogen dioxide
NO_x	Nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O₃	Ozone
OBS	Office of Biological Services/United States Fish and Wildlife Service
OKT	Oklahoma-Kansas-Texas (operating division of UP)
OSHA	Occupational Safety and Health Administration
Pb	Lead
PDEA	Preliminary Draft Environmental Assessment
PM₁₀	Particulate Matter (under 10 microns in diameter)
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROW	Right of Way
SEA	Section of Environmental Analysis
SCS	Soil Conservation Service (currently named Natural Resources Conservation Service, Division of United States Department of Agriculture)
SEL	Source sound exposure level at 100 feet, dBA
SHPO	State Historic Preservation Officer

LIST OF ACRONYMS AND ABBREVIATIONS, Continued

SIP	State Implementation Plan
SO₂	Sulfur dioxide
SO_x	Sulfur oxides
SP	Southern Pacific Rail Corporation, includes SPT, SSW, SPCSL Corp., and DRGW
SPT	Southern Pacific Transportation Company
SSW	St. Louis Southwestern Railway Company
SPL	State Priority List
STATSGO	State Soil Geographic Database
STB	Surface Transportation Board
SWLF	State Inventory of Solid Waste Facilities
TRAA	Terminal Railroad Association of St. Louis
TSD	Treatment, Storage, or Disposal Sites
TSP	Total Suspended Particulates (particulate matter)
UP	Union Pacific Railroad, MPRR, and CNW
UP/SP	The new railroad system to be created by the merger of the holding companies of UP and SP if the merger proposal is approved
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VISTA	VISTA Environmental Information, Inc.
VOCs	Volatile organic compounds
WCL	Wisconsin Central Ltd.
WEPCO	Wisconsin Electric Power Company
WSC	Western Shipper's Coalition

EXECUTIVE SUMMARY

The Surface Transportation Board's (Board) Section of Environmental Analysis (SEA) prepared an Environmental Assessment (EA) that evaluated the potential environmental impacts associated with the proposed merger between the Union Pacific Railroad Company (UP) and the Southern Pacific Transportation Company (SP), including 17 proposed rail line abandonments and 28 rail line constructions.

The EA was served on April 12, 1996, to the public and all parties to the proceeding. Comments on the EA were due on May 3, 1996. SEA received approximately 160 environmental comments since the issuance of the EA. The comments addressed a range of issues involving potential environmental impacts of the proposed merger. To address the comments, SEA undertook additional environmental analysis and then prepared this Post Environmental Assessment (Post EA).

Overall, based on SEA's independent analysis and review of the information available at this time, SEA concludes in the Post EA that the proposed UP/SP merger would not significantly affect the quality of the human environment if the recommended mitigations set forth in Chapter 5 of this document are implemented. Accordingly, SEA recommends that the Board impose these mitigation measures as conditions in any final decision approving the proposed merger and the related rail abandonments and constructions.

ES-1 Overview of the Proposed Merger

On November 30, 1995, UP and SP applied to the Board's predecessor, the ICC, for authority to consolidate their operations into a single, combined system. The proposed merger of the two railroads would create a single railroad company with more than 34,000 miles of track operating in 24 states. According to UP and SP, the proposed merger would create a Western rail carrier that would be more competitive and efficient, resulting in many benefits to shippers and the public. The proposed merger would result in rerouting train traffic within the combined system, consolidating rail yards and terminal facilities, changing activities at rail yards and intermodal facilities, abandoning certain rail line segments, and constructing new rail connections.

ES-2 The Environmental Review Process

The Board's decision to grant or deny the proposed UP/SP merger is a major Federal action requiring environmental review under the National Environmental Policy Act (NEPA) and related laws. NEPA requires the completion of the environmental review process before the Board can

issue a final decision either granting or denying the proposed merger. The Board's SEA is responsible for conducting the NEPA environmental review.

The Board's environmental rules typically call for the preparation of an EA, rather than an EIS, in proposed merger cases (49 CFR 1105.6(b)(4)). SEA reviewed the proposed merger and determined that it met the criteria of this section.

SEA conducted several public outreach activities to inform the public that an EA was being prepared and to encourage public participation in the environmental review process. Initially, SEA prepared and widely distributed a Fact Sheet describing the proposed merger to cities and counties potentially affected by the proposed merger. Also, SEA sent out numerous consultation letters to Federal, state and local agencies that included merger/environmental information packets. SEA established a toll-free environmental hotline and placed notices in newspapers throughout the affected states. In addition, the Board issued Federal Register Notices announcing the environmental review process and the availability of the EA for review and comment. The Board also issued a press release announcing that an EA would be prepared for the proposed merger.

As noted above, SEA issued an EA for the proposed UP/SP merger on April 12, 1996. This EA was served to all parties to the proceeding; appropriate Federal, state, and local agencies; and any parties requesting copies of the EA. Also the availability of the EA was announced through a notice in the Federal Register. SEA invited comments on all aspects of the EA, including the scope and adequacy of the recommended mitigation measures for the proposed merger and the related abandonment and construction projects. Comments were due on May 3, 1996, 20 days after the service date of the EA. SEA reviewed the approximately 160 comments raising environmental issues after the EA was served. SEA reviewed all comments received throughout the environmental review process (approximately 400 in total), in the preparation of this Post EA, and in making its final environmental recommendations to the Board.

In preparing the EA, SEA, working with its independent third-party consultant, identified issues and areas of potential environmental impact; analyzed the potential environmental impacts of the proposed merger; considered alternatives to the proposed merger and the related rail line abandonment and construction projects; and developed mitigation measures to avoid or reduce potential impacts to the environment. SEA sent more than 500 consultation letters to various Federal, state and local agencies seeking their comments on the proposed merger and related abandonment and construction proposals. In addition, SEA conducted consultations with Federal, state, and local agencies, affected communities, UP and SP, and UP/SP's environmental consultants to gather and disseminate information about the proposed merger and to explore innovative mitigation measures.

SEA and its third-party consultant conducted site visits to various communities to assess the potential impacts on the environment. SEA analyzed UP/SP's Environmental Report and the operating plan that accompanied its application as well as the technical studies conducted by its environmental consultants. In addition, SEA conducted its own independent analyses, which included verifying projected rail operations; verifying and estimating noise level impacts; estimating increases in air emissions; and performing land use, habitat, surface water, and wetlands surveys, ground water analyses, and historic and cultural resource surveys. These analyses are discussed in the EA and are described in detail in the appendices of the EA.

Since the EA was served, SEA has continued its independent environmental analyses and public outreach activities. These activities included: (1) analyzing train operations and noise levels in affected communities; (2) consulting with Federal, state, and local officials and conducting additional site visits (now totaling more than 150) to communities with specific merger-related concerns; (3) consulting with State Historic Preservation Offices throughout the country to complete the Section 106 process of the National Historic Preservation Act, (4) responding to specific questions from the public concerning the EA; (5) responding to calls on the environmental hotline; (6) negotiating with UP/SP to facilitate innovative mitigation measures, including independent mitigation agreements between UP/SP and specific communities; and (7) developing other appropriate measures to effectively mitigate adverse environmental impacts. SEA's work culminated in the preparation of this Post EA, which will be served on all commenters and parties of record.

At this time, SEA wishes to thank the Federal, state, and local officials, local communities, UP and SP, and concerned members of the public who have devoted so much of their time and effort to work with SEA to identify and address the environmental issues associated with the UP/SP merger proposal.

CHAPTER 1 INTRODUCTION

The Surface Transportation Board's (the Board) Section of Environmental Analysis (SEA) prepared an Environmental Assessment (EA) that evaluated the potential environmental impacts associated with the proposed merger between the Union Pacific Railroad Company (UP) and the Southern Pacific Transportation Company (SP). The EA was served to the public and all parties to the proceeding on April 12, 1996. The formal comment period for EA comments closed on May 3, 1996. Since publication of the EA, SEA received approximately 160 comments raising environmental concerns. A complete list of agencies, organizations, and individuals who commented on the EA, copies of comments, and SEA's responses are provided in Volume 2, Appendix A. SEA also considered an additional 220 comments that raised environmental issues and were filed with the Board prior to publication of the EA. The comments address a range of issues related to the potential environmental impacts of the proposed merger, proposed abandonments and rail line constructions. These issues include: safety, traffic, hazardous materials, air quality, noise, historic and cultural resources, biological resources, water resources, and land use.

This Post Environmental Assessment (Post EA) addresses the comments to the EA as well as other environmental comments that were received during SEA's ongoing environmental review. It reflects SEA's further environmental analyses, including numerous site visits and consultations. In addition, the Post EA contains SEA's final environmental recommendations to the Board regarding the proposed merger. The Board will consider SEA's environmental recommendations and the environmental record before making a decision in this proceeding.

Based on an independent analysis of the information available at this time, SEA concludes that the proposed UP/SP merger would not adversely affect the quality of the human environment if the recommended mitigation measures set forth in Chapter 5 of this document are implemented by UP/SP. Accordingly, SEA recommends that the Board impose these mitigation measures as conditions in any final decision if the Board approves the proposed merger and related transactions.

The remainder of this chapter discusses the purpose and need for the proposed UP/SP merger, highlights related settlement agreements, summarizes SEA's environmental review process and the additional environmental review conducted by SEA since the EA was published, and discusses the alternatives to the proposed merger and related actions.

1.1 Purpose and Need

On November 30, 1995, the Union Pacific Railroad Company and the Southern Pacific Transportation Company applied to the Interstate Commerce Commission (ICC)¹ for authority to consolidate their operations into a single Union Pacific Railroad Company (UP/SP). The proposed merger now requires approval by the Surface Transportation Board. UP/SP states that the proposed merger is intended to improve service capabilities and operating efficiencies. The proposed merger of the two railroads would create a single railroad company with more than 34,000 miles of track operating in 24 states². The proposed merger would also result in rerouting of train traffic within the combined system, consolidation of yard and terminal facilities, changes in activities at rail yards and intermodal facilities, abandonment of certain rail line segments, and construction of new rail connections. Figure 1-1 illustrates the proposed merged UP/SP system.

If the proposed merger is approved, UP/SP states that the proposed transaction would create a more efficient and service-oriented railroad. UP/SP sets forth a number of reasons in support of this statement. First, UP/SP would combine certain routes of UP and SP to create new through routes, relieve congestion, and upgrade routes to provide faster and more reliable service. Second, UP/SP would improve reliability and service on SP's lines through better technology and routing and use of UP's maintenance standards. Third, UP/SP would be able to enhance equipment utilization and availability. Finally, UP/SP would be able to eliminate duplicative systems and improve productivity, thereby realizing large savings. In sum, UP/SP believes that the proposed merger would result in improved service to the public because service would be more efficient, responsive, and reliable.

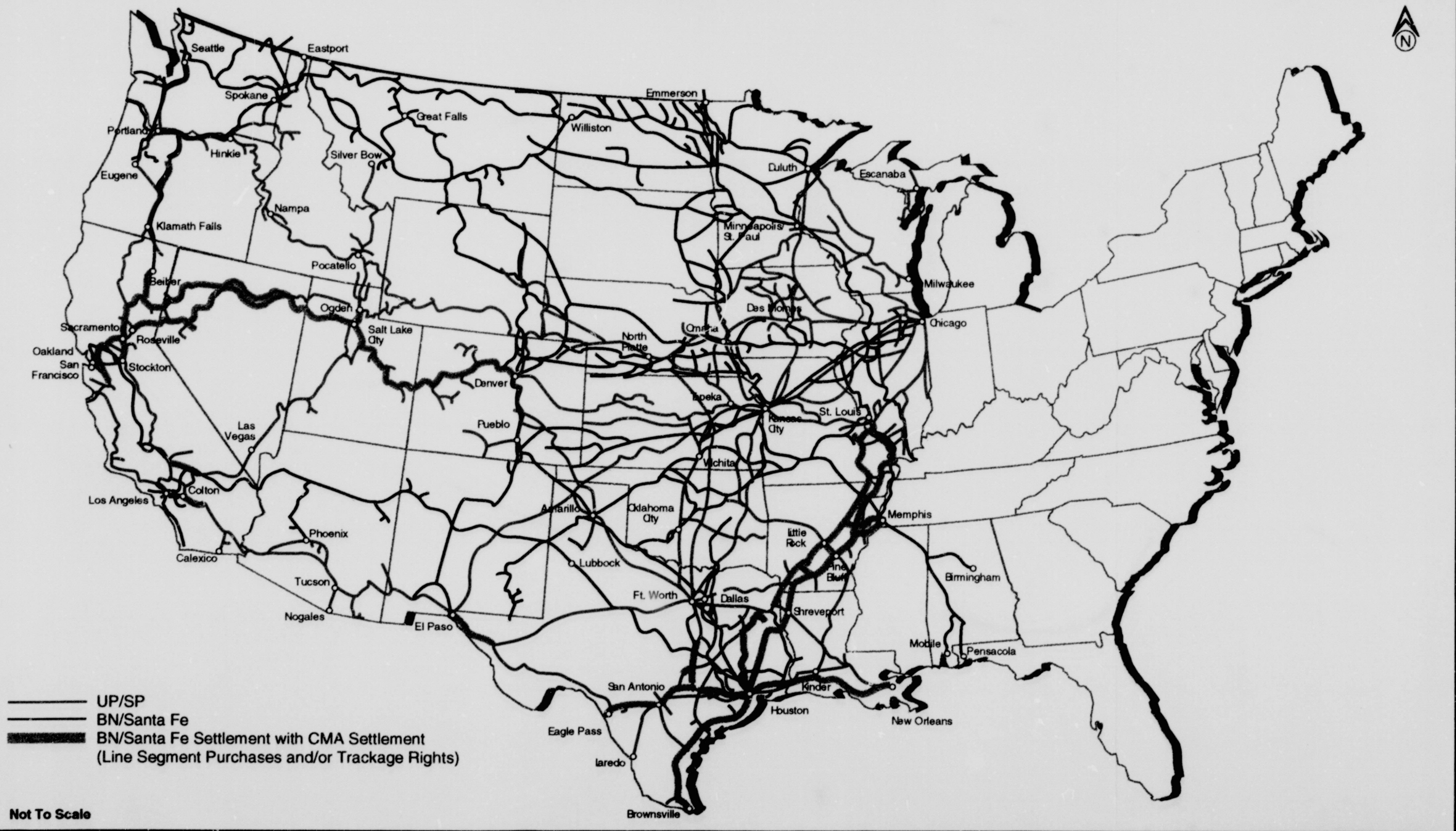
1.2 Settlement Agreements

As part of the proposed merger, UP/SP has entered into settlement agreements with four railroads: (1) the combined Burlington Northern Railroad Company and the Atchison, Topeka, and Santa Fe Railway Company (BN/Santa Fe), (2) the Utah Railway Company (Utah Railway), (3) the

¹ The ICC Termination Act of 1995 (P.L. 104-88, 109 Stat. 803), which was enacted on December 29, 1995 and took effect on January 1, 1996, abolished the Interstate Commerce Commission and transferred its railroad merger approval functions to the Surface Transportation Board.

² The EA stated that the proposed merger would include operations in 25 states. However, subsequent to SEA's issuance of the EA, the Board by decision served April 25, 1996 in Finance Docket No. 32864, Dakota, Minnesota and Eastern Railroad Corporation--Acquisition and Operation--Colony Line Segment of the Union Pacific Railroad Corporation, authorized the sale of the former Chicago and North Western Railroad Company (CNW) line in Nebraska, South Dakota, and Wyoming to the Dakota, Minnesota, and Eastern Railroad Corporation. Therefore, the proposed UP/SP merger would not include operations in South Dakota.

FIGURE 1-1



UP/SP RAILROAD MERGER
UP/SP AND BN/SANTA FE
RAILROAD SYSTEMS
ENVIRONMENTAL ASSESSMENT

Illinois Central Railroad Company (Illinois Central), and (4) CSX Corporation (CSX)³. The original settlement agreement with BN/Santa Fe was modified by a settlement agreement between UP/SP and the Chemical Manufacturers Association (CMA) filed April 23, 1996. Accordingly, all references herein to the BN/Santa Fe settlement agreement also embrace the modifications under the CMA settlement agreement. UP/SP states that these agreements, which are highlighted below, are intended to preserve the competitive position of the railroads involved, and, in some cases, preserve competition for shippers where service by two railroads would be lost.

The BN/Santa Fe settlement agreement includes trackage rights and rail line purchases involving the following major routes: Denver, Colorado to the San Francisco Bay Area, California; Keddie to Bieber, California; and Houston and other points in Texas to Memphis, Tennessee, St. Louis, Missouri and East St. Louis, Illinois. These routes would serve as connections to other BN/Santa Fe routes. The BN/Santa Fe states that it intends to use these new route combinations to establish service in direct competition with UP/SP.

On most new through routes, the BN/Santa Fe intends to use its own locomotives and crew. On other routes, UP/SP locomotives and/or crews would be used under contract arrangements. At larger terminals and yards, BN/Santa Fe would do its own switching, while at smaller yards, switching might be handled by UP/SP through reciprocal switch arrangements or by a third party contractor. The BN/Santa Fe settlement agreement also would provide access for UP/SP to some BN/Santa Fe line segments in Oregon, California, Texas and Louisiana to preserve two-line competition or to optimize train routing. Figure 1-1 illustrates the merged UP/SP system, including trackage rights granted to the BN/Santa Fe as part of the settlement agreement.

The settlement agreements reached with the Utah, Illinois Central, and CSX railroads would not be as extensive as those with the BN/Santa Fe. The settlement agreement with the Utah Railway would provide access to certain coal loading facilities in Utah and trackage rights from Utah Junction to Grand Junction, Colorado. The Illinois Central settlement agreement addresses joint marketing and operational issues. The operating portion focuses on the clarification of interchange service and construction of certain rail connections in the Chicago area, use of the Illinois Central-BN/Santa Fe tracks between Chicago and Joliet, Illinois, and rebuilding of certain facilities in the New Orleans area. The CSX settlement agreement would not involve changes in operations.

³ CSX is used collectively to describe CSX Corporation, CSX Transportation, Inc., CSX Intermodal, Inc., and Sea-Land Service, Inc.

The BN/Santa Fe and CMA settlement agreements are intended to enhance competition in key operating corridors by providing the BN/Santa Fe trains access to UP/SP's rail lines and facilities. The CMA settlement agreement specifically granted BN/Santa Fe overhead trackage rights over (a) UP's line between Houston, Texas and Valley Junction (near East St. Louis, Illinois) via Palestine, Texas; (b) SP's line between Fair Oaks, Arkansas and Valley Junction, Illinois; and (c) UP's line between Fair Oaks and Bald Knob, Arkansas. These overhead trackage rights would allow traffic to move to or from points south of Bald Knob and Brinkley, Arkansas. BN/Santa Fe would also operate its trains with the flow of traffic on lines that UP/SP plans to operate directionally. Generally, both UP/SP and BN/Santa Fe trains would move north on the existing UP line through Little Rock, Arkansas and south on the existing SP line through Pine Bluff, Arkansas. Directional operations are described more specifically in Volume 2 of the EA (p. 1-16).

On March 29, 1996, UP/SP filed a Preliminary Draft Environmental Assessment (PDEA) which outlined the proposed changes in operations resulting from the BN/Santa Fe settlement agreement (prior to the CMA agreement) to the extent such changes would exceed the Board's thresholds for environmental analysis⁴. SEA reviewed this PDEA and conducted further verification and analysis. Pursuant to SEA's request, UP/SP submitted on May 21, 1996, supplemental information detailing the proposed operational changes under the CMA agreement which would meet or exceed the Board's environmental thresholds. Again, SEA conducted its own analysis and verification of this information, which is reflected in this Post EA. (See the UP/SP Train Densities table contained in Volume 2, Appendix G.)

In other actions related to the proposed merger, six parties (three railroads, two utilities, and one transit agency) filed responsive applications seeking the Board's authority for trackage rights and/or acquisition of specific UP/SP rail lines. This Post EA does not analyze the potential environmental impacts of these responsive applications because it appears, based upon verified statements submitted by the six parties, that the Board's environmental analysis thresholds would not be met or exceeded, and no substantial increase in trains or other activities are expected as a result of these proposals. (These responsive applications are discussed in more detail in Volume 1, Chapter 1 of the EA.)

⁴ These thresholds are set forth and explained in Chapter 3 of this document.

1.3 UP/SP Merger Environmental Review Process

1.3.1 The Environmental Assessment Process

The Surface Transportation Board's decision to grant or deny the proposed UP/SP merger is a major Federal action requiring environmental review under the National Environmental Policy Act (NEPA). NEPA requires the completion of this environmental review process before the Board can issue a final decision either granting or denying the proposed merger. The Board's SEA is responsible for conducting the NEPA environmental review.

The Board has adopted the former ICC environmental regulations (49 CFR Part 1105) that govern the environmental review process and outline procedures for preparing environmental documents. Sections 1105.6(a) and 1105.6(b) of these regulations establish the criteria that identify the types of actions for which an EA or Environmental Impact Statement (EIS) generally would be prepared. Railroad mergers, like the action proposed here, are classified under the Board's regulations as normally requiring preparation of an EA. SEA reviewed the proposed merger and determined that it met the criteria of Section 1105.6(b)(4). This section calls for the preparation of an EA, rather than an EIS, for proposed mergers which would involve major operational changes, abandonments, or rail line constructions, but are not expected to result in substantial adverse environmental impacts. If the mitigation measures recommended in this Post EA are imposed by the Board, SEA believes that any potential environmental impacts resulting from the proposed merger would not be significant; therefore preparation of an EIS is not necessary. (See Chapter 4 for further discussion of this issue.) However, should UP/SP alter the scope of the proposed merger or materially change the proposed operations upon which SEA's analysis was based, or if previously undisclosed and significant environmental impacts are identified, SEA reserves the right to require the preparation of an EIS.

SEA served the EA for the proposed UP/SP merger on April 12, 1996. The EA was served on all parties to the merger proceeding, appropriate Federal, state, and local agencies, and other organizations or individuals who requested copies. (See Volume 2, Appendix D for the distribution list.) SEA invited comments on all aspects of the EA, including the scope and adequacy of the recommended mitigation measures for the proposed merger and related constructions and abandonments. The comment period closed on May 3, 1996, 20 days after the service date of the EA. SEA considered the 162 comments received in response to the EA in determining its final environmental recommendations to the Board. In addition, SEA reviewed the environmental issues raised in comments and pleadings filed during the ongoing environmental review process. SEA also considered the responses to the agency consultation letters dated March 26, 1996, sent out by Dames & Moore on behalf of UP/SP. (See Volume 2, Appendix A.)

To assist in conducting the NEPA environmental analysis and in preparing the EA, SEA selected and approved De Leuw, Cather & Company to act as the Board's independent third party consultant. (See 49 CFR 1105.10(d).) UP/SP retained the independent third party consultant to work solely under SEA's direction and supervision and to assist SEA in conducting environmental analyses related to the proposed merger.

In preparing the EA, SEA identified issues and areas of potential environmental impact, analyzed the potential environmental impacts of the proposed merger, considered alternatives to the proposed merger and the related rail line construction and abandonment projects, reviewed public comments, and developed mitigation measures to avoid or reduce anticipated impacts on the environment. On January 29, 1996, SEA sent consultation letters to 61 Federal agencies, 68 state agencies, and 248 county officials seeking their comments on the proposed merger and related construction and abandonment proposals. (See Volume 5, Appendices D and E of the EA for SEA's consultation letters and agency response letters.) In addition, SEA and/or its independent third party consultant conducted consultations with UP/SP and its environmental consultants and visited selected rail line segments, rail yards, intermodal facilities, and proposed rail line construction and abandonment sites to assess the potential impacts on the environment.

SEA analyzed UP/SP's Environmental Report, the operating plan that accompanied their application, and the technical studies conducted by UP/SP's environmental consultants. In addition, SEA conducted its own independent analysis, which included verifying the projected rail operations; verifying and estimating noise level impacts; estimating air emission increases; performing surveys of land use, habitat, surface water, and wetlands; conducting ground water analyses; assessing impacts to biological resources; and performing archaeological and historic resource surveys. These studies, including details of methodologies used, are discussed in Chapter 4 of the Post EA and Volume 5 of the EA.

SEA also assessed potential impacts to safety in numerous communities. These safety impacts could potentially arise as rail line segments experience substantial increases in traffic as a result of the proposed merger. Safety concerns include potential environmental impacts associated with grade crossing accidents, movements of hazardous materials, derailments, pedestrian traffic, and increased vehicular traffic congestion at railroad grade crossings.

In the EA, SEA considered the impacts of the proposed merger, which would include changes in rail operations, rail constructions, and rail abandonments, on minority and low-income communities in accordance with Executive Order 12898 "Federal Actions to Address Environmental

Justice in Minority Populations and Low-Income Populations."⁵ Also, SEA solicited comments from agencies and communities in order to identify potential impacts and to devise mitigation measures, where necessary.

1.3.2 SEA's Environmental Review Process Since Service of the EA

As stated above, the EA for the proposed UP/SP merger was served to all parties to the proceeding, appropriate federal, state, and local agencies, and other organizations and individuals who requested copies. All comments on the proposed merger, which raised environmental concerns, including the March 29, 1996 and April 29, 1996 filings and the June 3, 1996 briefs⁶ were reviewed by SEA during the Post EA evaluation period. In addition, SEA conducted numerous outreach activities to inform the public of the proposed merger and encourage interested parties to comment on the EA, including the scope and adequacy of the recommended mitigation measures. SEA established a toll-free telephone hotline to provide information and assistance concerning the environmental review of the proposed merger. To facilitate public participation and comments on the EA, SEA distributed the EA to cities and counties potentially affected by the proposed merger and provided additional copies for placement in public buildings and libraries. In addition, the Board issued a press release announcing the availability of the EA for the proposed merger, advertised notice of the environmental review process in local newspapers, and announced the availability of the EA to the public through a Notice of Availability in the Federal Register on April 15, 1996. (See Volume 2, Appendix C.) The comment period for the EA closed on May 3, 1996, 20 days after the service date of the EA.

Since the EA was served, SEA continued its independent environmental analysis and public outreach activities, including:

- Review of all environmental comments.
- Additional site visits to several locations to verify and assess potential environmental impacts.

⁵ The Executive Order directs Federal agencies to analyze the environmental effects of their actions on minority and low-income communities. Also, it calls for Federal agencies to provide opportunity for community input, including the identification of potential effects and mitigation measures, throughout the NEPA process.

⁶ Under the Board's procedural schedule for the proposed merger, March 29, 1996 was the filing date for inconsistent and responsive applications, all comments, protests, requests for conditions, and any other opposition evidence and argument. April 29, 1996 was the filing date for responses to inconsistent and responsive applications, response to comments, protests, requested conditions, and other opposition, rebuttal in support of primary application and related applications. June 3, 1996 was the filing date for briefs from all parties.

- Verification of data on rail operations and traffic.
- Additional analysis of potential environmental impacts in certain locations where communities raised further concerns in their environmental comments.
- Consultations with various Federal, state, and local agencies.
- Responses to specific questions and concerns from agencies and other interested parties about the EA and the environmental review process.
- Expanded telephone outreach.
- Responses to inquiries on the Board's Environmental Hotline (1-800-448-7246).

1.4 Alternatives Considered

In the EA, SEA reviewed the potential environmental impacts of alternatives to the proposed merger. On a system-wide basis, SEA considered the "no action" or "no merger" alternative to the proposed merger. Under this alternative, the two railroads would forego the expected improved service capabilities and increased operating efficiencies. Current operational patterns and service levels would continue. Generally, with respect to rail line segments, rail yards, and intermodal facilities, impacts to air quality, noise level, safety, or transportation would not occur. With respect to the proposed rail line constructions and abandonments, there would be no potential impacts associated with land use, transportation, safety, water resources, biological resources, air quality, noise levels, and historic and archaeological resources.

In addition to the system-wide alternative, SEA also considered location-specific alternative actions to the proposed abandonments and rail line construction projects on new rights-of-way. For proposed abandonments, SEA considered the following alternatives to the proposed abandonment action, including: (1) discontinuance of service with no abandonment; (2) continued operations by another carrier; and (3) the no action alternative (i.e., denial of the abandonment). Under each of these alternatives, SEA concludes that there would be no adverse environmental impacts. For the new rail line constructions on new rights-of-way, which were evaluated in the EA, SEA identified no other feasible alternatives to the proposed rail line construction. Each proposed rail line would be the most direct connection between the existing rail lines and would minimize the use of new land outside the UP, SP, and BN/Santa Fe rights-of-way. SEA concludes that there are no construction, operational, or environmental features that would render another alignment more reasonable than the proposed location for each of the proposed rail lines.

CHAPTER 2 OPERATIONAL CHANGES RESULTING FROM PROPOSED MERGER

If approved, the proposed UP/SP merger would substantially change the nation's railroad system west of Illinois and the Mississippi River. Because rail transportation is a vital national asset, structural and operational changes to the system should be viewed from a national (system-wide), regional (corridor), and local (site-specific) perspective. The proposed merger would result in both positive and negative environmental impacts which must be viewed in the full context of the proposed merger.

2.1 Potential Benefits of Proposed Merger

In its application, UP/SP has described several intended benefits and environmental enhancements resulting from the proposed merger. Overall, UP/SP states that it intends to improve the quality and efficiency of rail operations and the movement of freight. UP/SP has identified several specific operational improvements:

- Improved, direct connections on major rail corridors.
- Consolidation of redundant rail line segments and facilities.
- Capital investment to improve system capacity and efficiency.
- Increased efficiency of rail yards and intermodal facilities.
- Reduced switching of rail cars and improved shipping times.

Generally, system-wide consolidation and efficiency improvements are expected to reduce the impacts on the human and natural environment. These system-wide improvements would result in several environmental benefits, as identified by UP/SP in its application:

- **Energy**
 - System-wide net reduction of 35 million gallons of diesel fuel (based on 1994 operations) from rail operations and truck-to-rail diversions (UP/SP-27, Vol. 1, p. 56).
- **Air Quality**
 - System-wide improvements to air quality are anticipated from reduced fuel use.
 - System-wide efficiency improvements for rail operations and truck-to-rail diversions.
- **Transportation/Safety**
 - System-wide improvements from truck-to-rail diversions which would reduce long-haul truck-miles by 283 million miles, which in turn would reduce roadway congestion, maintenance, and motor vehicle accidents (UP/SP-27, Vol. 1, p. 50).

- Removal of approximately 550 grade crossings and associated safety improvements.

Several environmental benefits are also presented by UP/SP for areas where certain rail line segments would be abandoned:

- Reduced human disturbance of the natural environment and gradual reestablishment of natural vegetation.
- Reduced loss of wildlife from train-animal collisions.
- Reduced noise exposure to adjacent land uses.

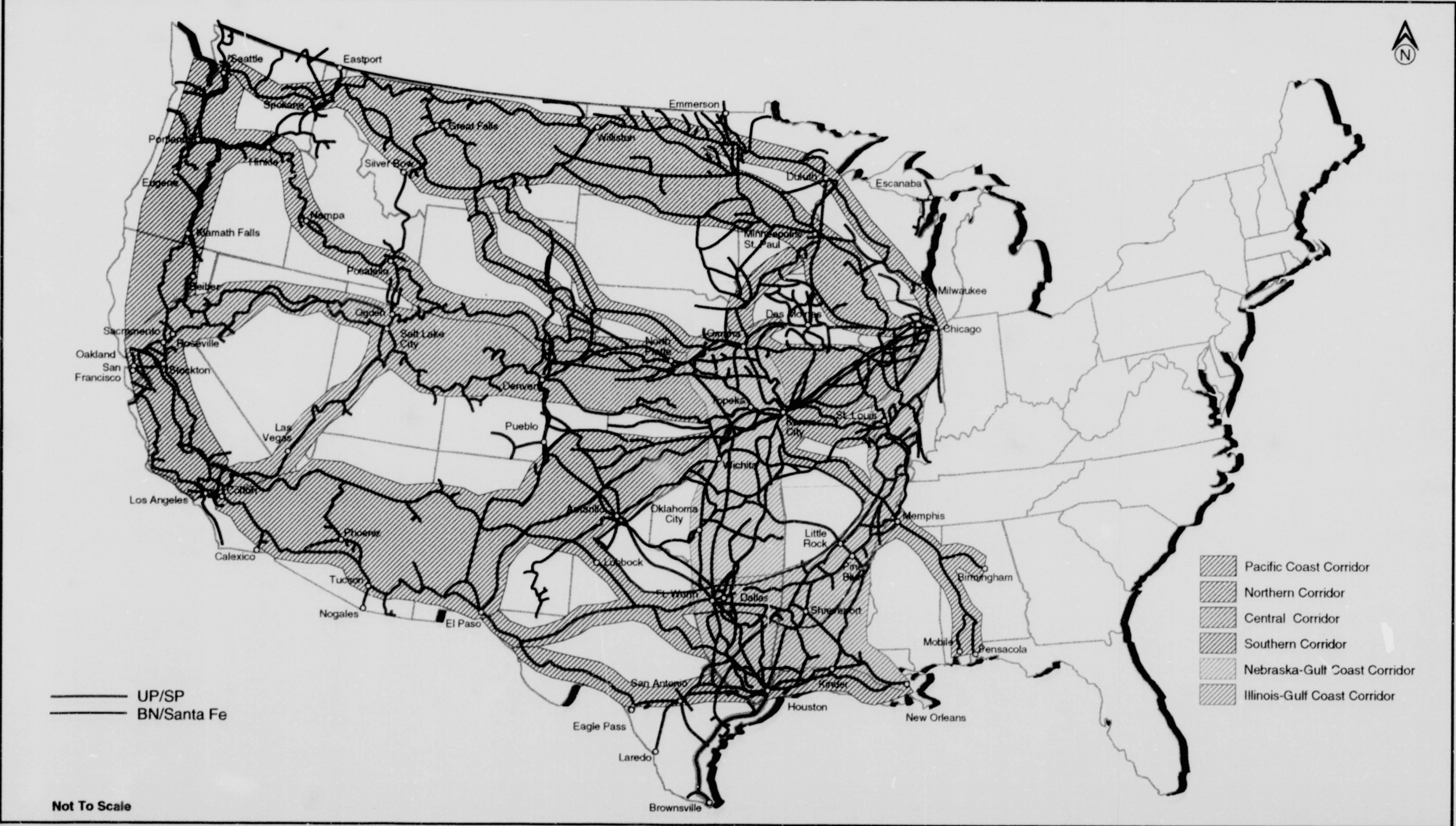
2.2 Changes in Rail Corridor Operations

As stated above, the proposed merger of the UP and SP, together with the implementation of the BN/Santa Fe settlement agreement described in Chapter 1, would significantly change the railroad map west of Illinois and the Mississippi River. Because ownership of railroad lines (and the possession of trackage rights over rail lines owned by other railroads) quite literally define competitive relationships in the railroad industry, changes in ownership and operating (trackage) rights modify competitive relationships and, ultimately, operations. The basic operational changes that would result from the proposed UP/SP merger and the BN/Santa Fe settlement agreement would affect train densities over major routes throughout the territories in which these railroads operate.

To facilitate understanding the operational impacts of the proposed merger and potential environmental effects, SEA has categorized the changes associated with the proposed UP/SP merged system into six "transportation corridors." (See Figure 2-1 for an illustration of the corridors.) These corridors help provide an understanding of the proposed changes in rail operations from a national and regional perspective.

The six corridors, which are discussed individually below, are the: (1) Central Corridor, (2) Southern Corridor, (3) Northern Corridor, (4) Pacific Coast (I-5) Corridor, (5) Nebraska-Gulf Coast Corridor, and (6) Illinois-Gulf Coast Corridor. In some cases, there are overlaps between the corridors. This is particularly true on the west coast where the Northern, Central and Southern Corridors all end in the vicinity of the Pacific Coast (I-5) Corridor. These corridors also overlap in the eastern part of the UP/SP operating territory with the Illinois-Gulf Coast Corridor. Further overlap occurs where the Central and Southern Corridors cross the Nebraska-Gulf Coast Corridor in Kansas and Texas. Section 2.3 provides a listing of the rail line segments, rail yards, intermodal facilities, proposed abandonments, and rail line constructions on new rights-of-way in each

FIGURE 2-1



UP/SP RAILROAD MERGER
TRANSPORTATION CORRIDORS
ENVIRONMENTAL ASSESSMENT

transportation corridor that were evaluated in the EA and Post EA. This grouping provides an overview of the geographic scope of the potential environmental impacts associated with the proposed changes in the western railroad network. A summary description of each of the transportation corridors is provided below.

2.3 Corridor Descriptions

2.3.1 Central Corridor

The Central Corridor is comprised of railroad routes extending westward from Chicago, Illinois and St. Louis, Missouri/East St. Louis, Illinois, through Illinois, Iowa, Missouri, Nebraska, Kansas, Wyoming, Colorado, Utah, Nevada and California to the San Francisco Bay Area (Bay Area). At present, UP and SP are the only railroads having routes through the entire length of the Central Corridor. UP's route from Salt Lake City through Las Vegas, Nevada to Los Angeles, California is considered here as an extension of the Central Corridor. If the proposed UP/SP merger and the settlement agreement with BN/Santa Fe are consummated, then UP/SP and BN/Santa Fe would be the only two railroads serving the length of the corridor. BN/Santa Fe's existing route between Chicago, St. Louis and Denver would be extended over UP/SP's combined routes from Denver west through Grand Junction, Colorado and Salt Lake City, Utah to the San Francisco Bay Area in California.

For the EA and Post EA, SEA assessed the potential environmental impacts for the following rail line segments, rail yards, intermodal facilities, abandonments, and construction projects in the Central Corridor.

Rail Line Segments

- Oakland to Martinez, California (SP)
- Oakland to Niles Junction, California (UP)
- Martinez to Stockton, California (SP)
- Stockton (Lathrop) to Sacramento, California (SP)
- Sacramento to Roseville, California (SP)
- Roseville, California to Sparks, Nevada (SP)
- Sparks to Winnemucca, Nevada (SP)
- Winnemucca to Alazon, Nevada (UP & SP Paired Track)
- Alazon, Nevada to Ogden, Utah (SP)
- Ogden, Utah to Granger, Wyoming (UP)
- Provo to Lynndyl, Utah (UP)
- Granger to Green River, Wyoming (UP)
- Green River to Rawlins, Wyoming (UP)
- Rawlins to Cheyenne, Wyoming (UP)

- Cheyenne, Wyoming to Denver, Colorado (UP)
- Dotsero to Bond, Colorado (SP)
- Bond to Denver, Colorado (SP)
- Denver, Colorado to Oakley, Kansas (UP)
- California Jct., Iowa to Fremont, Nebraska (UP)
- Oakley to Salina, Kansas (UP)
- California Jct. to Missouri Valley, Iowa (UP)
- Vinton to Clinton, Iowa (UP)
- Clinton, Iowa to Nelson, Illinois (UP)
- Nelson to Geneva, Illinois (UP)
- Geneva to W. Chicago, Illinois (UP)
- W. Chicago to Chicago (Proviso), Illinois (UP)
- Oak Creek, Wisconsin to St. Francis, Wisconsin (UP)

Rail Yards

- Roseville, California (SP)
- Martinez, California (SP)
- Lathrop, California (SP)
- Grand Junction, Colorado (SP)
- La Salle, Colorado (UP)
- Rolla, Colorado (UP)
- Canal St. (Chicago), Illinois (UP)

Intermodal Facilities

- Lathrop, California (UP)
- Roseville, California (SP)
- Oakland, California (UP)
- Oakland, California (SP)
- Denver, Colorado (UP)
- Kansas City, Kansas (SP)
- Canal St. (Chicago), Illinois (UP)
- Dolton (Chicago), Illinois (UP)
- Global II (Chicago), Illinois (UP)
- Dupo (E. St. Louis), Illinois (UP)

Abandonments

- Magnolia Tower to Melrose, California (UP)
Docket No. AB-33 (Sub-No. 94X)
- Alturas to Wendel, California (SP)
Docket No. AB-12 (Sub-No. 184X)
- Sage to Leadville, Colorado
Docket No. AB-12 (Sub-No. 189X): SP Abandonment
Docket No. AB-8 (Sub-No. 36X): D&RGW Discontinuance

- Malta to Cañon City, Colorado
Docket No. AB-12 (Sub-No. 188): SP Abandonment
Docket No. AB-8 (Sub-No. 39): D&RGW Discontinuance
- Towner to NA Junction, Colorado
Docket No. AB-3 (Sub-No. 130): UP Abandonment
Docket No. AB-8 (Sub-No. 38): D&RGW Discontinuance
- Hope to Bridgeport, Kansas
Docket No. AB-3 (Sub-No. 131): UP Abandonment
Docket No. AB-8 (Sub-No. 37): D&RGW Discontinuance
- Little Mountain Junction to Little Mountain, Utah (UP)
Docket No. AB-33 (Sub-No. 99X)

Rail Construction Projects

- Lathrop, California
- Richmond, California
- Stockton, California (2 projects)
- Denver, Colorado (2 projects)

2.3.2 Southern Corridor

The Southern Corridor is comprised of railroad routes between Memphis, Tennessee and New Orleans, Louisiana on the east, and Los Angeles, California on the west. It passes through Arkansas, Louisiana, Oklahoma, Texas, New Mexico, Arizona and California. Only the BN/Santa Fe and the SP have routes extending through the entire length of the Southern Corridor. Under the proposed merger, there would be no change in the number of railroads serving the entire length of the Southern Corridor. Each of the railroads operating in this corridor (the UP, SP and BN/Santa Fe) have connecting routes to the eastern end points of the Central Corridor: Chicago and St. Louis. In addition, the SP and BN/Santa Fe have connecting routes to the San Francisco Bay Area, the western end point of the Central Corridor. The UP's Los Angeles rail line extends from Southern California through Las Vegas, Nevada, connecting with the Central Corridor at Salt Lake City, Utah.

Both a merged UP/SP and the BN/Santa Fe (with trackage rights and rail lines acquired under the settlement agreement) would have alternate routes from the San Francisco Bay Area and Los Angeles to Chicago, St. Louis, Memphis and New Orleans via either the Central or the Southern Corridors. This post-merger interchangeability of Central and Southern Corridor routes for both a merged UP/SP and the BN/Santa Fe under the settlement agreement would result in shifts in traffic levels between the two corridors.

For the EA and Post EA, SEA assessed the potential environmental impacts for the following rail line segments, rail yards, intermodal facilities, abandonments, and construction projects in the Southern Corridor.

Rail Line Segments

Combined "Sunset" and "Golden State" Routes:¹

- Long Beach to Slauson Jct., California (SP)
- Slauson Jct. to Los Angeles, California (SP)
- W. Colton to Yuma, Arizona (SP)
- Yuma to Picacho, Arizona (SP)
- Picacho to Tucson, Arizona (SP)
- Tucson to Cochise, Arizona (SP)
- Cochise, Arizona to Lordsburg, New Mexico (SP)
- Lordsburg, New Mexico to El Paso, Texas (SP)

"Golden State" Route:

- El Paso to Dalhart, Texas via Vaughn, New Mexico (SP)
- Dalhart to Stratford, Texas (SP)
- Stratford, Texas to Hutchinson, Kansas (SP)
- Galesburg to Buda, Illinois (BN/Santa Fe and SP)
- Buda to Nelson, Illinois (UP)

Portion of new Los Angeles-Memphis Route:¹

- El Paso to Sierra Blanca, Texas (SP)
- Sierra Blanca to Toyah, Texas (UP)
- Toyah to Big Spring, Texas (UP)
- Big Spring to Fort Worth, Texas (UP)
- Fort Worth to Dallas, Texas (UP)
- Dallas to Big Sandy, Texas (UP)
- Big Sandy to Texarkana, Texas (SP)

"Sunset" Route:

- Beaumont, Texas to Iowa Jct., Louisiana (SP)
- Iowa Jct. to Lafayette, Louisiana (SP)
- Lafayette to Avondale, Louisiana (SP)
- Kinder to Livonia, Louisiana (UP)

¹ The Sunset Route extends from Los Angeles through El Paso to New Orleans. The Golden State Route extends from Los Angeles through El Paso and Hutchinson, Kansas to Chicago. The new Los Angeles - Memphis Route would extend from Los Angeles through El Paso and Fort Worth to Memphis. These routes are one and the same from Los Angeles to El Paso.

Rail Yards

- Montclair, California (UP)
- Niland, California (SP)
- Yuma, Arizona (SP)
- Phoenix, Arizona (SP)
- Nogales, Arizona (SP)
- El Paso, Texas (SP)
- Amarillo, Texas (SP)
- Fort Worth, Texas (UP)
- Bellmead, Texas (SP)
- DeQuincy, Louisiana (UP)
- Lake Charles, Louisiana (SP)
- Livonia, Louisiana (UP)

Intermodal Facilities

- E. Los Angeles, California (UP)
- Phoenix, Arizona (SP)
- San Antonio, Texas (UP)
- Dallas, Texas (SP)

Abandonments

- Whittier Jct. to Colima Jct., California (UP)
Docket No. AB-33 (Sub-No. 93X)
- Iowa Jct. to Manchester, Louisiana (UP)
Docket No. AB-3 (Sub-No. 133X)

Rail Construction Projects

- W. Colton, California (2 projects)
- Houston, Texas (3 projects)
- Robstown, Texas
- Fort Worth, Texas (2 projects)
- West Point, Texas
- Carrollton, Texas
- Kinder, Louisiana

2.3.3 Northern Corridor

The Northern Corridor consists of rail lines which extend between Chicago and the Pacific Northwest through Illinois, Wisconsin, Minnesota, North Dakota, South Dakota, Montana, Idaho, Washington and Oregon. Much of corridor is dominated by the BN/Santa Fe system. The UP, however, has major routes in the Pacific Northwest extending from Granger, Wyoming (in the

Central Corridor), to Portland, Oregon, Seattle and Spokane, Washington and Eastport, Idaho (on the Canadian border). As a result of its recent merger with the Chicago and North Western (CNW), UP also now has rail lines extending from the Central Corridor to Milwaukee and Superior, Wisconsin, as well as St. Paul and Duluth, Minnesota, on the eastern end of the Northern Corridor. The merged UP/SP system is projected to result in some shifts of former SP traffic to the existing UP rail line from Portland, Oregon to Granger, Wyoming and away from SP's existing route from Portland to northern California and eastward through the Central Corridor.

For the EA and Post EA, SEA assessed the potential environmental impacts for the following rail line segments, rail yards, and intermodal facilities in the Northern Corridor.

Rail Line Segments

- Seattle, Washington to Portland, Oregon (UP)
- Portland to Oregon Trunk Jct., Oregon (UP)

Rail Yards

- Seattle, Washington (UP)
- Hinkle, Oregon (UP)

Intermodal Facilities

- Seattle, Washington (UP)
- Portland (Albina), Oregon (UP)

2.3.4 Pacific Coast (I-5) Corridor

The Pacific Coast or "I-5" Corridor, so named because of its proximity to Interstate 5, extends from Seattle, Washington through Portland, Oregon to the San Francisco Bay Area, Los Angeles, and San Diego, California. At present, no single railroad operates rail lines which extend through the entire Pacific Coast (I-5) Corridor. UP's rail line extends from Seattle to Portland and from Bieber, California to Stockton, California, while the SP rail line extends from Portland to Los Angeles. The BN/Santa Fe route runs from Seattle to Bieber, California via Wishram, Washington and Klamath Falls, Oregon. From Bieber, BN/Santa Fe traffic uses the UP's Central Corridor route between Keddle and Stockton, California, where it connects with the BN/Santa Fe route to San Diego via Bakersfield and Los Angeles.

A merged UP/SP rail line would extend from Seattle to Los Angeles, and the settlement agreement with BN/Santa Fe would extend the BN/Santa Fe rail line from Seattle to San Diego. As a result of these proposed route changes, SEA analyzed operational changes to rail line

segments, rail yards, and intermodal facilities in Washington, Oregon and California. Traffic changes in these three states would be the result of a combination of changes in routing and traffic shifts in the Northern and Pacific Coast (I-5) Corridors. Similarly, traffic shifts in Southern California would reflect a combination of traffic shifts in the Southern and Pacific Coast (I-5) Corridors as well as on UP's Los Angeles to Salt Lake City rail line, which UP/SP states would be used mostly for carload merchandise and bulk traffic, with most of the intermodal traffic shifted to the Southern Corridor to and from Los Angeles. Other rail line segments, rail yards, intermodal facilities, and rail constructions, which would be used by rail traffic in this corridor, and proposed abandonments are detailed in the descriptions of the Central, Southern, and Northern Corridors.

For the EA and Post EA, SEA assessed the potential environmental impacts for the following rail line segments and rail yards in the Pacific Coast (I-5) Corridor.

Rail Line Segments

- Palmdale to W. Colton, California (SP)
- Keddie to Bieber, California (UP)
- Roseville to Marysville, California (SP)
- Marysville to Dunsmuir, California (SP)
- Dunsmuir, California to Klamath Falls, Oregon (SP)
- Klamath Falls to Chemult, Oregon (SP)
- Chemult to Eugene, Oregon (SP)
- Eugene to Portland, Oregon (SP)

Rail Yards

- Salem, Oregon (UP)
- Bend, Oregon (UP)

2.3.5 Nebraska-Gulf Coast Corridor

The Nebraska-Gulf Coast Corridor consists of a number of routes that run basically north-south from the Central Corridor through Kansas and Oklahoma to the Texas Gulf Coast. At the north end of this corridor, North Platte and Omaha, Nebraska; Herington, Topeka, and Kansas City, Kansas; and Kansas City, Missouri are interconnected hubs from which several UP and BN/Santa Fe rail lines run southward through (variously) Wichita, Kansas; El Reno, Oklahoma City, Tulsa, and Muskogee, Oklahoma; and Dallas-Fort Worth to the Houston/Galveston region of Texas. Rail yards and intermodal facilities serving the Central or Southern Corridors would also serve traffic on the Nebraska-Gulf Coast Corridor; the locations of these facilities are included in previous corridor discussions.

For the EA and Post EA, SEA assessed the potential environmental impacts for the following rail line segments, rail yards, abandonments, and construction projects in the Nebraska-Gulf Coast Corridor.

Rail Line Segments

- Valley, Nebraska to Marysville, Kansas (UP)
- Herington to Lost Springs, Kansas (UP)
- Lost Springs to Wichita, Kansas (UP)
- Wichita, Kansas to Chickasha, Oklahoma (UP)
- Chickasha, Oklahoma to Fort Worth, Texas (UP)

Rail Yards

- Herington, Kansas (SP)

Abandonments

- Whitewater to Newton, Kansas (UP)
Docket No. AB-3 (Sub-No. 132X)
- Seabrook to San Leon, Texas (SP)
Docket No. AB-12 (Sub-No. 187X)
- Suman to Benchley, Texas (SP)
Docket No. AB-12 (Sub-No. 185X)
- Troup to Whitehouse, Texas (UP)
Docket No. AB-3 (Sub-No. 134X)

Rail Construction Projects

- Hope, Kansas

2.3.6 Illinois-Gulf Coast Corridor

The Illinois-Gulf Coast Corridor extends from Chicago southward through Illinois, Missouri, Arkansas, Louisiana and southeastern Texas as well as Dallas-Fort Worth, San Antonio and the Gulf Coast ports of Houston, Galveston, Beaumont and New Orleans. At present, UP and SP are the only railroads which operate along the entire corridor. Under the proposed merger and BN/Santa Fe settlement agreement, UP/SP and BN/Santa Fe would be the only railroads operating through the corridor. UP/SP has proposed directional operations through most of the Illinois-Gulf Coast Corridor south of East St. Louis and Memphis, basically using the existing UP rail line via Little Rock, Arkansas as the northward rail line and the SP rail line via Pine Bluff, Arkansas as the southward rail line.

For the EA and Post EA, SEA assessed the potential environmental impacts for the following rail line segments, rail yards, abandonments, and construction projects in the Illinois-Gulf Coast Corridor.

Rail Line Segments

- Chicago to Villa Grove, Illinois (UP)
- Dexter Jct., Missouri to Paragould, Arkansas (SP)
- Paragould to Fair Oaks, Arkansas (SP)
- Fair Oaks to Brinkley, Arkansas (SP)
- Brinkley to Pine Bluff, Arkansas (SP)²
- Shreveport, Louisiana to Lufkin, Texas (SP)²

Rail Yards

- Salem, Illinois (UP)
- Poplar Bluff, Missouri (SP)

Abandonments

- Edwardsville to Madison, Illinois (UP)
Docket No. AB-33 (Sub-No. 98X)
- DeCamp to Edwardsville, Illinois (UP)
Docket No. AB-33 (Sub-No. 97X)
- Barr to Girard, Illinois (UP)
Docket No. AB-33 (Sub-No. 96)
- Gurdon to Camden, Arkansas (UP)
Docket No. AB-3 (Sub-No. 129X)

Rail Construction Projects

- Girard, Illinois
- Salem, Illinois
- Dexter, Missouri
- Paront, Missouri
- Camden, Arkansas
- Fair Oaks, Arkansas
- Pine Bluff, Arkansas (2 projects)
- Texarkana, Arkansas
- Shreveport, Louisiana

² These segments were included in the analysis for the EA. As a result of the CMA settlement agreement, the number of trains on the segments would decrease below the Board's thresholds for environmental analysis and are shown here only to highlight the change.

2.4 Post-Merger Traffic Shifts Among the Corridors

The post-merger traffic shifts within and between corridors would be most prevalent in the Central and Southern Corridors, which, as mentioned earlier, would be interchangeable in many respects. This is reflected in the number of rail line segments, rail yards, intermodal facilities, and proposed abandonment and rail construction projects listed under these two corridors in the Section 2.3 of this chapter.

2.4.1 Central Corridor

In the Central Corridor, projected traffic increases over the entire route between the San Francisco Bay Area and Granger, Wyoming triggered SEA's environmental review. These increases reflect the shift of more SP traffic from the Southern to the Central Corridor, as well as from the D&RGW (SPT) for movement between the San Francisco Bay Area and Central California in the west and Chicago, St. Louis and points beyond in the east. Also included is traffic attracted from motor carriers and the added BN/Santa Fe traffic resulting from the BN/Santa Fe settlement agreement. Because of the planned shift of intermodal traffic to the SP Donner Pass rail line (Roseville, California to Winnemucca, Nevada) and the regular carload and bulk traffic to UP's route via Feather River Canyon, the train frequency would decrease on the latter route, and increase on the SP Donner Pass rail line.

As mentioned earlier, much of SP's carload traffic to and from Los Angeles via the Southern Corridor would be diverted to UP's Central Corridor route, including the UP rail line to Los Angeles via Salt Lake City and Las Vegas. Intermodal traffic would be largely diverted from the latter route to the Southern Corridor route, with a resulting net decrease in train frequency via Las Vegas and a net increase over the Southern Corridor.

