



Volume 2

Appendices A-L

DRAFT ENVIRONMENTAL ASSESSMENT November 1998

Finance Docket No. 33556
Canadian National Railway Company;
Grand Trunk Corporation, and
Grand Trunk Western Railroad Incorporated
--Control--
Illinois Central Corporation,
Illinois Central Railroad Company,
Chicago, Central & Pacific Railroad Company,
and Cedar River Railroad Company

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SURFACE TRANSPORTATION BOARD

Finance Docket No. 33556

**Canadian National Railway Company, Grand Trunk Corporation, and
Grand Trunk Western Railroad Incorporated**

--Control--

**Illinois Central Corporation; Illinois Central Railroad Company;
Chicago, Central & Pacific Railroad Company; and Cedar River Railroad Company**

GUIDE TO THE DRAFT ENVIRONMENTAL ASSESSMENT

This Draft Environmental Assessment (Draft EA) evaluates the potential environmental impacts that could result from the proposed Acquisition of Illinois Central Corporation; Illinois Central Railroad Company; Chicago, Central & Pacific Railroad Company; and Cedar River Railroad Company (IC) by Canadian National Railway Company and Grand Trunk Corporation (together with its affiliates [CN]). The Surface Transportation Board (Board), Section of Environmental Analysis (SEA) has prepared this document in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321); the Council on Environmental Quality (CEQ) regulations implementing NEPA; the Board's environmental rules (49 CFR Part 1105); and other applicable environmental statutes and regulations.

To assist the reader in the review of this document, each volume contains a Guide to that volume. In addition, each individual volume also contains a Guide to the Draft EA, a Glossary of Terms, a List of Acronyms and Abbreviations, and the Table of Contents of the Draft EA. Specifically, the Draft EA document includes the following volumes:

Volume 1: The Executive Summary and Chapters 1 through 8

- The Executive Summary provides an overview of the proposed CN/IC Acquisition, including the potential significant environmental impacts.
- Chapter 1, "Introduction and Background," describes the purpose and need for the project, the proposed action, and the alternatives to the proposed action. It also sets forth the jurisdiction of the Board and outlines SEA's environmental review process. In addition, this chapter presents an overview of SEA's agency coordination and the public comment process.
- Chapter 2, "Overview of Public Participation," describes SEA's public outreach activities to notify interested parties and potential environmental justice populations of

the anticipated environmental impacts of the proposed CN/IC Acquisition and of the availability of the Draft EA for public review and comment. Additionally, the chapter explains SEA's distribution of the Draft EA, explains the methods that SEA used to facilitate the public comment process, and describes the agency consultation that SEA performed as part of the environmental review process.

- **Chapter 3, "Project Description,"** identifies the proposed CN/IC Acquisition-related activities that SEA analyzed. This chapter includes a table presenting the thresholds SEA used to identify activities for environmental analysis and explains project activities.
- **Chapter 4, "Environmental Consequences—Operational Changes,"** presents the environmental analysis that SEA conducted to evaluate the potential environmental effects of changes in rail operations as a result of the proposed Acquisition. Specifically, Chapter 4 explains the methods of analysis, identifies the results of the analysis, and discusses SEA's assessment of potential environmental impacts. In addition, this chapter describes both the anticipated environmental benefits and the potential adverse environmental impacts of the proposed CN/IC Acquisition.
- **Chapter 5, "Environmental Consequences—Construction Projects,"** presents the environmental analysis that SEA conducted to evaluate the potential environmental effects of the Applicants' Acquisition-related construction projects.
- **Chapter 6, "Environmental Consequences—Cumulative Effects,"** presents the environmental analysis that SEA conducted to evaluate the cumulative potential environmental effects of operational changes, construction projects, and other related projects. Chapter 6 also presents SEA's methods of analysis, analysis results, and SEA's assessment of potential cumulative environmental impacts of the proposed CN/IC Acquisition.
- **Chapter 7, "Safety Integration Plan,"** sets forth the purpose and issues addressed in the Applicants' Safety Integration Plan and includes the Board's decision requiring the Safety Integration Plan.
- **Chapter 8, "SEA's Preliminary Recommended Environmental Mitigation,"** presents SEA's preliminary environmental mitigation recommendations to the Board to address potential adverse environmental impacts.

The Draft EA also includes Appendices containing the detailed analysis conducted in each technical discipline and the results reached, including methods, extensive tables, and other pertinent data. Additional appendices contain public outreach and agency consultation information and documents, including public and agency correspondence, public outreach materials, responses from other railroads, verified statements, relevant Board decisions, Federal regulations, site visit summaries, and other pertinent information. The Final EA will include the public comments received on this Draft EA. The Appendices are organized as follows:

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- **Appendix A: List of Public Comments on the Proposed CN/IC Acquisition**
- **Appendix B: Rail Line Segments**
- **Appendix C: Safety Analysis Methods and Results**
- **Appendix D: Transportation Analysis Methods and Results**
- **Appendix E: Energy Analysis Methods and Results**
- **Appendix F: Air Quality Analysis Methods and Results**
- **Appendix G: Noise Analysis Methods and Results**
- **Appendix H: Cultural Resources Analysis Methods and Results**
- **Appendix I: Hazardous Materials Spill Sites and Hazardous Waste Sites Analysis Methods and Results**
- **Appendix J: Natural Resources Analysis Methods and Results**
- **Appendix K: Land Use Analysis Methods and Results**
- **Appendix L: Environmental Justice Analysis Methods and Results**

Volume 3: Appendices M through V

- **Appendix M: Cumulative Impacts Analysis—Backup Information**
- **Appendix N: Public Participation Materials**
- **Appendix O: Verified Statements**
- **Appendix P: Voluntary Railroad Mitigation Plans**
- **Appendix Q: Relevant Board Decisions**
- **Appendix R: List of Inconsistent and Responsive Applications; Verified Statements**
- **Appendix S: List of Site Visits**
- **Appendix T: List of Agency Consultations and Relevant Correspondence**

- **Appendix U: Responses from State Historic Preservation Offices**
- **Appendix V: Safety Integration Plan**

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APPENDIX A
LIST OF PUBLIC COMMENTS ON THE
PROPOSED CN/IC ACQUISITION

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**APPENDIX A
LIST OF PUBLIC COMMENTS ON THE
PROPOSED CN/IC ACQUISITION**

The following Document Summary Report lists all public comments SEA received from local and state officials and from citizens regarding environmental issues by October 30, 1998 (the printing date for the Draft Environmental Assessment).

Table A-1
Document Summary Report

Document Type Name	Document Title	Entry Date/Time	Document Date
Comment: Local Elected	City of Clinton, KY, J. Caraway; SEA, E. K. Kaiser; Environmental Concerns	10/22/98 15:25	10/16/98
Comment: Local Government	City of Lapeer, MI, M. Modrack; SEA, E. K. Kaiser; Request for Environmental Information	9/24/98 12:19	9/14/98
Comment: Local Government	City of Manchester, IA, J. T. Peters; SEA; Environmental Concerns	10/13/98 15:23	10/5/98
Comment: Local Government	Will County Department of Highways, IL, S. C. Latz; PAM, T. Brady; Response to Inquiry	10/19/98 14:33	10/15/98
Comment: Local Government	Village of Monee, IL, P. Schoenback; PAM, T. Brady; Response to Inquiry - Monee Map	10/19/98 14:50	10/13/98
Hotline: Citizens	Paul Mullen, Omaha, NE; SEA; Hotline Caller - Document Request	9/6/98 17:15	8/20/98
Hotline: Citizens' Group	Center for Neighborhood Tech. in Chicago, IL, J. Riet; SEA; Hotline Caller - Document Request	9/29/98 11:58	9/25/98
Hotline: Citizens' Group	Northwest Indiana Interfaith Federation Org., K. O'Brian; SEA; Hotline Caller - Document Request	10/19/98 15:47	10/12/98
Hotline: Local Elected	City of Clinton, KY, J. Caraway; SEA; Hotline Caller - Environmental Concern	10/19/98 16:23	10/13/98
Hotline: Local Government	Williamson County, IL, J. Battiste; SEA; Hotline Caller - Document Request	8/12/98 13:34	8/11/98
Hotline: Local Government	City of Manchester, IA, J. T. Peters; SEA; Hotline Caller - Document Request	10/13/98 15:11	10/6/98
Hotline: Local Government	Kankakee County Planning Dept., M. Lamme; SEA; Hotline Caller - Document Request	10/14/98 10:15	10/13/98
Hotline: State Legislators	IL State Legislator, Office of S. Silva; SEA; Hotline Caller - Document Request	8/14/98 11:39	8/13/98
Hotline: State Legislators	Mississippi State Legislator, Senator Hob Bryan; SEA; Hotline Caller - General Comment	9/6/98 16:53	8/17/98

APPENDIX B RAIL LINE SEGMENTS

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APPENDIX B

RAIL LINE SEGMENTS

Appendix B describes how the Surface Transportation Board (Board), Section of Environmental Analysis (SEA) verified that the projected changes in train traffic represent a reasonable outcome of the proposed Canadian National Railway Company/Illinois Central Corporation (CN/IC) Acquisition. Figures B-1 through B-13, presented at the end of Appendix B, identify the rail line segments under evaluation. In addition, Attachment B-1, "CN/IC Acquisition Rail Line Segment Master Table," contains pre- and post-Acquisition traffic densities and indicates which rail line segments exceed the Board's environmental analysis thresholds. Attachment B-2, "CN/IC Acquisition Intermodal Facilities Master Table," and Attachment B-3, "CN/IC Acquisition Rail Yards Master Table," show the Applicants' projected changes for those rail activities.