At present, SP traffic between the Pacific Northwest and points east of the Missouri River generally moves via northern California and the Central Corridor. If the merger is approved, this traffic would largely be routed via UP's Seattle/Portland rail line and its connection with the Central Corridor at Granger, Wyoming. This traffic, combined with increases in San Francisco Bay Area Central Corridor traffic, triggered SEA's environmental review of the Central Corridor rail line from Granger to Cheyenne, Wyoming.

Net increases in traffic over existing D&RGW (SPT) rail lines between (1) Dotsero and Denver, Colorado; (2) Denver, Colorado and Oakley, Kansas; and (3) Denver, Colorado and Cheyenne, Wyoming would result from the proposed abandonment of D&RGW, SP and UP rail lines in Colorado and Kansas. This traffic includes movements of coal from mines in Colorado to

the east and southeast of Denver, and the increased traffic from BN/Santa Fe trains between Denver and the San Francisco Bay Area.

Approximately half of the former CNW rail line between Fremont, Nebraska and Chicago, Illinois would experience traffic increases, triggering SEA's environmental review, and reflecting the shifts in Central Corridor traffic discussed above, to the extent such traffic moves to/from Chicago.

Increased utilization of Central Corridor rail yards and intermodal facilities in Northern California, Colorado, Kansas City, East St. Louis and Chicago also reflect the projected increases in Central Corridor traffic described above and required SEA's environmental review. Similarly, rail construction projects in Lathrop, Richmond, and Stockton, California and Denver, Colorado are intended in whole or in part to facilitate the movement of the increased traffic projected for the Central Corridor.

2.4.2 Southern Corridor

The Southern Corridor would experience increases in traffic over many rail line segments sufficient to require environmental analysis. Such increases are largely attributable to substantial increases in intermodal traffic to/from Los Angeles, the creation of a new, shorter route between Memphis and Los Angeles via Fort Worth and El Paso, and the addition of BN/Santa Fe traffic between Houston and New Orleans.

As a result of the projected traffic increases in the Southern Corridor, environmental review was required for (1) the entire rail line between Los Angeles and El Paso; (2) the rail line segment between El Paso and Hutchinson, Kansas via Vaughn, New Mexico and Stratford, Texas; (3) the rail line segment between El Paso and Texarkana, Texas via Fort Worth; (4) the rail line segment between Beaumont, Texas and Avondale, Louisiana (New Orleans); (5) the rail line segment between Kinder and Livonia, Louisiana; and (6) the rail line segment between Galesburg and Nelson, Illinois.

Rail yards and intermodal facilities in the Southern Corridor affected by projected traffic increases requiring environmental analysis are numerous and are located throughout the corridor in California, Arizona, Texas and Louisiana (none are located in New Mexico). SEA also analyzed 11 construction projects and 2 proposed abandonments in the Southern Corridor.

2.4.3 Northern Corridor

In the Northern Corridor, traffic shifts requiring analysis would occur only in Oregon and Washington, primarily reflecting the shift of SP traffic between Portland and eastern points to the UP route from Portland through Granger, Wyoming and eastward through the Central Corridor. There also would be increases in the Pacific Coast (I-5) Corridor between Portland and Seattle, reflecting the combination of UP and SP routes between Los Angeles and Seattle. Increased activity was analyzed for rail yards and intermodal facilities in Seattle and Hinkle, Oregon.

2.4.4 Pacific Coast (I-5) Corridor

The Pacific Coast (I-5) Corridor would have the greatest traffic increases north of Sacramento, specifically from Roseville, California to Portland, Oregon. This would result in large part from the addition of UP traffic to/from Seattle, Portland, and Hinkle, Oregon, the latter point becoming the hub terminal for eastern Washington and Oregon traffic moving to/from California via the newly created UP/SP route between Hinkle and Klamath Falls, Oregon via Bend, Oregon. This route would result from the BN/Santa Fe settlement agreement.

Rail yards solely related to the Pacific Coast (I-5) Corridor traffic at Salem and Bend, Oregon would experience increased activity and were analyzed by SEA. At the southern end of the corridor, one rail line segment (from West Colton, in the Los Angeles Basin, to Palmdale, California) would experience traffic increases sufficient to exceed the Board's thresholds for environmental analysis. It should be noted that all rail yards and intermodal facilities in (1) Seattle, Washington and Portland, Oregon in the Northern Corridor; (2) the San Francisco Bay Area to Roseville, California area in the Central Corridor; and (3) the Los Angeles, California area in the Southern Corridor also serve Pacific Coast (I-5) Corridor traffic.

Projected traffic shifts in the Nebraska-Gulf Coast Corridor would result in increased traffic, exceeding the Board's thresholds for environmental analysis, on the rail line between Herington, Kansas and Fort Worth, Texas via Wichita, Kansas. This is a rail line of the former Chicago, Rock Island and Pacific Railroad that was later acquired by the Missouri-Kansas-Texas Railroad. Finally, the rail line became part of the UP system pursuant to a merger. This rail line and two other UP/SP lines through the Nebraska-Gulf Coast Corridor have traditionally handled export grain moving through the Houston/Galveston Gulf ports. In more recent times, the rail lines have also been used for the movement of Powder River Basin coal to utilities in Oklahoma and Texas. The SP acquired trackage rights over the BN/Santa Fe rail line in this corridor as a result of an agreement with the BN/Santa Fe in the recently approved BN/Santa Fe merger.

Only one rail yard (Herington, Kansas) is projected to have increased activity requiring analysis by SEA. However, rail yards and/or intermodal facilities in Kansas City, Kansas and Fort Worth, Texas (in the Central and Southern Corridors, respectively) would also handle Nebraska-Gulf Coast traffic.

2.4.5 Illinois-Gulf Coast Corridor

The Illinois-Gulf Coast Corridor would handle a large amount of chemical traffic for UP/SP. Traffic increases requiring environmental analysis would be on the UP rail line between Chicago and Villa Grove, Illinois and the SP rail line between Dexter Junction, Missouri and Pine Bluff, Arkansas (via Paragould, Fair Oaks and Brinkley).

Two rail yards in the corridor, at Salem, Illinois and at Popular Bluff, Missouri, would have increased activity requiring environmental analysis. In addition, ten rail construction projects (two in Illinois, two in Missouri, five in Arkansas, and one in Louisiana) are planned to connect UP and SP routes and the routes of UP/SP with other carriers.

2.4.6 Modifications Since Publication of the EA

As a result of the UP/SP and BN/Santa Fe settlement agreement, as modified by the CMA settlement agreement, BN/Santa Fe would have trackage rights over UP/SP rail lines from Valley Junction, Illinois (near East St. Louis) and from Memphis, Tennessee, southward through the Illinois-Gulf Coast Corridor to Houston, Dallas/Fort Worth, San Antonio, and Waco, Texas over both UP and SP rail lines, which are planned for directional running. As a result of the change to directional running for BN/Santa Fe (specified for the first time in the CMA settlement agreement), two rail line segments in the Illinois-Gulf Coast Corridor are projected to have decreases in the number of trains operating over the segments. The decreases result in lowering the train densities below the Board's thresholds for environmental analysis. Thus, the SP rail line segments from Brinkley to Pine Bluff, Arkansas, and from Shreveport, Louisiana, to Lufkin, Texas, have been eliminated from consideration by SEA (these rail line segments were analyzed in the EA). The BN/Santa Fe settlement agreement has also resulted in the addition of three rail construction projects for analysis in this Post EA. The projects are located at Stockton and Richmond, California (Central Corridor), and Robstown, Texas (Southern Corridor).

The major shifts in traffic discussed above would affect rail line segments and facilities primarily in the Central and Southern Corridors (more so than the other transportation corridors). The same is true for increased activity at rail yards and intermodal facilities that would result from the rerouting of traffic in the two corridors. The most pervasive potential environmental impact that

has emerged from SEA's analyses is the issue of safety, particularly as it relates to rail-highway grade crossings. This issue is also present in the other corridors, but is more geographically dispersed than in the Central and Southern Corridors.

CHAPTER 3

POTENTIAL ENVIRONMENTAL IMPACTS OF THE PROPOSED MERGER

This chapter discusses the potential impacts that would result from anticipated changes in traffic and other merger-related activities with regard to: (1) rail line segments, (2) rail yards, (3) intermodal facilities, (4) abandonments, and (5) rail line constructions. Specifically, increased train activity on rail line segments, and truck activity at rail yards and intermodal facilities resulting from the proposed merger have the potential to cause environmental impacts. Rail line constructions have the potential to cause impacts because of construction-related activities and the subsequent operation of trains over the new connections. Abandonments may cause physical disruption of the right-of-way during salvage operations and increases in truck traffic on the national roadway system due to the discontinuance of rail service.

SEA identified potential environmental impacts to regional air quality, noise levels, and transportation systems for areas affected by increased rail and intermodal operations. SEA considered potential safety impacts in its analysis, including the effects of increased rail traffic on grade crossings, movements of hazardous materials, derailments, emergency vehicle response, and increased vehicular traffic congestion. As appropriate, SEA also considered the potential environmental impacts to land uses, historic and cultural resources, biological resources, and water resources that could result from changes in rail activity.

As required by 49 CFR 1105, SEA conducted an independent environmental review of the proposed merger and consulted with Federal, state, and local agencies. SEA also reviewed a wide array of data, including approximately 400 detailed environmental comments from concerned agencies, regional and local governments, shippers and competing industries; the merger application itself; the Environmental Report which accompanied the application; various verified statements; Preliminary Draft Environmental Assessments (PDEAs); and the settlement agreements reached with competing railroads (e.g., BN/Santa Fe, Illinois Central, CSX, and Utah Railway) and trade organizations (e.g., Chemical Manufacturers' Association). SEA's analysis of potential environmental impacts has been prepared using the most current data available (as of May 31, 1996). SEA also reviewed the environmental comments resulting from the January 29th consultation letters, Responsive Applications, the March 29th and April 29th filings, as well as those comments received on the EA document served on April 12th (see Volume 2, Appendix A for a complete set of comment letters and SEA's responses). As necessary, SEA conducted on-site investigations of areas potentially affected by operational changes or construction.

3.1 Board's Environmental Thresholds for Analysis and Methodologies

3.1.1 Rail Line Segments, Rail Yards and Intermodal Facilities

Because the environmental impacts associated with increased rail operations are commonly related to air quality and noise, SEA prepared detailed analyses of these impacts for all rail line segments, rail yards, or intermodal facilities that would meet or exceed the Board's environmental analysis thresholds. These thresholds were established to ensure that those rail line segments or facilities that would experience a substantial increase in traffic were thoroughly analyzed for potential air quality, noise, transportation, and safety impacts.

Air Quality

In the case of air quality analysis, the Board's threshold levels vary depending upon the air quality standards in the affected area and the type of operational changes proposed. In areas classified as being in "nonattainment" with air quality standards, the level of change required to meet or exceed the threshold for analysis is lower. Air quality analysis thresholds are summarized in Table 3-1.

Each rail line segment, rail yard or intermodal facility where post-merger activity is projected to exceed these thresholds was analyzed for potential air quality impacts. Potential sources of emissions would include: (1) increased use of road locomotives on rail line segments, (2) increased use of switching locomotives at rail yards and intermodal facilities, and (3) increased use of vehicles at rail yards and intermodal facilities. Emissions impacts for five pollutants -- hydrocarbons (HC), carbon monoxide (CO), sulfur oxides (SO_x), nitrogen oxides (NO_x), and particulate matter (PM₁₀) -- were calculated using EPA-approved methods. The standards outlined in EPA's General Conformity regulations (40 CFR 51.838) were used as guidelines for assessing emissions increases.

General Conformity. SEA has concluded that the proposed merger is not subject to EPA's air quality regulations entitled "Determining Conformity of General Federal Actions to State or Federal Implementation Plans" (General Conformity). The proposed merger does not meet the definitions set forth in the General Conformity regulations at 40 CFR 51.852, because, as a regulatory agency, the Board does not maintain program control over railroad emissions as part of its continuing responsibilities. EPA General Conformity levels were used in SEA's analysis only as a basis for comparison.

TABLE 3-1
SURFACE TRANSPORTATION BOARD'S
AIR QUALITY THRESHOLDS FOR IMPACT ANALYSIS

Activity Site	Threshold
Attainment Areas: (49 CFR 1105.7(e)(5)(I))	
Rail Line Segments	Increase of 8 trains per day or 100% increase in annual gross ton miles.
Rail Yards	Increase of 100% in carload activity per day.
Intermodal Facilities	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.
Nonattainment Areas: (49 CFR 1105.7(e)(5)(ii))	
Rail Line Segments	Increase of 3 trains per day or 50% increase in annual gross ton miles.
Rail Yards	Increase of 20% in carload activity per day.
Intermodal Facilities	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.

Estimated Emissions Increases. In response to various comments, SEA recalculated the potential pollution emissions increases associated with the proposed merger. SEA developed estimates of the net emissions changes resulting from the proposed merger for each Air Quality Control Region (AQCR) affected. Changes in emissions levels were calculated for those rail line segments that would experience increased traffic below the Board's thresholds and for those rail line segments that would experience decreases in traffic. These additional increases and offsetting decreases in emissions were then incorporated into the previously estimated totals for each AQCR. As a result, the estimated emissions changes increased for some AQCRs and decreased for others. The revised emissions estimates also incorporate corrections that were identified following publication of the EA, errors noted by commenters, and changes in rail traffic estimates developed following the publication of the EA.

Criteria for Adverse Emissions Impacts. Because the General Conformity Standards do not apply to railroad operations, except for future locomotive emissions standards, the EPA's Prevention of Significant Deterioration (PSD) regulations were used in the EA to give reviewers an indication as to whether the projected emissions increases were substantial. However, PSD relates primarily to stationary sources and are most appropriate for rail yards and intermodal facilities, not rail line segments. An alternative set of air quality guidelines, the EPA's General Conformity regulations (40 CFR 51.853), also provides criteria for determining the impacts of increased emissions. As noted above, the General Conformity criteria also do not apply directly to railroad operations or this Board action, but were utilized to provide a standard for comparison. These criteria vary by pollutant and, for some pollutants, by attainment status. The General Conformity criteria are listed in Table 3-2.

TABLE 3-2
GENERAL CONFORMITY EMISSIONS CRITERIA

Pollutant	Attainment Areas (tons/year)	Nonattainment Areas (tons/year)
Ozone (VOCs or NO ₂)	100	---
Other Nonattainment	---	100
Serious Nonattainment	---	50
Severe Nonattainment	---	25
Extreme Nonattainment	---	10
Carbon monoxide (CO)	100	100
Sulfur Dioxide (SO ₂)	100	100
Nitrogen Dioxide (NO ₂)	100	100
Particulate Matter (less than 10 microns) (PM ₁₀)	100	---
Moderate (or better) Nonattainment	---	100
Serious (or worse) Nonattainment	---	70

Many respondents commented that the expected increase in emissions from the proposed merger would have severe effects on their area or cause their area to be designated as nonattainment. Some of the commenters believed that if environmental thresholds were exceeded, severe air impacts would automatically result and areas that were currently attainment would become nonattainment. However, there is no direct connection between a threshold being exceeded and corresponding loss of attainment status. The modeling of air pollution sources has been used in an attempt to establish this link, but even modeling is not an accurate method of nonattainment prediction for every pollutant.

The attainment status of an area is derived from an ambient, monitored measurement from a network of monitoring devices spread throughout an area. The primary pollutant increases expected from the proposed merger would result from emissions along rail line segments, occurring along stretches of track that, in larger AQCRs, can cover 100 or more miles. The likelihood that an intermittent mobile source, such as a train, would impact one of the monitoring devices for a sufficient period of time and with sufficient emissions to cause an area to become nonattainment is negligible. The air quality impacts of these emissions are spread over a large area, and impacts at any individual location would be relatively minor. When people consider an air pollution source causing nonattainment, they typically envision stationary sources, such as power plants, or continuous and innumerable mobile sources, such as cars and trucks on a busy freeway. If a train were a stationary source, with all of the pollutants from hundreds of miles of operation emitted from a single location, then it might be sufficient to affect a single monitoring location.

It is important to note that nonattainment areas may be geographic subsets of total AQCRs. Therefore, the total emissions from train segments in these nonattainment areas would be smaller than that reported for the entire AQCR. The responses to individual comments in Volume 2, Appendix A indicate where this is true and where emissions estimates for the nonattainment area differ from those of the entire AQCR.

Noise

Noise impacts, i.e., increases in overall noise levels at sensitive receptor sites (e.g., residences, schools, churches), were analyzed by SEA for all locations where planned operational changes would meet or exceed the Board's noise analysis thresholds. Noise impact analysis thresholds are summarized in Table 3-3.

For those locations which required detailed noise analysis, overall merger-related noise impacts (weighted 24-hour noise exposure levels, L_{dn}) were estimated. Merger-related noise impacts are generally considered adverse if the 24-hour L_{dn} increases by three or more decibels (dBA), and if the post-merger noise levels exceed 65 dBA. A 3 dBA increase in L_{dn} normally requires a 100 percent increase in rail traffic, a substantial increase in operating conditions, different equipment, or a shift of daytime operations to night hours. Noise levels (L_{dn}) depend on the number of trains operating and the distance from the tracks to sensitive receptors.

3.1.2 Abandonments

In the case of abandonments, SEA examined the potential environmental impacts associated with each proposed abandonment in the following areas: (1) land use, (2) transportation and safety, (3) water resources, (4) biological resources, (5) air quality, (6) noise, and (7) historic and cultural resources. To assess the potential environmental impacts, SEA reviewed existing conditions, consulted with public agencies and local officials, analyzed resource maps and published reports, visited selected abandonment locations, and reviewed the environmental comments on the EA.

3.1.3 Rail Line Constructions

For new rail line constructions proposed as part of the merger, SEA examined the potential environmental impacts associated with each construction project that required new rights-of-way. The following areas were evaluated: (1) land use, (2) transportation and safety, (3) water resources, (4) biological resources, (5) air quality, (6) noise, and (7) historic and cultural resources. SEA's environmental review included consultations with Federal, state, and local agencies, data

**TABLE 3-3
SURFACE TRANSPORTATION BOARD'S NOISE THRESHOLDS
FOR IMPACT ANALYSIS**

Activity Site	Threshold (49 CFR 1105.7(e)(6))
Rail Line Segments	Increase of 8 trains per day or 100% increase in annual gross ton miles.
Rail Yards	Increase of 100% in carload activity per day.
Intermodal Facilities	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.

collection, site visits, and consultations with UP/SP and its environmental consultants, independent analyses of the potential impacts, and an analysis of the environmental comments on the EA.

3.2 Summary of Potential Environmental Impacts

In conducting its environmental analysis, SEA identified potential environmental impacts that could result from the proposed merger. This effort included consultations with Federal, state, and local agencies, data collection, site visits, consultations with UP/SP and its environmental consultants, review of the environmental comments on the EA, and independent analyses. The potential environmental impacts are related to anticipated changes in railroad freight traffic and other merger-related activities with regard to: (1) rail line segments, (2) rail yards, (3) intermodal facilities, (4) abandonments, and (5) rail line construction on new rights-of-way.

After detailed review of environmental comments on the EA and environmental issues and reconsideration of all of the environmental analyses, SEA concludes that the potential environmental impacts of the proposed merger are substantially the same as those described in the EA. In some locations, the potential air quality impacts and vehicular traffic impacts have been found to be fewer than described in the EA. In other locations, the number of sensitive noise receptors may have increased. The reexamination of potential for hazardous materials incidents has found a slightly higher risk of hazardous materials releases than described in the EA. The recommended mitigation measures have been made more detailed and specific to respond to changes in potential impacts. Detailed descriptions of the potential impacts are provided in the remainder of this chapter. SEA's recommended mitigation measures are described in Chapter 5.

3.2.1 Rail Line Segments, Rail Yards and Intermodal Facilities

Rail line segments, rail yards, and intermodal facilities have the potential to cause environmental impacts because of increased train or truck activity resulting from the proposed merger. The rerouting of train traffic within the consolidated system would cause increased traffic

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on some rail line segments and decreased traffic on other segments. It would also result in increased activity on certain rail line segments due to truck-to-rail diversions and diversions from other rail carriers. Construction within existing railroad rights-of-way is also expected to occur as a result of the proposed merger.

SEA concludes that the combined UP/SP rail system would have lower overall air emissions than the separate UP and SP systems. After reviewing potential changes in air emissions on individual rail line segments, SEA estimated emission changes in 67 AQCRs in 19 states with rail line segments, rail yards, or intermodal facilities that would exceed the Board's thresholds for analysis as a result of the proposed merger. Of these 67 AQCRs, 46 would exceed EPA's conformity levels for one or more pollutants. Based on these results, SEA has recommended air quality mitigation measures for 7 rail corridors in 12 AQCRs where the impacts were determined to be the greatest. SEA found that none of the rail yards analyzed would experience increases in pollutant emissions that would cause adverse air quality impacts. Changes in activities at three intermodal facilities (the East Los Angeles facility in California and the Canal Street and Global II facilities in Chicago, Illinois) could have minor air quality impacts in these areas, which are now in nonattainment with national air quality standards for ozone.

SEA also identified 13 rail segments in 9 states that could experience adverse noise impacts to an increased number of sensitive receptors (i.e., residences, schools, and churches). Most of these noise impacts would occur at or near grade crossings, where train horns are sounded as warnings to motorists or pedestrians. Operations at three rail yards (Salem, Illinois; Herington, Kansas; and Bellmead, Texas) and one intermodal facility (Dupo, Illinois) could cause potential adverse noise impacts. Although the overall noise levels in the vicinity of these yards and intermodal facility would increase slightly, there would not be a large increase in the number of sensitive receptors that would be affected.

A number of communities and agencies expressed safety concerns associated with increased hazardous materials transport, the risks of spills and accidents, and the impact to emergency response resources. SEA analyzed the potential increased risk of hazardous materials releases as a result of the proposed merger. SEA notes that several corridors (Central Corridor, Houston to New Orleans, St. Louis to Houston, and parts of the Pacific Coast Corridor) would have a larger increase in hazardous materials shipments than the rest of the system. SEA concludes that although there would be a small increase in risk of releases throughout the system, the rail operations would remain safe. SEA also finds that UP/SP and BN/Santa Fe have comprehensive, effective emergency response plans in place. SEA recommends implementing mitigation measures to provide additional margins of safety along the corridors with projected increases in hazardous materials transport. Recommended mitigation measures would also improve

communication and coordination among UP/SP emergency response personnel and local emergency response agencies.

Communities were also concerned about grade crossing safety, including potential accidents, vehicular traffic congestion, pedestrian safety, and emergency vehicle response. SEA analyzed changes in crossing delay and predicted accident rates for communities throughout the proposed merged system. Based on the results of the traffic delay analysis, most communities would experience only minor increases in delay that would not require mitigation. Preliminary traffic analysis has indicated that Wichita, Kansas and Reno, Nevada would experience an increase in grade crossing delay and potential vehicle and pedestrian safety impacts. Mitigation measures for these communities are contained in Chapters 4 and 5.

3.2.2 Abandonments

Rail line abandonments are also planned as a part of the proposed merger. Seventeen rail lines in eight states involving approximately 600 miles of track would be abandoned. Potential adverse impacts due to abandonments include one-time physical disruption of the right-of-way from salvaging operations and ongoing increases in truck activity due to discontinuance of rail service. Two proposed abandonments in Colorado were found to warrant special consideration because they are adjacent to two Federal Superfund sites, and removal of these lines may interfere with remediation activities and access. The Colorado Department of Public Health and Environment and US EPA Region 8 are concerned about interference with remediation activities and continued access to the California Gulch and Eagle Mine Superfund sites. Several agencies reported concerns regarding the preservation of historic structures and properties along the proposed abandonments. Rail abandonments would also reduce grade crossings and create recreational land use opportunities.

3.2.3 Rail Line Constructions

The proposed merger would involve 28 new rail line construction projects (including three new construction projects as a result of the BN/Santa Fe settlement agreement). In eight states (Arkansas, California, Colorado, Illinois, Kansas, Louisiana, Missouri, and Texas), projects would require construction activity outside existing rights-of-way. Construction-related activities and the subsequent operation of trains over the new connections could have potential environmental impacts. SEA concludes that construction would have short-term, temporary impacts to water resources, biological resources, cultural resources or other impact areas. Operation of the new lines would not create any notable long-term impacts.

3.2 4 Conclusion

SEA concludes that there would be no adverse environmental impacts as a result of merger-related changes in operations, new rail constructions, or abandonments, if the recommended mitigation measures are imposed as a condition of the proposed merger. The following sections discuss the potential environmental impacts associated with the proposed merger by the type of activity which would experience changes: rail line segments, rail yards, intermodal facilities, rail constructions, or abandonments. Further discussion of the evaluation methodology and conclusions is provided in Chapter 4. SEA's recommended mitigation measures are described in Chapter 5.

3.3 Detailed Impact Analysis

The following provides a detailed discussion of the merger-related environmental impacts and benefits associated with rail line segments, rail yards, intermodal facilities, abandonments, and constructions.

3.3.1 Rail Line Segments

SEA examined 389 rail line segments from the current UP and SP systems (including segments included in the BN/Santa Fe and CMA settlement agreements) that would experience an increase in rail traffic as a result of the proposed merger. In the EA, SEA identified a total of 72 rail segments that would meet or exceed the Board's environmental analysis thresholds for air quality analysis. In addition, 39 of the segments would meet or exceed the Board's environmental analysis thresholds for noise impacts. As a result of further evaluation of revised train operations during the Post EA, two segments were identified as no longer exceeding the Board's thresholds (i.e., Pine Bluff to Brinkley, AR; and Lufkin to Shreveport, LA). Additionally, the segment from Big Spring to Fort Worth no longer meets the Board's threshold for noise analysis. The revised list of rail line segments and their operational characteristics (pre- and post-merger) are outlined in Table 3-4. Potentially adverse environmental impacts resulting from the operational changes associated

with the proposed merger are summarized in the sections below by impact area. A detailed analysis of these issues is presented in Volume 2 of the EA.

Air Quality

Increases in rail traffic have the potential to contribute to adverse air quality in 19 states by contributing to existing levels of air pollution. The greatest increases in pollutants would be

TABLE 3-4
RAIL LINE SEGMENTS THAT WOULD MEET OR EXCEED THE BOARD'S ENVIRONMENTAL ANALYSIS THRESHOLDS

State ¹	Location	Operator	Length(mi.)	TRAINS PER DAY: ²			% Change in Gross Ton-Miles/Year	Threshold Exceedances
				Pre-Merger	Post-Merger	Change		
Arizona	Yuma to Picacho	SP	203.0	25.8	39.2	13.4	23.0%	Air Quality, Noise
	Picacho to Tucson	SP	50.0	25.7	41.4	15.7	38.6%	Air Quality, Noise
	Tucson to Cochise	SP	78.0	29.6	44.7	15.1	27.3%	Air Quality, Noise
	Cochise to Lordsburg, NM	SP	85.0	30.3	44.9	14.6	24.2%	Air Quality, Noise
Arkansas	Paragould to Dexter Junction, MO	SP	69.0	16.0	23.3	7.3	49.0%	Air Quality
	Fair Oaks to Paragould ³	SP	69.0	11.4	20.7	9.3	77.0%	Air Quality, Noise
	Brinkley to Fair Oaks ³	SP	26.0	11.4	22.7	11.3	106.0%	Air Quality, Noise
California	Dunsmuir to Klamath Falls, OR	SP	106.0	16.5	21.7	5.2	9.6%	Air Quality
	Marysville to Dunsmuir	SP	174.0	16.7	21.9	5.2	10.4%	Air Quality
	Keddie to Bieber	UP	112.0	1.0	4.0	3.0	60.5%	Air Quality
	Roseville to Marysville	SP	34.0	16.7	20.2	3.5	7.3%	Air Quality
	Roseville to Sparks, NV	SP	139.0	13.8	25.1	11.3	78.7%	Air Quality, Noise
	Sacramento to Roseville	SP	18.0	29.1	36.1	7.0	48.6%	Air Quality
	Stockton (Lathrop) to Sacramento ²	SP	46.0	13.3	23.0	9.7	56.4%	Air Quality, Noise
	Martinez to Stockton (Lathrop)	SP	48.0	0	4.0	4.0	>100.0%	Air Quality, Noise
	Oakland to Martinez	SP	32.0	25.2	32.3	7.1	48.2%	Air Quality
	Niles Junction to Oakland	UP	25.0	24.4	29.8	5.4	5.8%	Air Quality
	West Colton to Yuma, AZ	SP	195.0	27.7	38.8	11.1	24.1%	Air Quality, Noise
	Palmdale to West Colton	SP	80.0	9.2	13.1	3.9	49.1%	Air Quality
	Long Beach to Slauson Junction	SP	14.0	22.0	25.6	3.6	-19.0%	Air Quality

¹ Segments are listed by the state in which the majority of track occurs. Segments in two states are not duplicated in the list.

² Reflects revised traffic density attributed to BN/Santa Fe settlement agreement as presented in BN/Santa Fe's comments (1/31/96) on the primary application.

³ Reflects revised traffic data attributed to the Chemical Manufacturers' Association (CMA) settlement agreement.

TABLE 3-4
RAIL LINE SEGMENTS THAT WOULD MEET OR EXCEED THE BOARD'S ENVIRONMENTAL ANALYSIS THRESHOLDS

State ¹	Location	Operator	Length(mi.)	TRAINS PER DAY: ²			% Change in Gross Ton-Miles/Year	Threshold Exceedances
				Pre-Merger	Post-Merger	Change		
California	Slason Junction to Los Angeles	SP	6.0	19.4	25.6	6.2	-5.1%	Air Quality
Colorado	Denver to Cheyenne, WY ³	UP	105.0	10.5	15.3	4.9	78.5%	Air Quality
	Denver to Oakley, KS	UP	262.0	1.8	8.7	6.9	443.6%	Air Quality, Noise
	Bond to Denver	SP	127.0	11.0	19.6	8.6	87.8%	Air Quality, Noise
	Dotsero to Bond	SP	38.0	6.0	14.0	8.0	202.2%	Air Quality, Noise
Illinois	Nelson to Clinton, IA	UP	34.0	43.8	47.8	4.0	7.5%	Air Quality
	Nelson to Geneva	UP	69.0	43.8	57.9	14.1	23.1%	Air Quality, Noise
	Geneva to West Chicago	UP	6.0	78.6	92.7	14.1	22.7%	Air Quality, Noise
	West Chicago to Chicago (Proviso)	UP	15.0	92.7	106.8	14.1	22.4%	Air Quality, Noise
	Galesburg to Buda	BN/Santa Fe	43.0	17.1	23.5	6.4	17.1%	Air Quality
	Buda to Nelson	UP	34.0	6.1	16.2	10.1	97.2%	Air Quality, Noise
	Villa Grove to Chicago	UP	127.0	16.2	19.2	3.0	24.0%	Air Quality
Iowa	Vinton to Clinton ⁴	UP	81.0	42.8	47.9	5.1	8.0%	Air Quality
	California Jct. to Missouri Valley	UP	6.0	28.9	37.4	8.5	28.0%	Air Quality, Noise
	California Jct. to Fremont, NE	UP	31.0	22.6	31.1	8.5	33.7%	Air Quality, Noise
Kansas	Salina to Oakley	UP	191.0	2.2	8.2	6.0	388.0%	Air Quality, Noise
	Lost Springs to Wichita	UP	64.3	1.9	11.9	10.0	362.4%	Air Quality, Noise
	Herington to Lost Springs	UP	6.5	0.1	10.4	10.3	17005.4%	Air Quality, Noise
Louisiana	Avondale to Lafayette ⁴	SP	135.0	12.2	17.7	5.5	-19.8%	Air Quality
	Livonia to Kinder ⁴	UP	76.4	6.8	8.4	1.6	59.0%	Air Quality
	Lafayette to Iowa Junction	SP	58.0	11.2	16.7	5.5	-21.7%	Air Quality
	Iowa Jct. to Beaumont, TX	SP	75.0	15.5	30.8	15.3	73.9%	Air Quality, Noise
Nebraska	Valley to Marysville, KS	UP	134.0	0.9	2.9	2.0	133.6%	Air Quality, Noise
Nevada	Sparks to Winnemucca	SP	175.0	13.8	26.2	12.4	74.1%	Air Quality, Noise
	Alazon to Winnemucca	UP	182.0	31.3	35.3	4.0	19.7%	Air Quality
New Mexico	Lordsburg to El Paso, TX	SP	148.0	29.3	44.7	15.4	29.4%	Air Quality, Noise

⁴ Reflects changes included in UP/SP's comments on the EA (5/3/96).

TABLE 3-4
RAIL LINE SEGMENTS THAT WOULD MEET OR EXCEED THE BOARD'S ENVIRONMENTAL ANALYSIS THRESHOLDS

State ¹	Location	Operator	Length(mi.)	TRAINS PER DAY: ²			% Change in Gross Ton-Miles/Year	Threshold Exceedances
				Pre-Merger	Post-Merger	Change		
Oklahoma	Chickasha to Wichita, KS	UP	192.0	4.4	11.8	7.4	129.3%	Air Quality, Noise
Oregon	Klamath Falls to Chemult	SP	74.0	22.1	30.2	8.1	15.5%	Air Quality, Noise
	Chemult to Eugene	SP	124.0	17.4	22.6	5.2	11.2%	Air Quality
	Eugene to Portland ⁵	SP	124.0	16.3	21.5	5.2	47.4%	Air Quality
	Portland to Oregon Trunk Jct. ⁵	UP	84.8	25.8	28.8	3.0	7.3%	Air Quality
Texas	Dallas to Big Sandy	UP	98.0	27.7	34.9	7.2	50.2%	Air Quality
	Fort Worth to Chickasha, OK	UP	177.7	7.6	14.2	6.6	113.2%	Air Quality, Noise
	Big Sandy to Texarkana ⁴	SP	108.0	11.7	18.3	6.6	119.2%	Air Quality, Noise
	El Paso to Sierra Blanca ⁵	SP	88.0	21.5	27.3	5.8	21.4%	Air Quality
	Fort Worth to Dallas ⁴	UP	31.5	23.5	33.7	10.2	45.3%	Air Quality, Noise
	Toyah to Big Spring	UP	152.0	2.3	12.1	9.8	345.7%	Air Quality, Noise
	Sierra Blanca to Toyah	UP	109.7	2.1	11.9	9.8	430.6%	Air Quality, Noise
	Stratford to Hutchison, KS	SP	274.0	11.3	20.1	8.8	24.3%	Air Quality, Noise
	Dalhart to Stratford	SP	31.0	13.3	21.9	8.6	34.4%	Air Quality, Noise
	El Paso to Dalhart	SP	425.0	12.0	19.6	7.6	20.7%	Air Quality
Utah	Big Spring to Fort Worth	UP	267.5	10.5	15.5	5.0	62.9%	Air Quality
	Provo to Lynndyl	UP	87.0	8.7	11.7	3.0	39.1%	Air Quality
	Ogden to Alazon, NV	SP	178.0	12.7	23.0	10.3	77.2%	Air Quality, Noise
Washington	Seattle to Portland, OR	UP	186.0	46.5	50.1	3.6	5.7%	Air Quality
Wisconsin	Oak Creek to St. Francis	UP	7.0	4.0	3.2	(0.8)	153.3%	Air Quality, Noise
Wyoming	Granger to Ogden, UT ⁵	UP	145.2	35.3	39.1	3.9	12.7%	Air Quality
	Granger to Green River ⁵	UP	29.9	58.8	65.6	6.7	11.0%	Air Quality
	Green River to Rawlins ⁵	UP	134.2	58.4	65.1	6.7	11.4%	Air Quality
	Rawlins to Cheyenne ⁵	UP	172.0	60.1	67.1	7.0	11.2%	Air Quality

⁵ Reflects revised traffic density data attributed to increased passenger train traffic.

emissions of NO_x, primarily from locomotives on rail line segments. While only one area in the country is nonattainment for NO₂, it is of concern because, under the right conditions, it can react with hydrocarbons and sunlight to form photochemical oxidants measured as ozone. A number of areas that would be affected by the proposed merger are classified as nonattainment for ozone.

Since publication of the EA, the potential air quality impacts for all rail line segments were recalculated to take into account all of the UP/SP rail line segments operating in a particular AQCR. This could lead to either increases or decreases in the magnitude of impacts reported in the EA, depending upon the operational changes on the other segments within the AQCR. Previous analyses had considered only those segments within an AQCR which would meet or exceed the Board's environmental analysis thresholds. SEA believes that the new analysis provides a more accurate representation of the actual regional air quality impacts, in part because increases on some segments may be offset by decreases on others within the same region. Table 3-5 lists all analyzed AQCRs (AQCRs with rail line segments and/or facilities exceeding the Board's analysis thresholds) and the net emissions changes for all pollutants. Note that while most of the net emissions changes within an AQCR are from rail line segments, Table 3-5 also includes emissions increases from rail yards and intermodal facilities.

Although SEA believes that the proposed merger is not subject to EPA's General Conformity regulations (40 CFR 51.853), SEA used these criteria in order to gauge the level of potential impact of these changes in emissions. These regulations establish conformity levels for various pollutants. Based on an analysis of the net emissions for all pollutants, SEA identified 46 AQCRs where the net increases in emissions resulting from the proposed merger would exceed these conformity levels. These AQCRs are shown in Table 3-6.

Truck-to-Rail Diversions. The EA stated that the estimated emissions increases that would result from the proposed merger were conservative because they did not include the offsetting emissions that trucks carrying the same amount of freight would produce. Comments received either disputed this assertion or requested specific quantification of these offsetting emissions. It was not possible to determine this impact by local area because the trucks now carrying the freight that would be diverted to rail as a result of the proposed merger would not necessarily travel in the same geographic area as the train. On a national basis, the proposed merger is expected to result in a total shift of freight from rail and truck to the merged system of approximately 39 billion ton-miles per year. This amount, which is in excess of the total carried by the current independent systems, is expected to be diverted from other rail lines or from trucks. In its application, UP/SP estimated that approximately 15 percent of the freight would be diverted from trucks. The transfer of freight from rail truck to rail generally decreases pollutant emissions by a factor of three, since rail carries freight more efficiently. On a national basis, therefore, the proposed merger would

TABLE 3-5
NET EMISSIONS CHANGES BY AIR QUALITY CONTROL REGION¹

AQCR	State	AQCR Name	Change in Emissions (tons/year)				
			HC	CO	NO _x	SO _x	PM ₁₀
20	AR	Northeast Arkansas	49.07	152.56	1142.00	82.75	24.76
501	AZ	Southeast Arizona	17.04	52.99	396.63	28.74	8.60
502	AZ	Pima	22.95	71.35	534.06	38.70	11.58
503	AZ	Mohave - Yuma	20.68	64.29	481.26	34.87	10.43
504	AZ	Maricopa	19.51	62.65	431.17	30.93	10.45
505	AZ	Central Arizona	21.04	65.40	489.58	35.48	10.61
24	CA	Metropolitan Los Angeles	18.29	80.34	159.55	7.84	16.33
27	CA	Northeast Plateau	-3.02	-9.39	-70.30	-5.09	-1.52
28	CA	Sacramento Valley	-12.83	-39.90	-298.67	-21.64	-6.48
30	CA	San Francisco Bay Area	10.78	39.39	184.33	12.43	7.22
31	CA	San Joaquin Valley	38.79	124.73	856.12	61.38	20.82
33	CA	Southeast Desert	58.16	180.82	1353.49	98.08	29.34
508	CA	Mountain Counties	19.42	64.50	405.29	28.72	11.04
34	CO	Commanche	-3.07	-9.54	-71.44	-5.16	-1.55
35	CO	Grand Mesa	-62.88	-195.49	-1463.35	-106.04	-31.72
36	CO	Metropolitan Denver	46.90	148.26	1063.70	76.69	24.40
37	CO	Pawnee	22.61	70.29	526.11	38.12	11.41
40	CO	Yampa	24.46	76.06	569.34	41.25	12.34
88	IA	Northeast Iowa	9.56	29.73	222.54	16.13	4.82
91	IA	Southeast Iowa	1.55	4.82	36.06	2.61	0.78
93	IA	Southwest Iowa	32.97	102.52	767.38	55.60	16.64
65	IL	Burlington - Keokuk	-4.93	-15.33	-114.74	-8.31	-2.49
66	IL	East Central Illinois	12.26	38.12	285.34	20.68	6.19
67	IL	Metropolitan Chicago	23.43	100.68	229.53	12.22	20.25
69	IL	Metropolitan Quad Cities	9.58	29.78	222.93	16.15	4.83
70	IL	Metropolitan St. Louis	-2.64	-1.11	-142.00	-11.41	0.82
71	IL	North Central Illinois	7.58	23.57	176.46	12.79	3.83
73	IL	Rockford - Janesville - Beloit	10.36	32.22	241.15	17.47	5.23
74	IL	Southeast Illinois	37.05	115.19	862.25	62.48	18.69
94	KS	Metropolitan Kansas City	-39.20	-114.95	-990.68	-72.88	-17.68
95	KS	Northeast Kansas	-64.72	-201.23	-1506.28	-109.15	-32.66
96	KS	North Central Kansas	-28.66	-89.11	-667.05	-48.33	-14.46
97	KS	Northwest Kansas	3.00	9.33	69.81	5.06	1.51
99	KS	South Central Kansas	57.98	180.28	1349.43	97.78	29.26
100	KS	Southwest Kansas	-42.10	-130.90	-979.81	-71.00	-21.24
138	MO	Southeast Missouri	8.53	26.53	198.55	14.39	4.30
85	NE	Metropolitan Omaha - Council Bluffs	-4.91	-15.28	-114.37	-8.29	-2.48

**TABLE 3-5
NET EMISSIONS CHANGES BY AIR QUALITY CONTROL REGION¹**

AQCR	State	AQCR Name	Change in Emissions (tons/year)				
			HC	CO	NO _x	SO _x	PM ₁₀
145	NE	Lincoln - Beatrice - Fairbury	1.72	5.35	40.05	2.90	0.87
146	NE	Nebraska	68.05	211.58	1583.75	114.76	34.34
12	NM	New Mexico Southern Border	47.37	147.27	1102.38	79.88	23.90
154	NM	Northeastern Plains	11.88	36.94	276.50	20.04	5.99
155	NM	Pecos - Permian Basin	7.64	23.75	177.75	12.88	3.85
147	NV	Nevada	49.17	152.87	1144.32	82.92	24.81
148	NV	Northwest Nevada	0.27	0.83	6.20	0.45	0.13
184	OK	Central Oklahoma	34.84	108.31	810.77	58.75	17.58
185	OK	North Central Oklahoma	22.23	69.11	517.32	37.49	11.22
187	OK	Northwestern Oklahoma	13.39	41.64	311.72	22.59	6.76
189	OK	Southwestern Oklahoma	20.69	64.32	481.44	34.89	10.44
190	OR	Central Oregon	15.51	48.21	360.90	26.15	7.82
191	OR	Eastern Oregon	13.71	42.63	319.12	23.12	6.92
193	OR	Portland	41.38	139.61	838.90	59.05	24.19
22	TX	Shreveport - Texarkana - Tyler	49.69	154.49	1156.43	83.8	25.07
106	TX	Southern Louisiana - Southeast Texas	18.90	58.75	439.80	31.87	9.53
153	TX	El Paso - Las Cruces - Alamogordo	39.44	122.61	917.78	66.50	19.90
210	TX	Abilene - Wichita Falls	62.68	194.89	1458.80	105.71	31.63
211	TX	Amarillo - Lubbock	39.51	122.85	919.59	66.63	19.94
212	TX	Austin - Waco	-27.02	-84.00	-628.74	-45.56	-13.63
215	TX	Metropolitan Dallas - Fort Worth	5.69	21.72	86.71	5.64	4.09
217	TX	Metropolitan San Antonio	-43.63	-131.00	-1067.91	-78.12	-20.61
218	TX	Midland - Odessa - San Angelo	51.23	159.27	1192.16	86.39	25.85
219	UT	Utah	34.93	108.60	812.93	58.91	17.62
220	UT	Wasatch Front	-82.80	-257.43	-1926.99	-139.63	-41.78
228	WA	Olympic - Northwest Washington	1.10	3.42	25.61	1.86	0.56
229	WA	Puget Sound	5.67	19.99	105.18	7.25	3.58
239	WI	Southeastern Wisconsin	0.81	2.51	18.82	1.36	0.41
242	WY	Metropolitan Cheyenne	35.39	110.03	823.62	59.68	17.86
243	WY	Wyoming	51.11	158.91	1189.48	86.19	25.79

¹ Net emissions impacts now incorporate air quality impacts (increases and decreases) for all segments located in the AQCR whether or not the changes in rail traffic would exceed the Board's thresholds for environmental analysis. This recalculation of the air quality impacts included in Volume 2 of the EA could result in either overall increases or decreases in net emissions for a given pollutant.

TABLE 3-6
AQCRS¹ WHERE INCREASED EMISSIONS WOULD EXCEED
GENERAL CONFORMITY LEVELS² (BY POLLUTANT)

AQCR #	State	AQCR Name (Attainment Status)
<u>Exceeds Hydrocarbon Levels:</u>		
24	CA	Metropolitan Los Angeles (Extreme ozone nonattainment)
33	CA	Southeast Desert (Severe ozone nonattainment)
<u>Exceeds Carbon Monoxide Levels:</u>		
20	AR	Northeast Arkansas
31	CA	San Joaquin Valley (Carbon monoxide nonattainment)
33	CA	Southeast Desert
36	CO	Metropolitan Denver (Carbon monoxide nonattainment)
67	IL	Metropolitan Chicago
74	IL	Southeast Illinois
93	IA	Southwest Iowa
99	KS	South Central Kansas
146	NE	Nebraska
147	NV	Nevada
12	NM	New Mexico Southern Border
184	OK	Central Oklahoma
193	OR	Portland (Carbon monoxide nonattainment)
22	TX ³	Shreveport-Texarkana-Tyler
153	TX	El Paso-Las Cruces-Alamogordo (Carbon monoxide nonattainment)
210	TX	Abilene-Wichita Falls
211	TX	Amarillo-Lubbock
218	TX	Midland-Odessa-San Angelo
219	UT	Utah
242	WY	Metropolitan Cheyenne
243	WY	Wyoming
<u>Exceeds Nitrogen Dioxide (NO₂) Levels:</u>		
501	AZ	Southeast Arizona
502	AZ	Pima
503	AZ	Mohave-Yuma
504	AZ	Maricopa (Moderate ozone nonattainment)
505	AZ	Central Arizona
20	AR	Northeast Arkansas
24	CA	Metropolitan Los Angeles (Extreme ozone nonattainment; NO ₂ nonattainment)
30	CA	San Francisco Bay Area
31	CA	San Joaquin Valley (Serious ozone nonattainment)
33	CA	Southeast Desert (Severe ozone nonattainment)
508	CA	Mountain Counties (Serious ozone nonattainment)
36	CO	Metropolitan Denver (Transitional ozone nonattainment)
37	CO	Pawnee
40	CO	Yampa
66	IL	East Central Illinois

TABLE 3-6
AQCRS¹ WHERE INCREASED EMISSIONS WOULD EXCEED
GENERAL CONFORMITY LEVELS² (BY POLLUTANT)

AQCR #	State	AQCR Name (Attainment Status)
67	IL	Metropolitan Chicago (Severe ozone nonattainment)
69	IL	Metropolitan Quad Cities
71	IL	North Central Illinois
73	IL ⁴	Rockford-Janesville-Beloit
74	IL	Southeast Illinois
88	IA	Northeast Iowa
93	IA	Southwest Iowa
99	KS	South Central Kansas
138	MO	Southeast Missouri
146	NE	Nebraska
147	NV	Nevada
12	NM	New Mexico Southern Border
154	NM	Northeastern Plains
155	NM	Pecos-Permian Basin
184	OK	Central Oklahoma
185	OK	North Central Oklahoma
187	OK	Northwestern Oklahoma
189	OK	Southwestern Oklahoma
190	OR	Central Oregon
191	OR	Eastern Oregon
193	OR	Portland (Marginal nonattainment for ozone)
22	TX	Shreveport-Texarkana-Tyler
106	TX ³	Southern Louisiana-Southeast Texas (Serious ozone nonattainment)
153	TX	El Paso-Las Cruces-Alamogordo (Serious ozone nonattainment)
210	TX	Abilene-Wichita Falls
211	TX	Amarillo-Lubbock
218	TX	Midland-Odessa-San Angelo
219	UT	Utah
229	WA	Puget Sound (Marginal ozone nonattainment)
242	WY	Metropolitan Cheyenne
243	WY	Wyoming
<u>Exceeds Sulfur Dioxide (SO₂) Levels:</u>		
146	NE	Nebraska
210	TX	Abilene-Wichita Falls

¹ Unless noted, all AQCRs are designated as being in attainment for the respective pollutant.

² General Conformity levels are used in SEA's analysis as a standards of comparison, not as threshold values.

³ AQCR 22 also extends into Arkansas and Louisiana.

⁴ AQCR 73 also extends into Wisconsin.

result in no change in emissions for the transportation of freight shifted from other rail systems, and a substantial decrease in emissions for freight diverted from trucks. Table 3-7 shows that this decrease in tons of pollutants per year would range from about 6 percent to 81 percent, averaging about 45 percent.

As indicated above, it is not possible to determine the extent to which the transport of freight would be diverted from rail to rail or truck to rail within an AQCR or state. While in many cases, the interstate highway parallels rail lines and at least some of the freight would be carried by truck on an adjacent facility, the EA did not quantify this because it was not possible to assume this to always be the case. SEA continues to believe that the estimates of emissions increases reported in the EA are conservative, both nationally and at the local level in most areas.

Emissions at Grade Crossings. Concern over emissions from motor vehicles idling at grade crossings was cited in a number of comments. The EA stated that these emissions are expected to be minor. Additional analysis was performed for grade crossing emissions to further substantiate the small levels of emissions at grade crossings. The EA utilized the Federal Railroad Administration's Grade Crossing Database, the best national source of data available for traffic counts at grade crossings. Where more accurate or current traffic counts were provided by commenters, these values were used to analyze the air quality emissions at grade crossings. This analysis showed that emissions increases due to the proposed merger would constitute a very small percentage of total emissions, even at crossings with relatively high levels of traffic. Localized air quality impacts at grade crossings are generally only related to carbon monoxide (CO), which dissipates quickly. Since rail crossings would also generally be closed for only a small portion of a single hour, SEA concludes that violations of EPA's 1-hour CO standards are extremely unlikely to occur as a result of idling vehicles at grade crossings. Specific figures are cited in the response to individual comments in Volume 2, Appendix A of this Post EA.

A number of comments included emissions levels estimates from a study that was done for the City of Reno, Nevada by Nolte and Associates with the assistance of Kleinfelder Associates entitled "Railroad Merger Study - Fact Finding Report" (March 15, 1996). SEA has reviewed this study and determined that a number of key methodological errors were made in this study. These errors resulted in a substantial overestimation of traffic queue lengths and emissions. A detailed technical evaluation of the methodology used in this study is included in Volume 2, Appendix G.

An extensive discussion of the additional air quality analysis conducted for this Post EA, including a description of mitigation alternatives considered by SEA, is included in Chapter 4. Location-specific mitigation recommendations related to air quality impacts are in Chapter 5.

TABLE 3-7
DECREASE IN POLLUTANT EMISSIONS DUE TO PROPOSED UP/SP MERGER

Pollutant	Total Emissions (tons/year)			
	Pre-Merger	Post-Merger	Decrease	Percent Decrease
Hydrocarbons	2,157	681	1,476	68.4%
Carbon Monoxide	9,177	2,118	7,059	76.9%
Nitrogen Oxides	22,190	15,852	6,338	28.6%
Sulfur Oxides	1,217	1,149	68	5.6%
Particulate Matter (< 10 microns)	1,836	344	1,492	81.3%
TOTAL:	36,577	20,144	16,433	44.9%

Noise

SEA identified 13 rail segments (out of the 39 analyzed in the EA) that would experience an increase in rail traffic sufficient to increase the number of sensitive receptors (i.e., residences, schools, and churches) and cause potentially adverse noise impacts due to L_{dn} increases greater than 3 dBA. On these 13 rail segments, increased rail segment activity resulting from the proposed merger would lead to increased noise exposure at an additional 4,053 sensitive receptors. Table 3-8 identifies, by state, the particular rail line segments which would be affected and the extent of the adverse impacts. In general, these segments pass through largely rural areas with no concentrations of sensitive receptors. Most of the noise impacts would occur at or near grade crossings, where train horns are sounded as a warning to motorists or pedestrians. These noise impacts would be limited to increases in noise level and the number of sensitive receptors because trains are already the dominant source of noise in these areas. No additional types of noise would occur, nor would there be a change in the character of the noise.

The remaining rail line segments which would meet the Board's analysis thresholds could experience noise increases, but none of the increases would cause a substantial adverse impact to sensitive receptors or cause an increase in the L_{dn} of more than 3 dBA. A detailed analysis of the total noise impact along each rail line segment is presented in Volume 2 of the EA. Overall, SEA concludes that there would be no adverse noise impacts as a result of the proposed merger.

Safety

A number of communities and agencies have raised safety concerns in connection with increased rail line traffic as a result of the proposed merger. Specific areas of concern include: the

**TABLE 3-8
RAIL SEGMENTS WITH POTENTIALLY ADVERSE NOISE IMPACTS**

State	Segment ¹	Estimated Noise Increase		Estimated Structures within 65 L _{dn} Contour Existing/Post-Merger		
		dBA Increase	Additional Receptors ²	Residences	Schools	Churches
California	Martinez to Stockton (Lathrop)	>3.0	264	0/261	0/1	0/2
Colorado	Dotsero to Bond (SP)	3.7	0	0/0	0/0	0/0
	Denver to Oakley, Kansas (UP)	6.8	253	27/275	0/1	0/4
Illinois	Nelson to Buda (UP)	4.3	20	19/39	0/0	0/0
Kansas	Herington to Lost Springs (UP)	18.7	32	0/32	0/0	0/0
	Lost Springs to Wichita (UP)	8.0	247	22/265	0/2	0/2
	Salina to Oakley (UP)	5.7	508	143/639	0/4	1/9
Louisiana	Iowa Jct. to Beaumont, TX (SP)	3.0	574	771/1,331	3/9	18/26
Nebraska	Valley to Marysville, KS (UP)	5.0	325	167/485	0/2	0/5
Nevada	Sparks to Winnemucca ³	3.0	418	279/696	0/1	2/2
Oklahoma	Chickasha to Wichita, KS (UP)	4.3	785	563/1,333	0/3	8/20
Texas	Sierra Blanca to Toyah (UP)	7.5	87	22/107	0/0	0/2
	Toyah to Big Spring (UP)	7.3	540	89/619	0/1	1/10

¹ As in Table 3-4, all segments are listed only once. For those segments which extend into an adjoining state, all impacts are summarized in the state in which the segment originates.

² Total number of additional receptors is equal to the sum of post-merger receptors less existing receptors.