CN/IC and their subsidiaries (collectively known as the Applicants) state that the proposed CN/IC Acquisition would increase and improve service because it would provide single-line, coast-to-coast service; coordinate operations; divert traffic from trucks and other railroads; and provide better operating efficiency. The Applicants anticipate that service improvements would result from the implementation of the CN/IC Operating Plan shown in Volumes 1 and 2 of the Primary Application. The plan outlines the car movement data collection and analysis, projected traffic levels, and adjusted train densities for rail line segments and yards across the proposed CN/IC system. As the basis of their train density analysis, the Applicants used 1996 rail traffic volume movements among railroads serving the same markets as the proposed combined CN/IC system would serve.

SEA used the analysis methods described in this Appendix to verify data provided in the Applicants' Operating Plan and associated materials. SEA used these data and material to identify rail segments that meet the Board thresholds for environmental analysis and warrant review under the National Environmental Policy Act (NEPA).

SEA's verification and analysis of traffic data focused on the following elements:

- Development of the Operating Plan.
- System capacity.
- Geographically specific operations.

B.1 DEVELOPMENT OF THE OPERATING PLAN

During a series of meetings and teleconferences, SEA and the Applicants discussed the methods used in developing the Operating Plan. SEA collected additional information from the Applicants to expand on information in the Operating Plan. CN/IC employed the services of

outside consultants, all of whom participated in previous railroad transactions, to assist in modeling the post-Acquisition redistribution of rail traffic. Those firms included ALK Associates of Princeton, New Jersey; Reebie Associates of Stamford, Connecticut; and Multimodal Applied Systems, Inc. of Somerset, New Jersey.

The Applicants' process to develop their post-Acquisition rail operations projections consisted of two major parts. The first part involved estimating the amount of rail traffic that CN/IC would receive from rail-to-rail, truck-to-rail, and port-to-rail diversions. (The rail-to-rail traffic diversions constitute most of the projected post-Acquisition traffic: \$217 million in revenue from rail-to-rail, \$23.4 million in revenue from truck-to-rail, and \$7.5 million from port-to-rail diversions). The second part involved determining how to move that traffic over their proposed combined system (e.g., lengthening existing trains and scheduling new trains). Both steps in the process accounted for the Alliance and Access Agreements between CN/IC and The Kansas City Southern Railway Company (KCSR).

To accomplish the first part of the Applicants' process to develop rail operations projections, ALK Associates projected future CN/IC traffic levels based on 100 percent of CN and IC 1996 waybill traffic data and the 1996 Rail Waybill Sample for other rail carriers (including CCP and KCSR) with Canadian traffic terminations, augmented using 100 percent of KCSR 1996 waybill traffic data.¹ The ALK analysis included both the potential for CN/IC to run extended hauls and the potential for CN/IC to attract traffic that neither CN nor IC participated in during the 1996 base year. ALK Associates' modeling is a rail industry traffic flow simulation that predicts and quantifies the traffic rerouting and diversion effects of restructuring of the North American railroad system. ALK's methodology involves five steps:

1. Define the scope of the traffic analysis, including the relevant origin-destination pairs and service types (general merchandise, intermodal, auto, coal/bulk, and reload).
2. Determine the candidate post-Acquisition rail routes for each origin, destination, and service type.
3. Calculate the post-Acquisition market share for each candidate route.
4. Assess reroutes and diversions and allocate traffic to candidate routes based on calculated market shares.
5. Allocate revenue among carriers when traffic is allocated to multi-carrier post-Acquisition routes.

The projected traffic volumes are based on estimates of traffic that would divert to CN/IC by the third year of the proposed CN/IC Acquisition implementation period. The Applicants did not

¹ George C. Woodward and Michael H. Rodgers, Verified Statement, Vol. 2, pp. 1-66.

divert traffic if they knew that the traffic was under contract for a period likely to exceed the 3-year implementation period.

To estimate the amount of rail traffic that CN/IC would receive from truck-to-rail diversions, Reebie Associates determined the volume of dry-van traffic that would divert from highways to intermodal service as a result of the increased efficiencies of a combined CN/IC network. The diversion analysis focused on an evaluation of specific traffic lanes (one origin linked to one destination) combined into broader corridors.² Reebie selected lanes based on projections for improved intermodal service resulting from the proposed CN/IC Acquisition, the volume of highway traffic and its potential to contribute to train traffic, and the likelihood that diversions would be successful. Reebie Associates worked with the Applicants to select and refine the lanes and corridors.

To estimate the volume of port-to-rail diversions that could result from the proposed CN/IC Acquisition, the Applicants analyzed potential diversions to Montreal, Quebec and Halifax, Nova Scotia from U.S. ports on the East Coast and the Gulf of Mexico. In their analysis, the Applicants did not divert port traffic from other states because inland costs of such traffic through the ports of Montreal and Halifax would not be competitive with existing routings. The commodities included overseas intermodal, finished autos, and auto parts.

The second part of the Applicants' process to develop rail operations projections involved CN and IC staffs working with Multimodal Applied Systems, Inc., to design the train operating plan. The Applicants used this interactive process to develop an acceptable plan that would work with CN's and IC's respective systems. Multimodal used ALK's rail traffic data as a basis for this part of the process.

Using the Multimodal modeling outputs and their knowledge of their systems, CN and IC designed the Operating Plan the way they traditionally have, by maximizing train loads and service. Among other activities, CN and IC analyzed blocking operations and determined where they had sufficient projected traffic to develop new trains. In that effort, the Applicants determined the numbers of trains per day and gross ton-miles described in the Operating Plan and in Attachment B-1. Attachment B-1 delineates the new traffic by rail line segments and includes the following information:

1. Segment number assigned by the Applicants.
2. Segment end points.
3. Railroad ownership.
4. Segment length provided by the Applicants.
5. Pre- and post-Acquisition passenger and freight trains per day.
6. Difference in trains per day.
7. Pre- and post-Acquisition gross ton-miles.
8. Difference in gross ton-miles.

² Joseph O.B. Bryan, Verified Statement, Vol. 2, pp. 66-101.

9. Pre- and post-Acquisition hazardous materials cars transported per day.
10. Difference in hazardous materials cars per day.
11. Thresholds that qualified a segment for environmental analysis.

B.2 SYSTEM CAPACITY

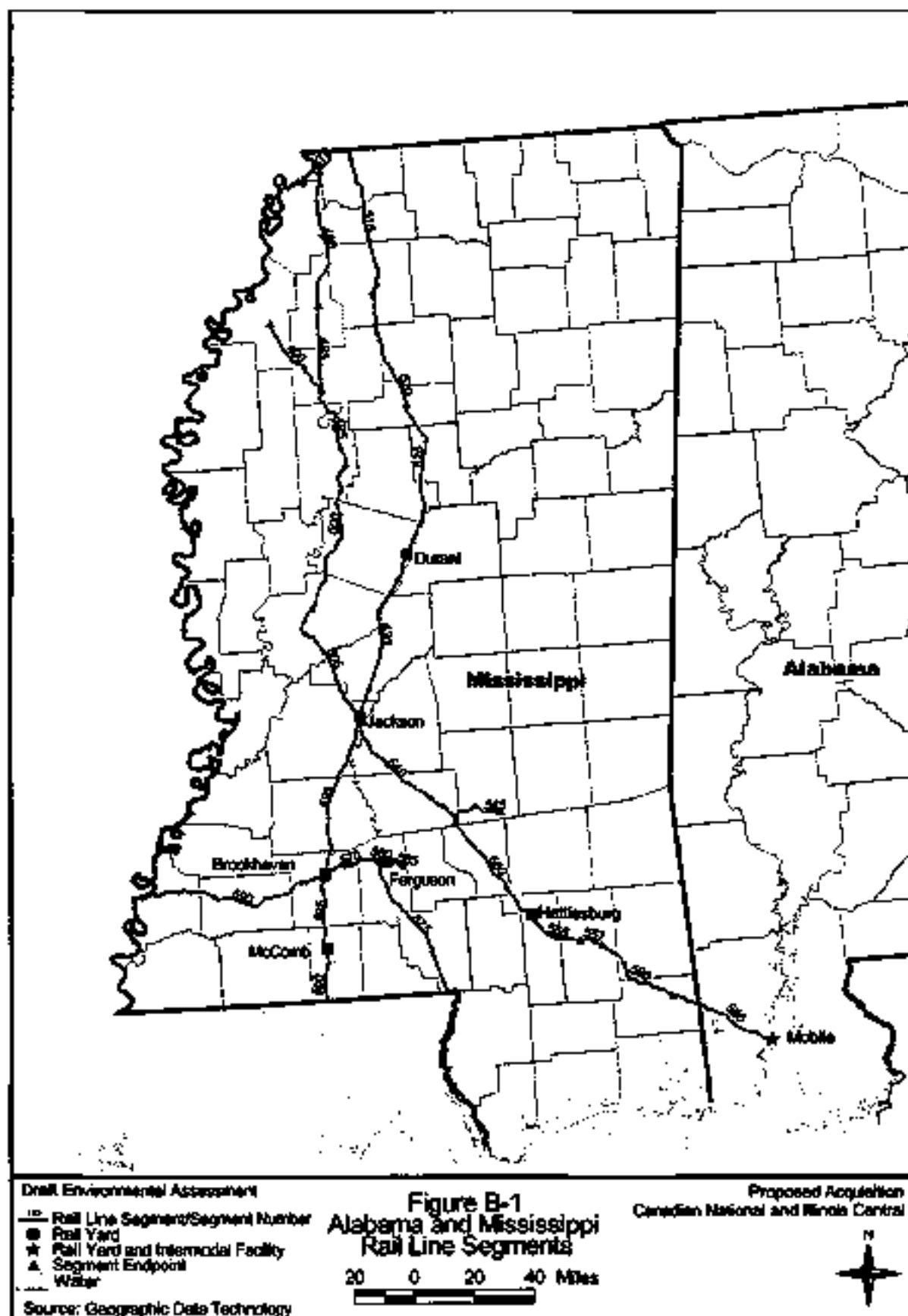
SEA verified that the proposed CN/IC system would have adequate capacity to carry longer trains and additional trains per day. For example, to determine that the proposed system had adequate capacity to handle longer trains, SEA confirmed that the existing sidings were long enough (IC already handles trains as long as the longest trains projected for post-Acquisition).

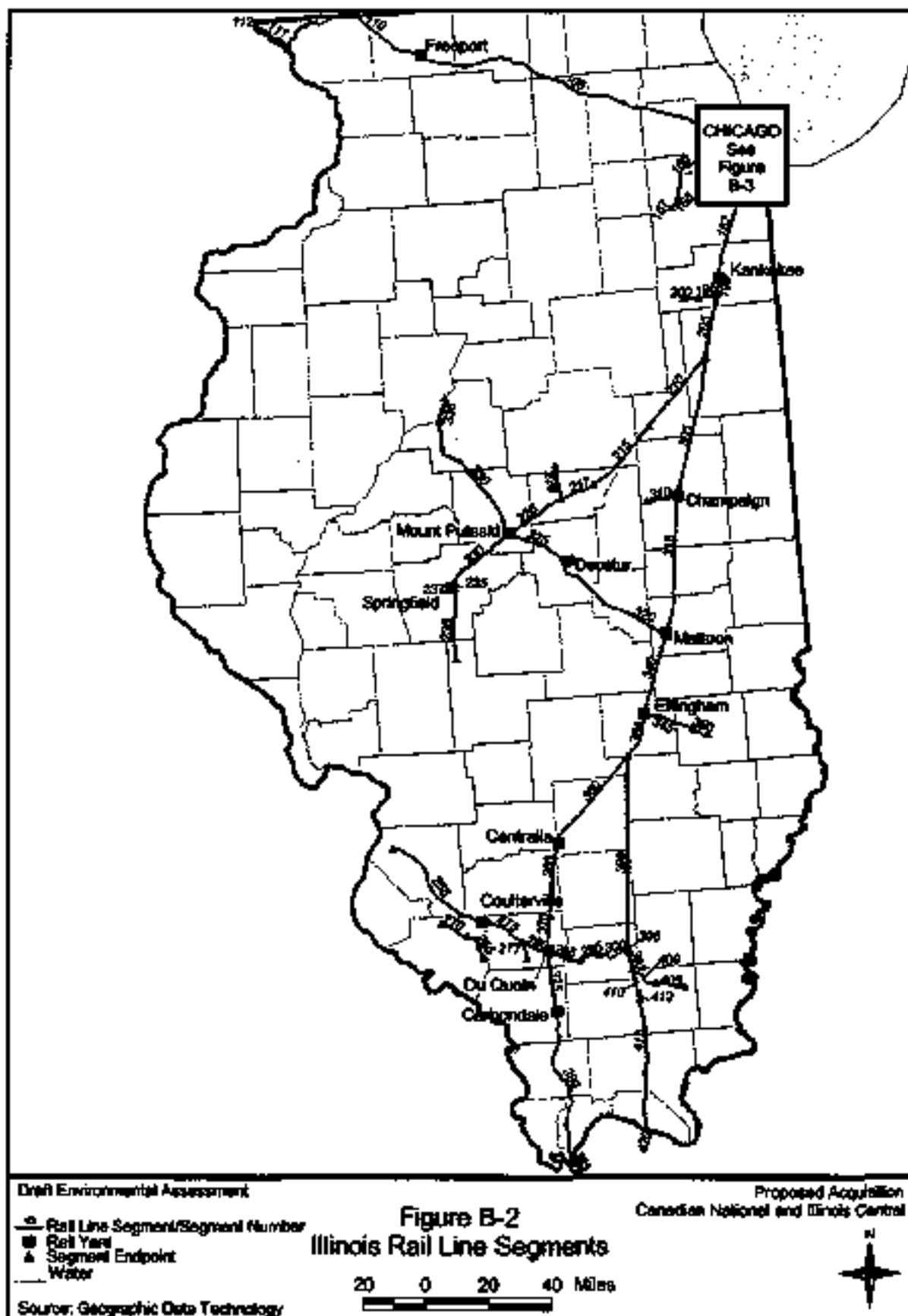
SEA also analyzed pre- and post-Acquisition train length data. SEA estimated the Applicants' system's average train length using the Train Statistics module of MultiRail. This module accumulates train statistics by division and train symbol for each train in the scenario. Among the statistics compiled are train-miles, car-miles, and feet-miles. These three statistics allow users to generate average train statistics. The estimated post-Acquisition average train length of 5,026 feet is similar to those of recent Class I Railroad acquisitions. To verify that the system could accommodate additional trains per day, SEA reviewed the Applicants' capacity analysis. For the capacity analysis, the Applicants used conservative inputs and considered the following variables in their analysis:

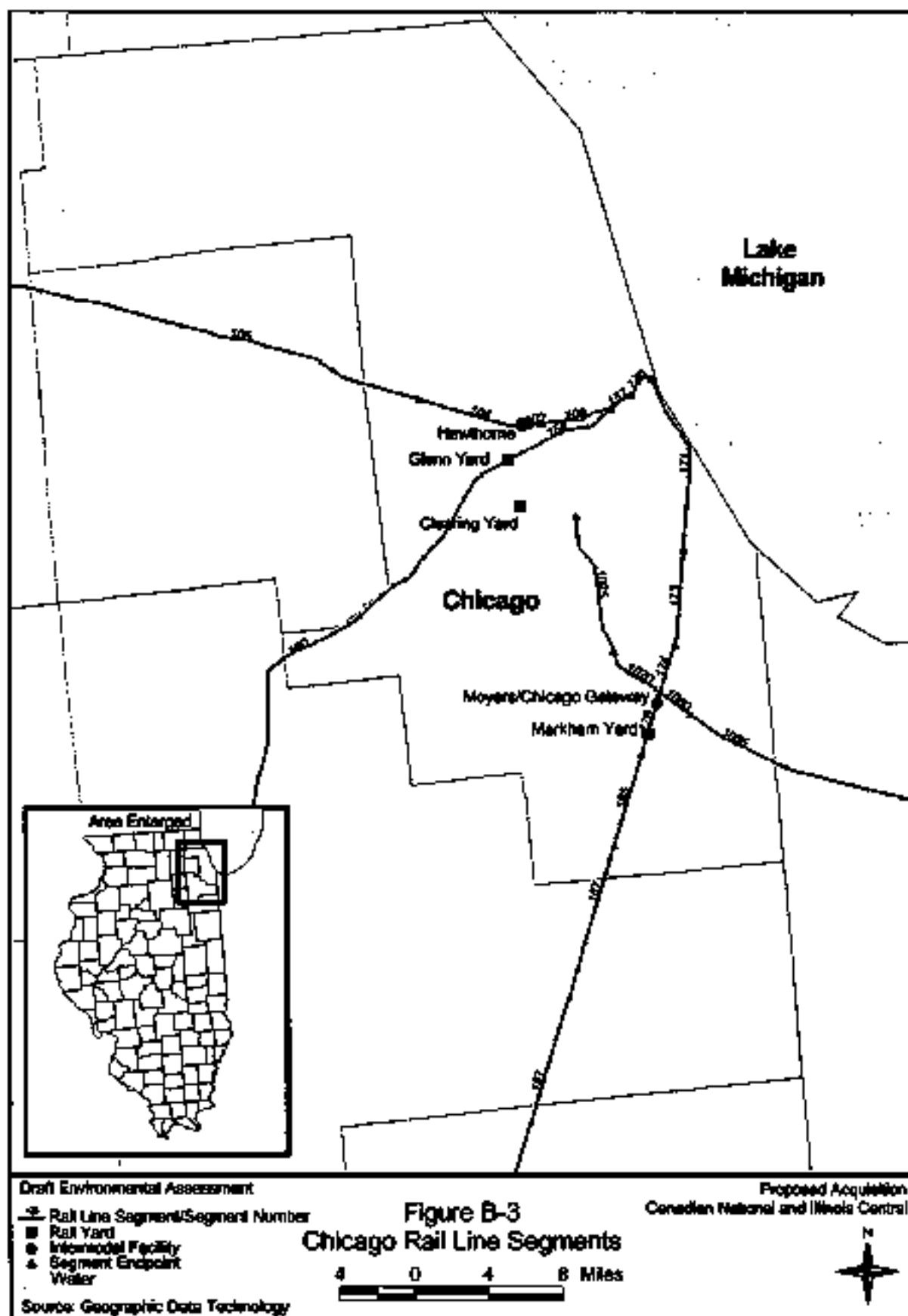
- Track gradient and curvature.
- Locomotive horsepower and train weight (for the model, the Applicants used a conservative value for a train weight to horsepower per ton ratio of 1.2).
- Train length.
- Distance between track sidings.