³ Noise impacts on this segment not included in the EA; impacts due to additional BN/Santa Fe traffic.

potential effects of additional rail traffic on vehicular traffic, grade crossing safety, accidents and derailments, shipments of hazardous materials, traffic congestion, pedestrian safety, and emergency vehicle response. Safety concerns have been raised about several rail line segments, including:

<u>State</u>	<u>Segment</u>
Arkansas	Poplar Bluff, Missouri to Newport (Corning)
California	Oakland to Martinez
	Marysville to Dunsmuir
	Roseville to Sparks, Nevada
	Stockton(Lathrop) to Martinez
	Denver to Oakley, Kansas
Colorado	Nelson to Clinton, Iowa
Illinois	Lost Springs to Wichita
Kansas	Iowa Jct. to Beaumont, Texas
Louisiana	Roseville, California to Sparks (Reno)
Nevada	Sparks to Winnemucca
	Alazon to Winnemucca
	Eugene to Portland
	Big Spring to Fort Worth
	Houston to Westpoint (Sealy)
Oregon	
Texas	

SEA has reviewed UP/SP's operating plans for these segments, and, in general, they appear to be within the parameters of normal and safe railroad operating practices. UP/SP, in conducting its proposed operations, must comply with the safety and operational requirements of the Federal Railroad Administration. These requirements are discussed in Chapter 4. However, because of strong local concerns regarding safety, SEA is recommending specific mitigation measures (see Chapter 5).

3.3.2 Rail Yards

SEA analyzed 26 rail yards in 10 states that would meet or exceed the Board's environmental analysis thresholds for air quality and/or noise analysis impacts. None of the rail yards would experience increases in pollutant emissions that would cause adverse air quality impacts. Systemwide, emissions impacts from the increased operations at these rail yards would be partially offset by corresponding decreases in operations at other rail yards which would be closed or consolidated as a result of the proposed merger.

While overall noise levels in the vicinity of most of these yards would increase slightly (less than a 2 dBA increase in L_{dn}), changes in operations at three yards (Salem, Illinois; Herington, Kansas; and Bellmead, Texas) would cause noise increases in excess of 3 dBA. A total of 13 additional sensitive receptors would be exposed to increased noise levels. Potential adverse impacts resulting from operational changes associated with rail yards are summarized in Table 3-9. A detailed analysis of potential air quality and noise impacts at rail yards is presented in Volume 2 of the EA. (See Chapter 5 for mitigation measures.)

3.3.3 Intermodal Facilities

SEA analyzed 16 intermodal facilities in 8 states that would meet or exceed the Board's environmental analysis thresholds for air quality and/or noise impacts. These intermodal facilities that would experience the greatest increase in activity are in major urban areas. Based on their location and relatively small pollutant emission increases, these intermodal facilities would have minor air quality impacts. Increased emissions at an intermodal facility result from the use of trucks, yard tractors and lift equipment while in the facility. Despite these localized impacts, overall increased intermodal traffic is expected to reduce emissions due to truck-to-rail diversions.

All of the intermodal facilities would meet or exceed the Board's thresholds for noise analysis. Noise sources at intermodal facilities include truck traffic in and out of the facility, locomotives moving rail cars, and the cranes or fork lifts used for loading and unloading flat cars. For most of

TABLE 3-9
RAIL YARDS THAT WOULD MEET OR EXCEED THE BOARD'S ENVIRONMENTAL
ANALYSIS THRESHOLDS AND SUMMARY OF POTENTIAL ADVERSE IMPACTS

State	Location	Railcars per Day			Potential Adverse Impacts
		Operator	Change	% Change	
Arizona	Yuma	SP	16.0	58.6%	No adverse air quality or noise impacts.
	Phoenix	SP	82.4	25.3%	No adverse air quality or noise impacts.
	Nogales	SP	22.7	22.6%	No adverse air quality or noise impacts.
California	Montclair	UP	30.9	31.2%	No adverse air quality or noise impacts.
	Niland	SP	24.2	20.4%	No adverse air quality or noise impacts.
	Martinez	SP	44.8	29.1%	No adverse air quality or noise impacts.
	Lathrop	SP	97.5	66.1%	No adverse air quality or noise impacts.
	Roseville	SP	584.9	57.2%	No adverse air quality or noise impacts.
Colorado	Grand Jct.	SP	17.0	22.1%	No adverse air quality or noise impacts.
	Rolla	UP	36.8	53.8%	No adverse air quality or noise impacts.
	La Salle	UP	35.4	28.3%	No adverse air quality or noise impacts.
Illinois	Canal Street	UP	198.8	62.0%	No adverse air quality or noise impacts.
	Salem	UP	69.2	108.1%	No adverse air quality impacts; minor noise impacts (1 new sensitive receptor and increase in L_{dn} of 3 dBA).
Kansas	Herington	SP	399.7	266.5%	No adverse air quality impacts; minor noise impacts (10 new sensitive receptors and increase in L_{dn} of 5.6 dBA).
Louisiana	De Quincy	UP	16.0	74.1%	No adverse air quality or noise impacts.
	Lake Charles	SP	102.0	85.9%	No adverse air quality or noise impacts.
	Livonia	UP	316.9	29.9%	No adverse air quality or noise impacts.
Missouri	Poplar Bluff	SP	8.5	28.2%	No adverse air quality or noise impacts.
Oregon	Salem	SP	9.1	53.8%	No adverse air quality or noise impacts.
	Hinkle	UP	337.2	42.5%	No adverse air quality or noise impacts.
	Bend	UP	2.0	35.7%	No adverse air quality or noise impacts.
Texas	El Paso	SP	150.1	34.1%	No adverse air quality or noise impacts.
	Amarillo	SP	77.2	193.0%	No adverse air quality or noise impacts.
	Bellmead	SP	100.2	219.3%	No adverse air quality impacts; minor noise impacts (2 new sensitive receptors and increase in L_{dn} of 5 dBA).
	Fort Worth	UP	294.8	20.2%	No adverse air quality or noise impacts.
Washington	Seattle	UP	141.5	27.8%	No adverse air quality or noise impacts.

the facilities, the projected increase in noise exposure would be relatively modest, less than 2 dBA. Seven of the 16 facilities would experience increases in noise exposure greater than 2 dBA, but only one, the Dupo intermodal facility near East St. Louis, Illinois, would experience noise increases which would affect nearby sensitive receptors. An additional 28 sensitive receptors would be exposed to noise from intermodal facility activities. However, the noise impact would be limited to an increase in noise level of 2.1 dB and the number of sensitive receptors. There would be no new types of noise sources or changes in the character of the existing noise because there is existing intermodal activity in the area.

Increased intermodal activity resulting from the proposed merger could lead to increased vehicular traffic in and around intermodal facilities. SEA identified five intermodal facilities, Oakland, California (UP); Dupo, Illinois (UP); Global II and Canal Street (Chicago), Illinois (UP); and Portland (Albina), Oregon (UP), where additional intermodal activity which would result from the proposed merger could increase local traffic volumes by two to nearly five percent on surrounding roads. Intermodal traffic includes trucks entering and exiting facilities from local roads to pick up or drop off containers or trailers capable of being hauled by a truck or a rail car. This increase in truck activity would result from anticipated truck-to-rail diversions, rail-to-rail diversions, and extended hauls that the proposed merger could attract (i.e., the merged railroads would be able to haul freight for longer distances without interchanging with other carriers). In addition, increased truck activity at several intermodal facilities would result because of consolidated operations now conducted in separate UP/SP intermodal facilities located in the same city. Overall, these small increases in traffic volumes should not significantly affect the operation of the local transportation system. Potential adverse impacts resulting from operational changes at intermodal facilities are summarized in Table 3-10. A detailed analysis of potential air quality, noise, and transportation impacts at intermodal facilities is presented in Volume 2 of the EA.

3.3.4 Abandonments

SEA analyzed the potential environmental impacts of the 17 rail line segments proposed for abandonment. Rail traffic currently using these lines would be rerouted to other UP/SP lines. On rail line segments to be abandoned, the rails, ties, ballast, structures, buildings, and ancillary equipment (i.e., communications, signals) would generally be removed by UP/SP. In most cases, road crossings would also be removed. Most salvage and removal activities would occur within the existing right-of-way. In addition, portions of some abandoned segments may be considered for future recreation use (e.g., Rails to Trails). In such cases, after the railroad has removed its equipment, the right-of-way would be maintained for recreational purposes by the trail owner or operator. The abandoned line segments also would remain available for future transportation uses.

TABLE 3-10
INTERMODAL FACILITIES THAT WOULD MEET OR EXCEED THE BOARD'S ENVIRONMENTAL ANALYSIS THRESHOLDS AND
SUMMARY OF POTENTIAL ADVERSE IMPACTS

State	Location	Operator	Increase in Daily Traffic	Potential Adverse Impacts
Arizona	Phoenix	SP	0.4%	No adverse impacts to air quality, noise levels or local transportation systems.
California	East Los Angeles	UP	4.2%	No adverse impacts to noise levels or local transportation systems. Changes in activity could have minor impacts on ozone pollution in Metropolitan Los Angeles, an extreme ozone nonattainment area.
	Oakland	UP	4.7%	No adverse impacts to air quality or noise levels. Increased traffic levels could have minor impacts on local transportation systems.
	Oakland	SP	2.0%	No adverse impacts to air quality, noise levels or local transportation systems.
	Lathrop	UP	n/a	No adverse impacts to air quality, noise levels or local transportation systems.
	Roseville	SP	0.8%	No adverse impacts to air quality, noise levels or local transportation systems.
Colorado	Denver	UP	0.7%	No adverse impacts to air quality, noise levels or local transportation systems.
Illinois	Dupo (E. St. Louis)	UP	2.6%	No adverse air quality impacts. Minor impacts to noise levels (28 additional sensitive receptors) and local transportation systems.
	Global II	UP	2.2%	Changes in activity could have minor impacts on ozone pollution in Metropolitan Chicago, a severe ozone nonattainment area. No adverse noise impacts, but increased traffic levels could have minor impacts on local transportation systems.
	Canal Street	UP	1.8%	Changes in activity could have minor impacts on ozone pollution in Metropolitan Chicago, a severe ozone nonattainment area. No adverse noise impacts, but increased traffic levels could have minor impacts on local transportation systems.
	Dolton	UP	0.3%	No adverse impacts to air quality, noise levels or local transportation systems.
Kansas	Kansas City	SP	1.1%	No adverse impacts to air quality, noise levels or local transportation systems.
Oregon	Portland (Albina)	UP	5.3%	No adverse impacts to air quality or noise levels. Increased traffic levels could have minor impacts on local transportation systems.
Texas	San Antonio	UP	1.3%	No adverse impacts to air quality, noise levels or local transportation systems.
	Dallas	SP	1.3%	No adverse impacts to air quality, noise levels or local transportation systems.
Washington	Seattle	UP	0.8%	No adverse impacts to air quality, noise levels or local transportation systems.

**TABLE 3-11
PROPOSED ABANDONMENTS AND POTENTIAL ENVIRONMENTAL IMPACTS**

State	Location	Operator	Length (mi.)	Acres	Potential Environmental Impacts
Arkansas	Gurdon to Camden	UP	28.7	405	Salvage activities would result in minor, temporary impacts to surface waters along abandonment. One historic bridge would also be affected; Section 106 consultation has been initiated. Potential impact to 3 ERNS (hazardous waste) sites; threatened and endangered species and noise-sensitive receptors.
California	Alturas to Wendel	SP	85.5	1900	Salvage activities would result in minor, temporary impacts to surface waters and wetlands along abandonment. Potential effects to 9 eligible and 11 potentially eligible prehistoric sites.
	Magnolia Tower to Melrose	UP	4.9	29	Salvage activities would result in minor, temporary impacts to surface waters and wetlands along abandonment. Two historic resources would also be affected; Section 106 consultation has been initiated.
	Whittier Jct. to Colima Jct.	UP	5.2	38	No adverse environmental impacts are expected.
Colorado	Malta to Cañon City	SP	109	2487	Abandonment of line could limit hazardous waste removal options for two Superfund sites. Salvage activities could disturb and release existing hazardous waste along the line. Salvage activities would result in minor, temporary impacts to surface waters and wetlands along abandonment. Three historic resources would be affected; Section 106 consultation has been initiated. Approximately 530 rail car loads per year would be diverted to trucks. Potential impact to threatened and endangered species.
	Sage to Leadville	SP	69.1	1406	Abandonment of line could limit hazardous waste removal options for two Superfund sites. Salvage activities could disturb and release existing hazardous waste along the line. Salvage activities would result in impacts to two historic resources, both of which are portions of the rail line itself; Section 106 consultation has been initiated. Impacts to Eagle River could require a Water Pollution Control Act permit.
	Towner to NA Jct.	UP	122.4	2673	Approximately 120 rail car loads per year would be diverted to trucks. Potential impact to threatened and endangered species.
Illinois	Barr to Girard	UP	38.4	619	Salvage activities would result in impacts to three historic railroad bridges; Section 106 consultation has been initiated. Approximately 38 rail car loads per year would be diverted to trucks.
	DeCamp to Edwardsville	UP	14.6	139	Salvage activities would result in impacts to one historic railroad bridge; Section 106 consultation has been initiated. No other adverse environmental impacts are expected.

TABLE 3-11
PROPOSED ABANDONMENTS AND POTENTIAL ENVIRONMENTAL IMPACTS

State	Location	Operator	Length (mi.)	Acres	Potential Environmental Impacts
Illinois	Edwardsville to Madison	UP	15	191	No adverse environmental impacts are expected.
Kansas	Hope to Bridgeport	UP	31.2	754	Approximately 240 rail car loads per year would be diverted to trucks; no other impacts are expected.
	Whitewater to Newton	UP	9	110	No adverse environmental impacts are expected.
Louisiana	Iowa Jct. to Manchester	UP	8.5	109	Approximately 2 rail car loads per year would be diverted to trucks; no other impacts are expected.
Texas	Seabrook to San Leon	SP	10.5	143	Salvage activities would result in impacts to two historic bridges and three archaeological sites; Section 106 consultation has been initiated. Potential impact to protected plant species and noise-sensitive receptors.
	Suman to Benchley	SP	13.1	220	Salvage activities would result in impacts to three historic bridges and one archaeological site; Section 106 consultation has been initiated. Approximately 106 rail car loads per year would be diverted to trucks. Potential impacts to endangered species and from hazardous material site.
	Troup to Whitehouse	UP	7.5	157	No adverse environmental impacts are expected.
Utah	Little Mtn. Jct. to Little Mountain	UP	12	304	No adverse environmental impacts are expected.

Each of the abandonments planned as part of the proposed merger is summarized in Table 3-11. Unless specifically cited below, no adverse impacts are anticipated. Minor, short-term environmental impacts associated with salvage activities could occur to water resources (wetlands and surface water), biological resources (habitat loss), air quality, noise levels, historical and cultural resources, and transportation systems. However, these impacts would be temporary and would not cause any long-term damage or harm to the environment. Volume 3 of the EA provides a detailed analysis of the potential impacts of each proposed abandonment. Since publication of the EA, SEA undertook additional evaluation of potential abandonments, including site visits to the two abandonments in Colorado which affect Superfund clean-up sites and analysis of the line's removal on the continuation of remediation efforts. Based on SEA's further analysis (see Volume 2, Appendix G), mitigation measures are necessary to minimize adverse impacts to the environment at selected abandonment locations. Detailed mitigation measures for specific abandonments are listed in Chapter 5.

3.3.5 Rail Line Constructions

Table 3-12 provides an overview of the potential environmental impacts associated with the 28 rail line construction projects. This includes three additional constructions (Richmond, CA, Stockton, CA, and Robstown, TX) which are the result of the BN/Santa Fe settlement agreement for construction on new rights-of-way proposed as part of the proposed UP/SP merger. These connections would involve construction of a new rail line segment to connect existing tracks to other existing rail lines, sidings, and/or yard facilities. In some cases, an existing connection would be upgraded to accommodate additional traffic or increased operating speeds. Most of the connections are between UP and SP lines, although there would be some connections between the UP, SP and other carriers with which trackage rights agreements have been negotiated. As with any construction of new railroad tracks, building a new rail connection includes site preparation and grading, railbed preparation, ballast application, track installation, and systems (e.g., signals, communications) installation. Although the construction zone required will vary depending on site conditions, most work would be completed within 250 feet of the new rail line. Unless specifically cited below, no adverse impacts are anticipated from these rail line constructions. Minor, short-term environmental impacts associated with construction activities could occur to water resources (wetlands and surface water), biological resources (habitat loss), air quality, noise levels, and transportation systems. However, these impacts would be temporary and not cause any long-term damage or harm to the environment. A detailed discussion of each construction project is presented in Volume 4 of the EA. See Volume 2, Appendix G for details on the three new constructions.

TABLE 3-12
PROPOSED RAIL LINE CONSTRUCTIONS AND POTENTIAL ENVIRONMENTAL IMPACTS

State	Location	Approximate Length	Description of Proposed Construction and Potential Environmental Impacts	Trains/Day Using New Connection
Arkansas	Camden	1,100 feet	New connection between UP and SP tracks to permit operation of trains between Pine Bluff and El Dorado. Requires acquisition of ½ acre of new right-of-way. Minor impact to stream and wetlands; no other adverse environmental impacts are expected.	7
	Fair Oaks	1,100 feet	Upgrade existing connection between UP and SP tracks in southeast quadrant to 30 mph standards. Requires acquisition of ½ acre of new right-of-way; no adverse environmental impacts are expected.	4
	Pine Bluff (East)	650 feet	New connection to permit operation of trains between SP Pine Bluff Yard and UP mainline south to Monroe, LA. Requires acquisition of ½ acre of new right-of-way; no adverse environmental impacts are expected.	2
	Pine Bluff (West) ¹	1,000 feet	New connection to permit operation of trains from UP Monroe subdivision north to Little Rock. Requires acquisition of ½ acre of new right-of-way; no adverse environmental impacts are expected.	2
	Texarkana	2,500 feet	New connection between UP and SP tracks to permit operation of trains between Pine Bluff (SP) and Longview, TX (UP). Requires acquisition of ½ acre of new right-of-way; no adverse environmental impacts are expected.	3-4
California	Lathrop	3,000 feet	New connection between UP and SP track. Requires acquisition of 4 acres of new right-of-way. Potential effect to one historic property.	4
	Richmond ²	1,225 feet	New 10 mph crossover between the BN/Santa Fe and SP lines and two new turnouts. Requires acquisition of 2 acres of right-of-way; no adverse environmental impacts are expected.	2
	Stockton	1,500 feet	New connection from SP mainline to El Piñal and UP Stockton Yard. Requires acquisition of ½ acre of new right-of-way. Minor noise impacts at one school and residential area due to wheel squeal; no other adverse environmental impacts are expected.	14
	Stockton ²	800 feet	New wye track with two turnouts. Requires acquisition of one acre of right-of-way; no adverse environmental impacts are expected.	2
	West Colton (UP to SP)	1,150 feet	Connection to allow trains off UP tracks from Los Angeles to operate east on SP tracks towards Yuma. Requires acquisition of 1 acre of new right-of-way; no adverse environmental impacts are expected.	Varies

¹ Reflects changes included in UP/SP's comments on the EA (5/3/96).

² Reflects changes included in the BN/Santa Fe settlement agreement.

**TABLE 3-12
PROPOSED RAIL LINE CONSTRUCTIONS AND POTENTIAL ENVIRONMENTAL IMPACTS**

State	Location	Approximate Length	Description of Proposed Construction and Potential Environmental Impacts	Trains/Day Using New Connection
California, contd.	West Colton (SP to UP)	6,000 feet	Connection to allow eastbound trains off SP tracks at West Colton to operate west on UP tracks. Requires acquisition of 2 acres of new right-of-way; no adverse environmental impacts are expected.	2-3
Colorado	Denver (Utah Jct.) ³	3,100 feet	New connection between SP Moffat mainline and SP Belt Line at North Yard. Requires acquisition of 4 acres of new right-of-way; potential effect to North Yard Water Tower; minor wetland encroachment.	4
	Denver ⁴	5,000 feet	Siding extension on the SP Belt Line and upgrade of Belt Line. Requires acquisition of 2 acres of new right-of-way. Minor short-term impacts to South Platte River and associated wetlands; no other adverse environmental impacts are expected.	4
Illinois	Girard	3,100 feet	New connection between UP Madison subdivision and the SP Springfield subdivision; includes relocation of approximately 1,500 feet of existing track. Requires acquisition of 12 acres of new right-of-way; minor impacts to prime farmland soils, surface waters and associated wetlands are expected.	2
	Salem	4,600 feet	New connection between UP Chicago subdivision mainline and CSX mainline. Requires acquisition of 10 acres of new right-of-way; minor impacts to two intermittent streams crossed by the new connection are expected; no wetlands would be impacted.	2
Kansas	Hope ¹	2,200 feet	New connection between the UP Hoisington subdivision mainline and BN/Santa Fe mainline and two new turnouts. Requires acquisition of 1 acre of new right-of-way; minor impacts to surface waters and associated wetlands are expected.	2
Louisiana	Kinder	1,750 feet	New connection between the UP Lake Charles subdivision mainline and the UP Beaumont subdivision mainline and two new turnouts. Requires acquisition of ½ acre of new right-of-way; minor impacts to Kinder Ditch and associated wetlands are expected. Potential safety concerns due to close proximity to elementary school.	4
	Shreveport	1,560 feet	New connection between the UP Reisor subdivision mainline and the SP Lufkin subdivision mainline. Requires acquisition of 3 acres of new right-of-way and the relocation of an overpass pier for U.S. Highway 171. There could also be minor impacts to a small pond and intermittent stream in the vicinity of the construction site. Minor noise impacts.	2

³ Construction listed as Denver (North Yard) in EA.

⁴ Construction listed as Denver (Pullman) in EA.

TABLE 3-12
PROPOSED RAIL LINE CONSTRUCTIONS AND POTENTIAL ENVIRONMENTAL IMPACTS

State	Location	Approximate Length	Description of Proposed Construction and Potential Environmental Impacts	Trains/Day Using New Connection
Missouri	Dexter ¹	2,062 feet	Extension to existing siding at MP 189.9 on the UP's Chester subdivision. Requires acquisition of 1 acre of new right-of-way; minor impacts to several small streams and associated wetlands are expected. One existing grade crossing would be modified.	Varies
	Paront ²	8,000 feet	Extension to existing siding at MP 47.1 on the SP's Pine Bluff subdivision. Requires acquisition of 2 acres of new right-of-way; minor impacts to surface waters and associated wetlands adjacent to the construction site are expected. One state-endangered fish species is known to occur near the proposed construction site; mitigation measures would be implemented to avoid adverse affects to it. One existing grade crossing would be modified.	Varies
Texas	Carrollton	3,660 feet	Construction of two new tracks and one track extension at the SP Carrollton yard. Requires acquisition of ½ acre of new right-of-way; minor increases in noise levels could occur in one residential area.	Varies
	Fort Worth (UP to SP)	800 feet	New connections between UP Fort Worth subdivision mainline and SP Ennis subdivision, Fort Worth branch and two new turnouts in northeast quadrant. Requires acquisition of ½ acre of new right-of-way. Minor noise impact due to wheel squeal; no other adverse environmental impacts are expected.	8
	Fort Worth (Ney Yard)	1,180 feet	New connections between UP Fort Worth subdivision mainline and SP Ennis subdivision, Fort Worth branch and two new turnouts in southwest quadrant. Requires acquisition of ½ acre of new right-of-way. Minor noise impact due to wheel squeal; no other adverse environmental impacts are expected.	2
	Houston (Tower 26)	1,400 feet	New connection between the SP mainline and the HB&T line at Tower 26 and two new turnouts. Requires acquisition of 2 acres of new right-of-way. Minor noise impact due to wheel squeal; no other adverse environmental impacts are expected. One new grade crossing would be constructed.	2
	Houston (Tower 87)	1,000 feet	New connection between the SP mainline and the HB&T line at Tower 87 two new turnouts. Requires acquisition of 2 acres of new right-of-way; minor impacts to Hunting Bayou and its associated fringe wetlands are expected.	Varies
	Houston (SP to UP)	1,650 feet	New connection between the SP Lufkin subdivision and the UP Settegast yard and two new turnouts. Requires acquisition of 1 acre of new right-of-way. Minor noise impact due to wheel squeal; no other adverse environmental impacts are expected.	8
	Robstown ²	600 feet	New 10 mph connection between the UP and TM lines, two new turnouts, and a new timber crossing. Construction could involve acquisition of approximately 1 acre of adjacent commercial property; no other adverse environmental impacts are expected.	2
	West Point	1,900 feet	New connection between the UP Houston subdivision mainline and the SP Ennis subdivision Flatonia line and two new turnouts. Requires acquisition of ½ acre of new right-of-way; no adverse environmental impacts are expected.	3

CHAPTER 4 EA COMMENTS AND ISSUES

The Environmental Assessment (EA) for the proposed UP/SP merger was served to the public and all parties to the proceeding on April 12, 1996. (See Appendix D for a complete distribution list.) Recipients of the document were encouraged to comment on the EA, including the scope and adequacy of the recommended mitigation measures. Comments on the EA were due on May 3, 1996.

Approximately 160 comments and documents related to environmental concerns were received on the EA and other merger documents from Federal, state and local agencies, railroads, civic and advocacy organizations, businesses, and individuals as indicated below¹. Comments were received from 125 separate commenters; in some instances, the commenter or agency submitted multiple letters. Commenters included:

• Federal Agencies	22
• State Agencies	42
• County Governments	17
• Local Governments	22
• Railroads	4
• Other Organizations	14
• Individuals	4

The comments addressed the EA and a range of issues related to the potential environmental impacts of the proposed post-merger rail operations, the abandonment of rail line segments, and the construction of new rail connections and yard modifications. These issues included: (1) accuracy of data used in SEA's analyses, (2) rail crossing safety, (3) traffic and emergency vehicle delays at grade crossings, (4) future use of abandoned lines, (5) hazardous materials shipments and response to potential incidents, (6) air quality, (7) noise, (8) protection of historic resources, and (9) procedural challenges to the adequacy of the EA. Other issues included impacts on biological resources, water resources, and local land use.

The beginning of this chapter provides an overview of the issues raised in the environmental comments. The remainder of this chapter (Sections 4.3.1 to 4.3.12) addresses in detail some of the most commonly raised environmental concerns.

¹ The EA and the Post EA only discuss and respond to comments on the environmental impacts of the proposed merger and related abandonments and construction projects. Other comments (e.g., competition, support or opposition to the proposed merger, economic and employment impacts) are considered by the Board in its merger decision process, but are not part of SEA's environmental review.

4.1 Overview of Comments

Approximately 160 environmental comments have been received by SEA since publication of the EA, including:

- Comments on the EA.
- Comments raising environmental issues that were filed with the Board on March 29, April 29, and June 3, 1996.
- Responses to the Board's consultation letters received during the preparation of the EA and the Post EA.
- Agency responses to letters dated March 26, 1996 from UP/SP's environmental consultant, Dames and Moore, regarding the proposed merger and the related BN/Santa Fe settlement agreement.

SEA received 40 comments specifically responding to the EA. Approximately 30 comments raising environmental issues were received after March 15, 1996 while the EA was being published. These comments were not addressed in the EA; however, these comments are addressed in this Post EA. The remaining comments incorporated in this document include environmental concerns identified from submissions and materials received between May 10, 1996, through early June, 1996. Table 4-1 lists the total comments received by state.

SEA has considered each environmental comment in making its final environmental recommendations to the Board. SEA has prepared detailed responses for the environmental issues and concerns raised in these comments received from mid-March to early June. Copies of comments and SEA's detailed responses are included in Appendix A.² Each comment was reviewed by SEA and technical experts from SEA's independent third-party consultant. SEA visited more than 150 rail line segments, rail yards, intermodal facilities, abandonments, and construction sites to verify data, site conditions, and the appropriateness of the recommended mitigation. (See Volume 2, Appendix F.) SEA reevaluated technical analyses to confirm results and supplement, as warranted, with additional analyses. Section 4.3 describes the additional data verification and technical analyses conducted since the publication of the EA.

² Appendix A reproduces environmental comments as of early June, in full or part. Because of the length of some of these comments, SEA has excerpted those portions that captured the environmental concerns of the commenter. SEA emphasizes that every comment received as well as accompanying studies and reports were thoroughly reviewed, even though they may not appear in the Appendix. In addition, all environmental comments have been placed in the Board's public record.

TABLE 4-1
ENVIRONMENTAL COMMENTS RECEIVED BY STATE

State	Comments Received	State	Comments Received
All States/No State Specified	8	Missouri	1
Arizona	1	Montana	1
Arkansas	16	Nebraska	0
California	28	Nevada	23
Colorado	27	New Mexico	2
Georgia	2	Oklahoma	1
Idaho	1	Oregon	5
Iowa	1	South Dakota	1
Illinois	7	Texas	17
Kansas	6	Utah	2
Louisiana	7	Washington	1
Michigan	2	Wisconsin	1
Minnesota	1	Wyoming	0
		TOTAL	162

In preparing this Post EA, a primary focus for SEA has been to respond to the environmental concerns identified and addressed by the commenters. Wherever possible, within the parameters of the Board's authority and consistent with existing Federal, state, and local regulatory authority, SEA has recommended mitigation measures to alleviate commenters' concerns. In some locations, commenters have requested specific mitigation measures that are beyond the Board's jurisdiction or address long-standing community concerns that are unrelated to the proposed merger (i.e., preexisting conditions). Therefore, the recommended mitigation measures for a specific location may not be as broad as those desired by a particular agency or community. Chapter 5 contains a complete list of recommended mitigation measures. There are some locations where actions subsequent to the publication of the EA (e.g., a memorandum of understanding between UP/SP and an affected community) have eliminated or modified the need for the mitigation measures in the EA. (See Volume 2, Appendix B.) Consultations with the Federal Railroad Administration (FRA) and the U.S. Environmental Protection Agency (EPA), and detailed analysis of the potential mitigation measures have also modified the need for, or scope of, the mitigation measures recommended in the EA.

4.2 Major Issues Raised in Comments

SEA identified more than 640 issues in the more than 160 individual comments reviewed for this document. Major areas of concern included: validity of data used in analyses (rail and vehicle

traffic), grade crossings (safety, traffic and emergency response issues), future use of abandoned rail line segments, hazardous material shipments and responses to incidents, air quality, historic resources, noise, and the adequacy of the EA. Other commenters were also concerned with biological resources, water resources, and land use issues.

4.2.1 Accuracy of Data

SEA received a number of comments about the accuracy of the data and analyses presented in the EA. Several commenters also presented factual clarifying information. These changes have been incorporated, where warranted, into the text and tables included in this Post EA. In addition, several commenters raised questions or issues about the source and reliability of the data used in SEA's environmental review, and about the adequacy of its environmental analyses. Of particular concern were the base data and methodologies used in calculating safety, grade crossing delay, air quality, and noise impacts. For example, comments included questions about the average number of trains per day, average train lengths, and the average daily traffic at intersections. The EA's methodology, which based impact analysis on number of trains and not gross tons per year, was also questioned. The commenters considered the verification of these data important to the evaluation of such issues as vehicle delays, grade crossing safety, air pollution, and noise calculations.

4.2.2 Rail Crossing Safety

Several respondents expressed concern that the EA's evaluation was not sufficient concerning the proposed merger's impacts on local vehicular traffic, risks associated with accidents, and impacts at grade crossings. Comments from various communities and agencies in Arkansas, California, Colorado, Kansas, Nevada, Oregon, and Texas expressed concern about the adequacy of warning devices at grade crossings and corresponding pedestrian and vehicular traffic safety at crossings. Kansas City Southern Railway requested an independent safety analysis. Several agency and community representatives commented that the safety mitigation measures in the EA were not adequate. Transient-related crime around rail yards was an issue in California and Reno, Nevada.

4.2.3 Vehicle Traffic and Delays at Grade Crossings

Potential delay to vehicular travel resulting from increases in the number and length of trains blocking grade crossings was a predominant concern. In addition to the inconvenience to motorists delayed by blocked crossings, respondents noted that the response times of emergency vehicles might be adversely affected by delays at blocked crossings. In Colorado and Texas, there was

concern that post-merger diversion of some freight transport from rails to highways resulting from the proposed abandonments might have a negative impact on regional roadways and might increase vehicular traffic congestion.

4.2.4 Abandonments

Respondents from California, Colorado, Illinois, Kansas, and Utah stated their willingness to assume responsibility for abandoned rail lines. Several local governments expressed an interest in purchasing the line and/or requested that the line be retained for "Tourist Trains," future rail passenger services, or public use. State Historic Preservation Officers requested completion of historic documentation of the rail lines proposed for abandonment and emphasized the need for preservation of several historic structures and properties. Colorado communities and agencies opposed abandonment because of potential negative impacts on the region, increased truck traffic, economic impacts and competition. Two organizations in Colorado opposed "trail" development. Several other commenters, including EPA, expressed concerns about remediation of two Superfund sites along two proposed abandonments. Generally, there were requests that all bridges, culverts, and other structures be maintained, hazardous materials remediated, and, where tracks were removed, vegetation would be reestablished. Comments from California and Colorado asserted that the EA did not adequately address the impact of converting rails to trails.

4.2.5 Air Quality

The EA's evaluation of nonattainment areas was considered inadequate in comments from California, Kansas, Nevada and Texas. California, Nevada, and Oregon respondents noted the omission of idling automobile engine emissions from air quality analyses. Additional air quality studies were requested for sites in Oregon and Nevada.

Communities and agencies expressed concern about the potential adverse air quality impacts from increased train traffic, increased emissions from automobiles idling at blocked crossings, and increased truck traffic that may result from rail line abandonments. While comments from Kansas City Southern Railway and from the states of Nevada and Kansas claimed that air quality impacts were understated, UP/SP asserted that air quality impacts were overstated. Several respondents stated that there were insufficient mitigation measures recommended to address increased emissions, specifically PM₁₀ emissions.

4.2.6 Hazardous Materials

Comments on hazardous materials related to transportation, potential incidents along rivers, emergency response plans and coordination with local emergency forces, remediation of spills along tracks, and reimbursement or pay for remediation or local safety equipment. Comments from Kansas City Southern Railway, Conrail, the US Department of Transportation, the Coalition for Competitive Rail Transportation and respondents in California, Colorado, Kansas and Nevada indicated that the EA's analysis of hazardous materials impacts was inadequate and that further analysis was needed.

According to respondents from Arkansas, California, and Nevada, increased transport of hazardous materials by rail was cause for concern because of the increased risk of spills, leaks, and other accidents. Truckee, California and Wichita, Kansas requested no increases in the transportation of hazardous materials through town. A Colorado respondent expressed concern that the diversion of hazardous materials freight traffic from rails to trucks in the case of a proposed abandonment may expose large populations to increased risk. The adequacy of hazardous materials emergency procedures was questioned in several comments.

Several communities and agencies called for clarification of hazardous materials removal and clean-up responsibility. UP/SP asserted that requiring remediation plans prior to the proposed merger was beyond the role of the Board. Several Colorado comments expressed concern about remediation of two Superfund sites and the provision of continued access along a rail line proposed for abandonment.

4.2.7 Historic and Cultural Resources

Seventeen Historic Preservation Officers (SHPOs) in the 24-state merger area responded to SEA consultation letters, of whom 11 indicated that the proposed merger would have "no effect" (Arkansas, Idaho, Illinois, Iowa, Kansas, Louisiana, Michigan, Minnesota, South Dakota, Utah, and Washington). The U.S. Forest Service in Colorado and the Colorado Historical Society supported the inventory and documentation mitigation recommended in the EA for proposed abandonments in Colorado.

Respondents from Arkansas, California, Colorado, Michigan, Nevada, Oregon, Texas, and Wisconsin requested the documentation of potentially historic structures on which to base a "no effect" determination. A Colorado respondent stated that the EA omitted historic impact analysis for potentially abandoned properties. A Nevada commenter noted that several historic resources

were not addressed in the EA. A New Mexico respondent expressed concern over impacts to National Register properties at several locations in the state.

4.2.8 Noise

Higher noise levels anticipated from an increased number of trains precipitated a range of comments, from general noise concerns to very specific suggestions for reducing noise (e.g., landscaping and noise barriers and prohibiting use of train horns at grade crossings.) In some cases, commenters proposed rerouting trains.

Nevada, Oregon, and Kansas respondents stated that the number of sensitive receptors identified in the EA for certain communities was incorrect. Additional location-specific noise analyses were requested. Other commenters stated that the EA did not accurately address noise and requested changes in methodology. Commenters noted that the EA did not address horn and whistle impacts or automobile engine idling at blocked grade crossings. Several respondents asserted that the methodology used for assessing noise impacts was faulty and that noise impacts were understated in the EA. Several commenters expressed concern that the noise receptors identified in the EA did not reflect current land uses.

Communities in California, Kansas, Nevada, Oregon, and Texas expressed concern that increased train activity would increase horn and crossing signal noise and might affect noise levels in certain areas. Also mentioned were noise due to yard operations, noise in the vicinity of recreation areas, and noise at proposed construction sites. The U.S. Department of Transportation called for more specific mitigation. UP/SP indicated that broad-based noise mitigation was unwarranted and that mitigation should reflect specific local problems.

4.2.9 Environmental Review Process

SEA received 13 comments about SEA's approach to the environmental review process. Air quality concerns generated requests for the preparation of an EIS. Comments from the Kansas City Southern Railway, the Coalition for Competitive Rail Transportation, and the States of California, Colorado, Nevada and Kansas asserted that the EA was insufficient and requested that an EIS be prepared. Several respondents stated that the EA did not comply with NEPA requirements and the corresponding Council on Environmental Quality (CEQ) regulations. Two groups in Colorado indicated that the review period for the EA was not long enough to allow full evaluation of the document. Another Colorado commenter noted that its state agency was not contacted for consultation on the EA. Comments suggested that the EA needed to better address alternatives and that the mitigation measures proposed in the EA were not described in enough

detail. In its rebuttal comments, UP/SP proposed changes in mitigation measures and stated that in some cases (e.g., rail line signal and safety studies) the recommended mitigation went beyond the Board's jurisdiction.

4.2.10 Other Comments and Concerns

Land Use

A Nevada commenter stated that the land use maps on which the EA based its analysis were out of date. A respondent from Colorado stated that the EA did not account for the rails-to-trails conversion and its impact on farmland. An Oregon respondent claimed that the EA did not thoroughly address sensitive land uses. Two government agencies found no significant or adverse impact on agricultural lands. Land titles, conservation rights, public ownership and public use were all concerns related to abandonments.

Biological Resources

Several agency commenters responded to consultation letters by noting that there are no anticipated impacts to habitat for listed, proposed, or threatened or endangered species, or that they had no objections relating to biological resources. Comments were received from the US Fish & Wildlife Service (California, Georgia, Louisiana, and Texas) and state wildlife agencies (Arkansas, Nevada, and Texas).

Water Resources

Comments from California and Colorado stated that the EA's discussion of flood risks was inadequate, and a Nevada commenter stated that the EA's discussion of erosion and risks to water supplies was inadequate. Comments from the Coalition for Competitive Rail Transportation and respondents in California and Nevada expressed concern over the increased exposure of water supplies to hazardous materials accidents, spills, and/or leaks. According to California, Colorado, and Illinois comments, construction and other merger-related activities might affect water resources and heighten erosion and flood risk concerns. Respondents from Colorado and Louisiana indicated that they expect no water resource impacts in certain areas.

4.3 Additional Data Verification and Technical Analyses Conducted by SEA

Because of concerns expressed by several commenters, SEA reviewed its initial findings after publication of the EA and reassessed technical analyses to confirm the potential

environmental impacts of the proposed merger. SEA also verified the source and validity of data used in SEA's analyses. For all impact areas, SEA reviewed the methods used to determine whether or not the proposed actions would cause an adverse environmental impact. Where necessary, the impact evaluation conducted for the EA was supplemented with additional analyses. In some cases, SEA's additional analysis has resulted in new or modified mitigation recommendations. The following sections discuss the major topical areas where SEA conducted further analysis. The discussion includes: revisions to base operating data; vehicle traffic and delays at grade crossings; abandonments; rail construction projects; air quality; safety; transport of hazardous materials; noise; historical and cultural resources; and preparation of an EA rather than an EIS. The section also includes a discussion of the environmental review process, memoranda of understanding, local mitigation, and rail yards and intermodal facilities. Detailed responses to individual comments are provided in Volume 2, Appendix A.

4.3.1 Revisions to Base Operating Data

Train Traffic and Densities

Analyses of potential environmental impacts included in the EA were based on train and traffic densities provided by UP/SP. These densities used actual 1994 traffic counts as the existing (pre-merger) base to estimate post-merger figures for a consolidated UP/SP system. These density figures were supplemented twice by UP/SP, once to reflect increased traffic which would result from the BN/Santa Fe settlement agreement, and a second time to reflect the changes in BN/Santa Fe traffic on UP/SP rail lines as a result of the settlement agreement with the Chemical Manufacturers' Association (CMA). Since these train and traffic densities were the basis for analyzing the potential environmental impacts associated with such areas as grade crossing safety, grade crossing delays, emergency vehicle response, hazardous materials safety, air quality and noise, many of the comments received questioned their accuracy.

In order to independently verify the potential environmental impacts, SEA requested from UP/SP, the final train and traffic density figures for the merged UP/SP system (including data based on the BN/Santa Fe and CMA settlement agreements). The final tabulation of train traffic was received from UP/SP on May 23, 1996. UP/SP verified that all segments of a consolidated UP/SP system were included in the final tabulation. Traffic changes and the analysis of any potential environmental impacts resulting from the BN/Santa Fe settlement agreement were addressed previously in the EA. The EA, however, did not reflect the later executed CMA agreement and its modifications to the BN/Santa Fe settlement agreement. Based on a review of the final train traffic data that now reflects the CMA settlement agreement, SEA identified five rail line segments, which

were identified in the EA as exceeding the Board's environmental thresholds, where traffic densities would change as a result of the CMA settlement agreement:

- Paragould, Arkansas to Dexter Jct., Missouri
- Fair Oaks to Paragould, Arkansas
- Brinkley to Fair Oaks, Arkansas
- Pine Bluff to Brinkley, Arkansas
- Lufkin, Texas to Shreveport, Louisiana

Three of these segments would experience an increase of one train per day (Paragould, Arkansas to Dexter Jct., Missouri; Fair Oaks to Paragould, Arkansas; and Brinkley to Fair Oaks, Arkansas). Projected post-merger traffic on these segments, however, already exceeded the Board's environmental analysis thresholds and were evaluated in the EA. Traffic on the other two rail line segments (Pine Bluff to Brinkley, Arkansas and Lufkin, Texas to Shreveport, Louisiana) would experience a reduction of two trains per day. These segments previously exceeded the Board's environmental analysis thresholds (49 CFR Part 1105.7.) With implementation of the CMA settlement agreement, traffic on these segments would fall below the thresholds.

Further refinement of train density data revealed that the rail line segment between Big Spring and Fort Worth, Texas would experience a smaller increase in traffic due to train diversions now taking place as a result of the recently approved BN/Santa Fe merger. Traffic on this rail line segment would fall below the Board's noise analysis thresholds.

Other minor corrections to train densities had no effect on the number of segments which would exceed the Board's environmental analysis thresholds. Revised traffic densities for all segments that would exceed the Board's thresholds are listed in Chapter 3, Table 3-4. SEA also reviewed all impact analysis calculations based on train or traffic densities. Where modifications to previous SEA analyses were required as a result of revised rail traffic densities, analyses were repeated for all impact areas (i.e., air quality, grade crossing delay, etc.) that would be affected by the changes. All modified analyses are noted in the discussion of impact areas below.

Other Data Revisions

No changes were identified for operating data on rail yards and intermodal facilities addressed in the EA. Summaries of operating changes at rail yards and intermodal facilities are provided in Chapter 3, Tables 3-9 and 3-10, respectively. Minor corrections to the data on proposed abandonments (mileposts, total length) were reviewed; none of these changes affected the results of SEA's impact analysis. Revised data on the proposed abandonments were

incorporated in the Post EA (see Chapter 3, Table 3-11). Based on further engineering design, there were also changes in the length of four proposed connections or siding extension constructions:

- Pine Bluff, Arkansas connection increased from 900 to 1,000 feet.
- Denver, Colorado (Utah Jct.) connection reduced from 3,650 to 3,100 feet.
- Dexter, Missouri siding extension reduced from 8,900 to 2,062 feet.
- Paront, Missouri siding extension reduced from 8,600 to 8,000 feet.

These design changes would not affect the potential environmental impacts identified in the EA. In addition, due to a typographical error, the length of the Hope, Kansas connection was erroneously documented in one location in the EA as 22,000 feet in length; it should be 2,200 feet.

The original BN/Santa Fe settlement agreement requires construction of three additional rail line connections on new rights-of-way:

- Richmond, California (new connecting crossover, 1,225 feet).
- Stockton, California (new connection track, 800 feet).
- Robstown, Texas (new connection, 600 feet).

These were evaluated by SEA after the EA was published. Although some new right-of-way would be required, no adverse environmental impacts are expected from construction of these connections. Revised data on all new rail line constructions are provided in Chapter 3 and Appendix G.

4.3.2 Vehicle Traffic and Delays at Grade Crossings

SEA received several comments regarding the degradation of highway/roadway service attributable to increased blockage of grade crossings by post-merger train traffic. These comments raised issues of both vehicle delay and the impact of train traffic on emergency vehicle response.

For those locations where such comments were received, SEA reanalyzed each crossing to determine the change in total vehicle delay that would be experienced after the expected post-merger increase in train traffic. All grade crossings were treated as signalized traffic intersections and analyzed using the procedures contained in the Transportation Research Board's 1994 Highway Capacity Manual. The Level of Service (LOS) concept contained in these procedures was used to determine pre-merger and post-merger service levels for vehicles at the grade crossings.

Level of service standards (for peak-hour vehicle delay traversing an intersection) used to assess the potential traffic impacts were as follows:

Level of Service	Avg. Delay for Vehicle Traversing an Intersection ³
A	0 to 5 seconds
B	5 to 15 seconds
C	15 to 25 seconds
D	25 to 40 seconds
E	40 to 60 seconds
F	Greater than 60 seconds

Most signalized intersections are designed to operate at LOS C, though in many urbanized areas, LOS D is considered satisfactory. The concept and the criteria outlined above have been used to plan, analyze, and design roadways and intersections for the past four decades. To calculate the LOS at a given roadway-rail grade crossing, the following information is used:

- Volume of highway traffic (average weekday).
- Volume of train traffic (24 hours).
- Speed of trains at crossing.
- Length of trains.
- Number of roadway approach lanes on each side of tracks.

Because the LOS rating is based on peak-hour traffic volumes at an intersection, to determine the LOS for a grade crossing, the average daily traffic volumes (ADT) must be converted to peak-hour conditions. Peak-hour volumes are assumed to be twice the average hourly traffic Volume ($2 \times \text{ADT} \div 24$). To convert traffic volumes to peak-hour levels, SEA multiplied the average daily volumes by 8.33% to derive peak-hour volumes. For comparison, peak-hour traffic volumes throughout U.S. urbanized areas typically range from 7 to 10 percent of ADT.

In some cases, commenters expressed concerns that incorrect or outdated traffic volumes (ADT's) were presented in the EA. The EA used those ADT's contained in the Federal Railroad Administration (FRA) Rail Grade Crossing inventory. To address this issue, the larger of the two traffic volumes available to SEA (e.g., that provided by the commenter or that in the FRA Grade

³ 1994 Highway Capacity Manual, Transportation Research Board, p. 9-6.

Crossing Inventory), was used to assess pre-merger and post-merger grade crossing Levels of Service. This procedure resulted in a conservative, worst case assessment of possible vehicle delay.

SEA recommends that post-merger delay at public grade crossings be mitigated only if the average weekday peak hour vehicle delay is projected to exceed Level of Service (LOS) C criteria for signalized intersections. Any grade crossing mitigation would be based upon standard design guidelines⁴. Any potential mitigation measures would consider:

- Peak-hour traffic volumes.
- Daily delay, measured in vehicle hours.
- Accident prediction factors or other system safety formulas.
- Vehicle queuing storage area on approaches to the grade crossing.
- Sight distances.
- Vertical and horizontal geometrics.
- Illumination.
- Train speeds and variance in train speeds.
- Type of warning device (active or passive).
- Presence or absence of constant warning signals or constant distance device.
- Cost-effectiveness of potential mitigation measures.
- Crossing surface improvements.
- Interconnection of crossing signals with adjoining streets or at intersections to ensure adequate queuing space for delayed vehicles.
- Avoidance of entrapment of vehicles within grade crossing limits.
- Proximity of adjacent railroad crossings.

Of the grade crossings analyzed, only ten crossings with pre-merger values of LOS B, all in northern Wichita, Kansas, were projected to experience post-merger increases in vehicle delay of LOS D or lower as a result of increased rail traffic due to the proposed merger. For these crossings in Wichita, an increase in train operating speed from 10 to 20 mph would result in all ten grade crossings operating at LOS B. (See Chapter 5 for SEA's recommended mitigation for Wichita.) All other grade crossings that were analyzed (primarily in northern California and Nevada) would

⁴ Guidelines include the American Railway Engineering Association's *Manual of Railway Engineering*, the American Association of State Highways and Transportation Officials' *Policy on the Geometric Design of Highways and Streets* (Guide for Selecting, Locating, and Designing Traffic Barriers), the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* and *Railroad-Highway Grade Crossing Handbook*, and any applicable grade crossing standards or guidelines of the appropriate regulatory agency within each state.

have post-merger LOS values of C or better, even with the projected increases in train traffic. In those instances, no mitigation is recommended by SEA.

To address community concerns regarding emergency vehicle response, SEA recommends mitigation that would require UP/SP to provide an 800 number to assist communities. (See Chapter 5, Systemwide Mitigation.) SEA notes that several options are available to assist local emergency response providers. These options are intended to decrease the total time that crossings are blocked by a train and warn emergency service providers of a blocked crossing. These include:

- Increasing the speed of trains through the crossing.
- Installation of "constant-time" crossing signals to maintain a fixed 30-second period between crossing closure (by lights and/or gates) and train arrival, as opposed to potentially longer gate cycles for "constant distance" operated signals where train speeds vary.
- The possibility of interconnection of the railroad crossing circuitry with an alarm system which would advise the emergency vehicle driver or dispatcher of a blocked crossing. This is an emerging technology and has not yet been deployed in an operational environment.

4.3.3 Abandonments

UP/SP sought abandonment authority filed abandonment applications for 17 rail line segments (in the states of Arkansas, California, Colorado, Illinois, Kansas, Louisiana, Texas, and Utah) and four related discontinuances (three in Colorado and one in Kansas). Approval of each abandonment proposal would result in discontinuance of the rail service on these segments and the salvaging (i.e., removal) of railroad-related facilities.

Salvage of the rail line segments proposed to be abandoned should involve a minimum of surface disturbance. Nearly all salvage activities would be completed within the railroad right-of-way (ROW). Exceptions would include some bridges and areas where the railroad ROW is relatively narrow (less than 50 feet). In reviewing the abandonments, proposals, and related comments, SEA considered potential environmental impacts in areas such as land use, safety, water quality, biological resources, historic and cultural resources, and hazardous materials contamination.

Various parties commented on the need to preserve the rail corridor on rail line segments proposed for abandonment. Several have already submitted statements of willingness to assume

financial responsibility. Preservation of rights-of-way is not an area that SEA reviews for environmental impacts. Nor does SEA review requests for Public Use and Notice of Interim Trail Use (NITU)/Certificate of Interim Trail Use (CITU) as a part of its environmental review process. The Board handles these requests and will issue a Public Use condition or a NITU/CITU if the parties comply with 49 CFR 1152.28 and 1152.29. The Board routinely imposes a NITU/CITU condition where it retains jurisdiction and the railroad agrees to the condition.

With respect to the proposed abandonment of the Sage to Cañon City rail line (Sage to Leadville segment and Malta to Cañon City segment), SEA conducted a review of hazardous materials issues. This included a review of the environmental comments, interviews with cleanup agency officials and others (CDPHE, US Forest Service, SP, and D&RGW), a site visit, and a review of hazardous materials investigation reports. The Eagle Mine and California Gulch Superfund sites are located adjacent to the proposed abandonment. Three derailment sites along the rail line (1989, 1994, and 1996) are being investigated, cleaned up, and restored by SP. D&RGW has signed a consent decree with EPA regarding investigation and cleanup of the California Gulch site. Remediation of the Eagle Mine site by Viacom International is underway under a 1988 Consent Decree. If the proposed merger is approved, UP/SP would assume, as appropriate, any responsibility and/or liability for hazardous materials cleanup by SP or D&RGW in accordance with hazardous waste liability laws. This would include any responsibility of D&RGW for the California Gulch Superfund site. A copy of SEA's report is included in Volume 2, Appendix G. SEA has developed mitigation measures to effectively address any potential environmental impacts. (See Chapter 5.)

4.3.4 Rail Construction Projects

In the EA, Volume 4, 25 proposed construction projects involving acquisition of new right-of-way were detailed. The 25 projects involve proposed connections between UP and SP rail lines and connections between UP/SP and other carriers.

Operational changes resulting from the settlement agreement between the UP/SP and BN/Santa Fe requires the construction of three new rail line connections in new right-of-way. These constructions were presented in the UP/SP's PDEA but were not independently evaluated in the EA served to the public on April 12, 1996. The additional rail line construction projects and their lengths are:

- Richmond, California - 1,225 feet.
- Stockton, California - 800 feet.
- Robstown, Texas - 600 feet.

A detailed description of these proposed constructions, including alternative actions considered, the existing environment, the potential environmental impacts, and recommended mitigation measures, is provided in Appendix G.

The proposed action at Richmond, California would involve the construction and operation of a new 10 mph crossover between the existing SP and BN/Santa Fe rail lines. The design includes two power-operated turnouts. The connection would require acquisition of approximately two acres of new right-of-way and construction of approximately 1,225 feet of new rail line.

The proposed action at Stockton, California would involve the construction and operation of a new connection (wye track) between the existing SP and BN/Santa Fe rail lines. The design includes two power-operated turnouts and construction of approximately 800 feet of new rail line. It would require acquisition of approximately one acre of new right-of-way.

The proposed action at Robstown, Texas would involve the construction and operation of a new 10 mph connection between the existing UP and Texas-Mexican Railway lines. The design includes two power-operated turnouts, construction of approximately 600 feet of new rail line, and a new 36-foot timber bridge. It would require acquisition of approximately one acre of new right-of-way.

SEA has reviewed each of the total of 28 construction projects since issuance of the EA. Comments received relative to the construction projects have been incorporated into this Post EA. No material changes have been made to the mitigation measures recommended for the original 25 construction projects. Recommended mitigation for those 25 projects and the 3 additional BN/Santa Fe projects is set forth in Chapter 5.