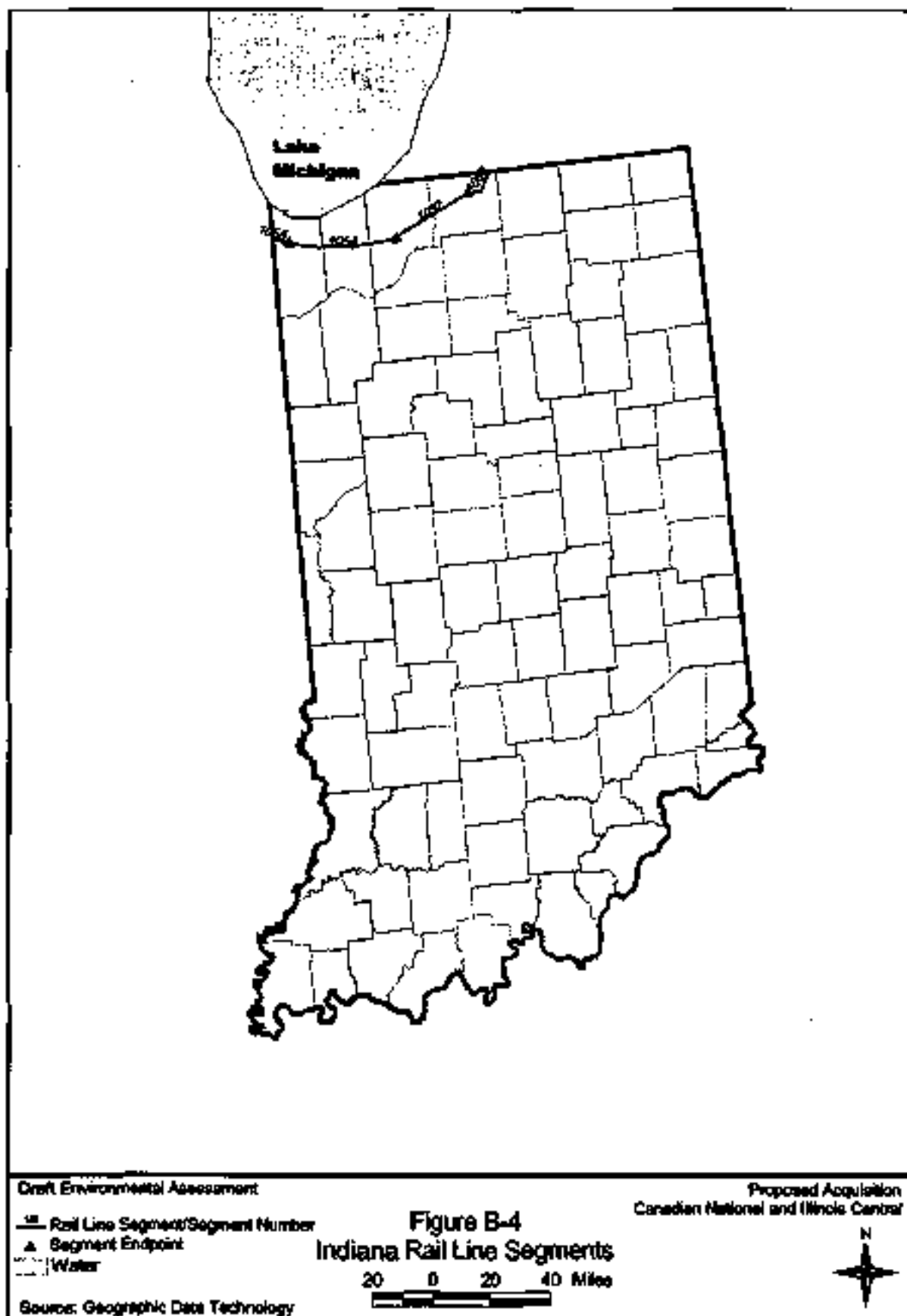
B.3 GEOGRAPHICALLY SPECIFIC OPERATIONS

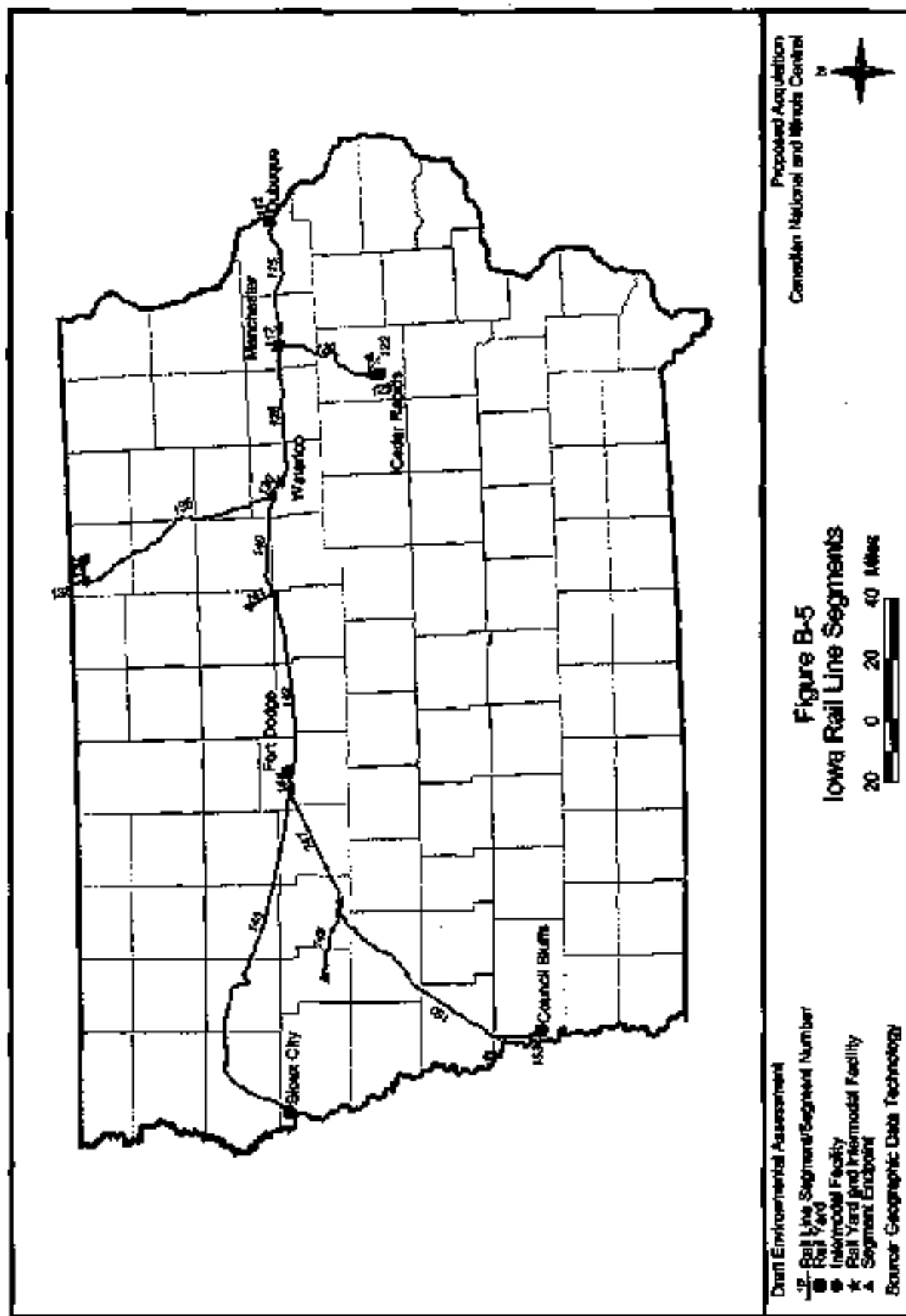
In this part of the verification analysis, SEA reviewed and discussed with the Applicants current and future operations in specific operating areas such as Chicago and the interchanges with KCSR and Wisconsin Central Limited. SEA wanted to confirm why the Applicants were projecting certain increases or decreases in trains per day or gross ton-miles. The Applicants explained that in Chicago, for example, they want to route trains