SEA notes that some commenters, primarily state historic preservation officers, submitted comments requesting mitigation for rehabilitation/capacity improvement projects within existing right-of-way. These projects include addition of second tracks, extension of passing sidings, tunnel enlargements, and other changes to existing facilities to increase capacity. These projects, which may involve some construction activity, are of limited scale and normally involve little disturbance. Moreover, location of the sites are on land which has already been disturbed. These activities could be undertaken by UP or SP without the need for approval by the Board. Accordingly, SEA concludes that required mitigation is not appropriate.

4.3.5 Air Quality

The air quality analysis performed for the EA was initially performed in conformance with the Board's environmental rules at 49 CFR 1105.7(e)(5). The rules dictate that air quality effects resulting from the proposed merger be calculated for rail line segments, rail yards, and intermodal facilities that exceed thresholds for changes in railroad activity. After publication of the EA, this analysis was expanded to respond to public comments in four general areas:

- Information was requested on total emissions increases within air quality control regions (AQCRs). Specifically, the requests asked that emissions be quantified for segments that are not expected to have increases in activity over the Board's thresholds or would have decreased activity.
- Clarification was requested with respect to emissions increases and how these increases relate to air quality standards and local General Conformity thresholds.
- Additional information on the air quality effects of truck-to-rail diversions was requested.
- Additional information on air quality impacts from idling vehicles at grade crossings was requested.

Methods to mitigate potential air quality impacts were also developed and are discussed below. Information specific to a particular geographic area that commenters addressed is included in the responses to comments in Appendix A.

Mitigation of Potential Air Quality Impacts

While the air quality impacts of the proposed merger are expected to be positive on a national scale, individual AQCRs or nonattainment areas could experience adverse air quality impacts resulting from shifts in rail traffic between geographic areas. Most of these increased pollutants would come from locomotives traveling on long rail line segments that are spread across large areas. The overall net emissions increases (not accounting for the rail-to-rail and truck-to-rail offsets as discussed above) would exceed the General Conformity levels established by EPA in many AQCRs. Those AQCRs that would experience the highest levels of impacts were identified based on expected emissions increases, the number of pollutants that would exceed their respective General Conformity levels, and air-quality related comments on the EA. Table 4-2 lists those AQCRs where air quality impacts were determined to be the greatest.

TABLE 4-2
AQCRs PROPOSED FOR AIR QUALITY IMPACT MITIGATION

State	Air Quality Control Region and Number
Arizona	Maricopa (504)
Arizona	Pima (502)
California	Metropolitan Los Angeles (24)
California	San Joaquin Valley (31)
California	Southeast Desert (33)
Colorado	Metropolitan Denver (36)
Illinois	Metropolitan Chicago (67)
Nevada	Nevada (147)
Oregon	Portland (193)
Texas	El Paso - Las Cruces - Alamogordo (153)
Washington	Puget Sound (229)
Wyoming	Wyoming (243)

As noted previously, the EPA's General Conformity criteria do not apply directly to railroad operations or this Board action, but were used by SEA to provide a standard for comparison and to facilitate a better understanding of air quality effects. SEA believes that the proposed merger is not subject to General Conformity because the proposed merger does not meet the definitions of the General Conformity regulations at 40 CFR 51.852. SEA notes that, as a regulatory agency, the Board does not maintain program control over emissions as part of a continuing responsibility.

To mitigate expected emissions increases in those AQCRs listed in Table 4-2, SEA proposes that UP/SP institute EPA locomotive standards (currently in draft form) on a priority basis for locomotives that pass through these AQCRs.⁵ Rail corridors consisting of a number of contiguous segments where UP/SP could assign reduced emissions locomotives were identified by SEA. These rail corridors would pass through one or more of the AQCRs identified in Table 4-2, providing mitigation for emissions both within the AQCR and elsewhere along the corridor.

The rail corridors were identified by taking into account the following criteria:

⁵ Criteria for these reported emission standards are contained in the US EPA's draft "Exhaust Emission Standards for Locomotives and Locomotive Emissions Manufacturers after January 1, 2005 and Each Remanufacturing after January 1, 2005."

- Rail line segments that are expected to contribute the highest levels of increases within these AQCRs.
- Rail line segments that are part of corridors that pass through more than one of these AQCRs (where the mitigation would provide benefits to more than one AQCR).

All of the through trains operating on these corridors, not just the additional trains resulting from the proposed merger, would operate with locomotives meeting the draft EPA standards. In addition, the end points of the corridors were identified as locations where locomotives could reasonably be changed that are at or beyond the boundaries of the areas to be mitigated. Both of these factors result in mitigation of air quality impacts within the AQCR of concern, as well as within those AQCRs that are along other parts of the corridor to be mitigated. The corridors and the resulting emissions reductions within the AQCRs through which the corridors pass are listed in Tables 4-3 and 4-4. The emissions reductions from the proposed mitigation would increase until they reach the levels shown in these tables in the year 2005.

In the EA, SEA proposed a general approach to air quality impact mitigation that would require UP/SP to negotiate such mitigation with appropriate Federal, state, and local agencies. A number of comments on the EA indicate that this approach is not reasonable in that it does not accurately reflect the specific air quality problems present in local areas.

As a result of these comments, SEA re-examined the air quality issue. Additional site visits, verification and/or modification of air quality data, and new relevant information presented in the comments have indicated that mitigation tailored to regional requirements is appropriate. This mitigation is more reasonable as it takes into account that locomotives are mobile, rather than stationary, sources that cover several hundred miles a day. SEA's recommended mitigation is now directed to the emission levels, types, and locations. SEA believes that the proposed air quality mitigation provides practical and reasonable solutions. (See Chapter 5 for SEA's specific recommended air quality mitigation measures.)

Under SEA's recommended mitigation, UP/SP would implement the draft emissions standards for diesel-electric railroad locomotives that EPA has developed. It is SEA's understanding that EPA plans to propose these standards and make them available for public comment in December, 1996. Under these standards, UP/SP would utilize newly manufactured or re-built locomotives that produce fewer emissions. When this equipment becomes available, UP/SP would assign these locomotives on a priority basis to the corridors or portions thereof specified below:

TABLE 4-3
ESTIMATED EMISSIONS REDUCTIONS FROM PROPOSED MITIGATION - BY CORRIDOR

Corridor	AQCR #	State	Estimated Emissions Reductions (Tons per Year) [1]				
			HC	CO	NOx	SOx	PM
Ft. Worth, TX to W. Colton, CA	501	AZ	-6.9	0.0	-236.8	N/A	-2.9
	502	AZ	-7.6	0.0	-263.3	N/A	-3.2
	503	AZ	-9.8	0.0	-337.4	N/A	-4.1
	504	AZ	-8.1	0.0	-279.2	N/A	-3.4
	505	AZ	-7.8	0.0	-270.0	N/A	-3.3
	24	CA	-2.8	0.0	-95.0	N/A	-1.2
	33	CA	-19.3	0.0	-664.5	N/A	-8.1
	12	NM	-17.9	0.0	-617.0	N/A	-7.5
	153	TX	-25.7	0.0	-884.5	N/A	-10.8
	210	TX	-17.7	0.0	-609.8	N/A	-7.4
	215	TX	-10.1	0.0	-346.9	N/A	-4.2
	218	TX	-23.2	0.0	-799.8	N/A	-9.8
	Totals for Corridor		-156.7	0.0	-5404.3	N/A	-65.9
Sacramento, CA to Bakersfield, CA	28	CA	-1.9	0.0	-65.4	N/A	-0.8
	31	CA	-21.9	0.0	-756.1	N/A	-9.2
	Totals for Corridor		-23.8	0.0	-821.5	N/A	-10.0
Cheyenne, WY to Hinkle, OR	61	ID	-39.9	0.0	-1374.2	N/A	-16.8
	63	ID	-40.6	0.0	-1399.5	N/A	-17.1
	64	ID	-14.7	0.0	-505.8	N/A	-6.2
	191	OR	-64.1	0.0	-2208.8	N/A	-26.9
	242	WY	-26.5	0.0	-913.5	N/A	-11.1
	243	WY	-78.9	0.0	-2720.9	N/A	-33.2
	Totals for Corridor		-264.6	0.0	-9122.8	N/A	-111.3
Chicago, IL to Fremont, NE	88	IA	-45.2	0.0	-1559.8	N/A	-19.0
	91	IA	-7.0	0.0	-240.7	N/A	-2.9
	92	IA	-60.3	0.0	-2079.7	N/A	-25.4
	93	IA	-70.7	0.0	-2436.8	N/A	-29.7
	67	IL	-21.4	0.0	-738.5	N/A	-9.0
	69	IL	-38.0	0.0	-1311.5	N/A	-16.0
	71	IL	-17.0	0.0	-585.3	N/A	-7.1
	73	IL	-17.8	0.0	-615.0	N/A	-7.5
	85	NE	-15.1	0.0	-519.9	N/A	-6.3
	146	NE	-10.0	0.0	-343.3	N/A	-4.2
	Totals for Corridor		-302.5	0.0	-10430.4	N/A	-127.2
Ogden, UT to Roseville, CA	508	CA	-24.3	0.0	-838.7	N/A	-10.2
	147	NV	-71.8	0.0	-2474.7	N/A	-30.2
	148	NV	-10.4	0.0	-359.9	N/A	-4.4
	219	UT	-19.0	0.0	-653.8	N/A	-8.0

TABLE 4-3
ESTIMATED EMISSIONS REDUCTIONS FROM PROPOSED MITIGATION - BY CORRIDOR

Corridor	AQCR #	State	Estimated Emissions Reductions (Tons per Year) [1]				
			HC	CO	NOx	SOx	PM
Ogden, UT to Roseville, CA	220	UT	-2.7	0.0	-93.4	N/A	-1.1
	Totals for Corridor		-128.2	0.0	-4420.4	N/A	-53.9
Denver, CO to Grand Jct., CO	35	CO	-18.0	0.0	-621.6	N/A	-7.6
	36	CO	-5.4	0.0	-185.9	N/A	-2.3
	40	CO	-8.5	0.0	-294.3	N/A	-3.6
	Totals for Corridor		-32.0	0.0	-1101.8	N/A	-13.4
Seattle, WA to W. Colton, CA	24	CA	-0.9	0.0	-31.8	N/A	-0.4
	27	CA	-1.3	0.0	-44.1	N/A	-0.5
	28	CA	-3.5	0.0	-120.6	N/A	-1.5
	31	CA	-4.2	0.0	-143.7	N/A	-1.8
	33	CA	-1.1	0.0	-36.4	N/A	-0.4
	508	CA	-0.4	0.0	-13.1	N/A	-0.2
	190	OR	-1.9	0.0	-66.0	N/A	-0.8
	193	OR	-4.6	0.0	-159.0	N/A	-1.9
	228	WA	-0.3	0.0	-10.6	N/A	-0.1
	229	WA	-1.1	0.0	-37.5	N/A	-0.5
	Totals for Corridor		-19.2	0.0	-662.7	N/A	-8.1
All Corridors	TOTAL		-927.1	0.0	-31964.0	0.0	-389.8

[1] - The EPA draft emissions requirements do not indicate reductions in either CO or SOx. Reductions in these emissions were therefore not quantified.

TABLE 4-4
ESTIMATED EMISSIONS REDUCTIONS FROM PROPOSED MITIGATION - BY AQCR [1]

AQCR	Name	State	Estimated Emissions Reductions (Tons per Year)				
			HC	CO	NOx	SOx	PM
501	Southeast Arizona	AZ	-6.9	0.0	-236.8	0.0	-2.9
502	Pima	AZ	-7.6	0.0	-263.3	0.0	-3.2
503	Mohave-Yuma	AZ	-9.8	0.0	-337.4	0.0	-4.1
504	Maricopa	AZ	-8.1	0.0	-279.2	0.0	-3.4
505	Central Arizona	AZ	-7.8	0.0	-270.0	0.0	-3.3
24	Metropolitan Los Angeles	CA	-3.7	0.0	-126.9	0.0	-1.5
27	Northeast Plateau	CA	-1.3	0.0	-44.1	0.0	-0.5
28	Sacramento Valley	CA	-5.4	0.0	-186.0	0.0	-2.3
31	San Joaquin Valley	CA	-26.1	0.0	-899.8	0.0	-11.0
33	Southeast Desert	CA	-20.3	0.0	-700.9	0.0	-8.5
508	Mountain Counties	CA	-24.7	0.0	-851.8	0.0	-10.4
35	Grand Mesa	CO	-18.0	0.0	-621.6	0.0	-7.6
36	Metropolitan Denver	CO	-5.4	0.0	-185.9	0.0	-2.3

TABLE 4-4
ESTIMATED EMISSIONS REDUCTIONS FROM PROPOSED MITIGATION - BY AQCR [1]

AQCR	Name	State	Estimated Emissions Reductions (Tons per Year)				
			HC	CO	NOx	SOx	PM
40	Yampa	CO	-8.5	0.0	-294.3	0.0	-3.6
88	Northeast Iowa	IA	-45.2	0.0	-1559.8	0.0	-19.0
91	Southeast Iowa	IA	-7.0	0.0	-240.7	0.0	-2.9
92	South Central Iowa	IA	-60.3	0.0	-2079.7	0.0	-25.4
93	Southwest Iowa	IA	-70.7	0.0	-2436.8	0.0	-29.7
61	Eastern Idaho	ID	-39.9	0.0	-1374.2	0.0	-16.8
63	Idaho	ID	-40.6	0.0	-1399.5	0.0	-17.1
64	Metropolitan Boise	ID	-14.7	0.0	-505.8	0.0	-6.2
67	Metropolitan Chicago	IL	-21.4	0.0	-738.5	0.0	-9.0
69	Metropolitan Quad Cities	IL	-38.0	0.0	-1311.5	0.0	-16.0
71	North Central Illinois	IL	-17.0	0.0	-585.3	0.0	-7.1
73	Rockford-Janesville-Beliot	IL	-17.8	0.0	-615.0	0.0	-7.5
85	Metropolitan Omaha-Council Bluffs	NE	-15.1	0.0	-519.9	0.0	-6.3
146	Nebraska	NE	-10.0	0.0	-343.3	0.0	-4.2
12	New Mexico Southern Border	NM	-17.9	0.0	-617.0	0.0	-7.5
147	Nevada	NV	-71.8	0.0	-2474.7	0.0	-30.2
148	Northwest Nevada	NV	-10.4	0.0	-359.9	0.0	-4.4
190	Central Oregon	OR	-1.9	0.0	-66.0	0.0	-0.8
191	Eastern Oregon	OR	-64.1	0.0	-2208.8	0.0	-26.9
193	Portland	OR	-4.6	0.0	-159.0	0.0	-1.9
153	El Paso-Las Cruces-Alamogordo	TX	-25.7	0.0	-884.5	0.0	-10.8
210	Abilene-Wichita Falls	TX	-17.7	0.0	-609.8	0.0	-7.4
215	Metropolitan Dallas-Ft. Worth	TX	-10.1	0.0	-346.9	0.0	-4.2
218	Midland-Odessa-San Angelo	TX	-23.2	0.0	-799.8	0.0	-9.8
219	Utah	UT	-19.0	0.0	-653.8	0.0	-8.0
220	Wasatch Front	UT	-2.7	0.0	-93.4	0.0	-1.1
228	Olympic-Northwest Washington	WA	-0.3	0.0	-10.6	0.0	-0.1
229	Puget Sound	WA	-1.1	0.0	-37.5	0.0	-0.5
242	Metropolitan Cheyenne	WY	-26.5	0.0	-913.5	0.0	-11.1
243	Wyoming	WY	-78.9	0.0	-2720.9	0.0	-33.2

[1] - The 12 AQCRs that are shown in bold (AQCRs 502, 504, 24, 31, 33, 36, 67, 147, 193, 153, 229, and 243) are those which were identified in Table 4-2 as experiencing the highest level of air quality impacts. Mitigation emissions along the proposed corridors would also result in reduced emissions in an additional 31 AQCRs, as shown in this table.

- Southern Corridor: Fort Worth, TX to West Colton, CA
- I-5 Corridor: Sacramento, CA to Bakersfield, CA
- Central Corridor: Cheyenne, WY to Hinkle, OR
- Central Corridor: Chicago, IL to Fremont, NE
- Central Corridor: Ogden, UT to Roseville, CA
- Central Corridor: Denver, CO to Grand Junction, CO
- I-5 Corridor: Seattle, WA to West Colton, CA

SEA notes that the best method for mitigating air quality impacts is to address the emissions at the source, the railroad locomotive. SEA also recognizes that, based on the EPA draft emission standards, specific decreases in CO and SO_x pollutants cannot be expected. While it is not possible to mitigate all of the emissions increases that would result from the proposed merger, SEA believes that the overall decreases in emissions on a national basis, along with the emissions reductions that would result from the preferential application of the EPA draft locomotive emission standards to specific corridors, would extensively reduce air emissions in the affected AQCRs.

To further facilitate the improvement in air quality for specific locations, SEA has also recommended mitigation that would require UP/SP to consult with appropriate state and local air pollution officials in the following states: Arizona, California, Colorado, Illinois, Nevada, Oregon, Texas, Washington, and Wyoming. SEA has recommended similar mitigation for certain intermodal facilities in California and Illinois.

4.3.6 Safety

Systemwide Safety Assessment

In assessing safety for a merged UP/SP system, SEA conducted consultations with state and local officials, UP/SP, and FRA concerning potential safety impacts and mitigation of those impacts. SEA has reviewed proposed operations and related data on a systemwide, corridor, and local basis, where appropriate, to identify and address the potential impacts of operational changes on safety. Also, SEA examined the emergency response plans of both UP and SP, and consulted with a number of local emergency response officials. Overall, SEA believes that there would not be a major increase in safety risks if the mitigation measures recommended by SEA in Chapter 5 are implemented by UP/SP.

The proposed merger would result in a minor increase in systemwide levels of operations. As a result, there is the potential for increase in overall accident risk. The number of accidents occurring on a single railroad -- or even nationwide -- can vary significantly from year to year. To

realistically assess accident rates, it is necessary to look at these rates over the long term. With respect to individual railroads or routes, the variability of accident rates can be greater or less than the national accident rate itself.

Because of public concern about the operational safety of a consolidated UP/SP system, SEA conducted an independent analysis of systemwide accident risk that could result from the proposed merger. For this analysis, railroad accidents involving freight trains on mainlines were assumed to fall into two categories:

- (1) *Ton-mile Dependent Accidents:* These accidents are directly related to the amount of traffic. They are primarily caused by track, roadbed, and train equipment failures. A majority of accidents fall into this category.
- (2) *Train-mile Dependent Accidents:* These accidents primarily result from human error and signal system failure.⁷

To assess ton-mile dependent and train-mile dependent accidents, SEA conducted its analysis based on national historical data reported to FRA, and other available data. This analysis assumed the changes to the operating plan, but did not estimate the effects of particular changes to operating procedures. Table 4-5 shows the annual estimated change in systemwide accidents as a result of the proposed merger, on both an absolute annual basis and as a percentage. (See Volume 2, Appendix G for this analysis.)

On a systemwide basis, the percentage increase in the expected number of accidents per year would be less than the anticipated increase in traffic. To put this another way, the total accident on mainline, yard, and industry tracks and sidings would not increase as much as the traffic increases as a result of the proposed merger. Accordingly, a combined post-merger system is likely to be safer per ton-mile than the pre-merger system. Based on SEA's analysis of FRA accident reports, it appears that reduced car handling at yards, as identified in UP/SP's operating plan, would account for the improvement in safety performance. Volume 2, Appendix G includes further discussion of the safety analysis.

Based on a thorough review of UP/SP's operating proposals, it is SEA's opinion that systemwide safety over a merged UP/SP system would be improved. UP/SP proposes a number of strategies that should enhance the safety of train movements and emergency response. These include: (1) improved maintenance and inspections of SP trackage and equipment, (2) more efficient train routing, (3) planned capital investments, (4) increased track and equipment inspections, and (5) rerouting of traffic over more efficient and better maintained routes. Also, as

TABLE 4-5
SYSTEMWIDE ANNUAL RAILROAD ACCIDENT CHANGE ESTIMATE
(PRE-MERGER TO POST-MERGER)

Type of Accident	Annual Accident Increase	Percent Change
Mainline	14.90	1.9%
Yard	2.63	0.2%
Industry, Sidings	1.30	1.9%
TOTAL:	18.83	0.9%

noted above, SEA is recommending mitigation measures in Chapter 5 that would further enhance overall safety.

Grade Crossing Safety

A primary area of concern was grade crossing safety. Numerous comments were received from cities and towns, primarily in the central and southern corridors, and a number of other communities in other parts of the proposed merged system. In assessing grade crossing safety, SEA carefully reviewed the comments; verified data, and where appropriate, adjusted data based on the comments; and conducted further site visits. Also, SEA consulted with FRA, state and local officials, and UP/SP; conducted further analyses; and monitored the progress of negotiations between affected jurisdictions and UP/SP. SEA notes that a number of jurisdictions have either executed or are in the process of negotiating memoranda of understanding (MOU) to address safety concerns.

Several states expressed concerns about grade crossing safety and vehicular delay. SEA conducted additional site visits and traffic and accident analyses. SEA recommends in Chapter 5 that UP/SP consult with FRA and the states of Arkansas, California, Colorado, Kansas, Nevada, Oregon, and Texas to ensure that proper grade crossing warning devices are in place to address potential safety impacts caused by increased train traffic resulting from the proposed merger. SEA also recommends that UP/SP advise SEA of the status and final results of these consultations.

The Town of Truckee and the East Bay Regional Park District, in California, which raised major grade crossing safety issues, have each executed a MOU with UP/SP. In addition, Placer County, California, is negotiating a MOU with UP/SP that will likewise address grade crossing safety concerns. These negotiations demonstrate that communities and UP/SP can work together to arrive at mutually acceptable mitigation plans. SEA believes that the communities and states can best identify the most appropriate mitigation to address their particular concerns.

Hazardous Materials Transportation

SEA conducted an independent examination of risks associated with increased hazardous materials shipments. The major changes to hazardous materials movements in UP/SP's operating plan would occur on various rail line segments that represent approximately 66 percent of the combined system's route-miles. These include: the Central Corridor, I-5 Corridor, Illinois-Gulf Coast Corridor, and the Houston to New Orleans portion of the Southern Corridor. SEA examined these corridors in terms of the percent change in hazardous materials traffic expected as a result of the proposed merger. To compare the change in hazardous materials traffic with historical fluctuations, SEA measured traffic increase against the largest likely year-to-year traffic growth on a single route in response to general economic conditions. If the projected traffic increase exceeded that growth, SEA compared the increases to the nationwide average risk for hazardous materials releases on a single route. (See Volume 2, Appendix G for a discussion of this analysis.)

Whenever it was necessary to estimate the release risk for a rail line segment, baseline risk levels (i.e., pre-merger) were estimated using the PC*HazRoute software developed by ALK, Inc. (ALK) for identifying optimal rail routings for hazardous materials. This software uses rail accident data reported to FRA for the years 1992 through 1994 to estimate a per-carload risk of hazardous material release. In general, SEA assumed that this risk would be proportional to the change in hazardous materials traffic on each route segment. Pursuant to SEA's request, UP/SP re-ran its Multi-Rail traffic model specifically for hazardous material car movements (STCC codes beginning with 48 and 58), and provided estimated pre-merger and post-merger hazardous materials carloads per day for the route segments identified below.

SEA's analysis using the ALK PC*HazRoute software on the rail line segments with major hazardous materials traffic changes indicated a relative average 2.6 percent increase in the overall risk of accidental hazardous materials releases on the following corridors: (1) the Central Corridor, (2) the I-5 Corridor, (3) Illinois-Gulf Coast Corridor, and (4) the Southern Corridor. Assuming that the average hazardous materials density on the remainder of a merged UP/SP system would be 75 percent of that on the aforementioned corridors, and that the risk on the remainder of the system would not change as a result of the proposed merger, a systemwide post-merger risk increase of 1.7 percent for hazardous materials incidents would result. This would correspond to an average annual increase of 0.2 accidental releases per year using the PC*HazRoute frequencies as adjusted.

In sum, the risk of accidental hazardous materials releases on the corridors identified above would increase 2.6 percent. The overall average on a systemwide basis would be a 1.7 percent

increase for the estimated releases of hazardous materials. In both cases, this represents a minor increase in risk exposure.

In assessing the accident risks of hazardous materials releases, it is important to note that the U.S. Department of Transportation (USDOT), in its comments to the EA, stated that "compliance by the merged railroad with FRA's safety regulations and with UP/SP's own internal safety requirements will afford a consistent level of railroad safety." For example, UP/SP are required to comply with specific FRA regulations (e.g., 49 CFR 171 to 180) regarding the movement of such hazardous materials. USDOT further stated that "preparation and submission by UP/SP of a specific safety plan to FRA to address certain individual railroad lines is not necessary". Accordingly, given the low risk of accidental hazardous material release, and USDOT's statement of the adequacy of FRA's safety regulations, the proposed UP/SP system should not pose a high safety risk. Nevertheless, to further promote safety, SEA recommends certain mitigation measures in Chapter 5 that are systemwide, SP specific, and corridor related. The corridor specific mitigation applies to the following:

Central Corridor

- The route between North Platte, NE and Oakland, CA (UP and SP).
- The route between Cheyenne, Wyoming and Denver, Colorado (UP).

Southern Corridor

- The route between Houston, TX and Avondale (New Orleans), LA (SP).
- The route between Iowa Junction, LA and Avondale, LA via Kinder and Livonia (UP).
- The route between Houston, TX and West Colton, CA (SP).

Illinois-Gulf Coast Corridor

- The route between St. Louis, MO; East St. Louis/Salem, IL and Houston, TX; Avondale, LA (UP and SP).

SEA's mitigation for the above includes the following:

- Equipping key trains with two-way end-of-train (EOT) devices.
- Adopting UP's formula-based standards for track inspection (on SP rail lines).
- Extending UP's tank car inspection programs to SP facilities.
- Development of detailed response plans and training programs with appropriate local authorities.

SEA has reviewed the comments from KCS and Conrail regarding their concerns for the movement of hazardous materials over the proposed merged UP/SP system. (See Volume 2, Appendix A.) In response to these concerns, SEA conducted an independent analysis especially to address these movements. KCS and Conrail questioned the directional movement strategy,

additional car handling, shifting of hazardous materials traffic from one rail line to another, and related trackage rights operations by BN/Santa Fe.

SEA has reviewed the hazardous materials movement data in relation to these concerns. Through this examination and UP/SP's response to KCS comments to the EA, SEA expects only minor increases in hazardous materials release rates as a result of the proposed merger. Directional running and trackage rights operations are thoroughly covered under FRA safety and operating rules.

SEA notes that the EA recommended mitigation to conduct rail line capacity simulations to verify that the directional operations involving St. Louis, Missouri; Memphis, Tennessee; and Dallas, San Antonio, and Houston, Texas could be safely accomplished. Mitigation in the EA also stated that a safety analysis should be conducted by UP/SP to determine the need for installing an Automatic Block Signalized (ABS) system or a Centralized Traffic Control (CTC) system between Houston, Texas and Lewisville, Arkansas. USDOT submitted a letter to SEA on May 9, 1996, stating that FRA's regulations are sufficient to ensure safety on these routes. Also, in their comments to SEA, both USDOT and FRA stated that such a safety analysis was not necessary given FRA's safety regulations and UP/SP's own internal safety requirements. (See Volume 2, Appendix A.) Accordingly, the Post EA does not include this type of safety analysis as mitigation.

Emergency Responses to Hazardous Materials Incidents

To address comments about hazardous materials incident responses, SEA conducted an extensive review of the emergency response procedures for transportation-related spills of hazardous materials that have been developed and implemented by the UP, SP, and BN/Santa Fe. The plans reviewed by SEA include:

- Union Pacific Railroad Company *Emergency Response Procedures for Transportation-Related Spills of Hazardous Materials, Oil, or Other Pollutants* (September 1995):
 - Avondale Yard, Houston Services Unit
 - North Little Rock Yard, Little Rock Terminal Service Unit
 - Settegast Yard, Houston Services Unit
- Union Pacific Railroad Company *Instructions for Handling Hazardous Materials* (October 1995).
- Southern Pacific Lines *Hazardous Materials/Emergency Response Business Plans* (January 1996):
 - Avondale Yard, Jefferson Parish, Louisiana (AV-11)
 - Pine Bluff Yard, Jefferson County, Arkansas (PB-01)
 - Houston Yard (Englewood/Hardy Street), Harris County, Texas (HO-01)

- Burlington Northern Railroad *Hazardous Materials Emergency Response Plan* (January 3, 1994)
- Santa Fe Railway *Emergency Action Plan, Environmental/Hazardous Materials* (republished May 1994)

All Emergency Response Plans were similar. Each plan represents the state of the art in managing hazardous material incidents. All plans are complete, current, and have a provision for periodic updating to meet the constantly changing railroad transportation patterns and materials transported or stored. This would include any changes to accommodate UP, SP, BN/Santa Fe operations under the proposed merger. These plans cover a range of topics, from general railroad policy to detailed procedures for hazardous materials accidents at specific sites, specific responses for different types of hazardous materials, and the responsibilities of specific railroad employees and local response agency officials. Information that is pertinent to a specific state, or required by that state, is also provided. The plans include suggested procedures for local public emergency service agencies to use in responding to a hazardous materials spill, derailment of rail cars carrying hazardous materials, release of hazardous vapors, and fires involving hazardous materials. There are also provisions for management by railroad personnel and/or public emergency service agencies of hazardous materials incidents, including site visits and training exercises.

SEA concludes that UP/SP and BN/Santa Fe are adequately prepared to respond to hazardous materials incidents. UP currently has 29 personnel on 24-hour call to respond to hazardous materials emergencies, compared to 9 on SP. UP/SP has agreed to redistribute personnel to provide UP's level of coverage throughout the system and assign such personnel to unprotected areas on SP rail lines, such as Arizona, New Mexico, and West Texas. In addition, UP/SP intends to extend UP's participation in the TRANSCARE program to SP jurisdictions. In this program, UP works with communities to develop hazardous material and emergency response plans. UP/SP also intends to use UP's training tank car on SP rail lines for training communities on hazardous material issues and to conduct emergency response drills. As reported in the EA, SEA recommends that UP/SP be required to transport all hazardous materials in compliance with U.S. Department of Transportation Hazardous Materials Regulations (49 CFR Parts 171 to 180). In addition, UP/SP should provide, upon request, local emergency management organizations with copies of all applicable Emergency Response Plans.

4.3.7 Noise

SEA's noise analysis identified noise-sensitive receptors where the change in operations could result in noise exposure increases that would meet or exceed the Board's environmental analysis thresholds. The analysis provided an estimate of the number of noise-sensitive receptors

(e.g., residences, schools, churches) where the Board's thresholds for impact analysis would be exceeded, potentially causing an adverse increase in noise exposure. In conducting its noise level impact assessment, SEA verified and used the baseline and proposed activity level data set forth by UP/SP in the merger application and supplemented with additional data from the settlement agreements. The Board's environmental rules provide that where the Board's analysis thresholds are exceeded, noise level impact analysis may be warranted.

Noise studies were performed and the following noise criteria (as discussed in Chapter 3) were used to determine whether adverse impacts would occur:

- An incremental increase in noise levels of 3 decibels (dBA) or more, as measured by the Day-Night Equivalent Sound Level (L_{dn}); or
- An increase to a noise level of L_{dn} of 65 dBA or greater.

The L_{dn} noise descriptor represents an average of the noise levels occurring during a complete 24-hour period. However, it includes a 10 dB weighting applied to those noises occurring during nighttime hours (10:00 p.m. to 7:00 a.m.), reflecting the fact that most people are more sensitive to nighttime noise. In calculating L_{dn} , the nighttime adjustment makes one freight train passby occurring between 10:00 p.m. and 7:00 a.m. equivalent to ten freight train passbys during the daytime hours. In general, an increase in L_{dn} of 3 dBA would require a 100 percent increase in rail traffic, a substantial change in operating conditions, changed equipment, or a shift of daytime operations to the nighttime hours.

Most commenters were concerned about the level of noise impacts from increased traffic on rail line segments. Overall, although some segments have long stretches with no noise-sensitive land uses, they do pass through many residential areas where trains are the dominant source of noise exposure. The noise exposure is greatly increased near grade crossings where train horns are used as a warning to motorists and pedestrians. UP and SP operate according to all applicable Federal, state, and local laws regarding the use of train horns. Any decision to reduce this use could result in a reduction of public safety at grade crossings.

SEA has analyzed rail line segments, yards, and intermodal facilities that would be affected by the proposed merger to determine the potential for noise impact. In addition, SEA reviewed the comments on the EA that raised noise concerns, and conducted additional site inspections. The Board's environmental rules at 49 CFR 1105.7(e)(6) provide that where the Board's thresholds are exceeded, noise level impact analysis may be warranted. SEA identified 13 rail line segments that would experience an increase in rail traffic sufficient to exceed the Board's thresholds and cause

potentially adverse noise impacts (L_{dn} increase greater than 3 or more dBA) to a number of sensitive receptors (residences, schools, hospitals, churches). Table 3-8 in Chapter 3 identifies, by state, the particular rail line segments that would be affected and the extent of the adverse impacts.

After careful analysis, site visits, and review of all the comments (including those on the EA), SEA believes the rail line segments listed in Chapter 3 would experience adverse noise impacts. However, the noise impacts at issue generally would be caused by locomotive horn sounding at grade crossings, to warn motorists or pedestrians of oncoming trains. As a result, any attempt to significantly reduce noise levels would jeopardize safety, which SEA considers to be of paramount importance.

As the agency responsible for regulating rail safety, FRA has been directed by the Swift Act to require, by November of 1996, that horns be sounded at all grade crossings unless extraordinary safety provisions are implemented which would allow FRA to waive the horn blowing requirements. Currently, the only state where FRA specifically requires that horns be sounded is Florida. This was done in response to a state legislative ban on horns. Also, FRA currently requires railroads to follow their operating plans, which typically require horn use at grade crossings.

Horn blowing by locomotives is currently the most effective way, short of separating the railroad from the highway, to increase safety. Despite the noise created by horns, safety dictates that railroads sound their horns at grade crossings. Studies, such as the Florida Whistle Ban analysis performed by FRA, have shown a decrease in incidents at grade crossings when a locomotive horn is sounded and a dramatic increase in incidents when horns are not sounded.

Even though the proposal would have adverse impacts on noise, some increase in noise is necessary to ensure safety. However, SEA has developed mitigation for the 13 rail line segments that could experience potentially adverse noise impacts as a result of the proposed merger. The rail line segments that are identified in Table 3-8 in Chapter 3 are located in the states of California, Colorado, Illinois, Kansas, Louisiana, Nebraska, Nevada, Oklahoma, and Texas. SEA recommends this mitigation to effectively reduce the potential noise impacts without compromising safety.

In developing mitigation, SEA considered several factors. First, as stated above, horn noise generally represents the greatest noise level associated with train movements, is a necessary safety measure. SEA recognizes that safety concerns override noise concerns, particularly in populated areas and at grade crossings. Second, the increase in the decibel level experienced by the affected communities would result from greater exposure to horn noise, rather than greater

intensity of sound. No additional types of noise would occur. Also, there would be no change in the character of the noise. In other words, horns would blow more often, but not more loudly as a result of the proposed merger. Third, many communities along these rail line segments already experience train-related noise. Fourth, mitigation measures for reducing or eliminating train horn noise at grade crossings have been developed, but require approval by FRA, and are extremely costly. Cooperative funding from other sources (local, state, Federal) for proposed merger-related noise impact mitigation may be available. Fifth, historic traffic levels and related noise impacts on many of these rail line segments have exceeded the proposed post-merger traffic levels. Finally, substantial portions of the rail line segments are located in rural areas where sensitive receptors are scattered and widely separated; mitigation of noise impacts at these receptors would be impractical regardless of the noise impact.

If the proposed merger is approved, UP/SP plans to implement UP's higher maintenance standards and greater use of welded rail to help mitigate rolling wheel and rail noise level increases on rail lines previously operated by SP. In addition, SEA recognizes that noise control mitigation must consider safety, automotive traffic flow, cost, maintainability, aesthetics, and practicality. Accordingly, local governments and communities must be involved in selection of noise impact mitigation measures.

Nevertheless, considering the constraints discussed above, SEA recommends the following measure to mitigate adverse noise impacts to communities: UP/SP shall consult with those affected counties that have communities that would experience a noise increase of 3 or more dBA as a result of the increased rail traffic over rail lines in California, Colorado, Illinois, Kansas, Louisiana, Nebraska, Nevada, Oklahoma, and Texas (see Table 3-8) and, if appropriate, develop a noise abatement plan. UP/SP shall submit the results of these consultations to SEA, who will review these findings with FRA. SEA encourages UP/SP and the affected counties to share the costs for noise reduction measures.

The remaining rail line segments that would meet the Board's analysis thresholds (i.e., those that would experience more than 8 trains per day or an increase of 100% as measured in gross ton miles annually) could experience noise increases, but none of the increases are expected to be substantial. SEA's analysis of the noise impacts along each rail line segment is presented in Volume 2 of the EA.

4.3.8 Historic and Cultural Resources

Since publication of the EA, SEA has continued consultation with various SHPOs to identify and determine possible impacts on historic and cultural resources. The Section 106 process is now

complete for all affected states, except: Arizona, California, Colorado, Montana, Nevada, New Mexico, Oregon, and Texas. Appropriate mitigation measures for each of these states are included in Chapter 5.

4.3.9 Environmental Procedural Issue - EA vs. EIS

SEA received several comments on the EA expressing concern that an EA was an inadequate or inappropriate environmental review for the proposed UP/SP merger. These comments noted concerns about the scope of the proposed merger, the magnitude of potential impacts, and the requirements of the National Environmental Policy Act (NEPA) and the Surface Transportation Board's regulations for implementing NEPA. Some commenters requested that SEA prepare an Environmental Impact Statement (EIS).

After a thorough review of the public comments, the proposed merger, the potential environmental impacts that could result from the proposed merger, and numerous site visits and consultations, SEA maintains that an EA, subject to the recommended environmental mitigation, is appropriate and that an EIS is not required. SEA bases this opinion on the Board's environmental rules, the review of potential environmental impacts, and the mitigation developed to address potential impacts as discussed below.

Environmental Rules

NEPA requires federal agencies to take environmental considerations into account in their decisionmaking process through preparation of an EA or an EIS. A detailed EIS is required for "major federal actions significantly affecting the quality of the human environment." [42 U.S.C. 4332(2)(C).] The identification of which actions require an EIS is a matter for the agency to determine, as long as the determination is not arbitrary or capricious. Based on extensive analysis of potential impacts and development of appropriate mitigation measures, SEA's conclusion that an EA is appropriate is neither arbitrary or capricious. First, SEA's conclusion that an EA is appropriate is consistent with the Board's environmental rules, which provide that railroad mergers are actions generally requiring the preparation of an EA⁶. Second, SEA's assessment of potential environmental impacts was thorough, independent, and analytical, as described below and in other parts of Chapter 4. Third, SEA developed mitigation measures to specifically address potential environmental impacts of the proposed merger as described below and in Chapter 5.

⁶ An EA was prepared for the merger of the Burlington Northern Railroad Company and the Atchison, Topeka and Santa Fe Railway Company. See Finance Docket No. 32549, EA served June 6, 1995.

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Review of Potential Environmental Impacts

SEA has conducted a thorough analysis of the potential environmental effects of the proposed merger. This independent analysis has included review of all of the environmental comments (approximately 400), examination of all available information and submitted studies and reports, site visits to more than 150 rail line segments and facilities, numerous consultations with Federal, state and local officials and UP/SP, and further review of potential environmental effects based on the environmental comments and SEA's own analysis. SEA's analysis reflects recent developments, such as the CMA agreement and its effect on the BN/Santa Fe settlement agreement, and negotiated mitigation plans between UP/SP and concerned communities. The following discussion highlights some of the environmental areas examined by SEA and addressed in the EA and this Post EA. Chapter 3 of the Post EA describes the potential impacts of the proposed merger and associated abandonments and construction proposals.

SEA reviewed potential systemwide environmental effects and concludes that the greater efficiencies resulting from the proposed combined routes⁷ would result in environmental benefits or insignificant impacts. SEA also thoroughly examined the individual rail line segments, rail yards, intermodal facilities, and rail line abandonments and constructions to determine what local or regional environmental impacts may occur as a result of the proposed merger. SEA identified various impacts, with safety, air quality, and noise among primary areas of potential impact. SEA conducted a detailed analysis of the locations with the greatest potential for adverse impact in these areas. SEA's review process for safety, air quality, and noise impacts is described below and elsewhere in Chapter 4. The potential impacts identified in the analysis are described in Chapter 3.

For safety impacts, SEA conducted an independent analysis that included detailed examination of the proposed rail operating plans, grade crossings, and average daily vehicular traffic figures in specific communities. SEA also examined and reviewed UP/SP's emergency response plans for hazardous waste spills, safety records, and FRA's existing regulations governing railroad safety. This analysis also included site visits and consultations with appropriate Federal, state, and local officials.

⁷ UP and SP state that the purpose and need for the proposed merger is to create a Western rail carrier that would be more efficient, therefore more competitive, with truck and water carriers and other railroads. UP/SP proposes to combine the routes of the UP and SP, creating new, shorter routes. They also intend to upgrade and improve SP's rail lines, create new through routes that would relieve congestion, and offer shorter, more efficient routes. In addition, rail yard and terminal facilities would be consolidated, intermodal facilities activities would be changed, rail lines would be abandoned, and new rail connections would be constructed.

For air impacts, SEA examined each AQCR where increased rail line segment, rail yard or intermodal facility activity was projected to exceed the Board's analysis thresholds. Using EPA-approved methods and analytical factors as a guide, SEA calculated the potential emission impacts in each affected AQCR for hydrocarbons, carbon monoxide, oxides of nitrogen and sulfur, and particulate matter. Taking into account the standards and criteria established by EPA, SEA then evaluated potential impacts in both attainment and nonattainment areas.

For noise impacts, SEA reviewed each rail line segment, rail yard, and intermodal facility that was projected to exceed the Board's threshold for analysis for potential noise impacts. SEA then conducted detailed noise analysis for some areas, estimating overall noise impacts in a 24-hour period. In addition, SEA analyzed UP/SP's planned upgrades to rails and facilities, which would decrease noise impacts.

Recommended Mitigation of Potential Impacts

SEA reviewed the potential impacts of the proposed merger and developed mitigation measures to reduce the levels of adverse environmental impacts. Specifically, SEA designed mitigation measures to address the varied types of potential environmental impacts: systemwide, corridor-specific, and regional or local. These measures included mitigation for particular rail line segments, rail yards, intermodal facilities, and rail abandonments and constructions. SEA identified two communities (Reno, Nevada and Wichita, Kansas) that require independent study and more specific mitigation plans to address environmental issues unique to these cities. Accordingly, SEA has recommended mitigation to ensure that UP/SP's level of train operations would essentially maintain the environmental status quo in these two cities until the specifically tailored mitigation plans are imposed. In addition to SEA's recommended mitigation, several local communities have negotiated agreements with UP/SP to implement mitigation measures and take other appropriate actions to address their particular environmental concerns.

Based on its thorough, independent analysis and review of all of the environmental information that has been submitted, SEA concludes that, subject to the recommended mitigation measures, the proposed merger would not significantly affect the quality of the human environment. Accordingly, the preparation of an EA is appropriate and, therefore, an EIS is not required.

4.3.10 Memoranda of Understanding

During the environmental review process, a number of communities and UP/SP consulted on ways to address their particular environmental concerns. To date, three jurisdictions have either executed a Memorandum of Understanding (MOU) or are in the process of negotiating such an

agreement. These jurisdictions, all in California, include the Town of Truckee, East Bay Regional Park District, and Placer County. (See Volume 2, Appendix B.) Accordingly, SEA has recommended mitigation in Chapter 5 that will require UP/SP to comply with the terms of these MOUs if the proposed merger is approved.

SEA notes that Placer County, California is negotiating a MOU to address its specific environmental concerns. In fact, Placer County, California and its respective jurisdictions have requested in writing that the Post EA not include recommended mitigation measures at this time since they are close to arriving at a mutually acceptable approach that is unique to their county. UP/SP concurs with this approach. (See Volume 2, Appendix B). SEA emphasizes that in the event any parties are unable to execute an MOU, SEA will then recommend appropriate mitigation to the Board before any decision is issued.

4.3.11 Local Mitigation

The cities of Reno, Nevada and Wichita, Kansas have characteristics that pose unique environmental concerns in connection with the proposed merger. These include, but are not limited to, track locations, the number and location of grade crossings, adjacent land use, vehicular traffic volumes, and topography. As a result, SEA is recommending the mitigation discussed below for these two cities.

Wichita, Kansas (Wichita to Chickasha rail segment)

SEA reviewed the various comments, submissions and reports related to the City of Wichita and Sedgwick County, Kansas. SEA also reviewed UP/SP's submissions and reports and consulted with UP/SP. SEA has conducted further independent analysis, as well as field inspections, which included site visits to the City of Wichita with city officials.

Under the proposed merger, UP/SP would continue to operate through downtown Wichita on a north-south route that crosses 24 streets at grade between and including 21st Street and Pawnee Street. The increased train movements on the Chickasha to Wichita rail line would produce corresponding increases in locomotive exhaust emissions and repeated horn, engine, and wheel noise. In addition, this increase in traffic could contribute to increases in backed-up vehicular traffic on major downtown streets and potential pedestrian/train/vehicle accidents.

The City of Wichita and UP/SP have attempted to negotiate mitigation to address the potential environmental impacts of the proposed merger on the downtown area. To address these impacts, an option considered by the City of Wichita was the use of the BN/Santa Fe route between

Wellington and Topeka to completely bypass Wichita, while UP/SP suggested grade separations at various locations. UP/SP has indicated it intends to consult with BN/Santa Fe about the possibility of operating on its tracks to further ease the highway traffic delays. These tracks are located within the City of Wichita, between approximately 21st Street in the north and Lincoln Street in the south.

As of the date of this Post EA, no resolution has been reached jointly by the City of Wichita, Sedgwick County and UP/SP. Obviously, there are multiple environmental, financial, operational and other issues to be resolved, largely on a local basis. In view of the above, SEA recognizes that mitigation must be imposed pending final resolution by the City of Wichita, Sedgwick and UP/SP.

Given the above factors, SEA recommends that, if the proposed UP/SP merger is approved, the Board impose mitigation that would limit the number of trains passing through Wichita while a specific mitigation plan is developed to address the environmental effects of the additional rail traffic projected as a result of the proposed merger. (See Chapter 5.) During this period, UP/SP would retain an independent third-party consultant to prepare, under the sole direction and supervision of SEA, a specific mitigation plan to address the environmental effects on the City of Wichita of additional rail traffic resulting from the proposed merger. This mitigation replaces the mitigation measures that were recommended in Volume 2 of the EA.

Reno, Nevada (Roseville, CA to Sparks, NV rail line segment)

Prior to and subsequent to the publication of the EA, SEA reviewed the various comments, submissions and reports related to the City of Reno and Washoe County, NV. SEA reviewed UP/SP's submissions and reports and consulted with UP/SP. SEA also conducted ongoing independent analysis, as well as field inspections, which included a site visit in the City of Reno with city officials, emergency response representatives, and casino and other business interests.

Based on all of the information gathered, SEA concludes that the post-merger operations proposed over the Sparks to Roseville rail line segment (Donner Pass route) would pose a safety risk to the City of Reno. In the downtown area, pedestrians must walk across the SP rail line to gain access to hotels, casinos and other tourist-oriented businesses on both sides of the tracks. Vehicular traffic is likewise channeled across the tracks in a highly congested area. Also, homeless and transients occupy the linear space along the tracks.

The existing situation has intensified over the last decade as more and more hotel-casinos have been constructed virtually at the edge of the right-of-way. Casinos and other businesses have purchased from SP portions of the right-of-way, as well as air rights over the tracks, with the

result that structures have been built both adjacent to and above the tracks. The infrastructure now in place along the SP rail line was allowed by the City of Reno. As a result, there is a heavy concentration of pedestrian and vehicular traffic crossing the tracks in the downtown area 24 hours a day, every day of the year. Regardless of the proposed merger, the City of Reno and SP need to address this situation.

The City of Reno and UP/SP have attempted to negotiate mitigation to address the potential environmental impacts of the proposed merger on the downtown area. That impact is projected to be a near doubling of train movements on the SP's Sparks to Roseville rail line, with commensurate increases in locomotive exhaust emissions and repeated horn, engine, and wheel noise (which reverberates between the exterior walls of the hotels that line both sides of the tracks). In addition, this increase in traffic would contribute to increases in backed-up vehicular traffic on major downtown streets and potential pedestrian/train/vehicle accidents.

Options considered by the City of Reno and UP/SP included construction of (1) grade separations and pedestrian overpasses and underpasses; (2) a depressed trainway through the central business district; (3) a new route, instead of the existing route, that would follow the Interstate 80 corridor within the City; and (4) a totally new route outside of the City.

As of the date of this Post EA, no resolution has been reached jointly by the City of Reno and UP/SP. Obviously, there are multiple environmental, financial, operational and other issues to be resolved, largely on a local basis. As an example, the proposed I-80 rail line corridor would involve acquisition of a new right-of-way including privately owned property, construction of tunnels, groundwater impacts, noise and vibration impacts, etc. This project would take an estimated ten years or so to complete, including environmental documentation.

In view of the above, SEA recognizes that mitigation must be imposed pending final resolution by the City of Reno and UP/SP. New rail line construction of the scope now under consideration by the City of Reno is too preliminary to be assessed at this time. If in the future such a project is undertaken, it might very well require the filing of an application with the Board seeking construction and operation authority. The filing of such an application would require that SEA prepare an appropriate environmental document at that time.

Given the above factors, SEA recommends that, if the proposed UP/SP merger is approved, mitigation be imposed to maintain the environmental status quo for a reasonable length of time. Essentially, this mitigation would limit the increase of rail traffic to two additional trains per day for an 18-month period. During this period, UP/SP would retain an independent third-party consultant to prepare, under the sole direction and supervision of SEA, a specific mitigation plan to address

the environmental effects on the City of Reno of additional rail traffic resulting from the proposed merger. This mitigation replaces the mitigation measures that were recommended in Volume 2 of the EA. The recommended mitigation is set forth in Chapter 5.

4.3.12 Rail Yards and Intermodal Facilities

UP/SP has proposed the consolidation of activities at certain rail yards and intermodal facilities at points now served in common by UP and SP. In some cases, this involves phasing out the yards and intermodal facilities of one of the two railroads. At other points, instead of phasing out one rail yard or intermodal facility, the property would be converted to another use.

Full descriptions of these activities are set forth in Volume 2 of the EA. In the Post EA, the location of the rail yards and intermodal facilities are shown in the corridor-by-corridor breakdown in Chapter 2, Section 2.3.

In the EA, a number of cities were identified where air and noise impacts would result from increased activities at rail yards and intermodal facilities. Subsequent investigations, site visits, and analysis have reduced the number of these facilities, as have settlement agreements between UP/SP and certain affected communities. As a result, the mitigation for the remaining rail yard and intermodal facilities in the states of California, Kansas, Illinois, and Texas have been combined into two recommended mitigation measures set forth in Chapter 5 that would require UP/SP to consult with appropriate state and local agencies to develop noise abatement plans.

CHAPTER 5

SEA'S RECOMMENDED MITIGATION

Based on its independent analysis of the proposed merger, review of available information, and consideration of all the environmental comments, SEA recommends that any final decision of the Board approving the proposed merger and related abandonments and construction projects be subject to the mitigation measures set forth in this chapter. Section 1 presents SEA's recommended systemwide mitigation measures. These measures would apply to affected rail line segments, rail yards, intermodal facilities, construction sites. Section 2 presents mitigation measures that apply to major transportation operating corridors. Sections 3 through 6 present general and location-specific recommended mitigation measures for rail line segments, rail yards, intermodal facilities, proposed abandonments, and rail construction projects.

SEA has modified some mitigation measures recommended in the EA and added new measures to reflect concerns raised by comments on the EA and/or the results of additional agency consultations and analysis conducted by SEA. In some cases, location-specific mitigation measures previously recommended in the EA have been replaced with systemwide mitigation measures. In some locations, mitigation recommended in the EA is no longer appropriate based on SEA's further analyses or negotiations of mitigation plans (Memoranda of Understanding) between UP/SP and a particular jurisdiction.

SEA notes that it consulted with UP/SP regarding mitigation measures that UP/SP would voluntarily undertake to address environmental issues, although these measures would extend beyond the Board's jurisdiction. As a result of these consultations, UP/SP has agreed to undertake for this specific merger certain mitigation measures that are outside the Board's normal conditioning authority. This mitigation pertains to such measures as law enforcement activities.

The recommended mitigation measures are categorized as follows: (1) "Systemwide", (2) "Corridor-Specific", (3) "Rail Line Segments", (4) "Rail Yards and Intermodal Facilities", (5) "Proposed Abandonments", and (6) "Construction Projects". For the convenience of the reader, these mitigation measures are numbered sequentially.

1. SYSTEMWIDE MITIGATION

The following mitigation measures address potential environmental impacts as a result of the proposed merger. These measures apply to rail line segments, rail yards, intermodal facilities, and rail line construction projects on new right-of-way.

1. UP/SP shall adopt UP's existing formula-based standards for track inspection for all rail lines of the merged system, which will increase the frequency of inspections on SP rail lines.
2. UP/SP shall adopt UP's existing tank car inspection programs for all appropriate facilities on the merged system.
3. For all highway grade crossing signals, UP/SP shall provide visible instructions designating an 800 number to be called if signal crossing devices malfunction.
4. UP/SP shall provide 800 numbers to all emergency response forces in all communities. These numbers shall provide access to UP/SP supervisors who shall provide train movement information and work cooperatively with communities in emergency situations. These numbers are not to be disclosed to the general public.
5. UP/SP shall participate on a systemwide basis in the TRANSCARE program to develop hazardous material and emergency response plans in cooperation with communities.
6. UP/SP shall redistribute personnel to respond to hazardous materials emergencies in unprotected areas on the SP rail lines, such as in Arizona, New Mexico, and West Texas.
7. UP/SP shall adopt UP's training program for community and emergency response personnel for locations on the SP rail lines, and include personnel from SP served locations in UP's school at Pueblo, Colorado for additional emergency response training.
8. UP/SP shall adopt existing UP training and operating practices that are designed to reduce locomotive fuel consumption and air pollution. These include: throttle modulation, use of dynamic braking, increased use of pacing and coasting trains, isolating unneeded horsepower, shutting down locomotives when not in use for more than an hour when temperatures are above 40 degrees, and maintaining and upgrading SP locomotives to UP standards.
9. As suggested by UP/SP, UP/SP shall extend to SP rail lines UP's program of closing boxcar doors on empty cars before movement on the system in order to reduce wind resistance and, thereby, fuel consumption.
10. As suggested by UP/SP, UP/SP shall use its own security forces to conduct its own arrests and bookings, reducing reliance on local police forces.