around the city to avoid its congested yards. The Applicants stated that the largest projected increase in the number of trains per day, just south of Chicago, would occur when the existing traffic that CN and IC currently interchange with Union Pacific, Southern Pacific, Burlington Northern, Santa Fe Railway Company, and others is diverted south onto the IC line.

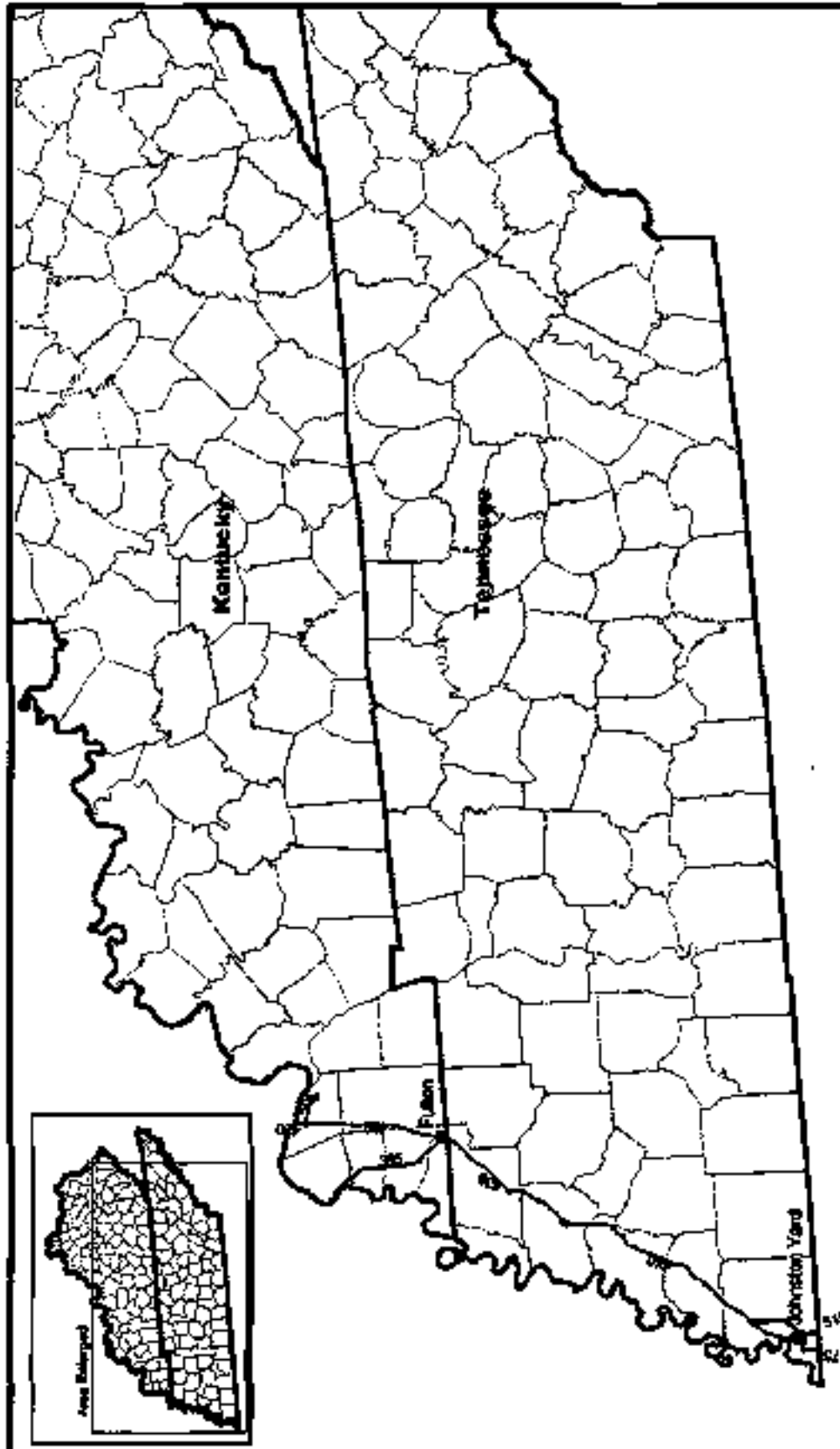












Drift Environmental Assessment

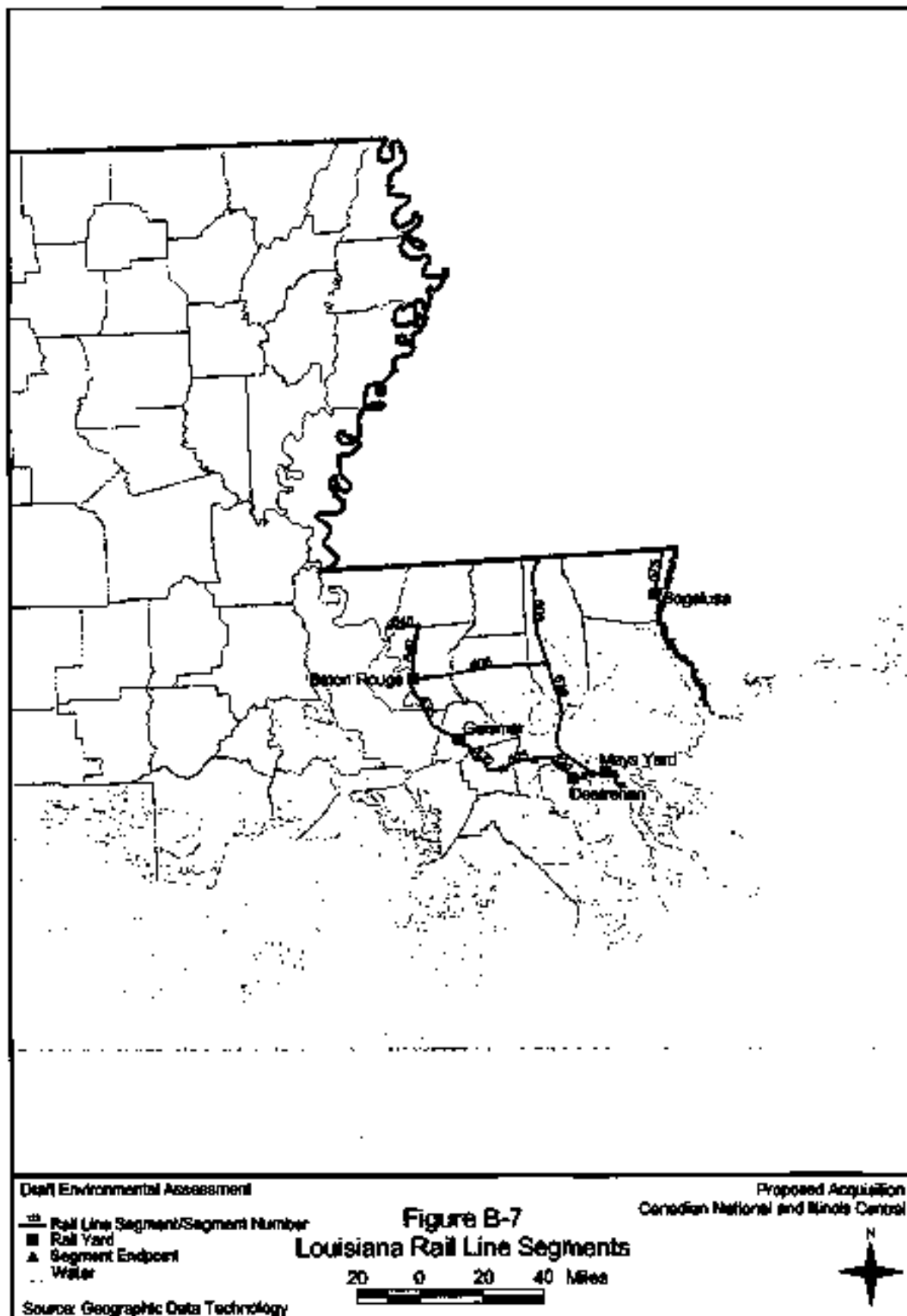
Proposed Acquisition
Canadian National and Illinois Central

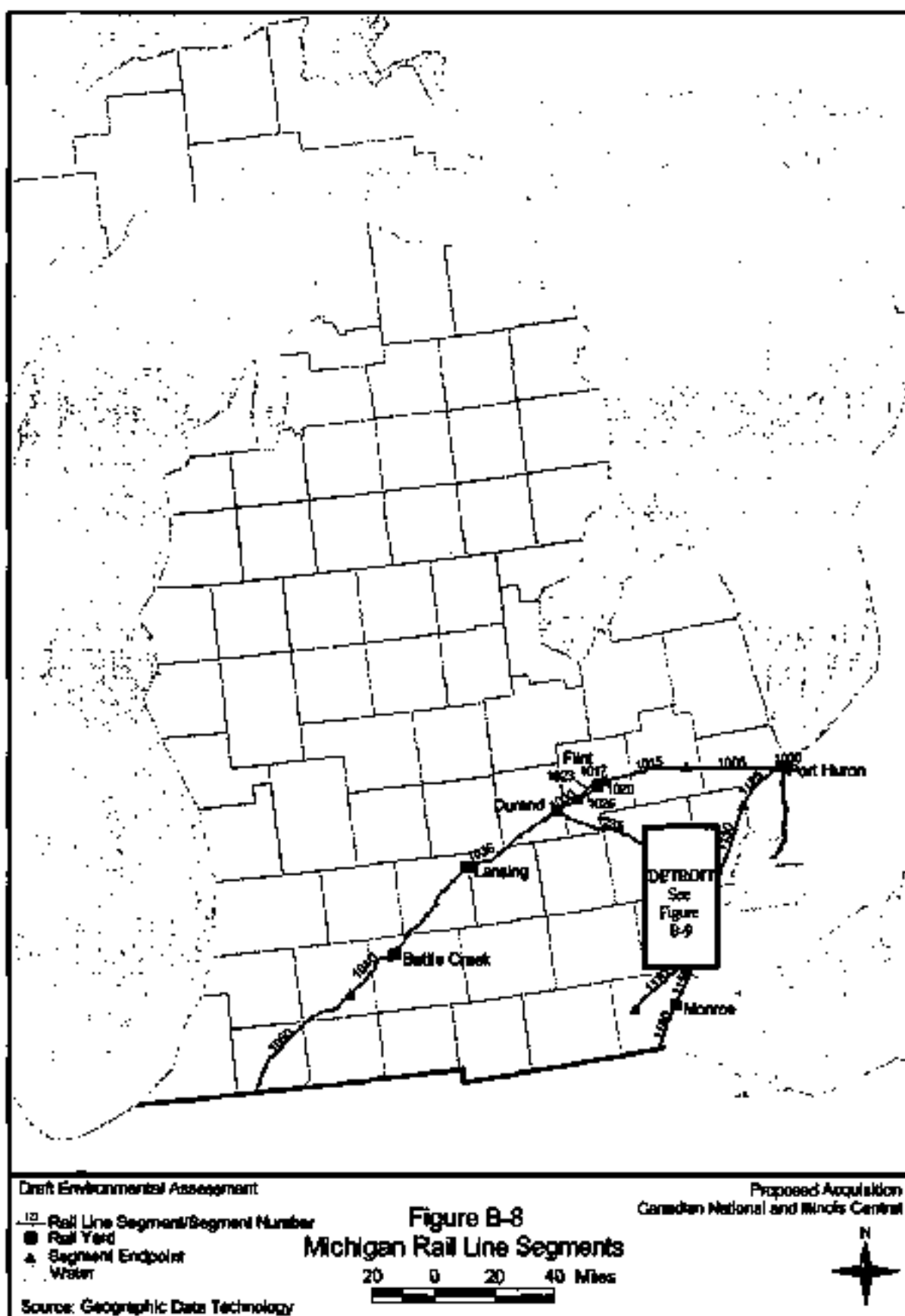
Figure B-6
Kentucky and Tennessee Rail Line Segments

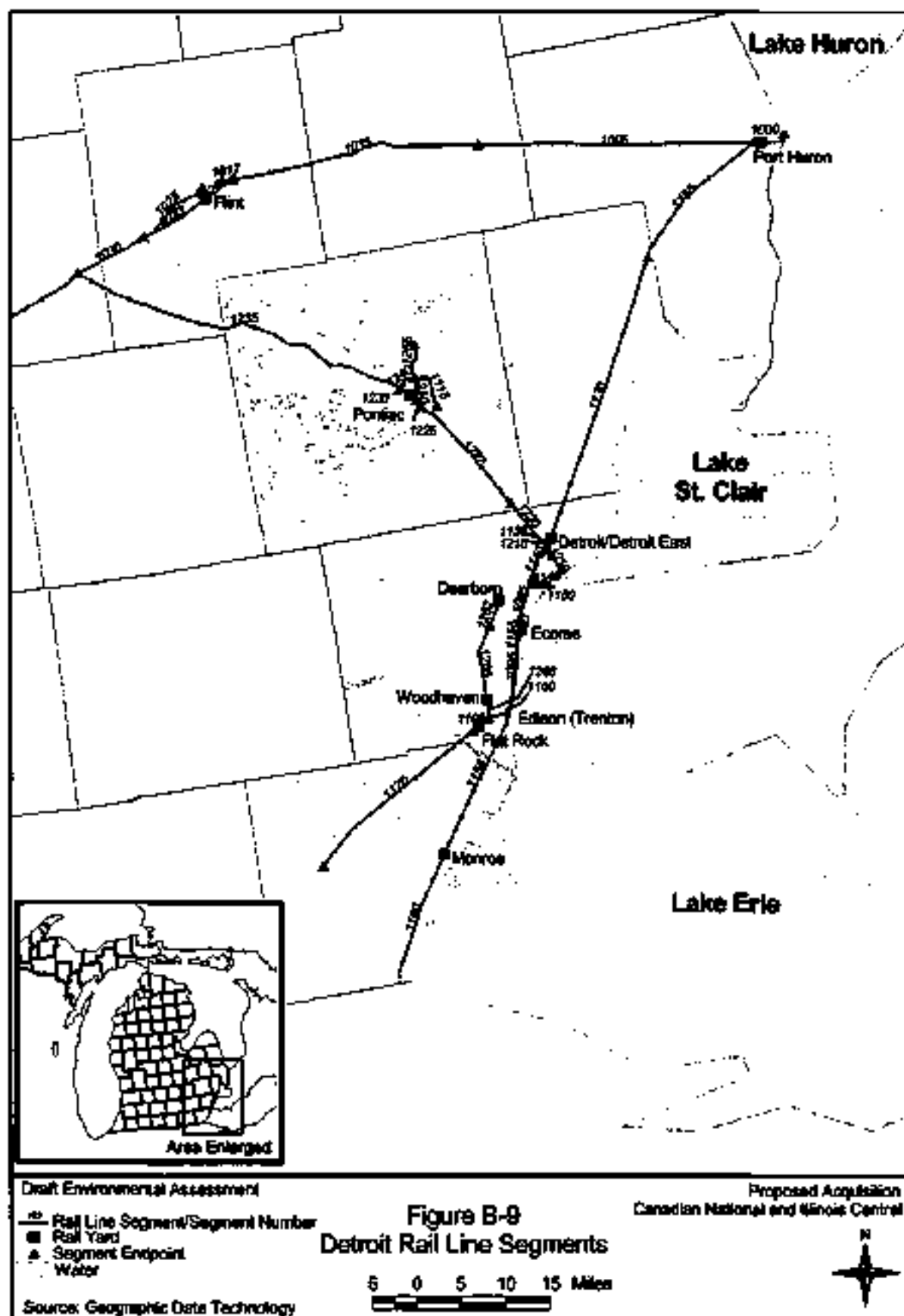
- 1. Rail Line Segment/Segment Number
- 2. Rail Yard
- 3. Segment Endpoint