16. To address noise impacts, UP/SP shall consult with the affected counties that have communities that would experience an increase of 3 dBA or more as a result of the increased rail traffic over rail lines in the states of California, Colorado, Illinois, Kansas, Louisiana, Nebraska, Nevada, Oklahoma, and Texas. If appropriate, the UP/SP shall develop a noise abatement plan. UP/SP shall submit the result of these consultations to SEA who will review these findings with FRA.

Specific

SEA recommends the following mitigation measures for specific rail line segments within the Central, Southern, and Illinois-Gulf Coast Corridors.

17. UP/SP shall give priority to equipping key trains, as defined by Union Pacific Railroad Form 8620, on the corridor segments listed below with two-way end of train devices. This requirement also applies to BN/Santa Fe key trains operating between Iowa Junction, LA and Avondale, LA.
- **Central Corridor**
 - North Platte, NE to Oakland, CA (UP and SP).
 - Cheyenne, WY to Denver, CO (UP).
 - **Southern Corridor**
 - Houston, TX to Avondale (New Orleans), LA (SP).
 - Iowa Junction, LA to Avondale, LA via Kinder and Livonia (UP).
 - Houston, TX to West Colton, CA (SP).
 - **Illinois-Gulf Coast Corridor**
 - St. Louis, MO, and East St. Louis/Salem, IL to Houston, TX and Avondale, LA (UP and SP).

3. RAIL LINE SEGMENT MITIGATION

General

SEA recommends the following mitigation measures with respect to all of the rail line segments in the states identified below.

18. UP/SP shall consult with the states and appropriate local officials as well as FRA to develop a priority list for upgrading grade crossing signals, where necessary, due to increases in rail traffic resulting from the proposed merger. This process shall be undertaken for all rail line segments in the States of Arkansas, California, Colorado, Kansas, Nevada, Oregon, and Texas. UP/SP shall advise SEA as to the status and the results of these consultations.

11. UP/SP shall convert all railroad locomotives to the standards for visible smoke reduction that are established in the South Coast Air Quality Basin.
12. UP/SP shall adopt UP's existing policy of using head-hardened rail on curves in mountainous territory for SP rail lines to promote safer operations.
13. UP/SP shall comply with all applicable FRA rules and regulations in conducting rail operations on the merged systems.

2. CORRIDOR MITIGATION

General

SEA recommends the following mitigation measures for the Central, Southern, Northern, Illinois-Gulf Coast, and Pacific Coast (I-5) Corridors.

14. UP/SP shall implement the draft emissions standards for diesel-electric railroad locomotives that the Environmental Protection Agency has developed. It is SEA's understanding that EPA plans to propose these standards and plans to make them available for public comment in December, 1996. Under these standards, UP/SP shall utilize newly manufactured or re-built locomotives that are more fuel efficient and produce less emissions. When this equipment becomes available, UP/SP shall assign these locomotives on a priority basis to the corridors or portions thereof specified below:

- **Southern Corridor:**
 - Fort Worth, TX to West Colton, CA.
- **Central Corridor:**
 - Cheyenne, WY to Hinkle, OR.
 - Chicago, IL to Fremont, NE.
 - Ogden, UT to Roseville, CA.
 - Denver, CO to Grand Junction, CO.
- **Pacific Coast (I-5) Corridor:**
 - Seattle, WA to West Colton, CA.
 - Sacramento, CA to Bakersfield, CA.

15. To further facilitate the improvement of air quality for specific locations, UP/SP shall consult with appropriate state and local air quality officials in the states of Arizona, California, Colorado, Illinois, Nevada, Oregon, Texas, Washington, and Wyoming, through which the Pacific (I-5), Southern, Central, and Northern Corridors extend in part.

Specific

SEA recommends the following detailed mitigation measures for the specific rail line segments and/or locations identified below.

Martinez, California to Oakland, California

East Bay Regional Park District

19. UP/SP shall comply with the terms of the Memorandum of Understanding upon execution with the East Bay Regional Park District and UP/SP.

Roseville, California to Sparks, Nevada

Town of Truckee

20. UP/SP shall comply with the terms of the Memorandum of Understanding executed with the Town of Truckee and UP/SP.

Placer County

21. UP/SP shall comply with the terms of the Memorandum of Understanding upon execution with Placer County and UP/SP.

City of Reno

- 22a. UP/SP shall operate no more than a daily average count of 15.8 trains per day through the City of Reno. (This reflects the Base Year daily average of 13.8 trains plus 2 additional trains.) The addition of two trains per day does not exceed the Board's threshold for environmental analysis at 49 CFR 1105.7(5)(ii). The 15.8 average train count per day does not include the following types of movements: (1) maintenance-of-way trains, (2) light locomotive movements, (3) local and industry switching train movements, (4) emergency trains operated under detour authority, for snow removal, for fire or other natural disaster purposes, and wreck removal purposes. This condition will be effective upon consummation of the proposed merger and continue in effect for 18 calendar months in total.
- 22b. For the purpose of monitoring the preceding condition, UP/SP shall file with the Board verified copies of station passing reports of train movements through Reno, NV, for each day of each preceding month in the specified 18-month period. These reports shall also identify those train movements, specified in the above condition, that are excluded from the 15.8 trains per day average count .

- 22c. Upon issuance of a decision by the Board approving the proposed merger, UP/SP, in consultation with and subject to the approval of SEA, shall retain an independent third party consultant to prepare a specific mitigation plan to address the environmental effects on the City of Reno of the additional rail traffic projected as a result of the proposed merger. This study shall be prepared under the sole direction and supervision of SEA. It shall include final mitigation measures based on a study of the railway, highway, and pedestrian traffic flows and associated environmental effects on the City of Reno. These environmental effects would include, but not be limited to, safety, hazardous materials transport, air quality, noise and water quality. UP/SP shall comply with the final mitigation plan developed under this study.

The study, which shall be completed within 18 months, shall include the following:

- Projected post-merger increases in rail traffic on the Sparks to Roseville line segment.
- Consultations with the City of Reno, Washoe County, the Federal Railroad Administration, and other appropriate Federal, state and local agencies.
- Consultations with UP/SP.
- Review of all existing information and studies including those prepared by the City of Reno, Washoe County and UP/SP.
- Independent analyses.
- With respect to vehicular and pedestrian safety, mitigation measures that identify the number and location of highway/rail grade separations and rail/pedestrian grade separations in downtown Reno.

- 22d. In the event UP/SP and the City of Reno and other appropriate parties reach agreement on a final mitigation plan, UP/SP and the City of Reno shall immediately notify SEA, and SEA will take appropriate action consistent with such an agreement.

Chickasha, Oklahoma to Wichita, Kansas

City of Wichita, Kansas

- 23a. UP/SP shall operate no more than a daily average count of 6.4 trains per day through the City of Wichita. (This reflects the Base Year daily average of 4.4 trains plus 2 additional trains.) The addition of two trains per day essentially maintains the environmental status quo. The 6.4 average train count per day does not include the following types of movements: (1) maintenance-of-way trains, (2) light locomotive movements, (3) local and industry switching train movements, (4) emergency trains operated under detour authority, for snow removal, for fire or other natural disaster purposes, and wreck removal purposes.

This condition will be effective upon consummation of the merger and continue in effect for 18 calendar months in total.

23b. For the purpose of monitoring the preceding condition, UP/SP shall file with the Board verified copies of station passing reports of train movements through Wichita, KS for each day of each preceding month in the specified 18-month period. These reports shall also identify those train movements, specified in the above condition, that are excluded from the 6.4 trains per day average count.

23c. Upon issuance of a decision by the Board approving the proposed merger, UP/SP, in consultation with and subject to the approval of SEA, shall retain an independent third party consultant to prepare a study to address the potential environmental effects on the City of Wichita of the additional rail traffic projected as a result of the proposed merger. This study shall be prepared under the sole direction and supervision of SEA. It shall include a final mitigation plan based on a study of the railway, highway, and pedestrian traffic flows and associated environmental effects on the City of Wichita. These environmental effects would include, but not be limited to, safety, hazardous materials transport, air quality, noise and water quality. UP/SP shall comply with the final mitigation plan developed under this study.

The study, which shall be completed within 18 months, shall include the following:

- Projected post-merger increases in rail traffic on the Chickasha to Wichita line segment.
- Consultations with the City of Wichita, Sedgwick County, the Federal Railroad Administration, and other appropriate Federal, state and local agencies.
- Consultations with UP/SP.
- Review of all existing information and studies including those prepared by the City of Wichita, Sedgwick County and UP/SP.
- Feasibility of a bypass route.
- With respect to vehicular and pedestrian safety, mitigation measures that identify the number and location of highway/rail grade separations in Wichita.

23d. In the event UP/SP and the City of Wichita and other appropriate parties reach agreement on a final mitigation plan, UP/SP and the City of Wichita shall immediately notify SEA, and SEA will take appropriate action consistent with such an agreement.

4. RAIL YARDS AND INTERMODAL FACILITIES

24. UP/SP shall consult with appropriate state and local agencies to develop noise abatement plans for rail yards in the following cities: Herington, Kansas; Salem, Illinois; and Bellmead, Texas. UP/SP shall advise SEA of the results of these consultations and provide SEA with a copy of any resulting noise abatement plans.
25. To further facilitate the improvement of air quality in the States of California and Illinois, UP/SP shall consult with appropriate state and local air quality officials concerning the intermodal facilities in East Los Angeles, California and the Global II and Canal Street intermodal facilities in Chicago, Illinois.

5. ABANDONMENTS

The following 17 proposed abandonments and four related discontinuances are subject to the mitigation specified below:

- Gurdon to Camden, Arkansas (UP) - Docket No. AB-3 (Sub-No. 129x).
- Whittier Junction to Colima Junction, California (UP) - Docket No. AB-33 (Sub-No. 93x).
- Magnolia Tower to Melrose, California (UP) - Docket No. AB-33 (Sub-No. 94x).
- Alturas to Wendel, California (SP) - Docket No. AB-12 (Sub-No. 184x).
- Sage to Leadville, Colorado (SP):
 - Docket No. AB-12 (Sub-No. 189x) - SP Abandonment.
 - Docket No. AB-8 (Sub-No. 36x) - Discontinuance of Service by D&RGW.
- Malta to Cañon City, Colorado (SP):
 - Docket No. AB-12 (Sub-No. 188) - SP Abandonment.
 - Docket No. AB-8 (Sub-No. 39) - Discontinuance of Service by D&RGW.
- Towner to NA Junction, Colorado (UP):
 - Docket No. AB-3 (Sub-No. 130) - Abandonment by UP.
 - Docket No. AB-8 (Sub-No. 38) - Discontinuance of Service by D&RGW.
- Edwardsville to Madison, Illinois (UP) - Docket No. AB-33 (Sub-No. 98x).
- DeCamp to Edwardsville, Illinois (UP) - Docket No. AB-33 (Sub-No. 97x).
- Barr to Girard, Illinois (UP) - Docket No. AB-33 (Sub-No. 96).
- Whitewater to Newton, Kansas (UP) - Docket No. AB-3 (Sub-No. 132x).
- Hope to Bridgeport, Kansas (UP):
 - Docket No. AB-3 (Sub-No. 131) - UP Abandonment.
 - Docket No. AB-8 (Sub-No. 37) - Discontinuance of Service by D&RGW.
- Iowa Junction to Manchester, Louisiana (UP) - Docket No. AB-3 (Sub-No. 133x).
- Seabrook to San Leon, Texas (SP) - Docket No. AB-12 (Sub-No. 187x).
- Suman to Benchley, Texas (SP) - Docket No. AB-12 (Sub-No. 185x).
- Troup to Whitehouse, Texas (UP) - Docket No. AB-3 (Sub-No. 134x).

- Little Mountain Junction to Little Mountain, Utah (UP) - Docket No. AB-33 (Sub-No. 99x).

General

At all proposed abandonment locations, the general mitigation measures listed below are recommended to reduce or avoid potential environmental impacts.

26. UP/SP shall observe all applicable Federal, state, and local regulations regarding handling and disposal of any waste materials, including hazardous waste, encountered or generated during salvage of the proposed rail line.
27. UP/SP shall dispose of all materials that cannot be reused in accordance with state and local solid waste management regulations.
28. UP/SP shall restore any adjacent properties that are disturbed during right-of-way salvaging activities to pre-salvaging conditions.
29. Before undertaking any salvage activities, UP/SP shall consult with any potentially affected American Indian Tribes adjacent to, or having a potential interest in, the right-of-way.
30. UP/SP shall use Best Management Practices to encourage regrowth in disturbed areas and to stabilize disturbed soils.
31. UP/SP shall use appropriate signs and barricades to control traffic disruptions during salvage operations at or near grade crossings.
32. UP/SP shall restore roads disturbed during salvage activities to conditions as required by state or local jurisdictions.
33. UP/SP shall comply with all applicable Federal, state, and local regulations regarding the control of fugitive dust. Fugitive dust emissions created during salvage operations shall be minimized by using such control methods as water spraying, installation of wind barriers, and chemical treatment during salvaging.
34. UP/SP shall control temporary noise from salvage equipment through the use of work hour controls and maintenance of muffler systems on machinery.

35. If previously unknown archaeological remains are found during salvage operations, UP/SP shall cease work in the area and immediately contact the appropriate State Historic Preservation Officer.
36. As appropriate, UP/SP shall use appropriate technologies, such as silt screens, to minimize soil erosion during salvaging. UP/SP shall disturb the smallest area possible around streams and tributaries and shall revegetate disturbed areas immediately following salvage operations.
37. As appropriate, UP/SP shall transport all hazardous materials generated by salvage activities in compliance with U.S. Department of Transportation Hazardous Materials Regulations (49 CFR Parts 171 to 180).
38. As appropriate, UP/SP shall assure that all culverts are clear from debris to avoid potential flooding and stream flow alteration, in accordance with Federal, state and local regulations.
39. As appropriate, UP/SP shall obtain all necessary Federal, state, and local permits if salvaging activities require the alteration of wetlands, ponds, lakes, streams, or rivers, or if these activities would cause soil or other materials to wash into these water resources. UP/SP shall use appropriate techniques to minimize impacts to water bodies and wetlands, such as positioning salvaging equipment on barges, matting, or skids.

Specific

The following mitigation measures are specifically recommended for the abandonment under which they appear.

Gurdon to Camden, Arkansas (UP) - Docket No. AB-3 (Sub-No. 129x)

40. UP/SP shall limit salvage activities within 1,000 feet of residences to daytime hours to mitigate noise impacts on nearby receptors.
41. To further assess the potential occurrence of threatened and endangered plants, UP/SP shall coordinate with U.S. Fish & Wildlife Service and the Arkansas Department of Game and Fish, prior to salvage activities, to determine whether surveys of vegetation types in areas of potential disturbance due to salvage activities are needed and shall conduct any such surveys during an appropriate time of year.

42. UP/SP shall retain its interest in and take no steps to alter the through-plate girder bridge at MP 436.70, until the Section 106 process of the National Historic Preservation Act (16 USC 470f., as amended) has been completed for this structure.
43. Prior to the start of salvage operations in the vicinity of the three Emergency Response Notification System (hazardous waste) spill sites, UP/SP shall contact the Arkansas Pollution Control and Ecology Department, Hazardous Waste Division, to confirm that remediation has been completed to agency satisfaction.

Whittier Junction to Colima Junction, California (UP)
Docket No. AB-33 (Sub-No. 93x)

No specific mitigation is recommended.

Magnolia Tower to Melrose, California (UP) - Docket No. AB-33 (Sub-No. 94x)

44. UP/SP shall retain their interest in and take no steps to alter the Magnolia Tower or WP Oakland Depot until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended) has been completed for these structures.

Alturas to Wendel, California (SP) - Docket No. AB-12 (Sub-No. 184x)

45. UP/SP shall retain its interest in and take no steps to alter the integrity of the 9 eligible and 11 potentially eligible prehistoric sites along this abandonment until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended) has been completed for these sites.

Sage to Leadville, Colorado (SP)

Docket No. AB-12 (Sub-No. 189x) - SP Abandonment

Docket No. AB-8 (Sub-No. 36x) - Discontinuance of Service by D&RGW

46. A Water Pollution Control Act permit under 35 U.S.C. 1251 et. seq., may be required prior to salvage of the portion of the rail line near the Eagle River. Prior to salvage activities, UP/SP shall contact the Colorado Department of Public Health and Environment, Water Quality Division, to determine if any permits are required and take the steps to secure these permits.

47. UP/SP shall retain their interest in and take no steps to alter the historic integrity of the D&RGW branch line in its entirety from Sage to Leadville until the Section 106 process of the National Historic Preservation Act (16 USC 470f., as amended) has been completed.
48. UP/SP shall consult with Colorado Department of Public Health and Environment and U.S. EPA Region 8 prior to conducting any salvage activity, develop a risk assessment and remediation plan, if required, in consultation with CDPHE and EPA, and provide SEA with a copy of an EPA-approved plan for the California Gulch and Eagle Mine Superfund sites.
49. UP/SP shall provide continued access for Viacom International, Inc. to the Eagle Mine site to facilitate ongoing remediation activities.

Malta to Cañon City, Colorado (SP)

Docket No. AB-12 (Sub-No. 188) - SP Abandonment.

Docket No. AB-8 (Sub-No.39) - Discontinuance of Service by D&RGW

50. To further assess the potential occurrence of the five threatened and endangered species of plants and animals, UP/SP shall coordinate with U.S. Fish & Wildlife Service and the Colorado Department of Natural Resources to determine if surveys in areas of potential disturbance due to salvage activities are needed and shall conduct any such surveys during an appropriate time of the year.
51. UP/SP shall retain its interest in, and take no steps to alter the historic integrity of the SP line in its entirety, including the Hanging Bridge and Royal Gorge War Revetments, until completion of the Section 106 Process of the National Historic Preservation Act (16 USC 470f., as amended).
52. UP/SP shall consult with Colorado Department of Public Health and Environment and U.S. EPA Region 8 prior to conducting any salvage activity, develop a risk assessment and remediation plan, if required, in consultation with CDPHE and EPA, and provide SEA with a copy of an EPA-approved plan.

Towner to NA Junction, Colorado (UP)

Docket No. AB-3 (Sub-No. 130) - Abandonment by UP

Docket No. AB-8 (Sub-No. 38) - Discontinuance of Service by D&RGW

53. To further assess the potential occurrence of the seven threatened and endangered species of plants and animals, UP/SP shall coordinate with U.S. Fish & Wildlife Service and the Colorado Department of Natural Resources to determine if surveys in areas of potential

disturbance due to salvage activities are needed and shall conduct any such surveys during an appropriate time of the year.

54. UP/SP shall consult with the Colorado Department of Public Health and Environment to confirm that assessment and remediation has been completed to the agency's satisfaction.

Edwardsville to Madison, Illinois (UP) - Docket No. AB-33 (Sub-No. 98x)

55. Prior to the start of abandonment activities in the vicinity of any known hazardous waste sites, UP/SP shall consult with the Illinois Environmental Protection Agency to assess procedures necessary to address issues related to the sites.

DeCamp to Edwardsville, Illinois (UP) - Docket No. AB-33 (Sub-No. 97x)

56. UP/SP shall retain its interest in and take no steps to alter the historic integrity of the one historic bridges until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended) is completed.

Barr to Girard, Illinois (UP) - Docket No. AB-33 (Sub-No. 96)

57. UP/SP shall retain its interest in and take no steps to alter the historic integrity of the three historic bridges until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended) is completed.

Whitewater to Newton, Kansas (UP) - Docket No. AB-3 (Sub-No. 132x)

No specific mitigation is recommended.

Hope to Bridgeport, Kansas (UP)

Docket No. AB-3 (Sub-No. 131) - UP Abandonment

Docket No. AB-8 (Sub-No. 37) - Discontinuance of Service by D&RGW

No specific mitigation is recommended.

Iowa Junction to Manchester, Louisiana (UP) - Docket No. AB-3 (Sub-No. 133x)

No specific mitigation is recommended.

Seabrook to San Leon, Texas (SP) - Docket No. AB-12 (Sub-No. 187x)

58. U.S. Fish & Wildlife Service indicated a possible desire to obtain permission to determine if Windmill-grass is present along the rail line. Should U.S. Fish & Wildlife Service follow up with such a request, UP/SP shall cooperate in granting the necessary authorizations.
59. UP/SP shall retain its interest in and take no steps to alter the historic integrity of the through-plate girder bridges at MPs 31.99 and 38.77 until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended), has been completed for these structures.
60. UP/SP shall continue Section 106 consultation with the Texas State Historic Preservation Officer to determine the need and extent of a recovery and treatment program for the three known archaeological sites along this segment.
61. Prior to the start of abandonment activities in the vicinity of any known hazardous waste sites, UP/SP shall contact the Texas Natural Resources Conservation Commission, Waste Management Office, to assess procedures necessary to address issues related to the sites.
62. UP/SP shall limit construction work within 1,000 feet of residences to daytime hours to mitigate noise impacts on nearby receptors.

Suman to Benchley, Texas (SP) - Docket No. AB-12 (Sub-No. 185x)

63. To further assess the potential occurrence of Navasota Ladies'-tresses (*Spiranthes parksii*), a federally listed endangered species, UP/SP shall conduct a survey and consult with the US Fish & Wildlife Services and the Texas Parks and Wildlife Department prior to salvage operations to determine if this species is present in any areas to be cleared or modified by the proposed abandonment.
64. UP/SP shall continue Section 106 consultation with the Texas State Historic Preservation Officer to determine the need and extent of a recovery and treatment program for the known archaeological site.
65. Prior to the start of abandonment activities in the areas containing copper slag ballast, UP/SP shall contact the Texas Natural Resources Conservation Commission, Waste Management Office, as required to assess procedures necessary to address issues related to the sites.

66. UP/SP shall retain its interest and take no steps to alter the historic integrity of the three deck plate girder bridges at MPs 109.73, 112.96, and 117.55, until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended) has been completed for these structures.

Troup to Whitehouse, Texas (UP) - Docket No. AB-3 (Sub-No. 134x)

67. Prior to the start of abandonment activities in the vicinity of any known hazardous waste sites, UP/SP shall contact the Texas Natural Resources Conservation Commission, Waste Management Division, and other appropriate agencies as necessary to assess procedures for addressing issues related to the sites.

**Little Mountain Junction to Little Mountain, Utah (UP)
Docket No. AB-33 (Sub-No. 99x)**

No specific mitigation is recommended.

6. CONSTRUCTION PROJECTS

General

SEA recommends the following mitigation measures at all new construction sites not on existing right-of-way. The following mitigation measures also apply to the new construction projects that result from the BN/Santa Fe settlement agreement.

68. UP/SP shall observe all applicable Federal, state, and local regulations regarding handling and disposal of any waste materials, including hazardous waste, encountered or generated during construction of the proposed rail line connection.
69. UP/SP shall dispose of all materials that cannot be reused in accordance with state and local solid waste management regulations.
70. UP/SP shall consult with the appropriate Federal, state and local agencies if hazardous waste and/or materials are discovered at the site.
71. UP/SP shall transport all hazardous materials in compliance with U.S. Department of Transportation Hazardous Materials Regulations (49 CFR Parts 171 to 180). UP/SP shall provide, upon request, local emergency management organizations with copies of all

applicable Emergency Response Plans and participate in the training of local emergency staff for coordinated responses to incidents. In the case of a hazardous material incident, UP/SP shall follow appropriate emergency response procedures contained in its Emergency Response Plans.

72. UP/SP shall use appropriate signs and barricades to control traffic disruptions during construction.
73. UP/SP shall restore roads disturbed during construction to conditions as required by state or local jurisdictions.
74. UP/SP shall obtain all necessary Federal, state, and local permits if construction activities require the alteration of wetlands, ponds, lakes, streams, or rivers, or if these activities would cause soil or other materials to wash into these water resources. UP/SP shall use appropriate techniques to minimize impacts to water bodies and wetlands.
75. UP/SP shall use Best Management Practices to control erosion, runoff, and surface instability during construction, including seeding, fiber mats, straw mulch, plastic liners, slope drains, and other erosion control devices. Once the track is constructed, UP/SP shall establish vegetation on the embankment slope to provide permanent cover and prevent potential erosion. If erosion develops, UP/SP shall take steps to develop other appropriate erosion control procedures. UP/SP shall use Best Management Practices to encourage regrowth in disturbed areas and to stabilize disturbed soils.
76. UP/SP shall use only EPA-approved herbicides and qualified contractors for application of right-of-way maintenance herbicides, and shall limit such application to the extent necessary for rail operations.
77. UP/SP shall comply with all applicable Federal, state, and local regulations regarding the control of fugitive dust. Fugitive dust emissions created during construction shall be minimized by using such control methods as water spraying, installation of wind barriers, and chemical treatment.
78. UP/SP shall control temporary noise from construction equipment through the use of work hour controls and maintenance of muffler systems on machinery.
79. UP/SP shall restore any adjacent properties that are disturbed during construction activities to their pre-construction conditions.

80. Before undertaking any construction activities, UP/SP shall consult with any potentially affected American Indian Tribes adjacent to, or having a potential interest in, the right-of-way.
81. In those cases where historic resources would be adversely affected, UP/SP shall not undertake construction activities until the Section 106 of the National Historic Preservation Act (16 U.S.C. 470f., as amended) review process is completed. If previously undiscovered archaeological remains are found during construction, UP/SP shall cease work and immediately contact the State Historic Preservation Officer to initiate the appropriate Section 106 process.

Specific

SEA recommends the following mitigation measures for the specific construction sites identified below.

Arkansas - Camden

82. UP/SP shall restrict mechanized equipment to upland areas to complete construction activities. UP/SP shall obtain and comply with all applicable permits for any construction activity within streams or wetlands. Also, UP/SP shall submit its final construction plans to appropriate state and local agencies for review.
83. Prior to construction, UP/SP shall provide final plans to the Arkansas DOT and appropriate local agencies for review.

Arkansas - Fair Oaks

84. Prior to construction, UP/SP shall provide final plans to the Arkansas DOT and appropriate local agencies for review.

Arkansas - Pine Bluff (East)

85. Prior to construction, UP/SP shall provide final plans to the Arkansas DOT and appropriate local agencies for review.

Arkansas - Pine Bluff (West)

86. Prior to construction, UP/SP shall provide final plans to the Arkansas DOT and appropriate local agencies for review.

Arkansas - Texarkana

87. Prior to construction, UP/SP shall provide final plans to the Arkansas DOT and appropriate local agencies for review.

California - Lathrop

88. UP/SP shall retain its interest in and take no steps to alter the historic integrity of the Sharpe Army Depot, until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended) has been completed for this property.

California - Stockton (E' Piñal)

89. UP/SP shall monitor noise resulting from train operations over the connection and implement mitigation measures to control excessive wheel squeal.

California - West Colton (UP to SP)

No specific mitigation is recommended.

California - West Colton (SP to UP)

No specific mitigation is recommended.

Colorado - Denver (Utah Jct.)

90. UP/SP shall retain its interest in and take no steps to alter the historic integrity of the North Yard water tower, until the Section 106 process of the National Historic Preservation Act (16 U.S.C. 470f., as amended) has been completed for this property.

Colorado - Denver

91. In and near the South Platte River and associated wetland areas, UP/SP shall restrict mechanized equipment to the area required to complete construction activities.
92. UP/SP shall perform hydrologic and hydraulic analyses for any modifications to the South Platte River bridge, to ensure the changes would have no effect on the 100-year floodplain.
93. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.

Illinois - Girard

94. UP/SP shall consult with the District Soil Scientist of the U.S. Department of Agriculture, Natural Resources Conservation Service, for recommendations to reduce impacts to prime farmland soils.
95. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.

Illinois - Salem

96. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.

Kansas - Hope

97. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.

Louisiana - Kinder

98. In and near the areas of Kinder Ditch and the fringe wetlands, UP/SP shall restrict mechanized equipment to the area required to complete construction activities.
99. UP/SP shall design all drainage structures to maintain existing flows for the Kinder Ditch.

Louisiana - Shreveport

- 100. UP/SP shall coordinate the design and construction of the U.S. Highway I-71 overpass pier replacement with the Louisiana Department of Transportation and the Louisiana Division of the Federal Highway Administration.
- 101. UP/SP shall monitor noise resulting from trains operating over the curved section of the connection and implement mitigation measures to control excessive wheel squeal.
- 102. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.

Missouri - Dexter

- 103. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.
- 104. In and near the two small wetland areas, UP/SP shall restrict mechanized equipment to the area required to complete construction activities.

Missouri - Paront

- 105. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.
- 106. In and near the wetland areas, UP/SP shall restrict mechanized equipment to the upland areas to complete construction activities.
- 107. UP/SP shall coordinate with the Missouri Department of Conservation prior to final design of the project to avoid adverse impacts to the state-endangered gold-striped darter. UP/SP shall not conduct in-stream construction activities during the breeding season of this species.

Texas - Carrollton

- 108. UP/SP shall monitor noise from train operations over the new connection and implement mitigation measures to control excessive wheel squeal.

Texas - West Point

No specific mitigation is recommended.

Texas - Houston (Tower 26)

109. UP/SP shall monitor noise resulting from train operations over the new connection and implement mitigation measures to control excessive wheel squeal.

Texas - Houston (Tower 87)

110. UP/SP shall store all construction equipment, petroleum products, and other hazardous materials outside the area of the 100-year floodplain.
111. Prior to construction, UP/SP shall consult with the Army Corps of Engineers and obtain and comply with any permits under Section 404 of the Clean Water Act.

Texas - Houston (SP to UP)

112. UP/SP shall monitor noise resulting from train operations over the new connection and implement mitigation measures to control excessive wheel squeal.

Texas - Fort Worth (Ney Yard)

113. UP/SP shall monitor noise resulting from train operations over the new connection and implement mitigation measures to control excessive wheel squeal.

Texas - Fort Worth (UP to SP)

114. UP/SP shall monitor noise resulting from train operations over the new connection and implement appropriate mitigation measures to control excessive wheel squeal.

Mitigation Measures That Result from the BN/Santa Fe Settlement Agreement

Richmond, California

No specific mitigation is recommended.

Stockton, California

No specific mitigation is recommended.

Robstown, Texas

No specific mitigation is recommended.

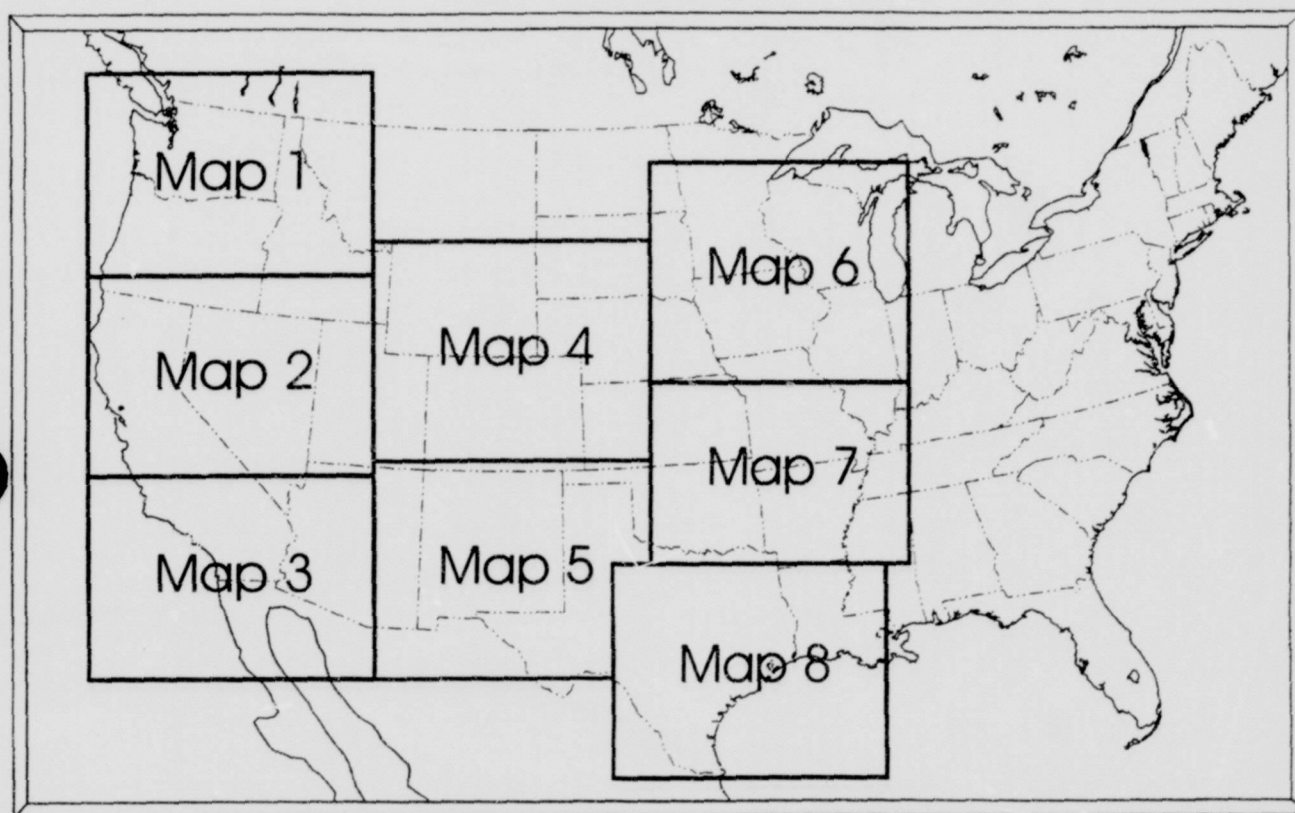
PROJECT MAPS



PROJECT MAPS

The eight maps on the following pages indicate the locations of the project activities that are discussed in the EA and Post-EA documents. Project activities include: rail segments, intermodal facilities, rail yards, abandonments and constructions on new rights-of-way. The nomenclature of each activity as used in the documents is indicated on the maps (i.e., names of rail yards). Due to the small size of the construction projects relative to the scale of the maps, these sites are indicated by green arrows and described in the table at the bottom of this page.

Key to Maps



Key to Construction Projects




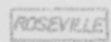
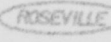

AR-C-8	Camden, Arkansas	IL-C-55	Salem, Illinois
AR-C-11	Fair Oaks, Arkansas	KS-C-68	Hope, Kansas
AR-C-9/10	Pine Bluff, Arkansas (2 projects)	LA-C-86	Kinder, Louisiana
AR-C-6	Texarkana, Arkansas	LA-C-88	Shreveport, Louisiana
CA-C-19/20	West Colton, California (2 projects)	MO-C-96	Dexter, Missouri
CA-C-30	Lathrop, California	MO-C-97	Paront, Missouri
CA-C-31	Stockton, California (2 projects)	TX-C-145	West Point, Texas
CA-C-193	Richmond, California	TX-C-146/147/148	Houston, Texas (3 projects)
CO-C-38	Denver, Colorado	TX-C-157/158	Fort Worth, Texas (2 projects)
CO-C-39	Denver (Pulman), Colorado	TX-C-186	Carrollton, Texas
IL-C-47	Girard, Illinois	TX-C-194	Robstown, Texas

PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

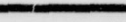
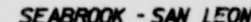
(FINANCE DOCKET NO. 32760)

COMPOSITE - MAP # 1


EXCEEDS STB THRESHOLDS

-  RAIL SEGMENT
AIR QUALITY ONLY
-  RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
-  RAIL SEGMENT
AIR QUALITY AND NOISE
-  INTERMODAL FACILITY
-  RAIL YARD
-  END POINTS - RAIL LINE SEGMENTS

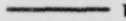
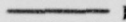
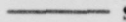




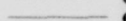
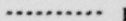
ABANDONMENTS

-  ABANDONMENTS
-  SEABROOK - SAN LEON END POINTS

CONSTRUCTION LOCATIONS

-  CONSTRUCTION PROJECTS
REQUIRING NEW R/W
- (SEE ACCOMPANYING LEGEND)

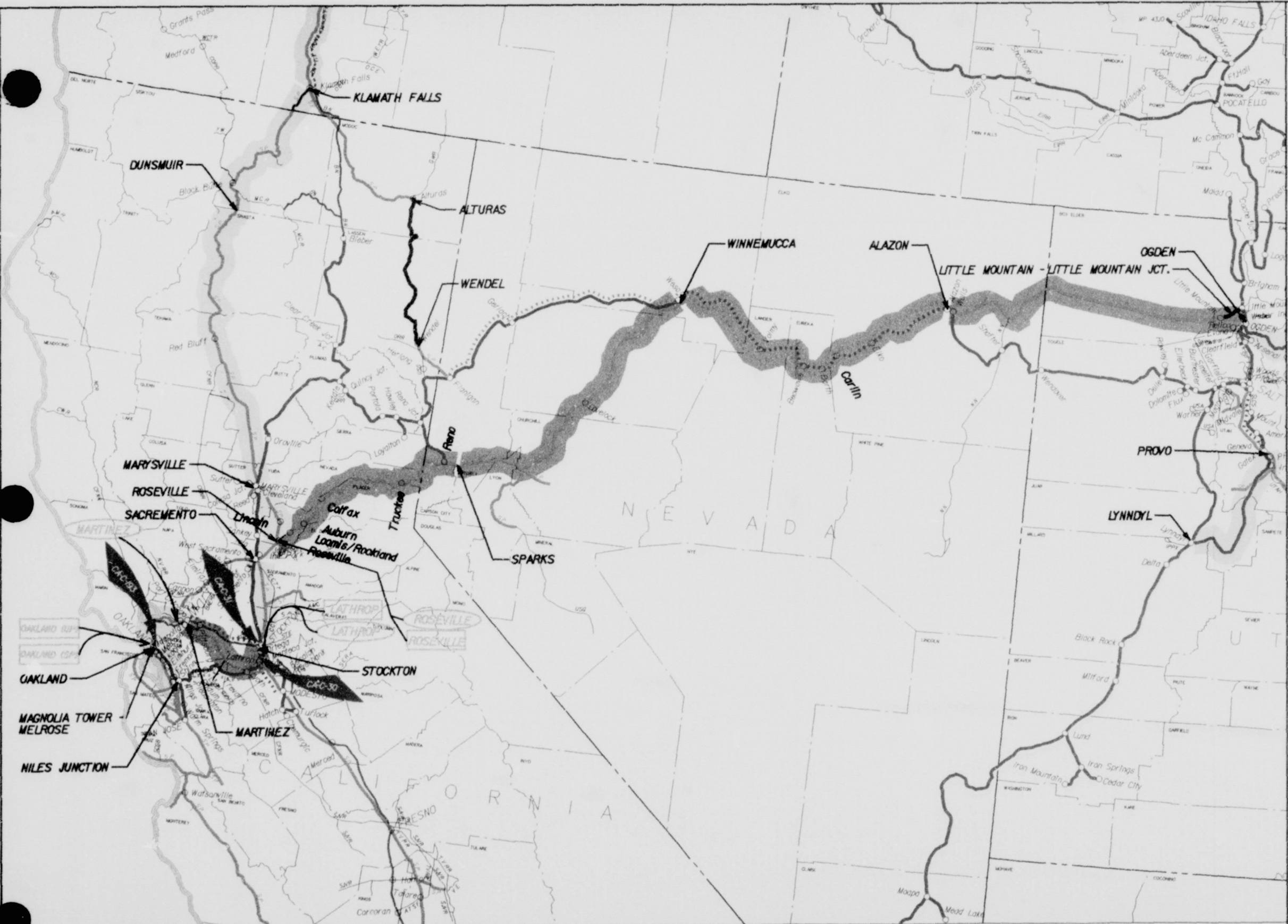
SECTION 1180.62(X6) LINES OF APPLICANT CARRIERS AND OTHER WESTERN RAILROADS

-  UP
-  BN/SANTA FE
-  SP
-  KCS
-  IC
-  CP
-  CN
-  OTHER RAILROADS
-  DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE

SEE COMPOSITE - MAP #2

SCALE : 1 INCH = 50 MILES

DATE : 6 / 13 / 96



PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

(FINANCE DOCKET NO. 32760)

COMPOSITE - MAP # 2

EXCEEDS STB THRESHOLDS

- RAIL SEGMENT
AIR QUALITY ONLY
- RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
- RAIL SEGMENT
AIR QUALITY AND NOISE

INTERMODAL FACILITY

RAIL YARD

END POINTS - RAIL LINE SEGMENTS

ABANDONMENTS

ABANDONMENTS

SEABROOK - SAN LEON END POINTS

CONSTRUCTION LOCATIONS

CONSTRUCTION PROJECTS
REQUIRING NEW R/W

(SEE ACCOMPANYING LEGEND)

SECTION 1180.64(X6) LINES OF APPLICANT CARRIERS AND OTHER WESTERN RAILROADS

- UP
- BN/SANTA FE
- SP
- KCS
- IC
- CP
- CN
- OTHER RAILROADS
- DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE


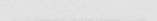
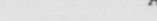
SEE COMPOSITE - MAP # 2


PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

(FINANCE DOCKET NO. 32760)

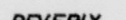
COMPOSITE - MAP # 3

EXCEEDS STB THRESHOLDS

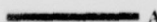
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AIR QUALITY ONLY
-  RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
-  RAIL SEGMENT
AIR QUALITY AND NOISE


 INTERMODAL FACILITY

 RAIL YARD


 END POINTS - RAIL LINE SEGMENTS

ABANDONMENTS

 ABANDONMENTS









 SEABROOK - SAN LEON END POINTS

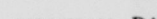
CONSTRUCTION LOCATIONS

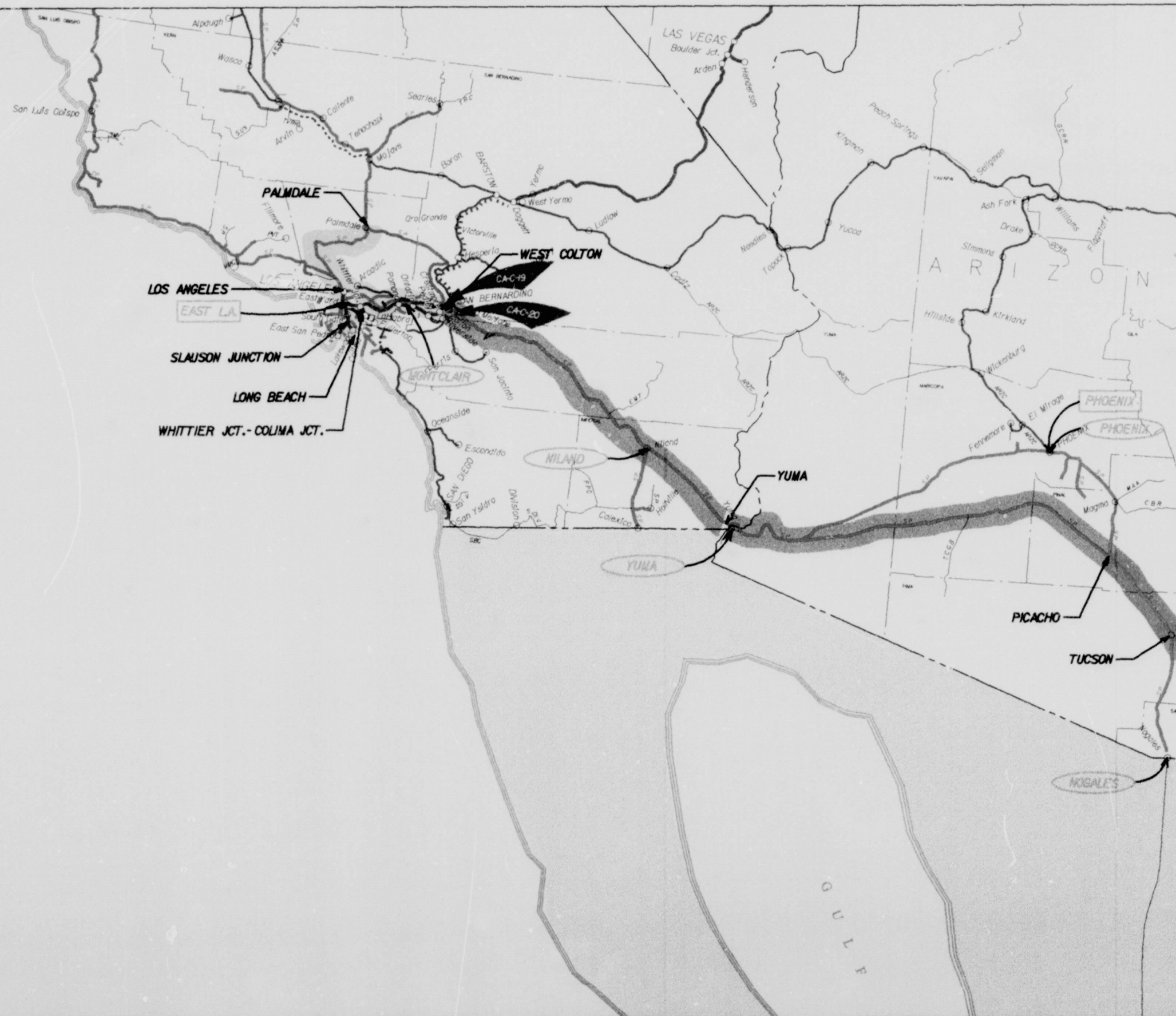
 CONSTRUCTION PROJECTS
REQUIRING NEW R/W

(SEE ACCOMPANYING LEGEND)

SECTION 1180.64(X6) LINES OF APPLICANT CARRIERS AND OTHER WESTERN RAILROADS

-  UP
-  BN/SANTA FE
-  SP
-  KCS
-  IC
-  CP
-  CN
-  OTHER RAILROADS

 DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE



SEE COMPOSITE - MAP # 5

SCALE : 1 INCH = 50 MILES

DATE : 6 / 13 / 96

PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

(FINANCE DOCKET NO. 32760)

COMPOSITE - MAP # 4

EXCEEDS STB THRESHOLDS

RAIL SEGMENT
AIR QUALITY ONLY
RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
RAIL SEGMENT
AIR QUALITY AND NOISE



INTERMODAL FACILITY

RAIL YARD

BEVERLY

END POINTS - RAIL LINE SEGMENTS

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SEABROOK - SAN LEON END POINTS

CONSTRUCTION LOCATIONS

CONSTRUCTION PROJECTS
REQUIRING NEW R/W

(SEE ACCOMPANYING LEGEND)

SECTION 1180.6(X6)
LINES OF APPLICANT
CARRIERS AND OTHER
WESTERN RAILROADS

UP
BN/SANTA FE
SP
KCS
IC
CP
CN
OTHER RAILROADS
DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE

SCALE : 1 INCH = 50 MILES

DATE : 6 / 13 / 96

SEL COMPOSITE - MAP # 2

SEE COMPOSITE - MAP # 5

SEE COMPOSITE - MAP # 5

PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

(FINANCE DOCKET NO. 32760)

COMPOSITE - MAP # 5

EXCEEDS STB THRESHOLDS

- RAIL SEGMENT
AIR QUALITY ONLY
- RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
- RAIL SEGMENT
AIR QUALITY AND NOISE

INTERMODAL FACILITY

RAIL YARD

BEVERLY

END POINTS - RAIL LINE SEGMENTS

ABANDONMENTS

ABANDONMENTS

SEABROOK - SAN LEON END POINTS

CONSTRUCTION LOCATIONS

CONSTRUCTION PROJECTS
REQUIRING NEW R/W

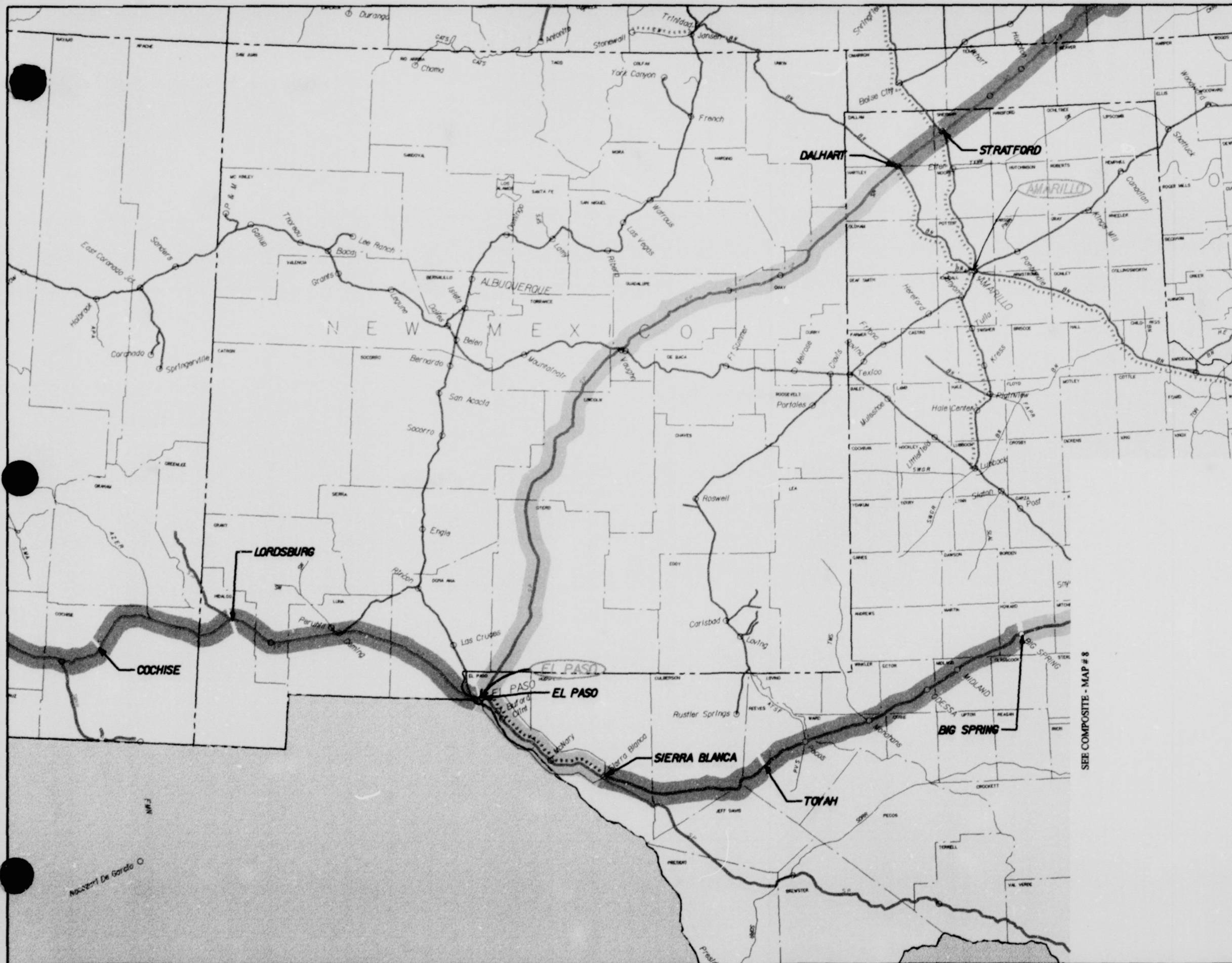
(SEE ACCOMPANYING LEGEND)

SECTION 1180.6(X6)
LINES OF APPLICANT
CARRIERS AND OTHER
WESTERN RAILROADS

- UP
- BN/SANTA FE
- SP
- KCS
- IC
- CP
- CN
- OTHER RAILROADS
- DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE

SCALE : 1 INCH = 50 MILES

DATE : 6 / 13 / 96



SEE COMPOSITE - MAP # 7



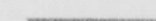
SEE COMPOSITE - MAP # 8

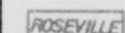
PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

(FINANCE DOCKET NO. 32760)

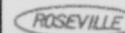
COMPOSITE - MAP # 6

EXCEEDS STB THRESHOLDS

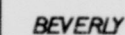
-  RAIL SEGMENT
AIR QUALITY ONLY
-  RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
-  RAIL SEGMENT
AIR QUALITY AND NOISE

 ROSEVILLE

INTERMODAL FACILITY


 ROSEVILLE

RAIL YARD

 BEVERLY


END POINTS - RAIL LINE SEGMENTS

ABANDONMENTS

 ABANDONMENTS

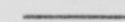







SEABROOK - SAN LEON END POINTS


CONSTRUCTION LOCATIONS

 CONSTRUCTION PROJECTS
REQUIRING NEW R/W

(SEE ACCOMPANYING LEGEND)

SECTION 1180.6(a)(6) LINES OF APPLICANT CARRIERS AND OTHER WESTERN RAILROADS

-  UP
-  BN/SANTA FE
-  SP
-  KCS
-  IC
-  CP
-  CN
-  OTHER RAILROADS

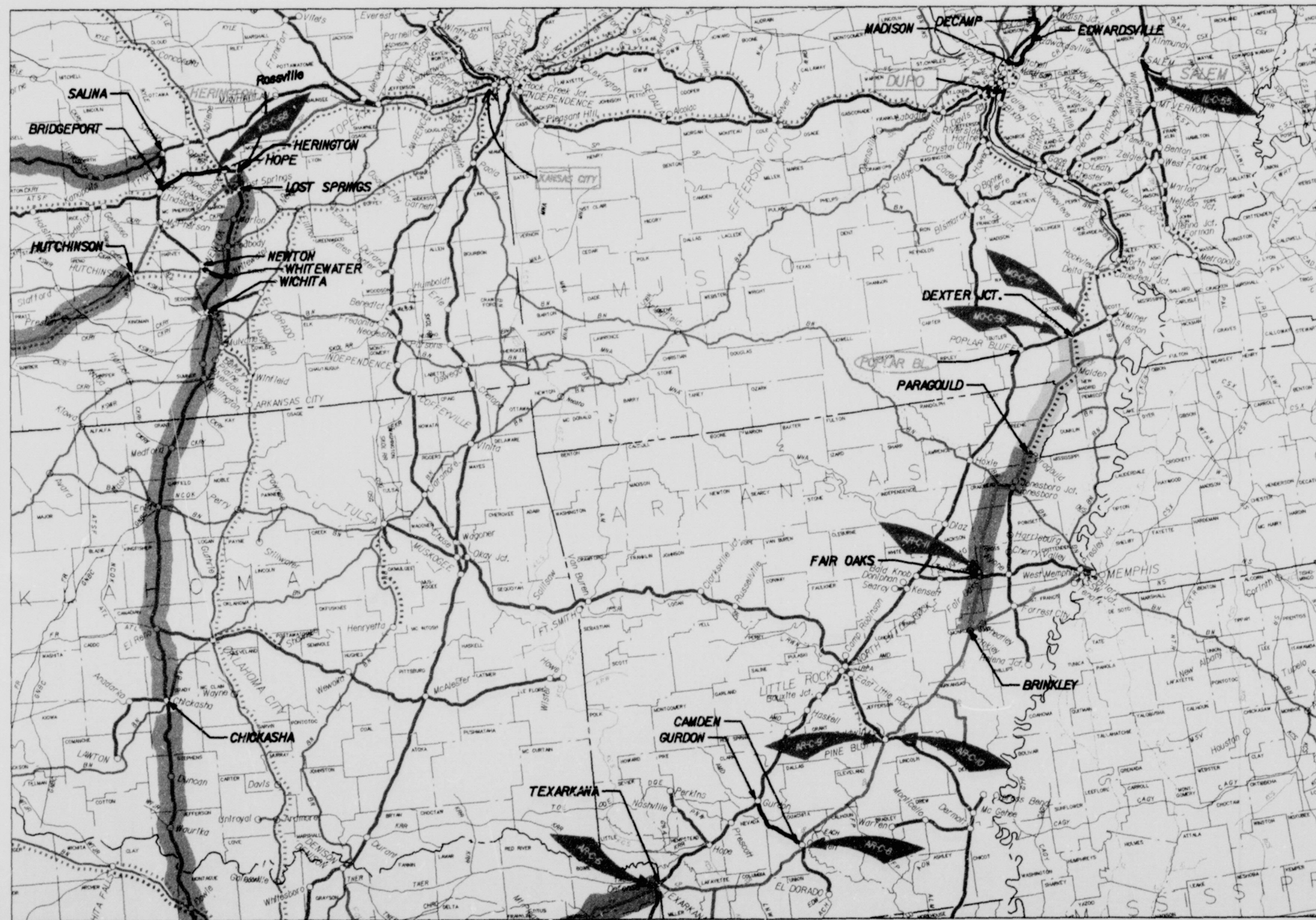
 DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE

SCALE : 1 INCH = 50 MILES

DATE : 6 / 13 / 96

SEE COMPOSITE - MAP # 7

SEE COMPOSITE - MAP # 6



SEE COMPOSITE - MAP # 8

PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

(FINANCE DOCKET NO. 32760)

COMPOSITE - MAP # 7

EXCEEDS STB THRESHOLDS

- RAIL SEGMENT
AIR QUALITY ONLY
- RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
- RAIL SEGMENT
AIR QUALITY AND NOISE

ROSEVILLE INTERMODAL FACILITY

ROSEVILLE RAIL YARD

BEVERLY END POINTS - RAIL LINE SEGMENTS

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SEABROOK - SAN LEON END POINTS

CONSTRUCTION LOCATIONS

CONSTRUCTION PROJECTS
REQUIRING NEW R/W

(SEE ACCOMPANYING LEGEND)

SECTION 1180.6(X)G LINES OF APPLICANT CARRIERS AND OTHER WESTERN RAILROADS

- UP
- BN/SANTA FE
- SP
- KCS
- IC
- CP
- CN
- OTHER RAILROADS
- DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE

SCALE : 1 INCH = 50 MILES



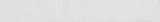
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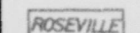
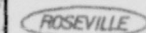
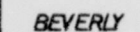
PROPOSED UNION PACIFIC - SOUTHERN PACIFIC MERGER

(FINANCE DOCKET NO. 32760)

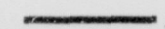
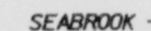
COMPOSITE - MAP # 8

EXCEEDS STB THRESHOLDS


-  RAIL SEGMENT
AIR QUALITY ONLY
-  RAIL SEGMENT
AIR QUALITY AND NOISE (INSIGNIFICANT)
-  RAIL SEGMENT
AIR QUALITY AND NOISE

 INTERMODAL FACILITY RAIL YARD END POINTS - RAIL LINE SEGMENTS

ABANDONMENTS





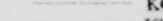



 ABANDONMENTS SEABROOK - SAN LEON END POINTS


CONSTRUCTION LOCATIONS

 CONSTRUCTION PROJECTS
REQUIRING NEW R/W

(SEE ACCOMPANYING LEGEND)

SECTION 1180.66(X6) LINES OF APPLICANT CARRIERS AND OTHER WESTERN RAILROADS

-  UP
-  BN/SANTA FE
-  SP
-  KCS
-  IC
-  CP
-  CN
-  OTHER RAILROADS

 DASHED LINES
SIGNIFY TRACKAGE
RIGHTS, HAULAGE OR
JOINT TRACKAGE

NOTE
UP HAS NOT CONSENTED
TO USE OF LETTSWORTH-
LOBDELL JCT SEGMENT
BY BN/SANTA FE

STB

FD-32760

6-24-96

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1 of 13

POST ENVIRONMENTAL ASSESSMENT

Volume 2 - Appendix A

FINANCE DOCKET NO. 32760

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD COMPANY,
AND MISSOURI PACIFIC RAILROAD COMPANY

-CONTROL AND MERGER-

SOUTHERN PACIFIC RAIL CORPORATION,
SOUTHERN PACIFIC TRANSPORTATION COMPANY,
ST. LOUIS SOUTHWESTERN RAILWAY COMPANY,
SPCSL CORPORATION, AND
THE DENVER & RIO GRANDE WESTERN RAILROAD COMPANY

Prepared by:
Surface Transportation Board
Section of Environmental Analysis
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Room 3219
Washington, DC 20423

Elaine K. Kaiser, Chief
Section of Environmental Analysis
(202) 927-6212

Information Contact:

Harold McNulty
Environmental Specialist
(202) 927-6217

June 24, 1996

Surface Transportation Board
Section of Environmental Analysis

Post Environmental Assessment
Volume 2 - Appendix A
Finance Docket No. 32760

Union Pacific Corporation, Union Pacific Railroad Company, and
Missouri Pacific Railroad Company

--Control and Merger--

Southern Pacific Rail Corporation, Southern Pacific Transportation Company,
St. Louis Southwestern Railway Company, SPCSL Corporation, and the Denver &
Rio Grande Western Railroad Company

Information Contact:

Elaine K. Kaiser, Chief
Section of Environmental Analysis
Surface Transportation Board
1201 Constitution Avenue NW, Room 3219
Washington, DC 20423
(202) 927-6212

SURFACE TRANSPORTATION BOARD
Finance Docket No. 32760
Union Pacific Railroad Company
--Control and Merger--
Southern Pacific Transportation Company

GUIDE TO THE POST ENVIRONMENTAL ASSESSMENT

An Environmental Assessment (EA), which evaluated the potential environmental impacts that could result from the proposed merger of the Union Pacific Railroad Company and the Southern Pacific Transportation Company, was served on April 12, 1996. The EA was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), as amended (42 USC 4321), the Surface Transportation Board's environmental rules (49 CFR Part 1105) and other applicable environmental statutes and regulations.

This Post Environmental Assessment (Post EA) addresses the comments to the EA as well as other environmental comments that were received during SEA's ongoing environmental review. It reflects SEA's further environmental analyses, including numerous site visits and consultations. In addition, the Post EA contains SEA's final environmental recommendations to the Board. The Board will consider SEA's environmental recommendations and the environmental record before making a decision in this proceeding.

The Post EA consists of two volumes. The major sections of Volume 1 and the issues addressed in each chapter include:

Chapter 1 discusses the purpose and need for the proposed UP/SP merger, highlights related settlement agreements, summarizes SEA's environmental review process and the additional environmental review conducted by SEA since the EA was published, and discusses the alternatives to the proposed merger and related actions.

Chapter 2 outlines the anticipated benefits of the proposed merger, describes the major operating corridors that would result from a combined UP/SP railroad, describes the operational changes associated with the proposed merger, and details the locations of activities evaluated in the EA.

Chapter 3 details the potential environmental impacts by activity type (i.e., rail line segment, rail yard, or intermodal facility activity, proposed abandonments, and new rail line constructions) and then by location.

Chapter 4 summarizes the issues raised in the environmental comments, and discusses the additional data verification and technical and environmental analyses conducted by SEA.

Chapter 5 contains SEA's recommended mitigation measures, including systemwide mitigation, corridor-specific mitigation, and location-specific mitigation.

Volume 2 of the Post EA contains eight appendices. These include:

Appendix A: Responses to Environmental Comments contains a collection of environmental comments received during the comment period on the Environmental Assessment, other comments received during the environmental process, and SEA's responses.

Appendix B: Memoranda of Understanding contains copies of correspondence related to independent mitigation plans between UP/SP and local jurisdictions to address environmental impacts and mitigation.

Appendix C: Public Outreach for the Environmental Assessment outlines the publication of official notices and media releases.

Appendix D: Distribution of the Environmental Assessment includes a listing of all parties who received a copy of the EA document served on April 12, 1996 and those who will receive a copy of the Post EA.

Appendix E: Post EA Correspondence includes copies of correspondence between SEA and UP/SP after the publication and service of the EA and copies of correspondence with the Federal Railroad Administration.

Appendix F: Site Visits includes a tabular summary of visits to various locations to investigate or confirm conditions, gather information, or assess impacts.

Appendix G: Additional Analysis provides a brief reporting of SEA's supplemental surveys and analyses of environmental impacts undertaken in response to consultation, comments, and major changes since the EA.

Appendix H: List of Preparers contains a list of organizations and key individuals responsible for the preparation of the EA and Post EA documents.

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Rock Island, IL	AF-3
New Orleans, LA (2)	AF-4 to AF-7
Galveston, TX	AF-8 to AF-9
U.S. Department of Agriculture, Forest Service Golden, CO (and U.S. Department of Interior, Bureau of Land Management)	AF-10 to AF-14
U.S. Department of Agriculture, Natural Resources Conservation Service	
Little Rock, AR	AF-15
Davis, CA	AF-16
Lakewood, CO	AF-17
Alexandria, LA	AF-18
Temple, TX (2)	AF-19 to AF-20
Madison, WI	AF-21
U.S. Department of Interior, Bureau of Indian Affairs	
Eastern Area Office	AF-22 to AF-23
Anadarko, OK	AF-24
U.S. Department of Interior, Bureau of Land Management,	
Susanville, CA (3)	AF-25 to AF-31
U.S. Department of Interior, Fish & Wildlife Service	
Atlanta, GA (2)	AF-32 to AF-33
Sacramento, CA	AF-34 to AF-36
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Albuquerque, NM	AF-38
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Department of Pollution Control & Energy	AS-7
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Industrial Development Commission	AS-9
Soil and Water Conservation Commission	AS-10
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CALIFORNIA	
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State Historic Preservation Officer	AS-46
KANSAS	
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MONTANA

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State Historic Preservation Officer AS-58 to AS-59

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Railroad Commission of Texas AS-113 to AS-116

State Historic Preservation Officer (3) AS-117 to AS-119

UTAH

State Historic Preservation Officer AS-120

WASHINGTON

State Historic Preservation Officer AS-121

RAILROADS, COUNTIES, CITIES, ORGANIZATIONS AND GENERAL PUBLIC

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LIST OF ACRONYMS AND ABBREVIATIONS

A&S	Alton & Southern Railway Company	KSHS	Kansas State Historical Society
ACHP	Advisory Council on Historic Preservation	L_{dn}	Day-night equivalent sound level
ADT	Average Daily Traffic	L_{max}	Maximum sound level during train passby, dBA
AHPP	Arkansas Historic Preservation Program	LOS	Level of Service
AQCR(s)	Air Quality Control Region(s)	LUST	State Inventory of Leaking Underground Storage Tanks
BIA	Bureau of Indian Affairs	MOU	Memorandum of Understanding
BMPs	Best Management Practices	MP	Mile Post or Missouri Pacific
BN	Burlington Northern Railroad Company	MPH	Miles per Hour
BN/Santa Fe	The new railroad system created by the merger of the holding companies of BN and Santa Fe.	MPRR	Missouri Pacific Railroad Company
BRGI	Brownsville and Rio Grande International Railroad	MRL	Montana Rail Link, Inc.
CAAA	Clean Air Act and Amendments	NAAQS	National Ambient Air Quality Standards
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (the "Superfund" Act)	NEPA	National Environmental Policy Act of 1969
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System	NHPA	National Historic Preservation Act of 1966
CFR	Code of Federal Regulations	NO₂	Nitrogen dioxide
CMTA	Capital Metropolitan Transportation Authority	NO_x	Nitrogen oxides
CNW	Chicago and Northwestern Railway Company	NPDES	National Pollution Discharge Elimination System
CO	Carbon Monoxide	NPL	National Priorities List
COE	United States Army Corps of Engineers	NPS	National Park Service
CTC	Centralized Traffic Control	NRCS	Natural Resources Conservation Service
CWA	Clean Water Act	NRHP	National Register of Historic Places
CZMA	Coastal Zone Management Act	NWI	National Wetlands Inventory
db	Decibel	O₃	Ozone
dBA	Decibels (of sound) A range	OBS	Office of Biological Services/United States Fish and Wildlife Service
DNL	Day-night equivalent level	OKT	Oklahoma-Kansas-Texas (operating division of UP)
DOT	United States Department of Transportation	OSHA	Occupational Safety and Health Administration
DRGW	Denver and Rio Grande Western Railroad Company	Pb	Lead
EA	Environmental Assessment	PDEA	Preliminary Draft Environmental Assessment
EPA	Environmental Protection Agency	PM₁₀	Particulate Matter (under 10 microns in diameter)
ER	Environmental Report	PSD	Prevention of Significant Deterioration
ERNS	Emergency Response Notification System	RCRA	Resource Conservation and Recovery Act
FEMA	Federal Emergency Management Agency	ROW	Right of Way
FHWA	Federal Highway Administration	SEA	Section of Environmental Analysis
FIRM	Flood Insurance Rate Maps	SCS	Soil Conservation Service (currently named Natural Resources Conservation Service, Division of United States Department of Agriculture)
FRA	Federal Railroad Administration	SEL	Source sound exposure level at 100 feet, dBA
GWWR	Gateway Western Railway Company	SHPO	State Historic Preservation Officer
HC	Hydrocarbons (in air)	SIP	State Implementation Plan
IBP	Iowa Beef Producers	SO₂	Sulfur dioxide
HBT	Houston Belt Terminal	SO_x	Sulfur oxides
IC	Illinois Central	SP	Southern Pacific Rail Corporation, includes SPT, SSW, SPCSL Corp., and DRGW
ICC	Interstate Commerce Commission (former licensing agency for the proposed merger; merger approval authority now with the Surface Transportation Board)	SPT	Southern Pacific Transportation Company
IHPA	Illinois Historic Preservation Agency	SSW	St. Louis Southwestern Railway Company
KCS	Kansas City Southern Railway Company	SPL	State Priority List
		STATSGO	State Soil Geographic Database
		STB	Surface Transportation Board

LIST OF ACRONYMS AND ABBREVIATIONS, Continued

SWLF	State Inventory of Solid Waste Facilities
TRAA	Terminal Railroad Association of St. Louis
TSD	Treatment, Storage, or Disposal Sites
TSP	Total Suspended Particulates (particulate matter)
UP	Union Pacific Railroad, MPRR, and CNW
UP/SP	The new railroad system to be created by the merger of the holding companies of UP and SP if the merger proposal is approved
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VISTA	VISTA Environmental Information, Inc.
VOCs	Volatile organic compounds
WCL	Wisconsin Central Ltd.
WEPCO	Wisconsin Electric Power Company
WSC	Western Shipper's Coalition

APPENDIX A RESPONSES TO ENVIRONMENTAL COMMENTS

MERGER OF UNION PACIFIC RAILROAD COMPANY AND SOUTHERN PACIFIC TRANSPORTATION COMPANY



RESPONSES TO ENVIRONMENTAL COMMENTS

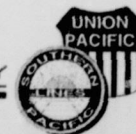
INTRODUCTION

The Post EA addresses all environmental comments that have been received by SEA since mid-March 1996. This date represents the cut-off date for all comments to be considered in the Environmental Assessment (EA) which was published on April 12, 1996.

The following pages contain SEA's responses to the comments received from Federal, state and local governments, as well as railroads, organizations and the general public. Specifically these include comments on the EA, the March 29th filings (e.g., inconsistent and responsive applications; protests; requests for conditions, and; other opposition evidence), the April 29th filings (e.g., responses to the March 29 filings), and any other comments raising environmental issues.

In this appendix, SEA has included the complete comment wherever possible, however in some instances, the comments are so lengthy that either summaries or pertinent excerpts are provided. Regardless, SEA emphasizes here that all environmental comments are made part of the Board's public record.

The original comment letters are reduced and appear predominantly on the left side of each page. Comments within each letter are highlighted and consecutively numbered. To the right of each comment are numbered responses corresponding to the numbered comments contained in the letter. Where appropriate references to the EA, Post EA or other comment letters are included as part of the response.



FEDERAL AGENCIES

MERGER OF UNION PACIFIC RAILROAD COMPANY AND SOUTHERN PACIFIC TRANSPORTATION COMPANY



FEDERAL AGENCIES
U.S. ARMY CORPS OF ENGINEERS - SACRAMENTO, CA



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

April 24, 1996

Regulatory Branch

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

We received a copy of your letter dated March 26, 1996 mentioning the proposed merger of the Union Pacific and Southern Pacific Railroads and the expected increase in rail activity on certain rail segments. You identified one of these segments as "Denver, Colorado to Dotsero, Colorado" and asked for our comments.

The eastern boundary of the Corps of Engineers, Sacramento District in Colorado is the Continental Divide. We administer the Regulatory Permit Program under Section 404 of the Clean Water Act. You must receive a permit from the Corps of Engineers to discharge dredged material (including excavation) and fill material in waters of the United States. In western Colorado, you should contact this office about permit requirements.

Thank you for the opportunity to comment. If you have any questions, write to the address below and telephone (9700 243-1199.

Sincerely,

Grady L. McNure
(Chief) Northwestern Colorado
Regulatory Office
402 Rood Avenue, Room 142
Grand Junction, Colorado 81501-2563

1 SEA acknowledges the Corps of Engineers Sacramento office's comment that prior to any excavation in or the placement of dredged or fill material into wetlands or streams, either temporary or permanent, their office should be notified for issuance of permits. The Applicant would be responsible for obtaining all necessary permits.



REPLY TO
ATTENTION OFDEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
TRI-LAKES PROJECT OFFICE, 9307 STATE HWY 121
LITTLETON, COLORADO 80123-6901

April 30, 1996

Ms. Julie Donsky
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008

Dear Ms. Donsky:

Reference is made to the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads.

This letter is to inform you that prior to any excavation in or the placement of dredged or fill material into wetlands or streams, either temporary or permanent, our office should be contacted for proper Department of the Army permits pursuant to Section 404 of the Clean Water Act.

The rail segment within the state of Colorado falling under the jurisdiction of this office extends from Denver to the continental divide.

Regarding your concerns which involve the rail segment from the Continental divide to Dotsero, Colorado, a copy of your letter has been forwarded to the Corps of Engineers Regulatory Office at 402 Rood Ave, Room 142, Grand Junction, Colorado, 81501-2163. Telephone No. (970) 243-1199.

If there are any questions concerning this matter, please feel free to contact Mr. Terry McKee at (303) 979-4120.

Sincerely,

Timothy T. Casey
Project Manager

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SEA acknowledges the Corps of Engineers' comment that prior to any excavation in or the placement of dredged or fill material into wetlands or streams, either temporary or permanent, their office should be notified for issuance of permits. The Applicant would be responsible for obtaining all necessary permits.



REPORT OF
ATTENTION OF

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61224-2004

May 2, 1996

Planning Division

Ms. Elaine K. Kaiser
Chief
Section of Environmental Analysis
Surface Transportation Board
1201 Constitution Avenue, NW.
Room 3219
Washington, DC 20423

Dear Ms. Kaiser:

I received your Environmental Assessment, Volumes 1-5, dated April 12, 1996, concerning Finance Docket No. 32760, Union Pacific Corporation, Union Pacific Railroad Company, and Missouri Pacific Railroad Company - Control and Merger - Southern Pacific Rail Corporation, Southern Pacific Transportation Company, St. Louis Southwestern Railway Company, SPCSL Corporation, and The Denver & Rio Grande Western Railroad Company. Rock Island District staff reviewed the information you provided.

Copies of our previous correspondence on the subject of this merger to Ms. Julie Donsky of Dames and Moore are enclosed for your review. Our previous responses are still applicable. If you have any questions regarding permits for this project, please contact Ms. Donna Jones of our Operations Division, telephone 309/794-5371.

No new concerns surfaced during our review. Thank you for the opportunity to comment on your proposal. If you need more information, please call Mr. Randy Kraciun of our Planning Division's Environmental Analysis Branch, telephone 309/794-5174.

Sincerely,

Dudley M. Hanson, P.E.
Dudley M. Hanson, P.E.
Chief, Planning Division

Enclosures

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1 The Corps of Engineers' comments provided on December 22, 1995, indicated that excavation in or the placement of dredged or fill material into wetlands or streams, either temporary or permanent, would require the issuance of permits. This comment was considered in preparing the EA.

2 SEA acknowledges the Corps' comment of no new concerns.



FEDERAL AGENCIES

U.S ARMY CORPS OF ENGINEERS - NEW ORLEANS, LA



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P O BOX 50237
NEW ORLEANS, LOUISIANA 70160-0237

May 7, 1996

Planning Division
Environmental Analysis Branch

Ms. Julie Donsky
Environmental Scientist
Dames and Moore, Incorporated
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

The information below is provided in response to your letter of inquiry dated March 29, 1996, concerning the application for merger of the Union Pacific and Southern Pacific Railroads. Your letter was forwarded to us from our Lower Mississippi Valley Division office.

The rail segment identified in your letter between Avondale, Louisiana, to Beaumont, Texas, which may have an increase in rail activity, as a result of the proposed merger, is within the Department of the Army (DOA) regulatory jurisdiction of the U.S. Army Corps of Engineers (COE), New Orleans District, and the Galveston District. Any portion of that segment within the New Orleans District which may be proposed for area expansion to accommodate relocations, additional trackage, or facilities could, dependent on environmental impacts, require DOA permits for performance of required work. Any portion of that segment within the Galveston District is subject to their DOA regulatory jurisdiction and would require a separate response from them for any proposal.

The Shreveport, Louisiana, to Lufkin, Texas, segment and the Brinkley to Pine Bluff, Arkansas, segments are each subject to DOA regulatory jurisdiction of other COE districts and would require a separate response from each of them for any proposal. We have no response to other items of information requested over which we have no jurisdiction.

Please contact our office if we may be of further assistance.

Sincerely,

R. H. Schroeder, Jr.

R. H. Schroeder, Jr.
Chief, Planning Division

SEA acknowledges the New Orleans District's comment that if permits are required for the Avondale to Beaumont line, they would be obtained from either New Orleans or Galveston offices of the Corps. Permits for the Shreveport to Lufkin, Texas line and the Brinkley to Pine Bluff, Arkansas line would be issued by other Corps offices is also noted by SEA.



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 50267
NEW ORLEANS, LOUISIANA 70160-0267

11/14/95 10:30

Operations Division
Operations Technical Support Branch

Ms. Julie Donsky
Environmental Scientist
Dames & Moore, Inc.
One Continental Towers
1701 Golf Road
Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This is in answer to your telephone inquiry which requested information about your letter of request dated November 9, 1995 that was received in our offices for response on December 1, 1995 and answered by letter on December 26, 1995.

A copy of our response to your letter is attached. The scope of our response is limited to relevant factors within our D.O.A. jurisdiction.

Sincerely

R.V. Utes
S.O.V. Manager

See responses on the following pages.



FEDERAL AGENCIES
U.S. CORPS OF ENGINEERS - NEW ORLEANS, LA



REPLY TO
ATTENTION OF:

Operations Division
Operations Technical Support Branch

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

DEC 9 1995

Ms. Julie Donsky
Dames & Moore
One Continental Towers
Suite 1000
1701 Golf Road
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This is in response to your inquiry of November 9, 1995, regarding the proposed increases in the level of rail traffic in rail yards located in Lake Charles/Westlake and Dequincy areas of Calcasieu Parish and Livonia area of Pointe Coupee Parish.

The proposed increase in traffic level, should it result in need for increases of rail yard areas and trackage could be subject of Department of the Army (D.O.A.) regulatory jurisdiction and result in an impact on a D.O.A. project. There are lands classified as wetlands, that are subject to D.O.A. regulatory jurisdiction, in close proximity to each of these rail yards.

Any agency proposing to perform work for which D.O.A. permits could be required should apply for those permits well in advance of need for permits or performance of any work for which permits could be required. Applications for permits should, in each instance, include sufficient detailed maps, drawings data and information for effective evaluation of the proposal.

Should you have questions concerning wetlands determinations or a need for on-site evaluations by D.O.A. personnel you may contact Dr. J. D. Bruza at (504) 862-1288 or -2270.

1 SEA has incorporated the Corps of Engineers' comment that an increase in traffic level that could result in increases of rail yard areas and trackage could be subject to the Department of the Army regulatory jurisdiction. It is also acknowledged that lands classified as wetlands near the rail yards are also subject to Corps jurisdiction. The Applicant would be required to obtain any necessary permits prior to construction.

Should you have questions concerning D.O.A. regulatory permits and performance of the proposed work in Calcasieu River you may contact Mr. Pete Serio Jr. at (504) 862-2044.

Sincerely,

R. V. Utes

R. V. Utes
S.O.V. Manager

Copies Furnished:

Ms. Karen Kirkland
Federal Program Review Coordinator
Post Office Box 3355
Baton Rouge, Louisiana 70821





DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

DATE 2 9 1996

Operations Division
Operations Technical Support Branch

Ms. Julie Donsky
Environmental Scientist
Dames & Moore, Inc.
One Continental Towers
1701 Golf Road
Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This is in answer to your telephone inquiry which requested information about your letter of request dated November 9, 1995 that was received in our offices for response on December 1, 1995 and answered by letter on December 26, 1995.

A copy of our response to your letter is attached. The scope of our response is limited to relevant factors within our D.O.A. jurisdiction.

Sincerely

R.V. Utes

R.V. Utes
S.O.V. Manager

See responses on the following pages.



FEDERAL AGENCIES
U.S. CORPS OF ENGINEERS - NEW ORLEANS, LA



REPLY TO
ATTENTION OF:

Operations Division
Operations Technical Support Branch

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

DEC 28 1995

Ms. Julie Donsky
Dames & Moore
One Continental Towers
Suite 1000
1701 Golf Road
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This is in response to your inquiry of November 9, 1995, regarding the proposed increases in the level of rail traffic in rail yards located in Lake Charles/Westlake and Dequincy areas of Calcasieu Parish and Livonia area of Pointe Coupee Parish.

The proposed increase in traffic level, should it result in need for increases of rail yard areas and trackage could be subject of Department of the Army (D.O.A.) regulatory jurisdiction and result in an impact on a D.O.A. project. There are lands classified as wetlands, that are subject to D.O.A. regulatory jurisdiction, in close proximity to each of these rail yards.

Any agency proposing to perform work for which D.O.A. permits could be required should apply for those permits well in advance of need for permits or performance of any work for which permits could be required. Applications for permits should, in each instance, include sufficient detailed maps, drawings data and information for effective evaluation of the proposal.

Should you have questions concerning wetlands determinations or a need for on-site evaluations by D.O.A. personnel you may contact Dr. J. D. Bruza at (504) 862-1288 or -2270.

1 SEA has incorporated the Corps of Engineers' comment that an increase in traffic level that could result in increases of rail yard areas and trackage could be subject to the Department of the Army regulatory jurisdiction. It is also acknowledged that lands classified as wetlands near the rail yards are also subject to Corps jurisdiction. The Applicant would be required to obtain any necessary permits prior to construction.

Should you have questions concerning D.O.A. regulatory permits and performance of the proposed work in Calcasieu River you may contact Mr. Pete Serio Jr. at (504) 862-2044.

Sincerely,

R. V. Utes

R. V. Utes
S.O.V. Manager

Copies Furnished:

Ms. Karen Kirkland
Federal Program Review Coordinator
Post Office Box 3355
Eaton Rouge, Louisiana 70821



REPLY TO
ATTENTION OFDEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1229
GALVESTON, TEXAS 77583-1229

April 18, 1996

Environmental
Resources BranchMs. Julie Donsky
Environmental Scientist
Dames & Moore
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This is in response to your letter with supporting project information and map concerning an addendum to the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads, as submitted to us for review and comment. The rail segments with portions under our jurisdiction are Shreveport, Louisiana to Lufkin, Texas and Avondale, Louisiana to Beaumont, Texas. The activities involve an increase in the number of trains per day moving along these two segments. We have no comment with regard to an increase in traffic on rail segments already in place which will not require any additional construction for operations.

We appreciate the opportunity to review and comment upon the proposed changes in operations and trust that this response facilitates your planning and implementation process.

Sincerely,

for Richard Medina
Chief, Environmental
Resources Branch

1

1

SEA acknowledges the Corps of Engineers' statement that the Corps has no comment regarding the increase in traffic on existing rail segments.

REPLY TO
ATTENTION OFDEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1229
GALVESTON, TEXAS 77553-1229

March 25, 1996

Environmental
Resources BranchMs. Julie Donsky
Environmental Scientist
Dames & Moore
1701 Golf Road
Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This is in response to your letter with accompanying information and maps concerning construction projects proposed in an addendum to the Environmental Report which is part of the application for merger of Union Pacific and Southern Pacific railroads. The proposed projects are construction of a new connection involving a timber crossing in the City of Robstown, Nueces County, Texas and installation of two No. 10 turnouts in the City of Sealy, Austin County, Texas. After consideration by elements of the Planning, Engineering, and Construction-Operations Divisions, our only comment is that neither of the proposed projects appears to require a Department of the Army permit.

We appreciate the opportunity to review and comment upon the proposed projects and trust that this response facilitates your preparation of the addendum to the Environmental Report.

Sincerely,

Richard Medina
Chief, Environmental
Resources Branch

1 SEA acknowledges the Corps of Engineers' comment that the proposed construction projects in Robertson and Sealy do not require permits.



FEDERAL AGENCIES

U.S. DEPT. OF AGRICULTURE, FOREST SERVICE AND US DEPT. OF INTERIOR, BUREAU OF LAND MANAGEMENT - GOLDEN, CO

USFS-008

BEFORE THE
SURFACE TRANSPORTATION BOARD



Union Pacific Corporation, Union Pacific)
Railroad Company, and Missouri Pacific)
Railroad Company -- Control and Merger --)
Southern Pacific Transportation Company,)
St. Louis Southwestern Railway Company,)
SPCSL Corp., and the Denver and Rio)
Grande Western Railroad Company)

Finance Docket No. 3274

COMMENT AND REQUEST FOR CONDITIONS

On behalf of the U.S. Department of Agriculture, Rocky Mountain Region and the U.S. Department of Interior, Bureau of Land Management, Colorado State Office.

The Rocky Mountain Region of the U.S.D.A. Forest Service and the Colorado State Office of the U.S.D.I. Bureau of Land Management ("Agencies") have no formal position regarding the merits of the proposed merger and abandonment. Our purpose in commenting and requesting conditions is to protect the Federal lands we manage along the railroad corridors, and the people we manage those lands for, from unnecessary harm, liability and cost resulting from any action taken in this proceeding. Our interest is in the three corridors proposed for abandonment in Colorado: Towner to NA Junction; Malta to Canon City; and Sage to Leadville.

Caring for the Land and Serving People

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53-6200-200 (12/93)

FULL ABANDONMENT AND REVERSION

Should the process run to full conclusion and a certificate permitting the abandonment of the rights-of-way be ordered, Southern Pacific Transportation Company ("Railroad") estimates that 75% of the right-of-way will return to the possession of the United States and management by our respective Agencies. This reversion is non-discretionary and automatic under 16 U.S.C. 1248(c).

Under a typical land acquisition by our Agencies, we would require that land title be cleared of all other claims; that the lands be free of hazardous materials and toxic waste; that other uses of the land be identified and, if appropriate, authorized by the agency; and that the land be cleared of safety hazards and crash. Although we recognize that the circumstances are different in a railroad abandonment, we expect the Board to protect the United States from unnecessary cost related to correcting the above matters. Therefore, we request that the certificate permitting abandonment of the subject rights-of-way include the following requirements:

1. Resolve title encumbrances unacceptable to the United States.

An example of a situation that may unacceptably cloud title is where the Railroad apparently has traded portions of original public lands easement for realignment across private property. This portion of the original easement now would return to the United States with a "clouded" title because of the Railroad's actions. It is likely that the United States would have to pursue litigation to get such title claims cleared, unless cleared by the Railroad prior to abandonment.

Caring for the Land and Serving People

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1 SEA recognizes the concerns of the USDA Forest Service and US Department of Interior regarding reversionary rights if the proposed abandonment of three rail segments in Colorado is approved. SEA's general approach to rails-to-trails conversions is described in Volume 1, Chapter 4 of the Post EA. UP/SP has expressed a willingness to negotiate with the State of Colorado for conversion of the three proposed abandonments to trail use.

2 SEA acknowledges the Agencies' request for resolution of title encumbrances, resulting from trading of original public easements for access rights across private property. Resolving title encumbrances is beyond the scope of the Board's jurisdiction and should be discussed with UP/SP as part of negotiations to convert abandoned rail lines to trail use.



2. Inventory all utilities, optic fiber cables, and other linear uses within the rights-of-way to be abandoned.

The inventory should include, at a minimum, the types of uses, the owner or manager of each use with current address, and map(s) showing where each use occurs. The Railroad should notify the owners/managers of these uses that for any portion of right-of-way crossing National Forest System lands or Public Lands, they will be expected to apply for authorization from the respective agency for continued use of the right-of-way.

3

3. Assess and remediate hazardous materials and toxic spills along all three corridors, as necessary. We support the requirements given by the EPA Region VIII in their Notice of Intent to Participate in Consolidation and Abandonment Proceedings. For the Board's convenience, those requirements are:

4

- a. That the Board require Southern Pacific Transportation Company to undertake and complete a remedial investigation of the nature and extent of contamination of the rail lines to be abandoned within the Eagle Mine and California Gulch Superfund Sites; and
- b. That such remedial investigations be completed and any appropriate mitigation plan be developed to EPA Region VIII's satisfaction prior to any final review and determination of the above-referenced abandonment applications.

Caring for the Land and Serving People

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PS-A200-280 (1/2/93)



3

SEA has reviewed the Agencies' request for inventory of utilities and other linear uses along the proposed abandonment. This issue is beyond the scope of the Environmental Assessment and should be discussed with UP/SP as part of transfer negotiations.

4

SEA has reviewed the Agencies' request for assessment and remediation of hazardous materials and toxic spills on all three proposed abandonments. Since publication of the EA, SEA has conducted a review of hazardous materials issues related to the proposed abandonment of the Sage to Canon City rail line (Sage to Leadville segment and Malta to Canon City segment). This review included interviews with clean up agency officials and others (CDPHE, US Forest Service, SP, and D&RGW), a site visit, and a review of hazardous materials investigation reports. The Eagle Mine and California Gulch Superfund sites are located adjacent to the proposed abandonment. Three derailment sites along the line (1989, 1994, and 1996) are being investigated, cleaned up, and restored by Southern Pacific. SEA notes that D&RGW has signed a consent decree with EPA regarding investigation and clean up of the California Gulch site. Remediation of the Eagle Mine site by Viacom International is underway under a 1988 Consent Decree. If the proposed merger is approved, UP/SP would assume, as appropriate, any responsibility and/or liability for hazardous materials clean up by SP or D&RGW in accordance with hazardous waste liability laws. This would include any responsibility of D&RGW for the California Gulch Superfund site. A copy of SEA's report is included in Appendix G, Volume 1, Chapter 5 of the Post EA includes SEA's recommended mitigation measures regarding hazardous materials along rail lines proposed for abandonment.

Additionally, we request that the Commission require Southern Pacific Transportation Company to undertake and complete a preliminary assessment of the nature and extent of contamination of all "spill" sites and sidings on or adjacent to National Forest System lands or Public Lands. This assessment should include all diesel, hydraulic fluids, etc., as well as large chemical spills, such as the one on February 22, 1996, near Tennessee Pass. The Southern Pacific Transportation Company should conduct any related and necessary response activities to the Agencies' satisfaction.

4. Clear the rights-of-way of any trash and discarded or abandoned equipment, including railroad ties, lights, and switches.

5. Inventory and classify, in consultation with the Agencies, all bridges, crossings and culverts for retention for public use or removal by Railroad.

This would give the Agencies adequate information to evaluate which structures should be retained for land management reasons or which structures represent significant safety hazards.

6. Include a statement in any deed or transfer of property to a salvage operator or entity, that the transfer does not include any lands or interest in lands owned by the United States. We request this clause to correct a common misconception that private individuals can acquire federal land for non-railroad purposes through a railroad grant. If the certificate of abandonment is not issued, this provision would not affect a transfer to another railroad, railbanking, or a public right-of-way.

Caring for the Land and Serving People

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PS-6200-28b (1/2/93)

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7

5

SEA has noted the Agencies' request for clearing rights-of-way of any trash and discarded or abandoned equipment, including railroad ties, lights and switches. SEA has recommended mitigation measures in Volume 1, Chapter 5 of the Post EA related to cleaning along proposed abandonments. Requests for removal of all materials that may be historic must be coordinated with the Colorado State Historic Preservation Officer (SHPO).

6

SEA has reviewed the Agencies' request for inventory and classification of all bridges, crossings and culverts for retention for public use or removal by UP/SP. This request must be coordinated with conditions requested by the Rails to Trails Conservancy and the State of Colorado as part of any negotiations to transfer the right-of-way. Also, any structures that may be historic must be inventoried and coordinated with the Colorado SHPO.

7

SEA has considered the Agencies' request for clarification that any land transfers do not include any lands or interests of the United States. Land transfers and deed language are beyond the Board's jurisdiction and should be negotiated with UP/SP.



5

7. Obtain concurrence from the State Historic Preservation Officer or provide a formal Determination of Eligibility for historic site evaluation. The Railroad's determination of site significance and eligibility for listing on the National Register of Historic Places (as required in 49 CFR 1105.8(7)) requires the concurrence by the State Historic Preservation Officer, or a formal Determination of Eligibility from the Advisory Council on Historic Places. This step will eliminate many controversies regarding the sites when they come into federal ownership.

8

8

SEA acknowledges the Agencies' request to obtain concurrence from the State Historic Preservation Officer (SHPO) or obtain a formal determination of eligibility. SEA is conducting Section 106 consultation with the Colorado SHPO.

IF ABANDONMENT DOES NOT OCCUR

If a certificate of abandonment is not issued, the Agencies have continuing concerns in the event of transfer to a new rail operator, railbanking or transfer to a public highway. There are certain small areas on public land for which government records do not show the railroad having obtained an authorization from the United States. These are usually associated with minor realignments, a portion or all of which extend outside the original 200-foot right-of-way. Also, in the past, the railroad has been hesitant to engage in "small" land transactions. We submit that this is an ideal opportunity for the Agencies and the Railroad to reach mutually satisfactory title transfers. One example of small land transaction is the Texas Creek "wye" that serviced the Westcliffe Branch. The Bureau of Land Management would be highly interested in acquiring this parcel, which is now surrounded by Public Lands.

9

9

Resolution of minor real estate encroachments of the rail lines onto adjoining public land is beyond the Board's jurisdiction. These issues should be negotiated with UP/SP.



FEDERAL AGENCIES

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE- LITTLE ROCK AR.

UNITED STATES
DEPARTMENT OF
AGRICULTURE

Natural Resources
Conservation
Service

Room 5404 Federal Building
700 West Capitol Avenue
Little Rock, Arkansas 72201

APR 22 1996

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

We have reviewed the proposed action for the merger of the Union Pacific and Southern Pacific Railroads from Brinkley, Arkansas to Pine Bluff, Arkansas. We do not anticipate these additions will adversely impact prime farmland or erosion rates, the primary concerns of the Natural Resources Conservation Service. Thank you for providing us with the opportunity to comment on potential significant effects. If further information is required, please call Belinda Bell at (501) 324-5509.

Sincerely,

Jerry L. Mitchell
JERRY L. MITCHELL

Assistant State Conservationist (Programs)

aging.dcx(04/96)

The Natural Resources Conservation Service, formerly the Soil Conservation Service, works hand-in-hand with the American people to conserve the natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER

All programs and services of the Natural Resources Conservation Service are offered on a nondiscriminatory basis without regard to race, color, national origin, religion, sex, marital status, age, or handicap.

1. SEA acknowledges the Natural Resources Conservation Service's comment that it does not anticipate adverse impacts to farmlands or erosion rates.

MERGER OF UNION PACIFIC RAILROAD COMPANY AND SOUTHERN PACIFIC TRANSPORTATION COMPANY





United States
Department of
Agriculture

Natural
Resources
Conservation
Service

2121-C Second Street, Suite 102
Davis, CA 95618
(916) 757-8200

March 8, 1996

Julie Donsky
Environmental Specialist
Dames and Moore Inc.
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008

Dear Ms. Donsky:

I am responding to your letter of February 26, 1996, pertaining to a request for environmental information concerning the potential merger of the Union Pacific and Southern Pacific Railroads.

The Natural Resources Conservation Service is primarily concerned with the impact of actions which relate to Prime Farmlands. Accordingly, I am forwarding your request to our Stockton field office so they may comment on that subject. I suggest you contact the following agencies for other information you seek:

1. Protected Species: U.S. Fish and Wildlife Service or California Department of Fish and Game.
2. Critical Habitats: Same as above.
3. Location of Parks and Refuges: Consult map of area, National Park Service, etc.
4. Citations re: Permits/Approval authority - State of CA.

I trust this information will be of value to you.

Sincerely,

CHUCK BELL
State Resource Conservationist

cc:

John Beyer, Area Conservationist, NRCS, Fresno, CA
Dave Simpson, District Conservationist, NRCS, Stockton, CA

The Natural Resources Conservation Service,
formerly the Soil Conservation Service,
is an agency of the
United States Department of Agriculture

AN EQUAL OPPORTUNITY EMPLOYER

1

SEA acknowledges the Natural Resources Conservation Service's area of concern for impacts to prime farmlands. Other sources of information cited have been previously contacted.

FEDERAL AGENCIES

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE- LAKEWOOD, CO

United States
Department of
Agriculture

Natural Resources
Conservation
Service

Soil Survey Office
655 Parfet St., Rm E200C
Lakewood, CO 80215-5517

Subject: LU - 310

Date: 2-5-96

To: Elaine K Kaiser
Chief, Section of Environmental Analysis
Surface Transportation Board
Washington, D.C. 20423-0001

File Code: 290-11-11

No apparent impact on prime farmland or farmland of statewide importance would occur as a result of the proposed Control and Merger of the Union and Southern Pacific railroads.

1

Duane L. Johnson, Acting

Duane Johnson
State Conservationist

Attachment(s): AD-1006

1

SEA acknowledges the Natural Resources Conservation Service's comment that the proposed merger would not impact prime farmland or farmland of statewide importance in Colorado.



United States
Department of
Agriculture

Natural Resources
Conservation Service

3737 Government Street
Alexandria, Louisiana
71302

April 25, 1996

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

In response to your most recent letter dated March 26, 1996 for concerns to be addressed in the Addendum to the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads, the following comments are offered for your consideration:

1. I am enclosing a copy of our initial letter to you dated December 15, 1996. Our comments in that letter still remain as valid comments or items of concern. See enclosure #1. **1, 2**
2. I am also enclosing a copy of our letter to Elaine K. Kaiser, UP/SP Environmental Project Director, Environmental Analysis Section, Surface Transportation Board, Washington, D.C. dated February 23, 1996. Our comments in that letter also still remain as valid comments or items of concern. See enclosure #2.
3. I would like to re-emphasize our concern regarding the transportation of hazardous wastes or materials over the existing and proposed routes. Of particular concern is the impact of spills or accidents involving hazardous wastes or materials on human life, domestic animals, wildlife, forests, farmlands and wetlands. **3**

1, 2 The issues raised by Natural Resources Conservation Service were considered and published in Volume 3 of the Environmental Assessment.

3 SEA acknowledges the concerns about hazardous materials. SEA has conducted an independent analysis of the movement of hazardous materials throughout principal corridors of the proposed merged UP/SP route system. A description of the methodology for this analysis is contained in Volume 1, Chapter 4 of the Post EA. The post-merger risk posed by the movement of hazardous materials through this region was found to be higher than the historical traffic fluctuations experienced by the railroad industry. Even with this increase, SEA considers the movement of hazardous materials safe because of the necessity to comply with Federal regulations regarding the movement of such materials. (See page 4 of the USDOT response letter in Appendix A.) In response to this comment, SEA also recommends additional mitigation as described in Volume 1, Chapter 5 of the Post EA.



United States
Department of
Agriculture

Soil
Conservation
Service

101 South Main Street
Temple, Texas
76501-7682

April 12, 1996

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

We have reviewed the projected rail traffic increase (between Shreveport, Louisiana and Lufkin, Texas, Avondale, Louisiana and Beaumont, Texas) resulting from the proposed merger of the Union Pacific and Southern Pacific Railroads.

It is our opinion these activities should have no significant adverse impacts on agricultural lands.

Thank you for allowing us to review this proposed merger.

Sincerely,

FOR

HARRY W. ONETH
State Conservationist

cc: Joe Daniel, ASTC for Field Operations, NRCS, Nacogdoches
Charles R. Terrell, Natl. Envir. Coord., Washington, DC



The Soil Conservation Service
is an agency of the
U.S. Department of Agriculture

1

SEA acknowledges the Natural Resources Conservation Service's opinion that the proposed UP/SP merger should have no significant adverse impacts on agricultural land.



FEDERAL AGENCIES

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE - TEMPLE, TX



United States
Department of
Agriculture

Soil
Conservation
Service

101 South Main Street
Temple, Texas
76501-7682

March 18, 1996

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

We have reviewed your letter and its attachments dealing with Dames & Moore's addendum to its Environmental Report in the application for merger of the Union Pacific and Southern Pacific Railroads.

The areas of interest in Robstown, Texas, and Sealy, Texas, have previously been dedicated to urban and industrial land uses; therefore, these undertakings will have no adverse impact on agricultural lands.

Thank you for allowing us to comment on this proposed merger.

Sincerely,

FOR

HARRY W. ONETH
State Conservationist

cc: Dexter Svetlik, ASTC for Field Operations,
NRCS, Corpus Christi
Charles R. Terrell, Natl. Envir. Coord., Washington, DC

The Soil Conservation Service
is an agency of the

1

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SEA acknowledges the Natural Resources Conservation Service's indication that the proposed project will have no adverse impact on agricultural lands.



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

6515 Watts Road, Suite 200
Madison, WI 53719-2726
(608) 264-5341

May 17, 1996

Ms. Elaine K. Kaiser, Chief
Section of Environmental Analysis
Surface Transportation Board
1201 Constitution Avenue NW, Room 3219
Washington, DC 20423

Dear Ms. Kaiser:

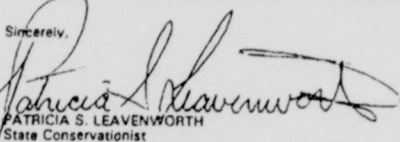
Subject: Environmental Assessment; Finance Docket No. 32760
Union Pacific - Missouri Pacific Merger

The Natural Resources Conservation Service (NRCS) staff has reviewed the above referenced Environmental Assessment (EA) with respect to requirements of the Farmland Protection Policy Act (FPPA).

The state comments on page 5-23, Volume 1 indicate that there are no proposed abandonments or constructions in Wisconsin. Provisions of the FPPA do not apply and submission of a Farmland Conversion Impact Rating (Form AD-1008) is not required for the Wisconsin part of this project, unless merger activities will irreversibly convert prime or unique farmland in Wisconsin to non-agricultural use.

Thank you for the opportunity to comment on this proposed project.

Sincerely,


PATRICIA S. LEAVENWORTH
State Conservationist

cc:
K. W. Lubich, SSS, NRCS, Madison, WI
C. E. Wacker, RSS, NRCS, Madison, WI

The Natural Resources Conservation Service,
formerly the Soil Conservation Service,
works hand-in-hand with the American people
to conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER

1 SEA acknowledges the Natural Resources Conservation Service's statement that provisions of the Farmland Protection Policy Act do not apply since there are no abandonments or constructions in Wisconsin.





Trust Services
Natural Resources

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Eastern Area Office
Suite 260
3701 North Fairfax Drive
Arlington, Virginia 22203

MAR 29 1996

Ms. Elaine K. Kaiser
UP/SP Environmental Project Director
Section of Environmental Analysis
Surface Transportation Board
12th and Constitution Avenue, Room 3219
Washington, D.C. 20423-0001

Dear Ms. Kaiser:

We are pleased to have an opportunity to provide comments on the potential environmental impacts of the proposed merger between the Union Pacific Railroad Company and Southern Pacific Railroad Company and the related abandonments and constructions that are planned as part of the merger.

In your letter dated January 26, 1996, you asked the Bureau of Indian Affairs/Eastern Area Office to address its comments to those areas of environmental concern that pertain to Indian trust lands and related natural resources, tribal cultures, and American Indian populations/tribes under our immediate jurisdiction.

As you may already be aware, the Bureau of Indian Affairs operates within a government-to-government relationship with federally-recognized American Indian tribes and Alaska Natives and has a trust responsibility to protect Indian trust lands, natural resources, and trust assets in accordance with the highest fiduciary standards. Within these broad parameters, the Eastern Area Office has jurisdiction over those federally-recognized Indian tribes located in various states east of the Mississippi River. There is, however, one exception. In the State of Louisiana, the Eastern Area Office serves the Coushatta Tribe which is located west of the Mississippi River. The Coushatta Indian Reservation is located halfway between Elton, Louisiana and Kinder, Louisiana in the northwest part of the state. Conversely, other Indian tribes located west of the Mississippi River, with the exception of the Coushatta Tribe, fall under the jurisdiction of other Agencies and/or Area Offices assigned to those respective tribes and/or geographical locations.

Since there are no federally-recognized Indian tribes and/or

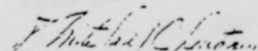
Indian reservations located in the States of Arkansas, Illinois, and Missouri that are under our immediate jurisdiction, we have no comments to offer on American Indian populations, lands, and cultures nor do we have any information on sacred areas and/or sensitive resources (historic, cultural, or archaeological) of Indian tribes in any of these three states.

We do, however, have some comments on the proposed rail line segment between Livonia, Louisiana and Kinder, Louisiana. Our review and analysis of the geographical area to be affected by the new rail line segment between Livonia and Kinder reveals that the Coushatta Tribe owns lands held in trust by the Federal government that are within a five-mile radius of the town of Kinder, Louisiana. Although the proposed rail line will not be on Indian trust lands, it will run adjacent to nearby tribal lands and therefore may warrant further study in conducting the environmental review process required by the National Environmental Policy Act. As such, we recommend that you contact the Honorable Lovelin Poncho, Chairman of the Coushatta Tribe of Louisiana, to determine if the tribe has any comments and/or concerns about the environmental impact of the new rail line on the tribe and its adjacent trust lands and resources. Chairman Poncho's mailing address is: P.O. Box 818, Elton, Louisiana 70532. He can be reached by telephone at (318) 584-2261.

In conclusion, since the proposed construction of a new rail line segment from Livonia, Louisiana to Kinder, Louisiana will not be on Indian trust lands and/or will not cross Indian lands, we do not have any substantive comments to offer in behalf of the Coushatta Tribe and/or the Bureau of Indian Affairs, as trustee for the tribe.

If we can be of further assistance to you with this project, please do not hesitate to contact my office.

Sincerely,



Mitchell Chouteau
Eastern Area Director (Acting)

Enclosures

1 The Bureau of Indian Affairs comment that the proposed project would not be on or cross any Indian Trust lands is noted. The office of the Chairman of the Coushatta Tribe of Louisiana was contacted to determine if there are concerns about impacts to the tribe and adjacent tribal lands. The office raised no objections or concerns.





IN REPLY, PLEASE TO:

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

Anadarko Area Office

P.O. Box 568

Anadarko, Oklahoma 73005

MAY 07 1996

Elaine K. Kaiser, Chief
Section of Environmental Analysis
Surface Transportation Board
1201 Constitution Avenue, NW
Room 3219
Washington, D.C. 20423

Attn: Harold McNulty, Environmental Specialist

RE: Environmental Assessment, Union Pacific Corporation, Union Pacific Railroad Company, and Missouri Pacific Railroad Company - Control and Merger - Southern Pacific Railroad Corporation, Southern Pacific Transportation Company, St. Louis Southwestern Railway Company, SPCSL Corporation, and The Denver and Rio Grande Western Railroad Company (Finance Docket No. 32760).

Dear Ms. Kaiser:

This office has received the environmental assessment for the proposed referenced control and merger between the Union Pacific and Southern Pacific Railroad Companies. Staff from this office have reviewed the assessment. We have no further comment beyond what was provided in our earlier letter of February 20, 1996. We continue to see no evidence of consultation with Tribal governments regarding impacts to Tribal lands or areas considered important to the Tribes from a historical or cultural standpoint.

Thank you for the continued opportunity to review and comment on the referenced environmental assessment.

Sincerely,

L W Collier

Area Director

1 Consultation letters and copies of the EA were distributed to all regional offices of the Bureau of Indian Affairs. These consultations did not reveal impacts to tribal lands, such as abandonments or new construction outside of existing rights-of-way. Consultations about historic and cultural resources were undertaken with State Historic Preservation Officers as required by Section 106 of the National Historic Preservation Act.



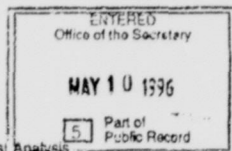
United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Eagle Lake Resource Area
705 Hall Street
Susanville, CA 96130



In Reply
Refer to:
8300
(CA-026)



Elaine K. Kaiser:
Chief, Section of Environmental Analysis
Surface Transportation Board
12th & Constitution Ave., N.W.
Washington, D.C. 20423-0001

MAY - 3 1996

Dear Ms. Kaiser:

The following are comments by the Eagle Lake Resource, Bureau of Land Management on the Environmental Assessment, Finance Docket No. 32760 Union Pacific and Southern Pacific merger. Please note that we did not receive copies of the EA until May 2, 1996 and only after requesting overnight shipping through the cooperation of Mr. Steve Brooks of your organization. Mr. Brooks indicated that copies were supposed to have been shipped to the Eagle Lake Resource Area and to the Lassen County Library on April 12th, however no copies arrived at either location. Additional requests for copies had to be made before we received our copy on May 2nd. Based on the late arrival of the EA we request that you accept our comments even though they will be arriving after the May 3, 1996 due date.

The enclosed items are submitted for your inclusion in the analysis of the draft EA. These documents provide a clear record that the Bureau of Land Management has determined during the winter and early spring of 1996 that there is local community support for rail banking of the Wendel to Alturas line if rail use of the line ceases as a result of the proposed abandonment. Based on the support documented in the enclosed resolutions and letters the Bureau of Land Management, Eagle Lake Resource Area, filed a petition for rail banking the Wendel to Alturas line and filed a statement of willingness to assume financial responsibility as part of the rail banking filing with the Surface Transportation Board on March 27, 1996. This filing needs to be referenced in your EA and included in your decision record.

The Eagle Lake Resource Area recognizes and supports the local community interest in continued rail use of the line for freight or alternate rail uses including excursion trains, motor car operations and/or individual or commercial railcycle operations. The Eagle Lake Resource Area rail banking filing has been submitted as a fall back option to protect the railroad right-of-way corridor if rail service ends and to provide for interim trail use on that corridor.

In reviewing the draft EA the following inaccuracies and/or omissions were identified that need to be corrected in the final EA.

Volume 3:

3.3 Alternatives to Wendel (SP)

Docket No. AB-12 (Sub-No. 184X)

1 The Bureau of Land Management's comments have been considered.

2 SEA has noted the Agency's recording of local support for railbanking of the Wendel to Alturas line, as well as its filing of a petition for railbanking and willingness to assume financial responsibility in the event the line is abandoned.



3.3.3 Existing Environment

Biological Resources

Parks and Forests: Add - Approximately 50 % of the 85.6 mile railroad grade crosses U.S. Department of Interior, Bureau of Land Management lands administered by the Eagle Lake and Alturas Resource Areas. This land provides habitat for a wide variety of species including antelope, mule deer, sage grouse, water fowl and various species of fish. BLM lands are used for livestock grazing, hunting, fishing, sightseeing, hiking, horse back riding and wildlife observation.

Safety: Check records and state in final EA if train wreck in Snow Storm Canyon west of Snowstorm Ranch (box cars still on site) contained hazardous materials affecting the right-of-way.

Noise: Incorrect. Alturas maintenance crew of SPRR reports at least 2 trains per day and county residents living along the track report up to 6 trains per day.

3.3.4 Potential Environmental Impacts of Proposed Action

Land use: Add - Removal of rails and ties will create a travel corridor that will be used by public land visitors, (hunters, fishermen, sightseers, off highway vehicle enthusiasts, and trails users). This use will create additional management responsibilities for the Bureau of Land Management in some areas because areas of public lands that were formerly inaccessible due to rough rocky terrain or very muddy clay soils during wet seasons are expected to become more accessible due to the well drained and graded route of the railroad grade. This will increase BLM management responsibilities in areas where increased vehicle access may create problems for wildlife and cultural resources that were formerly much less accessible to vehicle based travelers.

All bridges, culverts and other structures should be left in place to provide for access along the corridor for future BLM management of the corridor and managed trail use under rail banking provisions if abandonment occurs and rails and ties are removed. Some rails and ties that could be used to construct needed vehicle controls should be left based on field review by BLM staff. In addition, BLM would like to negotiate for acquisition of a segment of rails and ties to be left for railycycling and motorcar operations if an alternate rail operator does not take over operation of the line.

Parks and forests: No mention of the effects on public lands administered by BLM is made. This should be corrected and reference the impacts listed above in LAND USE.

Historic Structures: Any railroad structures that may be useful in conjunction with managing the corridor for trail uses should be left until a trail management plan can be prepared that would determine if such structures would be needed for or complementary to trail management.

Transportation: Incorrect. Two to six trains per day are using the line.

Noise: Incorrect. Two to six trains per day are using the line.

3.3.6 Summary of Agency Comments:

In addition to the referenced filing by BLM, Eagle Lake Resource Area on December 18, 1996 listed in Volume 5, Appendix pages E-4 + 5, the Eagle Lake Resource Area also submitted a filing for rail banking on March 27, 1996 based on support from the City of Susanville, Lassen County and local trails groups. Rail banking requested by BLM is conditional on no further rail operations on the line. BLM supports continued rail use if that is feasible and rail carriers or alternate rail operators take on operations of the line.

Included in the BLM filing was also a letter from the Feather River Rail Society, operators of the Portola Railroad Museum, expressing interest in alternate excursion train use and motorcar operations uses. This correspondence should be referenced in the final EA and

3 SEA recognizes that approximately 50 percent of the lands adjacent to the proposed abandonment are under the Bureau's administration. SEA is also cognizant of the wide variety of habitats on these lands (as indicated in Volume 3, Section 3.3.3 of the EA).

4 Accident records indicate no hazardous materials were released at the noted accident site.

5 SEA has confirmed the validity of rail traffic numbers; rail traffic is 7 through trains per day on the line. SEA has detailed its rail traffic methodology in Volume 1, Chapter 4 of the Post EA.

6 The Agency's position that abandonment would provide a corridor that enables access to public lands, thereby increasing BLM's management responsibilities is noted and will be considered by the Surface Transportation Board in its evaluation of the proposed abandonment and trails proposals.

7 SEA has noted the Agency's recommendations for reuse of infrastructure in the event of abandonment for trails.

8 See response provided for comment #6 of this letter.

9 The Agency's recommendations for reuse of infrastructure in the event of abandonment for trails are noted. Section 106 coordination to determine the eligibility and historic significance of resources within the proposed abandonment is under way with the California State Historic Preservation Officer.

10 See response provided for comment #5 of this letter.

11 SEA has confirmed the validity of rail traffic numbers upon which noise impacts are assessed. Please refer to the general statement on rail traffic and noise in Volume 1, Chapter 4 of the Post EA.

12 The Agency's railbanking request was submitted after the cut-off date for materials included in Volume 5 of the EA. It is now included in the Post EA record.

13 The expression of interest of the Feather River Rail Society for alternate excursion train use and motorcar operations is acknowledged. These interests should be forwarded directly to UP/SP.

Included in the decision process for the Wendel to Alturas line.

BLM has also received requests from railcycling interests, both individual and potential commercial ventures to explore ways to leave track in place if the line is abandoned so railcycling could occur on portions of the line. BLM would like to support this interest but would first defer to rail operators that may take over the line to work out arrangements for rail cycling with those users. If the line is abandoned and the rails and ties are planned to be removed, BLM would like to explore options with the railroad for leaving a segment of track for rail cycling use and motorcar excursions.

Enclosed with this letter are copies of all pertinent filings by BLM's Eagle Lake and Alturas Resource Area Offices and supporting resolutions and letters from the City of Susanville, Lassen County, the Feather River Rail Society, the Chester/Lake Almanor Chamber of Commerce and local trail groups.

Thank you for this opportunity to comment on the draft environmental assessment.

Sincerely,

Linda D. Hansen
Acting
For
Linda D. Hansen
Area Manager

end: rail banking filing
resolutions of support for railbanking
letters of support for railbanking
resolutions of support for continued rail uses

14

14

The expression of interest by individuals and commercial ventures in railcycling is acknowledged. These comments should be forwarded directly to UP/SP.





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Eagle Lake Resource Area
2950 Riverside Drive
Susanville, California 96130



ENTERED
Office of the Secretary

MAR 31 1996

4
Public Record



In Reply
Refer to
8300
(CA-026)

MAR 27 1996

Surface Transportation Board
Office of the Secretary
12th and Constitution
Washington, DC 20423 0001

Re: Southern Pacific Railroad Abandonment in Lassen and Modoc Counties, California. ICC Docket No. AB-12. (Sub No. 184-X).

Dear Secretary:

This request is filed on behalf of the U.S. Department of the Interior, Bureau of Land Management, Eagle Lake Resource Area. The agency is the manager of federal public lands crossed by the proposed Wendel to Alturas abandonment and herein after referred to as "proponent."

Proponent requested issuance of Public Use Conditions under 49 U.S.C. 10906 as prescribed in section 1152.28 in a letter mailed to you on December 18, 1995. In that request we indicated that in addition to public use conditions we would also be considering filing for railbanking (interim trail use) if there was local support for such a filing.

During this winter we have found that there is support for railbanking the Wendel to Alturas line if railroad uses do not continue. Enclosed are resolutions of support from the City of Susanville and Lassen County expressing conditional support for railbanking if railroad uses end on the line. In addition, letters of support for trail use are included from local trail use groups. Based on the local support demonstrated in the enclosed resolutions and letters the Bureau of Land Management, Eagle Lake Resource Area hereby submits the following Request For Interim Trail Use (rail banking) under section 8 (d) of the National Trails System Act.

Also enclosed is the request for railbanking based on the format provided by the Interstate Commerce Commission during the late fall of 1995.

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SEA acknowledges the Bureau of Land Management's recording of local support for railbanking the Wendel to Alturas line.

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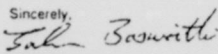
2

SEA acknowledges the Agency's filing of a petition for railbanking and willingness to assume financial responsibility in the event the line is abandoned.

2

The Bureau of Land Management does not advocate abandonment of the Wendel to Alturas line and is submitting the railbanking request as a final fall back measure to protect the right-of-way and provide for interim trail use only if the line does not continue to receive rail use. In addition to railbanking use we are also including a request by the Feather River Rail Society to use the line for excursion rail use and motorcar use. Please consider this interest for continued rail use first and only if continued rail use is not feasible move on to our request for railbanking filed today and our request for public use conditions filed on December 18, 1996.

Sincerely,


Linda D. Hansen
Area Manager

Enclosures

- Railbanking petition
- Map, Wendel to Alturas line
- Resolution, Lassen County
- Resolution, City of Susanville
- Letter, Lassen Land and Trails Trust
- Letter, Honey Lake Valley Riders

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SEA acknowledges the Agency's expression of interest from the Feather River Rail Society to use the line for alternative excursion train use and motorcar operations. Please refer to SEA's general statement on Rail-to-Trails in Volume 1, Chapter 4 of the Post EA.





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Eagle Lake Resource Area
705 Hall Street
Susanville, CA 96130

Office of the Secretary

DEC 29 1995

In Reply
Refer to:(CA-028)
8300

DEC 18 1995

Interstate Commerce Commission
Office of the Secretary
12th and Constitution
Washington, DC 20423

Re: Southern Pacific Railroad, Abandonment in Lassen and Modoc Counties, California, ICC Docket AB-12, (Sub No. 184-X).

Dear Commissioners:

This request is filed on behalf of the Eagle Lake Resource Area, Bureau of Land Management, U.S. Department of Interior herein referred to as "proponent".

Proponent requests issuance of a Public Use Condition under 49 U.S.C. 10906 as prescribed in section 1152.28.

Proponent asks the ICC to find that this property is suitable for other public use and to place the following conditions on the abandonment:

1. An order prohibiting the carrier from disposing of the corridor, other than the tracks, ties and signal equipment, except for public use on reasonable terms. Justification for this condition is:

The proposed abandonment crosses public lands managed by the Bureau of Land Management (BLM) Eagle Lake and Alturas Resource Areas. BLM lands constitute the largest single land management entity affected by this proposed abandonment. Initial estimates indicate that approximately 45 miles of the line cross BLM land. This constitutes 52% of the corridor.

Other public ownerships crossed by the railroad grade include lands held by the State of California and the U.S. Fish and Wildlife Service. These lands total approximately 3 additional miles. When combined with BLM managed lands, total public ownership crossed by the railroad is estimated to be 48 miles or 55 % of the railroad corridor.

If abandoned, those segments of the railroad grade that cross BLM lands would revert to BLM administration. Because these segments would afford opportunities for public access to public lands using the existing roadbed of the railroad grade and also afford opportunities for improved

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SEA has noted the Bureau of Land Management's request for a Public Use Condition under 49 USC 10906. The Agency's concerns about potential impacts to its management responsibilities to adjoining public lands, and potential benefits of trails are noted. SEA's general statement on rails-to-trails conversion is included in Volume 1, Chapter 4 of the Post EA. SEA's recommended mitigation measures for rail abandonments are described in Volume 1, Chapter 5 of the Post EA.

administrative access to these same lands. BLM is exploring options for managing these segments of the proposed abandonment. In order to effectively manage the railroad corridor across BLM land, access along the full length of those segments across BLM land would be required including the right to use and manage the interspersed non BLM managed segments.

The railroad grade could afford access for wildlife viewing (deer, antelope, chukar, waterfowl and non game birds) and for sightseeing activities ranging from nonmotorized trail uses including walking, mountain bicycling and horse back riding to motorized scenic byway touring. The grade passes through prime antelope habitat and passes by many areas that support waterfowl and other wetland species. Wetland areas include Biscar Reservoirs, numerous seasonal wetlands, perennial streams including Snowstorm Creek, East Side Canal of the Pitt River and the Modoc National Wildlife Refuge. Cross country skiing and snowmobiling would also be possible on some segments of the grade. Historic uses of the area by hunters could also benefit from the access afforded along the railroad grade.

#2. As part of our request for Public Use Conditions we ask that ICC issue an order barring removal or destruction of potential trail-related structures such as bridges, trestles and culverts. The justification for this condition is that these structures have considerable value for transportation and recreational trail use of the railroad grade.

#3. We request that the time period for imposition of Public Use Conditions be established at 180 days, the maximum amount of time allowed under U.S.C. 10906. This is necessary to enable BLM to complete public involvement scoping, conduct feasibility analysis about possible trail uses and management costs and to initiate negotiations with the railroad.

At this time BLM is not prepared to commit to any specific action on the corridor until a feasibility analysis and public involvement can be completed. However, BLM is exploring options for managing those segments that will revert to BLM administration and possibly other segments or combinations of segments that would be complementary to the uses of the corridor across BLM lands.

Analysis of public support, management feasibility and funding sources will require considerable time. Therefore it is imperative that public use conditions be established to allow BLM to explore public use options of the proposed abandonment and have time to begin negotiations with the railroad. If, as a result of further analysis and public involvement, interim trail use (railbanking) is determined to be a desired use of the corridor, BLM would then submit a request for interim trail use under section 8d of the 1983 Trails Act in addition to this request for public use conditions.

Because of the time needed to analyze public interest in the corridor and complete feasibility analysis of possible trails uses we need to know as soon as possible how much time we have to complete these procedures and if appropriate, request interim trail. Please provide us with the timeframe required to request interim trail use and indicate when that timeframe begins and ends under the "intent to petition for exemption" process that appears to have already begun, based on the notice in the Lassen County Times on November 28, 1996. Also, please clarify how the proposed merger of Southern Pacific and Union Pacific will affect the petition for exemption process.

We are further concerned that under the impending dissolution of the Interstate Commerce Commission, communication and guidance on this issue with ICC and its successor may become confused and inputs under the critical timeframes required in abandonments may be missed if timely correspondence does not occur. Please provide us with the name(s) and address of the person(s) and organization(s) that will be responsible for this abandonment once ICC is dissolved on December 31, 1996.

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2 SEA acknowledges the request for preservation of infrastructure that may have trails use. Please see recommended mitigation in Volume 1, Chapter 5 of the Post EA.

3 The request for a 180 day period of imposing public use conditions is noted. Please see SEA's general statement on rails-to-trails conversion in Volume 1, Chapter 4 of the Post EA.

4 The responsibilities of the former Interstate Commerce Commission regarding proposed abandonments of rail lines have been assigned to the Surface Transportation Board.



FEDERAL AGENCIES

U.S. DEPARTMENT OF INTERIOR, FISH & WILDLIFE SERVICE - ATLANTA, GA

DAMES & MOORE

ONE CONTINENTAL TOWERS 101 GOLF ROAD, SUITE 1000 ROLLING MEADOWS, ILLINOIS 60008
TEL: 708-450-0707 FAX: 708-450-0713

March 26, 1996
U.S. FISH & WILDLIFE SERVICE
VICKSBURG, MS

U.S. Fish and Wildlife Service
Region 4
Richard B. Russell Federal Bld., Rm 1200
1875 Century Blvd., Ste 200
Atlanta, GA 30345

Dames & Moore is preparing an addendum to the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The attached list and maps show rail segments, identified within your state, which may see an increase in rail activity (increase in the number of trains per day) due to the proposed merger.

To prepare our addendum to the Environmental Report, we are requesting that you inform us of any concerns you have and provide information regarding:

- protected species information (State, Federal) within 5 miles of each segment.
- listing of critical habitats within 5 miles of each site.
- locations of parks and refuges in proximity to the proposed projects.
- citations to any permitting/approval authority which you believe your state has over the actions identified.
- any other information you would like to provide regarding environmental matters or local concerns at these sites.

We would appreciate receiving the requested information at your earliest convenience. We would further appreciate it if the information could be supplied in writing or orally to the undersigned at the address and phone/fax numbers on this letterhead.

We very much appreciate your assistance.

Very truly yours,

DAMES & MOORE, INC.

Julie Donsky
Julie Donsky
Environmental Scientist

☒ Mr. [unclear] [unclear] [unclear]
☒ Mr. [unclear] [unclear] [unclear]
Curtis B. Jones
Curtis B. Jones
U.S. Fish & Wildlife Service
Log No. 96-446
4/18/96

(This page is for administrative use)

1 SEA acknowledges the Fish and Wildlife Service's comments that there are no significant adverse wetland impacts and no listed, proposed or candidate species present.

DAMES & MOORE

ONE CONTINENTAL TOWERS, 1701 GOLF ROAD, SUITE 1000, ROLLING MEADOWS, ILLINOIS 60068
(847) 228-0707 FAX: (847) 228-1115

February 26, 1995

U.S. FISH AND WILDLIFE SERVICE
Region 4
Richard B. Russell Federal Bldg., Rm. 1200
1875 Century Boulevard, Suite 200
Atlanta, GA 30345

RECEIVED

MAR - 6 1996

U.S. FISH & WILDLIFE SERVICE
VICKSBURG, MS

Dames & Moore is preparing an addendum to the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The attached list and maps show additional construction projects which have been identified within your state.

To prepare our addendum to the Environmental Report, we are requesting that you inform us of any concerns you have and provide information regarding:

- protected species information (State, Federal) within 5 miles of each site.
- listing of critical habitats within 5 miles of each site.
- locations of parks and refuges in proximity to the proposed projects.
- citations to any permitting/approval authority which you believe your state has over the actions identified.
- any other information you would like to provide regarding environmental matters or local concerns at these sites.

We would appreciate receiving the requested information at your earliest convenience. We would further appreciate it if the information could be supplied in writing or orally to the undersigned at the address and phone/fax numbers on this letterhead.

We very much appreciate your assistance.

Very truly yours,

DAMES & MOORE, INC.

Julie Donsky
Julie Donsky
Environmental Scientist

No federally listed endangered,
threatened or candidate species present

Site may contain wetlands. Contact
Corps of Engineers for necessary permits.
(telephone 901-544-3471)

Curtis B. Jones
Environmental Coordinator
U.S. Fish and Wildlife Service

Log# 96-351
3/12/96
Date

(U.S. Fish and Wildlife Service)

SEA acknowledges the Fish and Wildlife Service's comment that there are no Federally listed endangered, threatened or candidate species present and that the site may contain wetlands.





IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Sacramento Field Office
2800 Cottage Way, Room E-1803
Sacramento, California 95825

1-1-96-TA-770

April 29, 1996

Ms. Julie Donsky
Dames & Moore
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Subject: Species List for Proposed Merger of the Union Pacific and
Southern Pacific Railroads in California

Dear Ms. Donsky:

The enclosed list replies to your letter of March 26, 1996, requesting information on listed and proposed endangered and threatened species that may be present in or may be affected by projects in the subject project area (see Enclosure A). Information concerning the distribution, life history, and habitat requirements for the listed species is available upon request.

The Fish and Wildlife Service (Service) used your map(s) and/or other information to locate the proposed project on a U.S. Geological Survey (USGS) 7.5 minute quadrangle map. The species on the enclosed list are those species we believe may occur within, or be affected by projects within, the various quads where your project is planned. Some of the species on the list may not be affected by the proposed action. A trained biologist or botanist, familiar with the habitat requirements of the listed species, should determine whether these species or habitats suitable for these species may be affected by the proposed action.

Information and maps concerning candidate species in California are available from the California Natural Diversity Data Base, a program of the California Department of Fish and Game. Address your request to: Marketing Manager, California Department of Fish and Game, Natural Diversity Data Base, 1416 Ninth Street, Sacramento, California 95814 (916)322-2493.

All listed species identified in Enclosure A are fully protected under the mandates of the Endangered Species Act of 1973 as amended (Act). Section 9 of the Act and its implementing regulations prohibit the "take" of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such wildlife species. Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures. If a Federal agency is involved with the permitting, funding,

SEA acknowledges the Fish and Wildlife Service's comment concerning the information available.

STB

FD-32760

6-24-96

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2 of 13

Ms. Julie Donsky

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or carrying out of this project, then initiation of formal consultation between that agency and the Service pursuant to section 7 of the Act is required if it is determined that the proposed project may affect a federally listed species. Such consultation would result in a biological opinion that addresses anticipated effects of the project to listed and proposed species and may authorize a limited level of incidental take. If a Federal agency is not involved with the project, and federally listed species may be taken as part of the project, then an "incidental take" permit pursuant to section 10(a) of the Act should be obtained. The Service may issue such a permit upon completion by the permit applicant of a satisfactory conservation plan for the listed species that would be affected by the project.

If suitable habitat for federally listed species exists in the project area, we recommend that surveys for them be undertaken by qualified biologists during or prior to the environmental review process. We also recommend that surveys be undertaken for the proposed and candidate species included in Enclosure A if suitable habitat exists on site. The results of these surveys should be published in any environmental documents prepared for this project.

Should these surveys determine that federally listed or proposed species occur in the area and are likely to be affected by the proposed project, the Service recommends that the project proponent, in consultation with this office and the California Department of Fish and Game, develop a plan that mitigates for the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. The mitigation plan also should be included in the environmental document.

We also recommend addressing adverse impacts to candidate species. One of the benefits of considering these species early in the planning process is that by exploring alternatives, it may be possible to avoid conflicts that could develop, should a candidate species become listed before the project is complete.

The Service recently changed its policy on candidate species. The term candidate now strictly refers to species for which the Service has on file enough information to propose listing as endangered or threatened. Former candidate 2 species - species for which listing is possibly appropriate but for which the Service lacks sufficient information to support a listing proposal - are now called species of concern. They are no longer monitored by the Service. However we have retained them on the enclosed list for general information. We encourage consideration of them in project planning, as they may become candidate species in the future.

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The majority of the project area consists of existing right-of-way. The project area extends outside the right-of-way only in those areas that involve the construction of connecting track between the UP and SP lines. A review of information provided in the Applicants' Environmental Report indicates that suitable habitat for Federally-listed species does not exist in the project area.

3

In the event that a Federally listed or proposed species is affected either directly or indirectly by the proposed merger, the project proponents will consult with the USFWS to develop a plan to mitigate for these impacts.

4

Candidate species have been considered.



FEDERAL AGENCIES

U.S. DEPARTMENT OF INTERIOR, FISH & WILDLIFE SERVICE - SACRAMENTO, CA

Ms. Julie Donsky

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We appreciate your concern for endangered species. If you have further questions, please call Mr. Peter Cross, Central Valley Branch Chief, Mr. Michael Thibault, Coast-Bay-Delta Branch Chief, or Mr. Ken Sanchez, Forest Ecosystems Branch Chief, of this office at (916) 979-2725. For the fastest response to species list requests, address them to the attention of the section 7 office assistant at this address. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 979-2113. For questions concerning the endangered winter-run chinook salmon or the proposed threatened coho salmon, please contact the National Marine Fisheries Service's Protected Species Management Division, (310) 980-4015.

Sincerely,

Joel A. Medlin

Joel A. Medlin
Field Supervisor

Enclosure

DAMES & MOORE

ONE CONTINENTAL TOWERS, 1701 GOLF ROAD, SUITE 1000, ROLLING MEADOWS, ILLINOIS 60008
(847) 228-0707 FAX: (847) 228-1115

RECEIVED

MAR 21 1996

BY: F103-cc

February 26, 1995

U.S. FISH AND WILDLIFE SERVICE

Region 2

P.O. Box 1306

500 Gold Avenue, SW - Room 4000

Albuquerque, NM 87102

RECEIVED

MAR 13 1996

USFWS ClearLake ES

Dames & Moore is preparing an addendum to the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads. The attached list and maps show additional construction projects which have been identified within your state.

To prepare our addendum to the Environmental Report, we are requesting that you inform us of any concerns you have and provide information regarding:

- protected species information (State, Federal) within 5 miles of each site.
- listing of critical habitats within 5 miles of each site.
- locations of parks and refuges in proximity to the proposed projects.
- citations to any permitting/approval authority which you believe your state has over the actions identified.
- any other information you would like to provide regarding environmental matters or local concerns at these sites.

We would appreciate receiving the requested information at your earliest convenience. We would further appreciate it if the information could be supplied in writing or orally to the undersigned at the address and phone/fax numbers on this letterhead.

We very much appreciate your assistance.

Very truly yours,

DAMES & MOORE, INC.

Julie Donsky

Julie Donsky
Environmental Scientist

NO EFFECT FINDING	
Based on our review of the project activity as proposed, it is not likely that federally listed species, or other important fish and wildlife resources will be impacted.	
Date: 4.24.96	Original signed by: <i>Tricia A. Gassman</i>
Consultation by: <i>Tricia A. Gassman</i>	Approved by: <i>Tricia A. Gassman</i>
U.S. FISH AND WILDLIFE SERVICE, CORPUS CHRISTI, TX	

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SEA acknowledges the comment by Region 2 of the US FWS that the proposed UP/SP merger will have no effect.

(a1...[signature]...[initials])



LOUISIANA

RAIL SEGMENT - ACTIVITY INCREASE

- Shreveport, Louisiana to Lufkin, Texas - This rail segment, which is currently owned by Southern Pacific, runs from Shreveport, Louisiana to Lufkin, Texas. Preliminary information indicates that the Shreveport to Lufkin rail segment may see an increase in rail activity in the number of trains per day moving along the rail segment. The rail segment is approximately 116 miles in length.
- Avondale, Louisiana to Beaumont, Texas - This rail segment, which is currently owned by Southern Pacific, runs from Avondale, Louisiana to Beaumont, Texas. Preliminary information indicates that the Avondale to Beaumont rail segment may see an increase in rail activity in the number of trains per day moving along the rail segment. The rail segment is approximately 258 miles in length.

THE PROPOSED ACTIVITIES WOULD NOT
SIGNIFICANTLY AFFECT LISTED OR
PROPOSED THREATENED OR ENDANGERED
SPECIES

Thomas J. Bland
ENDANGERED SPECIES COORDINATOR
U.S. FISH & WILDLIFE SERVICE
LAFAYETTE, LOUISIANA
DATE: 4/16/81

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SEA acknowledges the US Fish and Wildlife Service's comment that increased rail traffic on the Lufkin, TX to Shreveport, LA, and Avondale, LA to Beaumont, TX segments would not affect threatened or endangered species.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services
17029 El Camino Real, Suite 211
Houston, Texas 77058

April 26, 1996

Julie Donsky
Dames & Moore
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This responds to your April 19, 1996 letter requesting information on federally listed threatened or endangered species or their critical habitat that may occur within 5 miles of your proposed project sites. The proposed projects involve rail segments which may have an increase in rail activity due to the proposed merger of Union Pacific and Southern Pacific Railroads. The two affected rail segments occurring within this office's area of responsibility are the section of the Shreveport, Louisiana to Lufkin, Texas rail line located within Angelina County and the Texas section of the Avondale, Louisiana to Beaumont, Texas segment. The second rail line is located within Jefferson and Orange Counties, Texas.

A review of U.S. Fish and Wildlife Service files and your project map indicates that no federally listed species or critical habitat are known to occur within 5 miles of the rail segments. While it is not likely that any federally listed species occur at the proposed project site, the possibility exists that unknown populations occur within this 5-mile radius. Therefore, a list of, and general information on, each species known to occur within these three counties is enclosed.

The Texas Natural Heritage Program, 3000 I-35 South, Austin, Texas, 78744 (512-448-4311) can provide information on state listed species and other species of concern.

If you have any questions, or we can be of further assistance, please contact Edith Erfling at 713/286-8282.

Sincerely,

Frederick T. Werner
Frederick T. Werner
Chief, Regulatory Activities

Enclosures

1 The Fish and Wildlife Service comment that no Federally listed species or critical habitats are known to occur within five miles of the project is noted.



FEDERAL AGENCIES

U.S. DEPARTMENT OF INTERIOR, FISH & WILDLIFE SERVICE - HOUSTON, TX



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services
17029 El Camino Real, Suite 211
Houston, Texas 77058

April 18, 1996

Julie Donsky
Dames & Moore
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

This responds to your February 26, 1995 letter requesting information on federally listed threatened or endangered species or their critical habitat that may occur within five miles of your proposed project sites. The proposed projects are associated with the proposed merger of Union Pacific and Southern Pacific Railroads. The proposed project located within this office's area of responsibility involves the installation of two turnouts at Sealy in Austin County, Texas.

A review of U.S. Fish and Wildlife Service files and your project map indicates that no federally listed species or critical habitat are known to occur within five miles of the proposed project site. While it is not likely that any federally listed species occurs at the proposed project site, the possibility exists that unknown populations occur within this five mile radius. As shown on the enclosures, the proposed project is located within a zone containing suitable habitat for the endangered Houston toad *Bufo houstonensis*. Unfortunately, most of this area has not been surveyed to determine where the Houston toad may occur.

According to Section 7(a)(2) of the Endangered Species Act, it is the responsibility of each federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any listed species. Based upon an inventory of listed species and those species proposed for listing received from the Service, the federal agency, or its designated agent, determines if any endangered or threatened species may be affected by the proposed action. If a "may affect" decision is reached, then formal Section 7 consultation is initiated with this office.

The Texas Natural Heritage Program, 3000 I-35 South, Austin, Texas, 78744 (512-448-4311) can provide information on state listed species and other species of concern.

If you have any questions, or we can be of further assistance, please contact Edith Erffling at 713/286-8282.

Sincerely,

Frederick T. Werner
Chief, Regulatory Activities

Enclosures

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- 1 SEA acknowledges the Fish and Wildlife Service's comment that no Federally-listed species or critical habitats are known to occur within five miles of the project.
- 2 The Houston Toad Recovery Program relocated the species to rural sites in Austin County which are not proximate to the sites in Sealy, Texas.

DOT-3

BEFORE THE
SURFACE TRANSPORTATION BOARD
WASHINGTON, D. C.

Finance Docket No. 32760

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD COMPANY
AND MISSOURI PACIFIC RAILROAD COMPANY
--CONTROL AND MERGER--
SOUTHERN PACIFIC RAIL CORPORATION, SOUTHERN PACIFIC
TRANSPORTATION COMPANY, ST. LOUIS SOUTHWESTERN RAILWAY
COMPANY, SPCSL CORP. AND THE DENVER AND
RIO GRANDE WESTERN RAILROAD COMPANY

COMMENTS OF THE UNITED STATES
DEPARTMENT OF TRANSPORTATION

I. Introduction

The Surface Transportation Board ("STB" or "Board") in this proceeding is considering the proposed consolidation of two major railroads in the West, the Union Pacific Railroad Company ("UP") and the Southern Pacific Transportation Company ("SP"). As part of that proceeding, the Board's Section of Environmental Analysis ("SEA") has issued an Environmental Assessment ("EA") that reviews the transaction's potential impacts on, inter alia, the environment and safety. In response to the SEA's request, the United States Department of Transportation ("DOT" or "Department") hereby offers these comments on the environmental and safety aspects



of the EA.¹

The SEA has identified certain adverse environmental and safety impacts that would result in certain areas from the merger and the projected increases in rail traffic volume. These adverse impacts generally involve increased levels of noise and air pollution as well as potential decreases in operating safety. The Department overall is concerned that the SEA's recommendations to the Board are not sufficiently specific with respect to measures necessary to fully mitigate these adverse impacts. More detailed, substantive recommendations would assist the STB in its consideration of what mitigation measures to impose in the event the merger is approved. We, therefore offer some specific mitigation measures for the STB's consideration.

II. Environmental and Safety Impacts of the Merger

The Department anticipates that the merger, if approved, would generate both positive and negative environmental and safety impacts. The positive impacts include: elimination of numerous grade crossings because of rail line abandonments, with attendant reduction in air pollution, noise and traffic congestion; reduction of energy consumption and air pollution resulting from shorter routings using the combined system; and creation of a more efficient rail system better able to compete with trucks, which will reduce pollution and enhance safety by taking traffic off the highways. The negative impacts would result from increased rail traffic in certain areas and additional truck traffic at intermodal terminals handling increased rail traffic

1/ We wish to emphasize that these comments refer only to these issues and do not, in any way, reflect the Department's overall position regarding the proposed merger. The Department's position on the merits of the merger will be set forth in its brief, which is due to be filed with the Board by June 3, 1996.

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SEA acknowledges the Department's concerns about specificity of mitigation measures. Since publication of the EA, SEA has conducted additional analyses and site visits to more accurately characterize potential impacts of the proposed merger. SEA has developed more specific mitigation measures, which are described in Volume 1, Chapter 5 of the Post EA. SEA acknowledges the positive impacts of the proposed merger described by the Department. It should also be noted that the Surface Transportation Board does not have ongoing implementation, funding or mitigation monitoring authority and thus has a more limited ability to impose conditions than does the Department.

flows. While the positive environmental impacts of the merger should be considered, DOT strongly urges the Board to impose specific measures to mitigate the negative impacts.

The EA identifies a small number of individual communities that will experience significant increases in train traffic as a result of the merger (e.g., the Cities of Abilene and Wichita, Kansas; and McPherson County, Kansas; the City of Reno, Nevada). EA, Vol. 2, at 8-34 and 12-15. These communities may face increases in noise, congestion, air pollution and safety risks if adequate mitigation measures are not implemented. Again, the DOT urges the Board to impose specific requirements to mitigate these real impacts, in a manner consistent with existing processes.

III. Safety Concerns

Because of its statutory responsibilities for rail and highway safety, the Department is particularly concerned about the impacts of the proposed merger on safety. The Department would like to offer comments on two specific safety-related points discussed by the EA. The EA recommends that the Board require the UP/SP to develop capacity studies of several of its lines, particularly those that will be run as paired tracks, with largely single-direction lines. EA, Vol., at 3-14, 15, 6-28, 9-15; and 16-43, 44. The EA also recommends that the STB require the UP/SP to submit those plans to the Federal Railroad Administration ("FRA") for review.

The FRA has in place a comprehensive program of railroad safety requirements, found in the Code of Federal Regulations ("CFR") in Title 49, Parts 209-240. These regulations address a broad range of safety concerns, including, among other things, track safety standards, freight car safety standards, locomotive inspection and safety standards, railroad power brakes and drawbars,

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Refer to the previous page for response.

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SEA has reviewed the Department's statement that Federal Railroad Administration (FRA) requirements and enforcement are sufficient to ensure safety of rail lines. Therefore, SEA will therefore not require submission of safety plans for specific corridors to the Federal Railroad Administration.



signal system reporting requirements, hours of service of railroad employees, qualification and certification of railroad locomotive engineers, radio standards and procedures, and grade crossing signal system safety. In implementing this merger, UP/SP will be required to comply with all of these requirements in operating the merged system. FRA also has in place a vigorous and effective safety inspection and enforcement program to assure that compliance is achieved.

The Department believes that compliance by the merged railroad with the FRA's safety regulations and with the UP/SP's own internal safety requirements will afford a consistent level of railroad safety across the merged system. Accordingly, preparation and submission by UP/SP of a specific safety plan to the FRA to address certain individual railroad lines is not necessary. Staff from the FRA has met with SEA to discuss railroad safety matters generally, and would be pleased to continue to work with that office on railroad safety issues as SEA completes its environmental analysis of the UP/SP proposal.

IV. Comments on Proposed Mitigation Measures

The Department appreciates the difficulties SEA faced in completing the EA in the limited time available. Perhaps as a result of the compressed schedule, the mitigating measures outlined in the EA are, in DOT's view, too vague to assure specific relief. For example, the EA recommends, in the absence of an agreement between the City of Reno and UP/SP, the construction of three grade-separated crossings and up to two pedestrian grade crossings to mitigate the transportation and safety impact of increases in rail traffic in Reno, Nevada (EA, Vol 2, at 12-15,16). The EA also suggests consideration of a grade-separated crossing for the same reasons at the Grand Junction, Colorado yard (EA, Vol. 2 at 5-26). However, the EA does not

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Refer to previous page for response.

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SEA has reviewed the Department's comments on proposed grade separations at Reno, NV and Grand Junction, CO. Proposed grade separations for Reno were developed in response to ongoing dialogue with the City of Reno and in recognition of the studies already conducted by the City and presented to SEA. Because the City continues to negotiate with the Applicant to reach a mutually-acceptable compromise, SEA recommended a continuance of that effort. Subsequent to the issuance of the EA, SEA conducted additional analyses and a site visit. Mitigation discussions have continued among SEA, UP/SP and Reno. SEA's revised, recommended mitigation measures are described in Volume 1, Chapter 5 of the Post EA.

Communication with Mesa County led to the consideration of a proposed grade crossing in Grand Junction. SEA's reevaluation of the train traffic data revealed that there will be a decrease in traffic on the lines in Grand Junction. A field visit to the location determined that a planned overpass at County Road 29 would provide alternative access to the area of Mesa County in question. SEA also noted that changes to the local signal system could reduce delays. As a result of these changes, no mitigation is proposed.

explain how the recommendations were arrived at or, if implemented, how fully they would mitigate the adverse impacts identified. Nor do the recommendations provide any guidance on the critical question of who will pay the costs of these measures.

For environmental impacts other than transportation and safety (i.e., air quality and noise), the SEA recommendations require UP/SP to meet with the communities to develop mitigation plans, reporting back to the SEA periodically on the status (e.g., EA at Vol. 2, 4-42). DOT believes that such meetings will be ineffective where significant adverse impacts are expected, unless the Board also identifies the minimum level and type of mitigation required, while leaving the railroad and the communities to resolve how to satisfy that requirement.

The same approach -- consultation (with EPA) and preparation of a remedial plan -- is taken with respect to clean-up of hazardous mining remnants and remediation of "Superfund" sites on lines to be sold or abandoned. EA, Vol 3, 4-10. This approach does not assure that adequate clean-up will occur and that financial responsibility for the clean-up will be placed where it belongs -- with the UP/SP.

Similarly, the EA recommends that the merged carriers consult with affected cities and counties about potential safety consequences and develop mutually agreeable plans to alleviate concerns (e.g., EA, Vol. 2, 2-19; 3-13; 4-42; 5-26; and 6-27). The EA should identify mitigation measures that the merged carriers will be required to implement to assure that there are no significant adverse impacts.

Refer to previous page for response.

SEA acknowledges the position of the Department with regard to mitigation negotiations between the Applicant and communities concerning air quality and noise issues. SEA's approach to air quality and noise evaluations is described in Volume 1, Chapters 3 and 4 of the Post EA. SEA's revised, recommended mitigation measures are described in Volume 1, Chapter 5 of the Post EA.

SEA acknowledges the Department's concerns regarding Superfund sites in Colorado. Since publication of the EA, SEA has completed a review of hazardous materials investigation activities in the vicinity of the proposed Sage to Leadville abandonment; this review is included in Appendix G. SEA's recommendation that the Applicant consult with EPA about remediation for proposed abandonments in Colorado recognizes the validity of existing remediation planning by EPA and the Colorado Department of Public Health and Environment and seeks to avoid any potentially conflicting direction. It should be noted that the Applicant is already cleaning up and restoring sites of past spills and is subject to a Consent Decree that requires remediation of contaminated areas at one of the Federal Superfund sites in the area. Financial responsibility for past contamination is defined under existing state and Federal laws. SEA's recommended mitigation measures are described in Volume 1, Chapter 5 of the Post EA.

SEA acknowledges the Department's comments on negotiating safety concerns between the Applicant and affected communities. In response to a request from SEA, the Applicant generated a more detailed output from its traffic model, which indicates the number of carloads of hazardous materials transported now, and projected after the proposed merger. Where these data indicate a substantial increase in shipment of hazardous materials, mitigation measures were developed to reduce exposure to pre-merger conditions. Please refer to Volume 1, Chapter 4 of the Post EA for the analysis. Mitigation measures that are proposed for the transport of hazardous materials are reported in Volume 1, Chapter 5 of the Post EA. SEA's recommended mitigation measures regarding other safety issues are specified in Volume 1, Chapter 5 of the Post EA.



V Recommendations

The Department recommends that the Board require that individual states and the UP/SP jointly develop grade crossing improvement plans that will result in no net reduction in safety, state-wide. The states and UP/SP should conduct a rigorous assessment of those lines and crossings where increased traffic or other operational changes are likely to cause increased safety problems, consistent with the process now undertaken annually by states pursuant to Federal Highway Administration ("FHWA") rules. 23 CFR 646.214 & 924.

The grade crossing improvements annually selected by the states under their normal processes are generally funded in part from the Surface Transportation Program, allocated to the states through the Federal Highway Administration. Intermodal Surface Transportation Efficiency Act of 1991, Section 133,(d)(1) and 23 USC, Section 130. However, where significant increases in safety risk (the exposure of vehicles to trains at crossings), state-wide, would result from the merger, the UP/SP should be responsible for the full cost of bringing the safety risk down to pre-merger levels -- i.e., ensuring no net state-wide increase in safety risk -- as one aspect of the merger's cost.²

Accordingly, if the merger is approved, the states should recalculate the exposure factors of rail crossings within their borders based on the train counts expected after the merger.

^{2/} The Department does not view this approach as being inconsistent with the initial position it has taken in a pending rulemaking, "Selection and Installation of Grade Crossing Warning Systems," 60 Fed Reg 11649 (March 2, 1995). The proposed rule, if implemented, would not be an impediment to requiring enhanced railroad participation in crossing upgrades in circumstances such as this; where an action, approving the merger, requires federal approval and, as a result, the existing level of crossing safety is adversely affected by a merger proposed by two railroads.

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SEA acknowledges the Department's recommendation that the Applicant and individual states jointly develop grade crossing improvement programs to result in no net reduction in safety. As noted, FHWA rules at 23 CFR Part 646.214 and 924 provide an established methodology for such an assessment and Federal funds are available to assist states. Volume 1, Chapter 5 of the Post EA includes the revised safety mitigation measures recommended by SEA.

including trains operated over trackage rights, reestablish their priorities, and, working with the railroads, develop plans to reduce any overall increase in risk. In states where the number of trains will increase significantly, or where rerouting will send trains through grade crossings with higher levels of vehicular traffic, requiring the applicants to assure no increase in overall risk relieves the state from the difficult choice of accepting decreases in overall safety or allocating its limited grade crossing funding resources to remedying problems caused by the merger. The improvements in safety resulting from eliminating the need for highway crossings where rail lines are abandoned may, in the case of some states, offset the increased safety exposure on lines over which traffic is rerouted. This state-wide approach is consistent with existing programs and will provide incentives for closing grade crossings and considering improvements addressed to specific corridors that offer greater safety than mandating a specific crossing-by-crossing approach.

The Department urges one exception to this general, state-wide approach. In those urban areas identified as facing significant increases in rail traffic -- at a minimum, Reno, Nevada, and Wichita, Kansas -- a similar approach, but with a narrower scope, should be used. Because of the relative severity and localized nature of prospective safety risks in these communities, a state-wide focus is simply too broad. Consequently, overall grade crossing risk should be no greater in these urban areas after the merger than before the merger, and the merging lines should again bear the cost of such equalization. The Department recommends that the states of Nevada and Kansas and the UP/SP, working with the Metropolitan Planning Organizations of these urban areas, calculate the area-wide safety risks presented by the merger and identify a program of improvements that will mitigate the negative safety impacts at the least feasible cost. The applicants should be responsible for funding the agreed-upon improvements, and the STB should

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SEA has further evaluated grade crossing issues for Reno, NV and Wichita, KS following publication of the EA. For Reno, traffic analyses were performed to determine the post-merger level of service (LOS) for the at-grade crossings. Acceptable levels of service were determined for all crossings. (Please refer to the response to the City of Reno letter dated May 3, 1996). From a traffic safety perspective, the provision of three grade separations in Reno would yield post-merger accident potential values equal to pre-merger conditions. SEA also reviewed pedestrian crossing issues and found that the average delay per pedestrian would be approximately nine seconds. (Please refer to the response to the City of Reno letter dated May 3, 1996).

For Wichita and Sedgwick County, based on the FRA accident prediction method for railroad grade crossings, for the two UP tracks at issue, the predicted accidents over the past six years would be about 14, or 2.32 accidents per year. By the same methodology, post-merger accidents are predicted to be a total of 4.05 accidents per year.

Reno and Wichita have continued to discuss mutually agreeable mitigation measures with UP/SP. SEA's recommended mitigation measures for Reno and Wichita are described in Volume 1, Chapter 5 of the Post EA.



assure satisfactory implementation of this approach.

Finally, the EA did not address the mitigation measures proposed by the City of Wichita, Kansas, and Sedgwick County, Kansas, to address their concerns about increased rail traffic.³

Those communities proposed that UP/SP reroute the additional trains that would otherwise pass through Wichita over Burlington Northern Santa Fe lines. While we cannot comment on the practicality or any other aspect of the proposal, it certainly should be discussed, as it may offer a relatively low cost solution to the problem.

^{3/} Verified Statement of Lloyd E. Stagner (SEDG-3), pages 1-2; 4-9

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SEA reviewed the proposed bypass for Wichita suggested as mitigation by Sedgwick County/City of Wichita. SEA conducted additional traffic analyses for grade crossings in Wichita. It was determined that the delays to traffic in Wichita resulting from the increased train traffic are not as significant as indicated by the County and City. For example, during the peak hour, a unit train crossing Pawnee Street would block the street for about 2.8 minutes, affecting an estimated 66 vehicles (not 245 vehicles as cited by the City), with a maximum queue of 20 vehicles in the peak traffic direction and 13 vehicles in the off-peak direction (not 61 in each direction), for a corresponding length of 400 or 260 feet (not 1,225 feet). Please refer to response letters to Kansas DOT and Sedgwick County for additional details about the traffic analysis.

The proposed bypass has a number of drawbacks, including:

- Poor connections, with differences in grade levels at both Topeka and Wellington.
- A steeper ruling grade on the BN/Santa Fe than the UP Line.
- Single track and limited siding capacity between Topeka and Emporia.
- Heavy transcontinental traffic and limited capacity between Emporia and Wellington.

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VI. Conclusion

The Department encourages the Board to identify and quantify more fully the merger's specific adverse impacts. Similarly, the Board should impose specific conditions for the mitigation of those impacts, with the costs to be borne by the merging carriers. General requirements that Applicants and local authorities "discuss" the issues may not bring about definite resolutions. The Department stands ready to assist the Board, states and local communities by assuring that railroad operations are conducted in compliance with applicable safety regulations.

Respectfully Submitted,

Rosalind A. Knapp

ROSALIND A. KNAPP

Deputy General Counsel

May 9, 1996

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SEA acknowledges the Department's encouragement to impose specific conditions for the mitigation of impacts. SEA will recommend to the Board that any approval of the proposed merger be subject to the mitigation measures set forth in Volume 1, Chapter 5 of the Post EA.

The most heavily traveled part of the line, Emporia to Elinor, handles up to 51.1 trains per day, plus 2 Amtrak trains and 3 to 4 SP trackage rights trains. BN/Santa Fe also runs 48 trains per day on the Elinor to Augusta portion and 36 trains per day on the Augusta to Wellington portion. The combination of heavy traffic, limited capacity on some sections, a steeper ruling grade, and the need to provide improved connections makes this an undesirable alternative to improvements in Wichita. For these reasons, SEA has concluded that the bypass is not a viable mitigation option.



BEFORE THE SURFACE TRANSPORTATION BOARD

Case No. ICC Dockets AB-12 (Sub-Nos. 188 AND 189X and AB-8 (Sub-Nos 32, 36X and 39) and/or the Proposed Consolidation between Union Pacific Railroad Company and Southern Pacific Transportation Company.
Finance Docket No. 32760.

JOINT COMMENTS OF THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT AND THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION VIII

The Colorado Department of Public Health and Environment ("CDPHE") and the United States Environmental Protection Agency Region VIII ("EPA Region VIII") hereby submit joint comments regarding the proposed consolidation of Union Pacific Railroad Company ("UP") and Southern Pacific Railroad Company ("SP"), and their respective subsidiaries (collectively, "the Companies"), as well as the proposed abandonment of the Malta and Sage rail lines located in the State of Colorado. The proposed abandonment and discontinuance of service of these lines can be found in Docket Nos. AB-12 (Sub Nos. 188 and 189X) and AB-8 (Sub-Nos. 32, 36X and 39).

I. GENERAL COMMENTS

1. By filing these comments, neither CDPHE nor EPA Region VIII take any position regarding the merits of the proposed consolidation of the companies and the proposed abandonment of the rail lines. Our primary concern is that should the consolidation and abandonment application be granted, any potential releases of hazardous substances, pollutants or contaminants, and any other associated environmental problems, must be handled appropriately, in a manner protective of human health and the environment. As explained more fully below, CDPHE and EPA Region VIII request that as a condition for the granting of this application, the Surface Transportation Board require the Companies to perform a remedial investigation to determine the nature and extent of the environmental issues as a condition for the granting of this application.

2. The current rail line proposed for abandonment runs from Sage, Colorado to Canon City, Colorado, a distance of approximately 190 miles. The Sage to Leadville, Colorado segment is 69.1 miles. Railroad Merger Application, Volume VI, Part 4 (Environmental Report-(Exhibit 4)) at 136. ("Environmental Report")

3. The Sage to Leadville segment has been the site of several railroad accidents which may have caused, and may be continuing

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Since publication of the EA, SEA has conducted a review of hazardous materials issues related to the proposed abandonment of the Sage to Canon City rail line (Sage to Leadville segment and Malta to Canon City segment). This review included interviews with clean up agency officials and others (CDPHE, US Forest Service, SP, and D&RGW), a site visit, and a review of hazardous materials investigation reports. The Eagle Mine and California Gulch Superfund sites are located adjacent to the proposed abandonment. Three derailment sites along the line (1989, 1994, and 1996) are being investigated, cleaned up, and restored by Southern Pacific. SEA notes that D&RGW has signed a consent decree with EPA regarding investigation and clean up of the California Gulch site. Remediation of the Eagle Mine site by Viacom International is underway under a 1988 Consent Decree. If the proposed merger is approved, UP/SP would assume, as appropriate, any responsibility and/or liability for hazardous materials clean up by SP or D&RGW in accordance with hazardous waste liability laws. This would include any responsibility of D&RGW for the California Gulch Superfund site. A copy of SEA's report is included in Appendix G. Volume 1, Chapter 5 of the Post EA includes SEA's recommended mitigation measures regarding hazardous materials along rail lines proposed for abandonment.

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to cause environmental damage. In the most recent incident, which occurred on February 21, 1996, two tank cars carrying 27,000 gallons of sulfuric acid ruptured as the result of a train derailment near Camp Hale, along the line proposed for abandonment. That segment of the line has been the site of two other railroad accidents in the past 7 years. One accident, in November, 1994 resulted in the dumping of 1500 gallons of diesel fuel in a wetlands area, and the other, in February, 1989, spilled sulfuric acid down a steep embankment. See, Denver Post, February 22, 1996 at 1A.

4. Much of the land which borders on the railroad right-of-way is Federal land; thus, the merger and ultimate abandonment of these railroad lines may result in a reversion of this property to the State of Colorado or the United States.¹ EPA Region VIII and CDPHE, therefore, believe that the Companies must characterize and investigate any contamination along the railroad lines and commit to remedy it, if necessary, before title passes or reverts to the State or the United States. It would be entirely inappropriate for taxpayers of the State of Colorado or the United States to pay for an environmental clean-up, if one is required, when the damage was caused by the operation of the railroad for the past hundred years.

5. The line proposed for abandonment, moreover, passes through two sites that are currently being remediated pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601, et. seq., ("CERCLA") the California Gulch and Eagle Mine Superfund Sites. Both of these Sites are listed on the National Priorities List (NPL), set forth at 40 CFR Part 30, Appendix B. See, 48 Fed. Reg. 40,658, 40,670, published September 8, 1983 (California Gulch), and 51 Fed. Reg. 21054-21077, published June 10, 1986 (Eagle).

6. In filing this Application for Merger and Abandonment, the Companies were required to prepare an Environmental Assessment, 49 CFR §1105.6(b)(2). The Environmental Assessment is required to contain certain information, including, but not limited to, information regarding whether the rail land is suitable for an "alternative public use" pursuant to 49 U.S.C. § 10906. (Offering abandonment rail properties for sale for public purposes), the impact on land use, the possible effect, if any, on endangered or threatened species, effects on National or State parks or Forests, and, if any hazardous waste sites are involved or any hazardous materials spills on the right of way, discuss the location and the materials involved. The Companies are also

¹ An estimated 1,645 acres of land bordering the rail corridor is currently controlled by the railroad; of this, approximately one half is federal land.

2 SEA considered the information on accidents along this segment in the remedial review.

3 SEA acknowledges the agencies' concern for remediation commitments by responsible parties prior to any title transfers. SEA's recommended mitigation regarding agency consultation is described in Volume 1, Chapter 5 of the Post EA.

4 SEA recognizes the presence of Federal Superfund sites adjacent to the proposed abandonment. SEA considered the sites in the remedial review.



required to provide information on plans for mitigation of any environmental problems. 49 CFR § 1105.7(3-10). Although the Companies did prepare an Environmental Report, the Report contains only a cursory outline of the existence of the two NPL sites noted above, and no mention of the spills. There is moreover, no discussion of the details of the environmental problems posed by these sites, or how the Companies plan to address or undertake any remediation.

7. EPA Region VIII and CDPHE maintain, therefore, that it is the Companies' responsibility to characterize all environmental conditions along the rights-of-way of the rail lines proposed for abandonment, and to agree to remediate any of these environmental conditions that pose a threat to human health or the environment prior to the approval of the merger and abandonment by the Surface Transportation Board.

II. SITE SPECIFIC COMMENTS

1. EAGLE MINE SUPERFUND SITE

A. Background

1. The Eagle Mine Site is located near Minturn, Colorado. See, Exhibit A, attached.

2. Ore deposits in the Eagle Mine area were first mined in the 1870's. From approximately 1916 to 1983, lead-zinc and copper-silver ores were mined from the Eagle Mine. From approximately 1929 to 1931 and then again from approximately 1941 to December, 1977, lead ores were processed through an underground flotation mill at Belden which produced lead and zinc concentrates for shipment by rail to smelters. A tailings product was also discharged by gravity flow to disposal areas several miles from the mine. Tailings were placed in two tailings ponds at the site. Waste material was also deposited in areas known as the Roaster Piles. See, Exhibit B, attached hereto.

3. The rail line was originally constructed in the 1880's. Additional track was laid in this area between 1903 and 1909. In the late 1920's, the Denver and Rio Grande Railroad, a subsidiary of SP, undertook a major reconstruction to improve alignment. The original construction and grades were changed as part of that process.

4. According to maps provided by SP, much of the land which abuts the rail line operated by SP is operated by SP pursuant to a grant from the United States Congress. The rest of the land is owned in fee simple by SP.

5. The current rail line runs along, and is parallel to, the Eagle River, a tributary of the Colorado River. The Eagle River,

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The Applicant filed an Environmental Report with its Application for Merger and Abandonment. The Report included information on hazardous materials and locations. The Applicant opted to provide funds for SEA to retain an independent third-party consultant to prepare the Environmental Assessment (EA). The EA, issued on April 12, 1996, addressed the issues cited.

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SEA acknowledges the information provided by the agencies on the Eagle Mountain Superfund site, including the current remediation of the site by Viacom International Inc. pursuant to a 1993 Record of Decision by EPA, and comments on particular subareas. SEA considered these comments in the remedial review and the development of proposed mitigation measures. SEA acknowledges the detailed information provided about the Eagle Mountain site, including the Belden Area, Roaster Pile #3, Roaster Pile #5, Rock Creek, spillage, and grade construction issues. These specific issues will be addressed through SEA's recommended mitigation regarding assessment of the proposed abandonments by UP/SP (Volume 1, Chapter 5 of the Post EA). These comments should also be forwarded to UP/SP and the Governor to be considered in negotiations about possible future use of the railway right-of-way.

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a major water source as well as a source of fish and other aquatic life, was adversely impacted by the mining activities of the last century.

6. Viacom International Inc., under the oversight of CDPHE, has been conducting a remediation of the site, pursuant to a Consent Decree and Remedial Action Plan entered by the United States District Court in 1988.¹ In September, 1990, EPA Region VIII undertook a Feasibility Study Addendum to determine if additional work should be required. That document resulted in the issuance of a Record of Decision in 1993. The State of Colorado, EPA Region VIII and Viacom have entered into a three-party Consent Decree for the completion of additional work at the site; the three-party Consent Decree is awaiting entry by the U.S. District Court.

7. One of the primary focuses of the remediation of the Eagle Mine Site has been the restoration of water quality and associated aquatic community in the Eagle River.

8. Another major focus of the ongoing remediation at the Eagle Mine Site has been the removal of mine waste from areas known as the Old Tailings Pile, the New Tailings Pile and the Roaster Piles. The mine waste and other contaminated materials were removed and placed in what is known as the Consolidated Tailings Pile. As portions of the Consolidated Tailings Pile are regraded, those portions are covered with a multi-layer clean soil cover. The areas from which contamination has been removed have been regraded, treated to lower the acidity, and reseeded.

B. Specific Comments

1. The Belden area.

a. The Belden area lies along the banks of the Eagle River, immediately adjacent to a portion of the railroad line which is proposed for abandonment. Belden is comprised of several buildings that were used during the mining operations. The primary structures are the Copper Tipple, the Belden drying house build-

¹ The mining activities which caused the environmental damage were caused primarily by the Empire Zinc Company, a subsidiary of the New Jersey Zinc Company. New Jersey Zinc merged in 1966 with Gulf & Western Industries, Inc. That company changed its name to Paramount Communications, Inc. in 1969. Paramount in turn merged with Viacom in 1995, with Viacom as the surviving corporation. Viacom therefore succeeded to the original rights and liabilities relating to the site under CERCLA. For simplicity, these comments will refer only to Viacom.

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ings, storage tanks and other miscellaneous buildings. The Belden drying house buildings were used to dry and store the lead and zinc product from the underground milling process. These buildings are on land owned by the United States, but managed and operated by SP pursuant to a land grant from the United States Congress.

b. Currently, the Belden area is not readily accessible to the public. In order to access the area, it is necessary to drive down a dirt road and pass through a locked gate. This access is intentionally limited, so as to protect public health and safety. The area is patrolled by railroad employees, who attempt to prevent trespassers and vandals. In addition to concerns about exposure to contamination, there are numerous mine-related safety hazards in the area such as rock falls, deteriorating buildings, and mine adits near the rail lines. There is also very expensive monitoring equipment relating to the ongoing remediation in that area.

c. In October, 1991, CDPHE and EPA Region VIII conducted a comprehensive site investigation to identify any improperly disposed of materials in the Belden area. Substantial spillage of the milling product was observed in the drying house buildings. Additionally, approximately 150 cubic yards of milling product was observed in the storage bins. A grab sample of the milling product was collected and sent to the CDPHE laboratory for analysis. The results showed extremely high levels of heavy metals such as lead, iron, zinc, manganese and cadmium, as well as arsenic and copper. This contamination needs to be further characterized and remediated by the Companies prior to approval of the merger.

d. There is also considerable solid waste along the siding in the Belden area. This solid waste consists of empty buckets and barrels, old railroad ties and hardware and various other materials. These objects have been observed migrating into the Eagle River. In addition, some of the buildings in Belden may contain asbestos insulation or siding. All solid waste associated with property owned or operated by the railroad must be identified and disposed of properly.

e. None of the parties involved in the ongoing remediation have performed a risk assessment of the Belden area. Because of its relatively limited access and public use, that was not considered necessary prior to this time. If the railroad line is abandoned however, and the railroad either no longer patrols this area, and/or this area becomes a recreational trail pursuant to the National Trails System Act Amendments of 1983, 16 U.S.C. §1247(d), then all future and potential uses must be evaluated, and this area may require remediation so as to protect public health and the environment. EPA Region VIII and CDPHE are concerned that the Environmental Report does not provide any

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discussion or evaluation of the potential impacts such a future use would have on human health and sensitive ecological populations in the vicinity of the abandoned line.¹

2. Roaster Pile No. 3

a. Roaster Pile No. 3 was located along the south bank of the Eagle River slightly west of the Belden mill complex. Roaster Pile No. 3 was removed and transported to the Consolidated Tailings Pile in 1989. Approximately 38,000 cubic yards of mine waste and underlying soils were excavated. Part of Roaster Pile No. 3 was observed during the removal activities to extend under the railroad grade to the east of the pile location. The roaster material was observed against the east end of the railroad abutment and continued beneath the main line towards the Belden railroad tunnel. The lateral extent of the Roaster Pile is unknown.

b. At the time of the excavation of Roaster Pile No. 3, the railroad expressed concern about further excavation to completely remove the mine waste. The State and the consultant for Viacom who performed the remediation, agreed to excavate as much of the contaminated material as possible, but leave a stable embankment adjacent to the abandoned railroad grade.

c. Roaster material is believed to continue under the railroad main line and is contained by wooden cribbing on the Eagle River side. The cribbing appears stable, but may require maintenance to prevent further migration of mine waste.

d. EPA Region VIII and CDPHE believe that there could be as much as 1000 cubic yards of mine waste material present in the Roaster Pile No. 3 area. This contamination is believed to be contributing to the metal levels in the Eagle River, although the full nature and extent of the impact from this source is not known. If the railroad line is abandoned, there is the potential that this mine waste may become exposed and migrate into the Eagle River if not properly managed. EPA Region VIII and CDPHE maintain that the Companies need to determine the areal extent of Roaster Pile No. 3 to determine what if any impacts the remaining

¹ Every year, the State of Colorado Division of Wildlife, under contract with CDPHE samples the fish population in the Eagle River. In the 1995 sampling, one of the fish collected was a Colorado River Cutthroat Trout; the U.S. Fish & Wildlife Service has designated this species as a Category I species, meaning that it could easily become a threatened or endangered species under the Endangered Species Act, 16 U.S.C. § 1533. The Colorado Division of Wildlife considers the Colorado River Cutthroat a species of "special concern."

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waste has on the water quality of the Eagle River. If the railroad line is abandoned, this waste should be removed and transported to an acceptable repository.

3. Roaster File No. 5

a. Roaster Pile no. 5 was a historic tailings pile located approximately 200 yards into the mouth of the Eagle River canyon near the confluence with Bishop Gulch. See Exhibit B. Approximately 5,000 cubic yards of mine waste and underlying contaminated soils were excavated from this area in the fall of 1988. Mine waste and other forms of contamination were observed under the abandoned railroad grade along the east side of the Eagle River. This contamination was not removed at that time because of concern by the railroad that further excavation would impact the abandoned grade which serves as an access road to the Belden area. If the railroad line is abandoned pursuant to the instant action, CDPHE and EPA Region VIII believe that this material should be removed and transported to an appropriate repository.

4. Rock Creek

a. There are two railroad grades that access the Eagle River canyon and continue to the Belden area. The west grade currently carries the railroad main line. The east grade has been abandoned and currently functions as an access road to the Rock Creek and Belden areas. During construction of the Rock Creek culvert in 1989, several crushed drums were uncovered along the abandoned grade south of the mouth of Rock Creek, on a railroad right of way. The railroad was notified. Conversations with railroad employees revealed that the railroad had used this area to dispose of similar waste in the past. Analytical results of the residual materials determined them to be primarily lubricants, but solvents were also present. EPA Region VIII and CDPHE are concerned that there may be additional buried drums in Rock Creek and other areas of the canyon. This area needs to be further investigated by the Companies to ensure that no other drums and associated waste have been disposed of improperly. If additional drums are found, these need to be removed and disposed of appropriately.

5. Spillage

a. There are several railcar wheel oilers along the active railroad grade in the canyon segment. These oilers mechanically pump lubricants onto the rails to minimize friction as the cars negotiate the tight turns. Appreciable spillage has been observed around these oiling stations. Each of the oiling stations should be investigated to determine whether the underlying soil has become contaminated; if it has, then it should be cleaned-up.

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6. Railroad Grade construction

a. Historic mining operations in the Jilman district preceded the construction of the railroad through the river canyon. It is believed that the railroad grade may have been built on top of waste rock as well as refined mining waste. Neither EPA Region VIII nor CDPHE have characterized the railroad grades. If the railroad lines are abandoned and removed, these grades need to be characterized both superficially and to depth to determine the nature and extent of the contamination, and any contamination needs to be remediated.

2. CALIFORNIA GULCH SUPERFUND SITE

A. Background

1. The California Gulch Superfund Site (the "Site") is located in and near Leadville, Colorado, a mining town approximately 100 miles southwest of Denver.

2. Between the 1860's and the present, the area has supported a variety of mining and mineral processing activities, including the mining, milling, and smelting of silver, gold, zinc, lead, and copper. Hundreds to thousands of mining and processing operations have been undertaken in the vicinity of the Site. Currently, only a few medium-sized facilities are operating.

3. The past 130 years of mining activity have extensively altered the area, both above and below ground. The key subsurface feature at the Site is the Yak Tunnel, a drainage tunnel built to dewater, allow exploration of, and provide access to, underground mines in the area.

4. The land surface in the area has also been disturbed with abandoned mining structures and surface workings dotting the landscape surrounding Leadville. Additionally, extensive shallow placer mining in the stream bed and floodplains of California Gulch has completely overturned and reworked the upper layers of soil and rock. The major surface features at the California Gulch Site are the numerous waste piles produced by mining and mineral processing activities. Three types of waste piles are present: waste rock, tailings and slag. Waste rock is rock with little economic value produced during mine excavation. Tailings are wastes created by milling of mineralized rock for extraction of the commercially valuable minerals. Slag is a waste product from smelting operations. These three waste types have different physical and chemical properties.

5. The United States filed a complaint on August 6, 1986 under Sections 106 and 107 of CERCLA for injunctive relief and the recovery of response costs. The United States named ASARCO,

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7 SEA acknowledges the information on the California Gulch Superfund site, including the commitments of D&RGW to perform a feasibility study pursuant to a 1993 Consent Decree, and comments on particular subareas. SEA considered these comments in the review and development of proposed mitigation measures. SEA acknowledges the specific information provided about the California Gulch Superfund site, including D&RGW's commitments and concerns about future land uses at the site. SEA's recommended mitigation regarding assessment and clean up of the proposed abandonments is included in Volume 1, Chapter 5 of the Post EA.



Inc., Resurrection Mining Co., and its parent, Newmont Mining Corp., Inc. and the RES-ASARCO Joint Venture, as well as the Denver & Rio Grande Western Railroad (D&RGW), a corporate subsidiary of SP and Hecla Mining Company Co. in its complaint.⁴

6. D&RGW owns and has owned property within the Site containing waste piles which have released various hazardous substances into the environment. D&RGW acquired miles of railroad easements throughout the Site and a substantial portion of the "Poverty Flats" area as a railyard. In 1962, D&RGW acquired three slag piles in the Site with an aim to use the slag in its ballast operations: the main pile associated with ASARCO's Arkansas Valley smelter, the pile associated with the LaPlata/Bi-Metallic smelter, and the slag pile and adjacent property of the prior Harrison Reduction Works.

7. D&RGW subsequently arranged with a salvage contractor, Crin Dietrich, to screen material at the Arkansas Valley pile. D&RGW then used the larger sized material for railroad ballast on its rail lines throughout the region. Dietrich was allowed to keep the leftover "fines" for his own purposes; Dietrich in turn sold the fines for use as road sanding material within the Site.

8. On December 15, 1993, the United States District Court for the District of Colorado entered a Consent Decree between the United States and D&RGW which settled D&RGW's potential CERCLA liabilities for the California Gulch Superfund Site.⁵ Under the terms of this decree, D&RGW agreed to perform a Feasibility Study (FS) on its three slag piles, and on a number of slag piles it does not own, as well as remediating its three slag piles, performing a reconnaissance on the Harrison Reduction Works property, and performing a field reconnaissance, FS and remediation on the railroad easement through town, if necessary.

9. In the Consent Decree, the United States reserves its claims against D&RGW for any recontamination which might occur in other

⁴ The State of Colorado initiated a civil action on December 9, 1983, by filing a claim against ASARCO, Inc., Resurrection Mining Co. and its parent, Newmont Corp., and the Res-ASARCO Joint Venture under Section 107 of CERCLA for natural resource damages associated with acid mine drainage from the Yak Tunnel. On April 8, 1985, the State amended its complaint seeking to recover its costs of responding to releases of hazardous substances under Section 107 at the Site. The state and federal cases were consolidated on February 3, 1987.

⁵ A copy of the Consent Decree is available through the EPA Region VIII Superfund Records Center, 999 Eighteenth Street Denver, Colorado 80202. Telephone number is (303) 312-6473.

7 Response on page AF-57

areas of the Site due to releases from D&RGW's work area, and groundwater contamination, if any, underlying their work area.

B. Specific Comments

1. EPA Region VIII and CDPHE are concerned that D&RGW's commitments and contingent liabilities are not assessed or even discussed in the Companies' Environmental Report. Risk assessment and remedial investigation data shows that slag "fines," the small particles which result from the breaking or splintering of large slag pieces, may present a risk to sensitive human and ecological populations in the Leadville community. Fortunately, to date, health risk to recreational and commercial/industrial users of D&RGW properties at the California Gulch Site has been shown to be minimal.

2. EPA Region VIII has been working with D&RGW/SP to ensure that a recreational use such as the creation of the Mineral Belt Bike Path continues to keep this health and environmental risk small. However, should the future use of the rail line transecting the Town of Leadville change to a residential use, EPA and CDPHE are concerned that the concentration of heavy metals from slag fines in the soil within or adjacent to the rail line right-of-way would require remediation. The Companies' Environmental Report does not discuss or analyze this potential environmental impact.

3. The field reconnaissance of easement soils was conducted consistent with the Consent Decree. This field survey showed that slag fines are indeed present in the easement soils. A Feasibility Study and selection of an appropriate remedy, however, were deferred until such time as the use of the rail line and right-of-way changed. Abandonment of the rail line is a changed use that triggers the need for conducting a remedial investigation and possibly a clean-up of this portion of D&RGW's operable unit at the Site. Reasonably foreseeable future land uses would be required to be taken into account when conducting any FS and issuing any Record of Decision. (See, 40 C.F.R. §300.430(d) and OSWER Directive No. 9355.7-04).

4. EPA Region VIII and CDPHE are also troubled by the fact that D&RGW's commitments under the consent decree, including the remediation of the AV, La Plata and Harrison Street slag pile footprints and addressing any release of hazardous substances from these piles into sitewide surface and groundwater, are not mentioned in the Environmental Report.

5. With regard to the California Gulch Superfund Site, therefore, EPA Region VIII and CDPHE ask that the Surface Transportation Board require D&RGW/SP to live up to its Consent Decree commitments and to more fully analyze the existing contamination in light of all reasonably foreseeable future land uses, includ-

-10-

7 Response on page AF-57



ing any new uses which may result from the proposed merger and abandonment.

WHEREFORE, EPA Region VIII and CDPHE request that the Surface Transportation Board require the Companies to perform a remedial investigation to determine the nature and extent of contamination at and emanating from the railroad lines along the entire railroad corridor to be abandoned as a condition precedent for the granting of this application.

Dated this 22nd day of March, 1996.

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

By Jane T. Feldman

Jane T. Feldman
Assistant Attorney General
Natural Resources Section
CERCLA Litigation Unit
Colorado Department of Law
1525 Sherman Street
Denver, Colorado 80203
(303) 866-5073

Consultation with U.S. Environmental Protection Agency
Office of Federal Activities, Washington, D.C.

On May 21, 1996, staff from the Section of Environmental Analysis (SEA) met with members of the U.S. Environmental Protection Agency's Office of Federal Activities (EPA Headquarters) at that office's request. EPA Headquarters advised SEA that not all of its regional offices had been served the EA. EPA requested that it receive a copy of the EA even though the federal office generally only reviews EIS's. SEA immediately provided them with an EA and express mailed additional copies to specified officials that EPA had identified at the regional offices. Due to the late receipt of the EA and to ensure its fullest participation, EPA also requested that SEA provide them with the Post EA for them to comment on within two weeks. After consulting with the Board's Office of General Counsel, SEA agreed that this seemed to be the best approach. Any suggested revisions by EPA could then be incorporated, as appropriate, into the Board's decision on the merger.



STATE AGENCIES

MERGER OF UNION PACIFIC RAILROAD COMPANY AND SOUTHERN PACIFIC TRANSPORTATION COMPANY



STATE AGENCIES
ARKANSAS - STATE CLEARINGHOUSE



OFFICE OF
INTERGOVERNMENTAL
SERVICES
PHONE (501) 682-1074
FAX (501) 682-1008

STATE OF ARKANSAS
DEPARTMENT OF FINANCE AND ADMINISTRATION
P.O. BOX 2276
LITTLE ROCK, AR 72203



June 3, 1996

Surface Transportation Board
Section of Environmental Analysis
Washington, DC 20423-0001

RE: FINANCE DOCKET NO. 32760/UNION PACIFIC CORP., UNION PACIFIC RAILROAD CO.,
AND MISSOURI PACIFIC RAILROAD CO.,--CONTROL AND MERGER--SOUTHERN PACIFIC
TRANSPORTATION CO., ST. LOUIS SOUTHWESTERN RAILWAY CO., SPCSL CORP., AND
THE DENVER AND RIO GRANDE WESTERN RAILROAD CO.

Dear Sir:

The State Clearinghouse has received the above Document pursuant to the
Arkansas Project Notification and Review System.

To carry out the review and comment process, this document was forwarded
to members of the Arkansas Technical Review Committee. Resulting comments
received from the Technical Review Committee which represents the position of
the State of Arkansas are attached.

The State Clearinghouse wishes to thank you for your cooperation with the
Arkansas Project Notification and Review System.

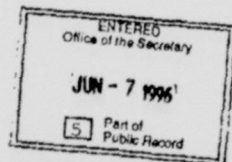
Sincerely,

Tracy L. Copeland, Manager
State Clearinghouse

Enclosure

cc: Randy Young, AS&MCC

0015N.1/TLC:mkb



AN EQUAL OPPORTUNITY EMPLOYER

Comments from the Arkansas Technical Review Committee are found on the
following pages.





Arkansas
Soil and Water
Conservation Commission

J. Randy Young, P.E.
Executive Director

101 EAST CAPITOL
SUITE 350
LITTLE ROCK, ARKANSAS 72201

PHONE 501-682-1611
FAX 501-682-3991

MEMORANDUM

TO: Mr. Tracy Copeland
Manager, State Clearinghouse

FROM: J. Randy Young, P.E.
Chairman, Technical Review Committee

SUBJECT: ENVIRONMENTAL ASSESSMENT FINANCE DOCKET NO. 32760/UNION PACIFIC
CORP., UNION PACIFIC RAILROAD COMPANY, AND MISSOURI PACIFIC RAILROAD
COMPANY

DATE: MAY 20, 1996

Members of the Technical Review Committee have reviewed the above referenced project. The Committee supports this project.

The opportunity to comment is appreciated.

JRY:smc
Enclosures
cc: Members of the Technical Review Committee

DECLINE
MAY 24 1996
RECEIVED
STATE CLEARINGHOUSE

An Equal Opportunity Employer

1

1

SEA acknowledges the State Clearinghouse Technical Review Committee's comment in support of the proposed merger.



STATE OF ARKANSAS

DEPARTMENT OF FINANCE AND ADMINISTRATION

P.O. BOX 3278

LITTLE ROCK - 72203

OFFICE OF
INTERGOVERNMENTAL
SERVICESPHONE (501) 682-1074
FAX (501) 682-5206

MEMORANDUM

TO: All Technical Review Committee Members

FROM: Tracy L. Copeland, Manager - State Clearinghouse

DATE: April 17, 1996

SUBJECT: ENVIRONMENTAL ASSESSMENT FINANCE DOCKET NO. 32760/UNION PACIFIC CORP.,
UNION PACIFIC RAILROAD COMPANY, AND MISSOURI PACIFIC RAILROAD COMPANY

Please review the above stated document under provisions of Section 404 of the Clean Water Act, Section 102(2)(c) of the National Environmental Policy Act of 1969 and the Arkansas Project Notification and Review System.

Your comments should be returned by 04-08-96 to - Mr. Randy Young, Chairman, Technical Review Committee, 101 E Capitol, Suite 350, Little Rock, Arkansas 72203.

If we have no reply within that time we will assume you have no comments and will proceed with the sign-off.

NOTE: It is imperative that your response be in to the ASWCC office by the date requested. Should your agency anticipate having a response which will be delayed beyond the stated deadline for comments, please contact Ms. Shani Cable of the ASWCC at 682-1611 or the State Clearinghouse Office.

<input type="checkbox"/> Support	<input type="checkbox"/> Do Not Support (Comments Attached)
<input type="checkbox"/> Comments Attached	<input type="checkbox"/> Support with Following Conditions
<input checked="" type="checkbox"/> No Comments	<input type="checkbox"/> Non-Degradation Certification Issues (Applies to PC&E Only)

Signature Joseph R. Kuytchik Agency ASWCC Date 5/8/96

0173N

AN EQUAL OPPORTUNITY EMPLOYER

1 SEA acknowledges the Arkansas Soil and Water Conservation Commission's statement of no comment.



STATE AGENCIES

ARKANSAS - ARKANSAS GAME & FISH COMMISSION

ARKANSAS GAME & FISH COMMISSION

Little Rock, Arkansas



MEMORANDUM

To: Randy Young, Chairman
Technical Review Committee

From: Craig K. Uyeda, Member
Technical Review Committee

Date: April 22, 1996

SMC for Craig Uyeda

In response to the memorandum from the State Planning and Development Clearinghouse of April 9 and 17, and attached public notice from the Memphis District, USCE, and letter from Mr. Winston M. Guthrie, Contractor, Real Estate Services, and Environmental Assessment, this is to advise we have no objections to the following projects:

Pre-Discharge Notification/St. Francis County/Gerald Wilson -- To Construct Levees in Farmed Wetlands for a Fish Pond.

**** *

New Postal Facility-Little Rock, Arkansas-- New Chenal Station

Environmental Assessment Finance Docket No. 32760 / Union Pacific Corporation, Union Pacific Railroad Company, and Missouri Pacific Railroad Company.

Thank you for the opportunity to review this permit application.

CKU:DGC/kak

cc: State Clearinghouse
U.S. Fish & Wildlife Service
Memphis District, USCE
Mr. Winston Guthrie
Surface Transportation Board

1

1

SEA acknowledges the Arkansas Game & Fish Commission's comment that it has no objection to the proposed merger.

2

2

SEA acknowledges the Arkansas Game and Fish Commission's comment of no objections to the proposed merger.

ARKANSAS GAME & FISH COMMISSION

Little Rock, Arkansas



MEMORANDUM

To: Randy Young, Chairman
Technical Review Committee

From: Craig K. Uyeda, Member
Technical Review Committee

Date: May 1, 1996

In response to the memorandums from the State Planning and Development Clearinghouse of April 22 and 26, and attached public notices from the Surface Transportation Board, Vicksburg District, USCE, and US Department of the Interior, this is to advise we have no objections to the following projects:

Finance Docket No. 32760 / Union Pacific Railroad Co., and Missouri Pacific Railroad Co., - Control and Merger - Southern Pacific Transportation Co., St. Louis Southwestern Railway Co., SPCSL Corp., and the Denver and Rio Grande Western Railroad Co.

Public Information Meetings / Environmental Design Report / Mississippi River and Tributaries Project - Levees (Vicksburg District) - The purpose of the Environmental Design Report is to develop and evaluate potential alternative engineering design methods to avoid and/or minimize damages to wetlands and bottom-land hardwoods.

Scoping Period for Two Federal Mineral Estate Tracts in Arkansas for Oil and Gas Exploration and Development (Sebastian and Yell Counties).

Action Id No. 13684 / Mr. Thomas L. Matchett - The purpose of this project is to provide a boat livery and guide service to trout fisherman on the White River.

Thank you for the opportunity to review these permit applications.

CKU/DGC/kak

cc: State Clearinghouse
U.S. Fish & Wildlife Service
Vicksburg and Little Rock Districts, USCE
US Department of the Interior, Bureau of Land Management
Surface Transportation Board

1

SEA acknowledges the Arkansas Game & Fish Commission's comment that it has no objection to the proposed merger.



STATE AGENCIES
ARKANSAS - DEPARTMENT OF HEALTH



OFFICE OF
INTERGOVERNMENTAL
SERVICES
PHONE (501) 682-1074
FAX (501) 682-5206

STATE OF ARKANSAS
DEPARTMENT OF FINANCE AND ADMINISTRATION
PO BOX 3278
LITTLE ROCK - 72203

COMMUNICATIONS SECTION

MEMORANDUM

RECEIVED
APR 24 1996

ARK. DEPT. of HEALTH

TO: All Technical Review Committee Members
FROM: Tracy L. Copeland, Manager - State Clearinghouse
DATE: April 22, 1996
SUBJECT: FINANCE DOCKET NO. 32760/UNION PACIFIC CORP., UNION PACIFIC RAILROAD CO.,
AND MISSOURI PACIFIC RAILROAD CO.,--CONTROL AND MERGER--SOUTHERN PACIFIC
TRANSPORTATION CO., ST. LOUIS SOUTHWESTERN RAILWAY CO., SPCSL CORP., AND
THE DENVER AND RIO GRANDE WESTERN RAILROAD CO.

Please review the above stated document under provisions of Section 404 of the
Clean Water Act, Section 102(2)(c) of the National Environmental Policy Act of
1969 and the Arkansas Project Notification and Review System.

Your comments should be returned by 05-13-96 to - Mr. Randy Young,
Chairman, Technical Review Committee, 101 E Capitol, Suite 350, Little Rock,
Arkansas 72203.

If we have no reply within that time we will assume you have no comments and
will proceed with the sign-off.

NOTE: It is imperative that your response be in to the ASWCC office by the
date requested. Should your agency anticipate having a response which
will be delayed beyond the stated deadline for comments, please contact
Ms. Shani Cable of the ASWCC at 682-1611 or the State Clearinghouse
Office.

☐ Support ☐ Do Not Support (Comments Attached)
☐ Comments Attached ☐ Support with Following Conditions
☒ No Comments ☐ Non-Degradation Certification Issues
(Applies to PC&E Only)

Signature: *[Signature]* Agency: Division of Engineering Date: 5-1-96
Arkansas Department of Health
4815 West Markham
Little Rock, AR 72206-3887

AN EQUAL OPPORTUNITY EMPLOYER

1 SEA acknowledges the Arkansas Department of Health's statement of
no comment.

STATE AGENCIES

ARKANSAS - DEPARTMENT OF POLLUTION CONTROL & ECOLOGY



STATE OF ARKANSAS

DEPARTMENT OF FINANCE AND ADMINISTRATION

P.O. BOX 3278

LITTLE ROCK, AR 72203

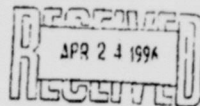
OFFICE OF
INTERGOVERNMENTAL
SERVICES

PHONE (501) 682-1074
FAX (501) 682-5206

RECEIVED

APR 23 1996

MEMORANDUM



TO: All Technical Review Committee Members

FROM: Tracy L. Copeland, Manager - State Clearinghouse

DATE: April 22, 1996

SUBJECT: FINANCE DOCKET NO. 32760/UNION PACIFIC CORP., UNION PACIFIC RAILROAD CO., AND MISSOURI PACIFIC RAILROAD CO.,--CONTROL AND MERGER--SOUTHERN PACIFIC TRANSPORTATION CO., ST. LOUIS SOUTHWESTERN RAILWAY CO., SPCSL CORP., AND THE DENVER AND RIO GRANDE WESTERN RAILROAD CO.

Please review the above stated document under provisions of Section 404 of the Clean Water Act, Section 102(2)(c) of the National Environmental Policy Act of 1969 and the Arkansas Project Notification and Review System.

Your comments should be returned by 05-13-96 to - Mr. Randy Young, Chairman, Technical Review Committee, 101 E Capitol, Suite 350, Little Rock, Arkansas 72203.

If we have no reply within that time we will assume you have no comments and will proceed with the sign-off.

NOTE: It is imperative that your response be in to the ASWCC office by the date requested. Should your agency anticipate having a response which will be delayed beyond the stated deadline for comments, please contact Ms. Shani Cable of the ASWCC at 682-1611 or the State Clearinghouse Office.

☐ Support ☐ Do Not Support (Comments Attached)

☒ Comments Attached ☐ Support with Following Conditions

☒ No Comments ☐ Non-Degradation Certification Issues (Applies to PC&E Only)

Signature Steve Brown Agency ADPC&E Date 29 APR 96

0173N

AN EQUAL OPPORTUNITY EMPLOYER

1 SEA acknowledges the Arkansas Department of Pollution Control and Ecology's statement of no comment.

MERGER OF UNION PACIFIC RAILROAD COMPANY AND SOUTHERN PACIFIC TRANSPORTATION COMPANY





OFFICE OF
INTERGOVERNMENTAL
SERVICES
PHONE 501/682-1074
FAX 501/682-5206

STATE OF ARKANSAS
DEPARTMENT OF FINANCE AND ADMINISTRATION
P.O. BOX 1278
LITTLE ROCK, AR 72203

APR 23 1996 10:27

MEMORANDUM

TO: All Technical Review Committee Members

FROM: Tracy L. Copeland, Manager - State Clearinghouse

DATE: April 22, 1996

SUBJECT: FINANCE DOCKET NO. 32760/UNION PACIFIC CORP., UNION PACIFIC RAILROAD CO.,
AND MISSOURI PACIFIC RAILROAD CO.,--CONTROL AND MERGER--SOUTHERN PACIFIC
TRANSPORTATION CO., ST. LOUIS SOUTHWESTERN RAILWAY CO., SPCSL CORP., AND
THE DENVER AND RIO GRANDE WESTERN RAILROAD CO.

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Clean Water Act, Section 102(2)(c) of the National Environmental Policy Act of
1969 and the Arkansas Project Notification and Review System.

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Chairman, Technical Review Committee, 101 E Capitol, Suite 350, Little Rock,
Arkansas 72203.

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date requested. Should your agency anticipate having a response which
will be delayed beyond the stated deadline for comments, please contact
Ms. Shani Cable of the ASWCC at 682-1611 or the State Clearinghouse
Office.

☐ Support ☐ Do Not Support (Comments Attached)

☐ Comments Attached ☐ Support with Following Conditions

☒ No Comments ☐ Non-Degradation Certification Issues
(Applies to PC&E Only)

Signature Will V. B. [Signature] Agency Ark. Geol. Comm Date 4-24-96

0173N

AN EQUAL OPPORTUNITY EMPLOYER

1

1

SEA acknowledges the Arkansas Geology Commission's statement of
no comment.

STATE AGENCIES
ARKANSAS - INDUSTRIAL DEVELOPMENT COMMISSION



OFFICE OF
INTERGOVERNMENTAL
SERVICES
ONE (501) 682-1074
AR (501) 682-5206

STATE OF ARKANSAS
DEPARTMENT OF FINANCE AND ADMINISTRATION
P.O. BOX 3278
LITTLE ROCK - 72203

MEMORANDUM

TO: All Technical Review Committee Members
FROM: Tracy L. Copeland, Manager - State Clearinghouse
DATE: April 22, 1996
SUBJECT: FINANCE DOCKET NO. 32760/UNION PACIFIC CORP., UNION PACIFIC RAILROAD CO.,
AND MISSOURI PACIFIC RAILROAD CO.,--CONTROL AND MERGER--SOUTHERN PACIFIC
TRANSPORTATION CO., ST. LOUIS SOUTHWESTERN RAILWAY CO., SPCS CORP., AND
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Chairman, Technical Review Committee, 101 E Capitol, Suite 350, Little Rock,
Arkansas 72203.

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NOTE: It is imperative that your response be in to the ASWCC office by the
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will be delayed beyond the stated deadline for comments, please contact
Ms. Shari Cable of the ASWCC at 682-1611 or the State Clearinghouse
Office.

☐ Support ☐ Do Not Support (Comments Attached)
☐ Comments Attached ☐ Support with Following Conditions
☒ No Comments ☐ Non-Degradation Certification Issues
(Applies to PC&E Only)

Signature Alfred Dinkwater Agency ATDC Date 4.25.96

0173N

AN EQUAL OPPORTUNITY EMPLOYER

1 SEA acknowledges the Arkansas Industrial Development Commission's
statement of no comment.

MERGER OF UNION PACIFIC RAILROAD COMPANY AND SOUTHERN PACIFIC TRANSPORTATION COMPANY





OFFICE OF
INTERGOVERNMENTAL
SERVICES
PHONE (501) 582-1074
FAX (501) 582-1008

STATE OF ARKANSAS
DEPARTMENT OF FINANCE AND ADMINISTRATION
P.O. BOX 3378
LITTLE ROCK, AR 72203

MEMORANDUM

TO: All Technical Review Committee Members
FROM: Tracy L. Copeland, Manager - State Clearinghouse
DATE: April 22, 1996
SUBJECT: FINANCE DOCKET NO. 32760/UNION PACIFIC CORP., UNION PACIFIC RAILROAD CO.,
AND MISSOURI PACIFIC RAILROAD CO.,--CONTROL AND MERGER--SOUTHERN PACIFIC
TRANSPORTATION CO., ST. LOUIS SOUTHWESTERN RAILWAY CO., SPCSL CORP., AND
THE DENVER AND RIO GRANDE WESTERN RAILROAD CO.

Please review the above stated document under provisions of Section 404 of the
Clean Water Act, Section 102(2)(c) of the National Environmental Policy Act of
1969 and the Arkansas Project Notification and Review System.

Your comments should be returned by 05-13-96 to - Mr. Randy Young,
Chairman, Technical Review Committee, 101 E Capitol, Suite 350, Little Rock,
Arkansas 72203.

If we have no reply within that time we will assume you have no comments and
will proceed with the sign-off.

NOTE: It is imperative that your response be in to the ASWCC office by the
date requested. Should your agency anticipate having a response which
will be delayed beyond the stated deadline for comments, please contact
Ms. Shani Cable of the ASWCC at 682-1811 or the State Clearinghouse
Office.

☐ Support ☐ Do Not Support (Comments Attached)
☐ Comments Attached ☐ Support with Following Conditions
☒ No Comments ☐ Non-Degradation Certification Issues
(Applies to PC&E Only)

Signature Joseph K. Kuykendall Agency ASWCC Date 5/14/96

0173N

AN EQUAL OPPORTUNITY EMPLOYER

1 SEA acknowledges the Arkansas Soil and Water Conservation
Commission's statement of no comment.



February 9, 1996

ARKANSAS
HISTORIC
PRESERVATION
PROGRAM

Ms. Elaine K. Kaiser
UP/SP Environmental Project Director
Section Of Environmental Analysis
12th. And Constitution Avenue, Room 3219
Washington, D.C. 20423-0001

Date 5/29/96
This undertaking will have no effect
on significant cultural resources.

Cathy Buford Staley
State Historic Preservation Office

RE: Multi-County - General
Section 106 Review - ICC Tracking No. #26035
Proposed Merger Of Union Pacific And Southern Pacific And
Railline Abandonment
(Finance Docket No. 32760)

Dear Ms. Kaiser:

This letter is written in response to your inquiry, regarding
properties of architectural, historical, or archeological
significance in the area of the proposed referenced project.

In order for the Arkansas Historic Preservation Program (AHPP) to
complete its review of the proposed project, we will need the
additional information checked below:

- a 7.5 topographic project location map delineating the project
boundary.
- a project description detailing all aspects of the proposed
project.
- ✓ the location, age, and photographs of structures (if any) to
be renovated, removed, demolished, or abandoned as a result
of this project.
- photographs of any structures on property directly adjacent to
the project area.

Once we have received the above information, we will complete our
review as expeditiously as possible. If you have any questions,
please contact me at (501) 324-9785.

Sincerely,

Randy Jeffery
Randy Jeffery
106 Review Coordinator

CS\GM\95

1500 Tower Building • 323 Center • Little Rock, Arkansas 72201 • Phone (501) 324-9880
Fax (501) 324-9134
A Division of the Department of Arkansas Heritage



- 1 The requested information was provided to the Arkansas Historic
Preservation Program during SEA's ongoing Section 106 process.





ARKANSAS
HISTORIC
PRESERVATION
PROGRAM

April 23, 1996

Ms. Julie Donsky
Environmental Scientist
Dames & Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

RE: Multit-County - General
Section 106 Review - ICC Tracking No. #26035
Proposed Addendum To Environmental Report For Rail Segment
Increase From Brinkley To Pine Bluff Arkansas

Dear Ms. Donsky:

This letter is written in response to your inquiry, regarding properties of architectural, historical, or archeological significance in the area of the proposed referenced project.

In order for the Arkansas Historic Preservation Program (AHPP) to complete its review of the proposed project, we will need the additional information checked below:

- ✓ a 7.5 topographic project location map delineating the project boundary.
- a project description detailing all aspects of the proposed project.
- the location, age, and photographs of structures (if any) to be renovated, removed, demolished, or abandoned as a result of this project.
- photographs of any structures on property directly adjacent to the project area.

Once we have received the above information, we will complete our review as expeditiously as possible. If you have any questions, please contact me at (501) 324-9785.

Sincerely,

Randy Jeffery

Randy Jeffery
106 Review Coordinator

CS\GM\ss

1500 Tower Building • 323 Center • Little Rock, Arkansas 72201 • Phone (501) 324-9880

Fax (501) 324-9154

A Division of the Department of Arkansas Heritage



1

1 The requested mapping of the Brinkley to Pine Bluff rail segment was previously supplied to the Arkansas Historic Preservation Program during SEA's ongoing Section 106 consultation process.

Surface Transportation Board
Washington, D.C. 20423-0001

MAR 15 1996

Section of Environmental Analysis

March 13, 1996

Cathryn Slater, Director
Arkansas Historic Preservation Program
Department of Arkansas Heritage
1500 Tower Building, 323 Center
Little Rock, AR 72201

Date 5-22-96
This undertaking will have no effect
on significant cultural resources.
Cathy Buford Slater
State Historic Preservation Officer

Attn: Randy Jeffery, 106 Review Coordinator

Re: Continuing Section 106 Consultation with Surface Transportation Board for Proposed
Merger of Union Pacific and Southern Pacific (UP/SP) Railroads
(Finance Docket No. 32760)
Proposed Abandonment, Gurdon to Camden [MHA L-2]

Dear Ms. Slater:

This letter is to continue Section 106 consultation about the potential impacts to cultural/historic resources that may arise from the UP/SP proposed merger. As described in our letter of January 29, 1996 that initiated formal consultation, the Surface Transportation Board's Section of Environmental Analysis is conducting an Environmental Assessment of the proposed merger. Your previous correspondence to the Union Pacific Railroad' environmental consultant, Dames & Moore, indicated that you needed certain additional information concerning the proposed merger. This letter provides that information.

In compliance with Section 106 of the National Historic Preservation Act, our historic preservation consultants, McGinley Hart & Associates, conducted a review and analysis of merger-related activities that may potentially affect historic and cultural resources within the State of Arkansas. We are pleased to provide you with the following information, as requested, to assist in your review of the proposed abandonment of the Gurdon Subdivision of the former Missouri Pacific Railroad between Gurdon and Camden:

- Historic Resources Summary List that includes 52 bridges (51 timber pile trestles and one multi-span with a through-plate girder).
- Photographs of the 52 bridges.
- Copies of seven USGS quadrangle maps showing the locations by mile post (MP) of each bridge.

- 1 SEA acknowledges the State Historic Preservation Officer's comment that the undertaking will have no effect on cultural resources for the proposed Gurdon to Camden abandonment. This correspondence completes Section 106 coordination responsibilities for the State of Arkansas for this proposed abandonment.



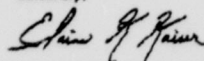
March 13, 1996

Page 3

evaluation of each site indicates that none of these historic resources will be affected by the proposed activities.

The assistance and cooperation of your office are appreciated. We hope that the enclosed materials will allow you to complete your review in an expeditious manner. If you have any questions regarding this material, please feel free to contact Paul McGinley or Tom Lingel at McGinley Hart & Associates at 617/227-2932. If we can provide any assistance regarding the Section 106 process, please call Ms. Phillie Johnson-Bell, SEA's UP/SP Environmental Project Manager, at (202) 927-8213.

Sincerely,



Elaine K. Kaiser
Chief, Section of Environmental Analysis

Attachments



DEPARTMENT OF
PARKS & TOURISM

One Capitol Mall
Little Rock, AR 72201
Phone: 501-682-7777
FAX: 501-682-1354

History Commission
501-682-4900 (VTT)

Personnel Section
501-682-7742 (VTT)

State Parks Division
501-682-1181 (VTT)

Tourism Division
501-682-7777 (VTT)

Internet Address:
http://www.dpt.state.ar.us

1 Drive: www.dpt.state.ar.us

433-682-1354

Jan Gary Tucker
GOVERNOR

Richard W. Thomas
EXECUTIVE DIRECTOR

STATE PARKS
RECREATION
& TRAILS
COMMISSION

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VISION DIRECTOR:

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STATE PARKS

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TOURISM

Honey Clark

GREAT RIVER ROAD

John L. Ferguson

HISTORY COMMISSION

AND: Middleton

KEEP ARKANSAS
BEAUTIFUL

AMERICAN
OPPORTUNITY

PHYSICALLY HANDICAPPED
AMERICANS WITH
DISABILITIES ACT

EMPLOYERS

Arkansas.
THE NATURAL STATE

March 15, 1996

Ms. Julie Donsky, Environmental Scientist
Dames and Moore
One Continental Towers
1701 Golf Road, Suite 1000
Rolling Meadows, Illinois 60008

Dear Ms. Donsky:

Enclosed is the information you requested for the addendum to the Environmental Report for the application for merger of the Union Pacific and Southern Pacific Railroads.

Attached is an inventory of all parks in that area.

Sincerely,

Bryan Kellar
Bryan Kellar, Director
Outdoor Park Recreation Grants

BK:wb

Enclosure

SEA appreciates the information about parks in West Memphis area. The originally proposed intermodal facility at West Memphis has been withdrawn from the Applicant's proposal.





Arizona
State Parks

1300 W. Washington
Phoenix, Arizona
85007
Tel: 602-542-4174
Fax: 602-542-4168
http://www.pstate.az.us

Fife Symington
Governor

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Deputy Director

"Managing and conserving natural, cultural, and recreational resources"

May 4, 1996

Elaine K. Kaiser
Chief, Section of Environmental Analysis
Surface Transportation Board
Washington, D.C. 20403-0001

RE: Union Pacific/Southern Pacific Railroad Merger; STB

Dear Ms. Kaiser:

Thank you for providing us with the response documentation as requested in our March 4, 1996 letter to you. I have reviewed the documentation submitted and note that specific determinations of eligibility and effect are requested from this office by the Surface Transportation Board (STB). Please note that we feel that such requests are premature at this time, as areas of new ground disturbance associated with the new construction of rail line segments and the expansion of intermodal facilities in Arizona could result in adverse effects to previously unknown cultural resources that are eligible for the National Register of Historic Places (NRHP), especially if human remains and/or grave goods are present at these sites.

As mentioned in our earlier letter, field surveys by qualified archaeologists are still required in order to assess these situations. The results of these surveys should provide a clear map of the entire right-of-way through Arizona that details which prehistoric and historic archaeological sites and historic structures (buildings, railroads, railroad camps, etc.) will be impacted by proposed activities associated with this merger. This survey report should also include NRHP eligibility recommendations for all cultural resources located within the areas of potential effect in Arizona.

In addition, given that this project is multi-state and could result in an adverse effect in any or all of the respective states (once survey results are known), we recommend that STB generate a Programmatic Agreement (PA) to facilitate the Section 106 process for this complex undertaking. It is our opinion that there should only be one determination of effect for this whole project -- in Arizona, we prefer not to segment undertakings and rarely provide multiple determinations of effect for one project. We would be more than happy, however, to agree within the body of the PA that certain categories of activities can proceed in Arizona without further consultation (e.g., Category 2--the increase of traffic at rail yards, Category 4--rail line abandonment (none of which is slated for Arizona), and Category 5--new construction of rail lines outside of the existing railroad right-of-way (none of which is planned for Arizona)).

Also, please clarify for us if any new construction will occur in Arizona outside of the existing railroad rights-of-way. If this is the case, then the respective land managers will need to be consulted regarding these expansions and be signatories to the project PA.

We look forward to further consultation on this undertaking and appreciate the STB's thorough and responsive consultation with this office on this project. We look forward to reviewing the future survey reports for Arizona and to formulating a working PA for the project with STB and the Advisory Council on Historic Preservation. In this way, we will have a better understanding of the nature of impacts to any NRHP-eligible property within Arizona and how to best mitigate these effects.

1

1

SEA acknowledges the Arizona SHPO's comments that requests for determination of eligibility and effect are premature. Archeological survey information is being developed by SEA for submittal to the SHPO as part of the ongoing Section 106 consultation process initiated by SEA.

2

2

SEA acknowledges the Arizona SHPO's recommendation for a Programmatic Agreement to address issues that can proceed without further consultation once the surveys are completed (i.e., increases in rail yard activity, abandonments, and construction outside existing railroad rights-of-way). A Programmatic Agreement will be further discussed as part of the Section 106 consultation process.

3

3

No projects outside of existing rights-of-way have been identified by the Applicant for the proposed merger. Information on all construction improvements has been provided to the SHPO as part of the Section 106 consultation process.



Cal/EPA

California
Environmental
Protection
Agency



Resource Board
Box 2815
3000 Street
Riverside, CA
92503-2815



Pete Wilson
Governor

James M. Suck
Secretary for
Environmental
Protection

April 13, 1996

Mr. Rodney A. Hill
Air Pollution Control Officer
Northern Sierra Air Quality Management District
200 Linton Drive, Suite 320
Grass Valley, California 95945

Dear Mr. Hill:

Thank you for your recent letter to Governor Wilson regarding the proposed merger between Union Pacific Railroad and Southern Pacific Railroad. Governor Wilson has asked me to respond to your letter on his behalf.

We understand your concern regarding the potential air quality impacts of this merger related to particulate matter less than 10 microns (PM₁₀). The merger may result in increased emissions of PM₁₀ due to changes in rail operations in your area. Described below is the process for approval of the merger and consideration of mitigation measures. We encourage your participation in that process to ensure that local air quality impacts are addressed.

Responsibility for approval of this merger rests at the federal level. The Surface Transportation Board (STB), an independent board located within the United States Department of Transportation, is the decision-making body. The process for approving the merger includes an environmental assessment which is subject to public comment.

On April 12, 1996, the STB published an environmental assessment to address environmental impacts associated with the proposed merger. The assessment addresses potential areas of environmental impact including safety, transportation, air quality, water quality, noise, biological resources, land use and hazardous materials. Volume two of the environmental assessment provides recommendations for mitigation measures to address potential environmental impacts. However, no mitigation measures to address increased PM₁₀ emissions were included.

Responsible Party

SEA has considered the concerns of the Northern Sierra Air Quality Management District regarding PM₁₀ emissions. Volume 1, Chapter 3 of the Post EA reports air quality impacts for the five Air Quality Control Regions in California for which SEA conducted more detailed air quality analysis.

Air quality impacts for AQCR 28, the Sacramento Valley, are described in Volume 1, Chapter 3 of the Post EA. PM₁₀ increases occur in four of the five rail line segments that have increases in rail traffic, ranging from 0.2 to 4.8 tons per year. However, the net emissions of PM₁₀ for all merger-related rail traffic in this AQCR would be reduced by 5.54 tons per year.

Air quality impacts for AQCR 508, Mountain Counties, are described in Volume 1, Chapter 3 of the Post EA. PM₁₀ increases occur in each of the four segments that have increases in rail traffic, ranging from 0.2 to 17.8 tons per year. The latter rail segment is the Roseville to Sparks line, which includes the Town of Truckee.

The net increase in PM₁₀ emissions for all merger-related rail operations in this AQCR would be 11.04 tons per year. This increase in emissions is insignificant, as it falls below the general conformity level as defined by the U.S. Environmental Protection Agency. In addition, most of the estimated increase in PM₁₀ emissions would occur from train activity along rail segments within this AQCR. Since the trains are moving, the air quality impacts would be spread across the length of the segment and would not affect any specific receptor for any significant length of time. Refer to the response provided for comment #2 of this letter.



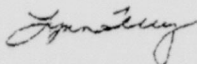
Mr. Rodney A. Hill

-2-

April 23, 1996

In our recent phone conversation, you indicated that your District provided technical information as part of the comment package submitted to the STB by the Town of Truckee. We agree that there are PM10 planning implications associated with the merger and would like to work with you on these issues. If you have any questions, please feel free to call me at (916) 322-2739 or Mr. Gary Hancock, Manager, Strategic Analysis and Liaison Section, at (916) 322-8474.

Sincerely,



Lynn Terry
Assistant Executive Officer

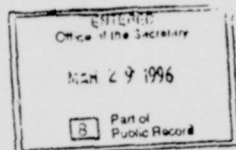
cc: Harold McNulty
Surface Transportation Board

2

2

Subsequent to the EA, the UP/SP and the Town of Truckee developed air quality mitigation measures that include construction of 2 new underpasses to reduce vehicular congestion and delay, as well as a program to reduce emissions from wood stoves. The grade-separated crossings would reduce automobile delay at railroad crossings, thereby reducing emissions of CO and PM₁₀. Please also refer to the general discussion on Air Quality in Volume 1, Chapter 4 of the Post EA for information regarding conformity analysis and assumed improvements in locomotive performance that would lessen PM₁₀ emissions.

Before the



SURFACE TRANSPORTATION BOARD

Finance Docket No. 32760

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD
COMPANY
AND MISSOURI PACIFIC RAILROAD COMPANY
--- CONTROL AND MERGER ---
SOUTHERN PACIFIC RAIL CORPORATION,
SOUTHERN PACIFIC TRANSPORTATION COMPANY, ST. LOUIS
SOUTHWESTERN RAILWAY COMPANY, SPCSL CRP. AND THE
DENVER AND RIO GRANDE WESTERN RAILROAD COMPANY

COMMENTS OF THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

The Public Utilities Commission of the State of California (CPUC)
hereby submits its comments on the above-described proceeding whereby
the Union Pacific Corporation, et al. (UP) and the Southern Pacific Rail
Corporation, et al. (SP) seek authorization for the merger of the Southern
Pacific Rail Corporation into the Union Pacific Railroad Company and the
consolidation of their railroad operations. The CPUC is an administrative
agency established under the Constitution and laws of the State of



The Capitol Corridor - The Capitol Corridor refers to rail passenger service between San Jose and Sacramento, utilizing SP's main line route for freight. The State of California has committed itself to furnishing extensive funding for improving the line, with an emphasis on track and signalization upgrading between Oakland and Sacramento. In return the state has requested that additional passenger runs be allowed. After lengthy negotiations, SP and the state have agreed on a corridor upgrade plan. The plan is pending approval from the California Transportation Commission.

The CPUC believes that if the UPSP merger were to be granted, the authorizing decision should include language noting UP's duty to assume the obligations for the Capitol Corridor that have been agreed to by SP.

The Alameda Corridor - This \$1.8 billion project calls for the construction of a 20-mile rail corridor between the Ports of Los Angeles and Long Beach and points in central Los Angeles where the corridor would connect with existing SP, UP and BNSF lines. Construction would generally be along the former San Pedro Branch of the SP. The corridor, part of which would be located in a sub-surface trench, would greatly facilitate the speed and volume of rail transportation to and from the ports. It also would enhance safety and air quality.

The above-mentioned three railroads have all signed a Memorandum of Understanding to participate in the corridor project through agreed upon trackage rights and user fees. Approval of the merger apparently would not affect the project, as UP asserts that it is committed to assuming SP's obligations. Nonetheless, the CPUC requests that any decision authorizing the merger underscore this new UP obligation and the importance of the Alameda Corridor for California and the nation.

NAFTA -The North American Free Trade Agreement (NAFTA) has presented California with new opportunities to develop trade, particularly with Mexico. The specific concern that the CPUC has, relative to NAFTA and the UPSP merger, is focused on the Calexico-Mexicali gateway. Presently SP serves this gateway via a secondary main line that runs north from Calexico to El Centro and the Imperial Valley and then connects at Niland with SP's Southern Corridor main line.

The CPUC requests that any decision authorizing UP control over this line also stress the importance of developing the Calexico-Mexicali gateway to its fullest potential in the public interest. Doing so not only will further trade but also reduce the large volume of truck traffic from Mexico that is expected in California soon.

1 Comment by the California Public Utilities Commission that the proposed merger would not affect the Memorandum of Understanding executed by the UP, SP and BN/Santa Fe railroads regarding participation in the Alameda Corridor project is noted.

2 The Commission's request that any decision authorizing the merger underscore the obligation of UP regarding the Alameda Corridor Memorandum of Understanding is acknowledged.



Before the

SURFACE TRANSPORTATION BOARD

ENTERED	
Office of the Secretary	
MAY 29 1996	
8	Part of Public Record

Docket No. AB-12 (Sub-No. 184X)

SOUTHERN PACIFIC TRANSPORTATION COMPANY
ABANDONMENT EXEMPTION -- WENDEL - ALTURAS LINE
IN MODOC AND LASSEN COUNTIES, CALIFORNIA

COMMENTS OF THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA ON PETITION
FOR EXEMPTION TO ABANDON
WENDEL-ALTURAS LINE

Pursuant to 49 CFR § 1121.4(b), the Public Utilities Commission of the State of California (CPUC) hereby comments on the Petition for Exemption (Petition) of Southern Pacific Transportation Company (SP) to abandon an 85.5 mile segment of the Modoc Line. The segment runs between Wendel in Lassen County and a point approximately 10 miles south of Alturas in Modoc County. Abandonment is contingent upon the proposed consolidation of the Union Pacific Railroad (UP) and SP, for