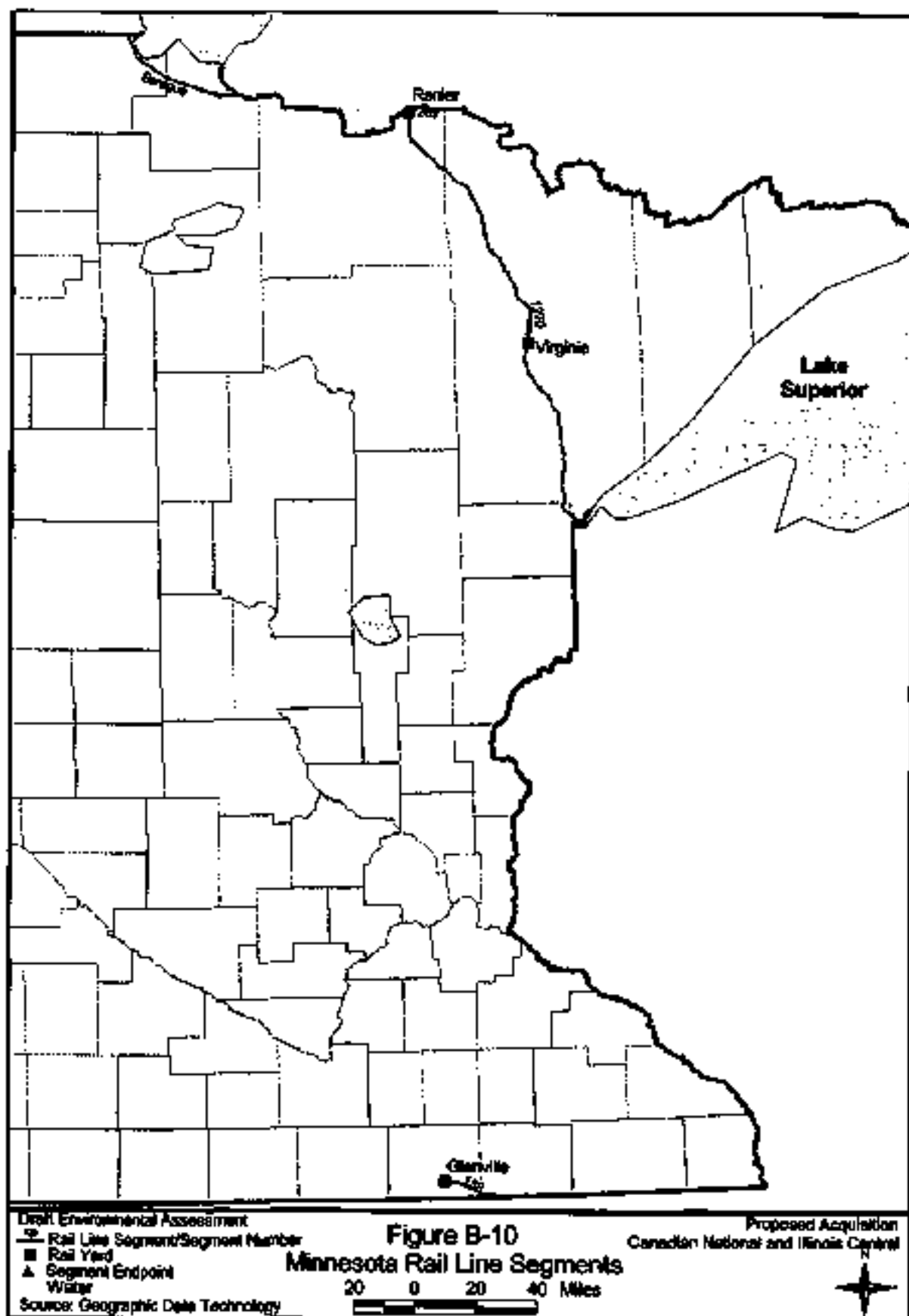


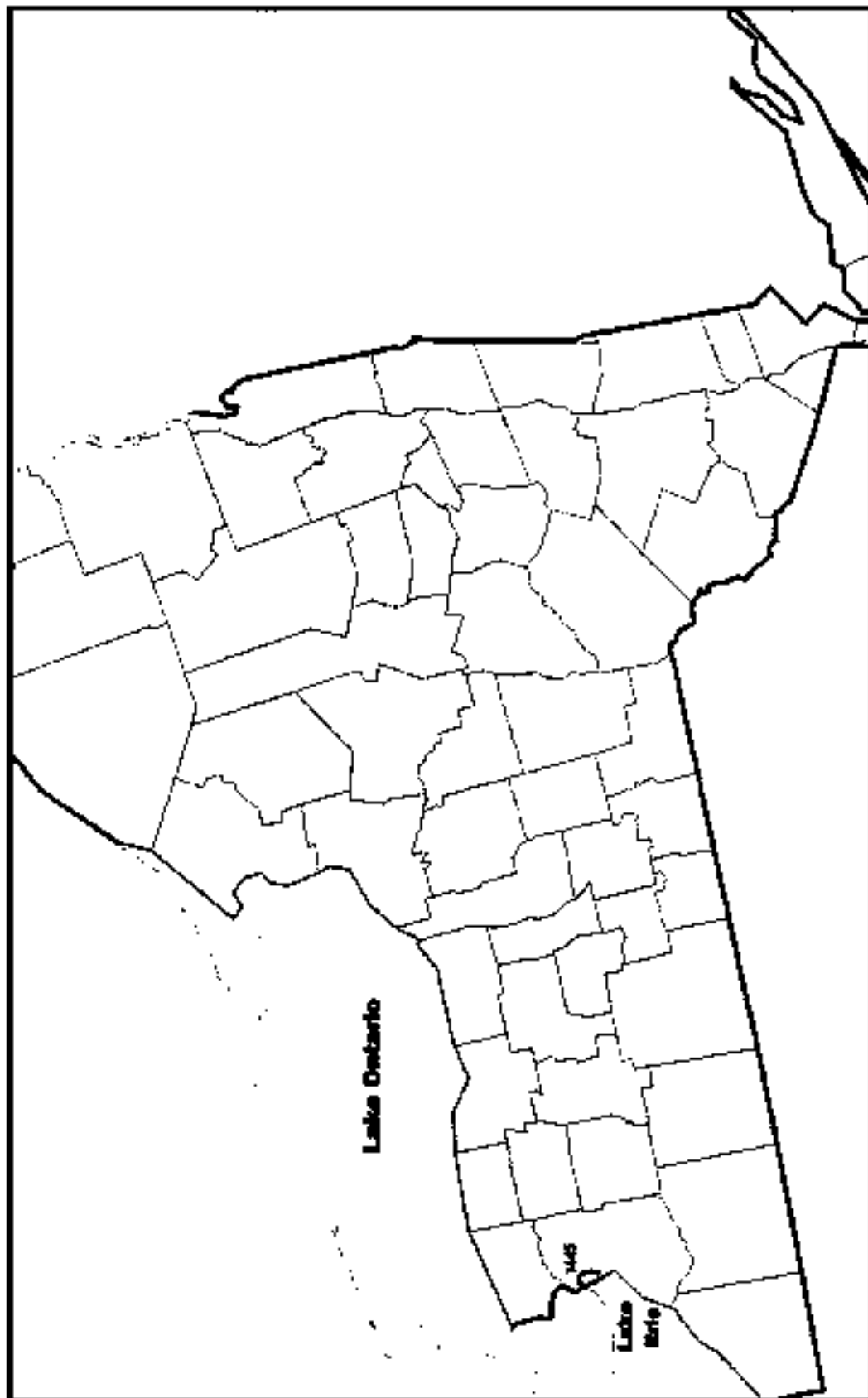
Source: Geographic Data Technology











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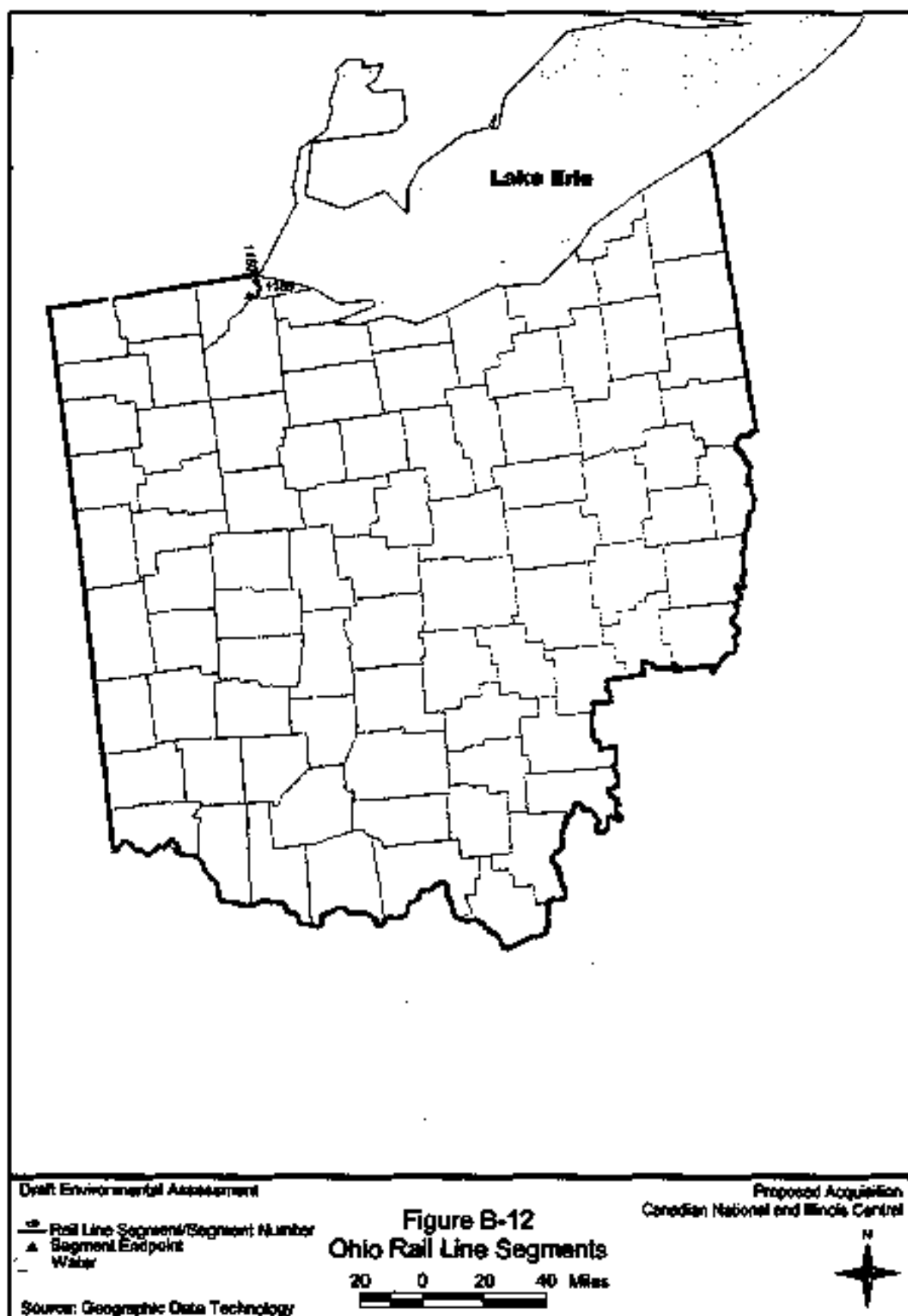
Proposed Acquisition
Canadian National and Illinois Central

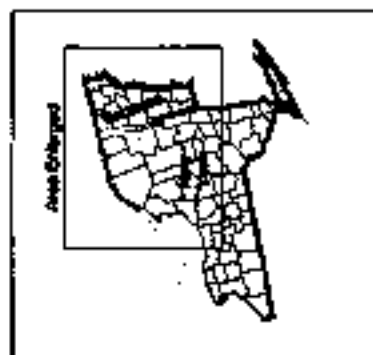
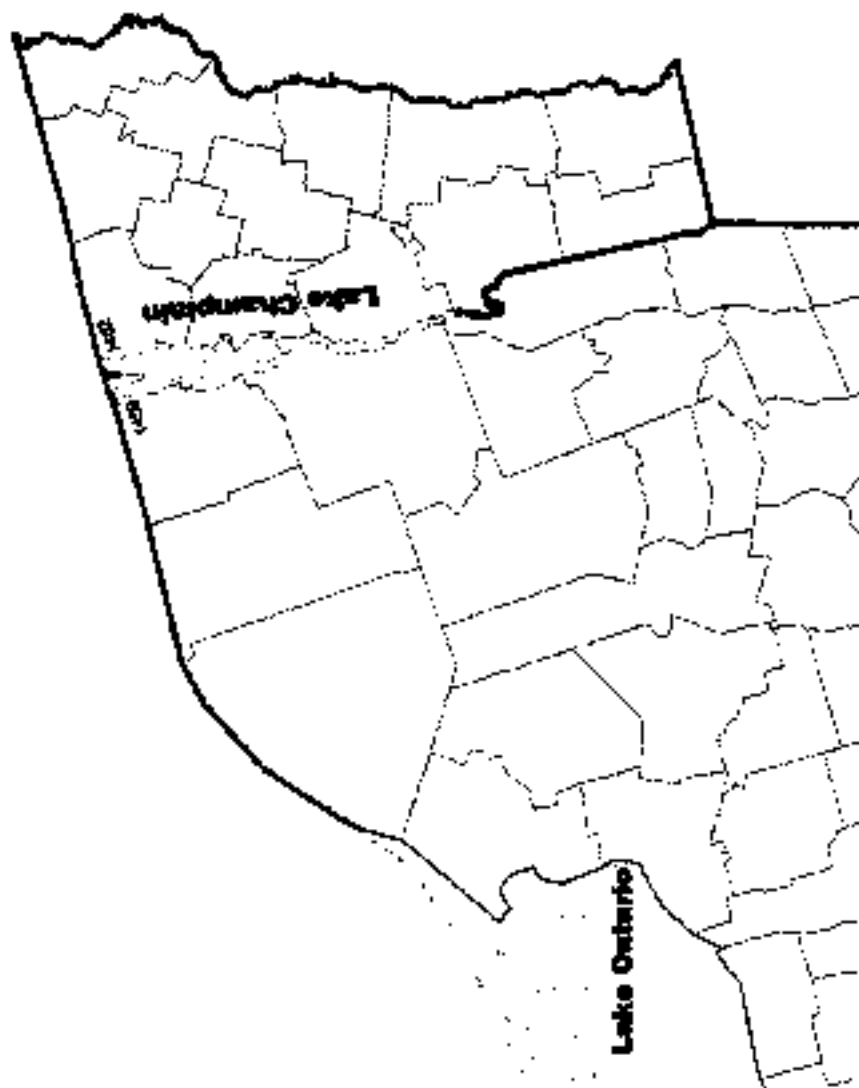
Figure B-11
New York Rail Line Segments



Source: Geographic Data Technology







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 Rail Line Segment/Segment Number
 Water

Source: Geographic Data Technology

Proposed Acquisition
 Canadian National and Illinois Central

Figure B-13
Vermont and Northern New York Rail Line Segments



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**ATTACHMENT B-1
CNIC ACQUISITION RAIL LINE SEGMENT MASTER TABLE**

Segment Description			Length Miles	Passenger and Freight Trains Trains/Day			Freight Over Time/Day				Human Carloads/Year				Tons/Year			
From Station	To Station	Track		Pass Trains/Day	Freight Miles/Day	Freight Difference	Base	Minimum	Difference	% Change	Base	Minimum	Difference	Base	Minimum	Difference		
220 CHURCH IL	COLLIERVILLE IL	IC	40	3.46	8.86	11.00	36.42	6.419	1%	13,203	13,203	0	2,353			X		
265 SPARTA IL	CARPENTERS IL	IC	8.8	1.42	1.42	0.00	8.46	1.461	0%	0	0	0	0					
270 SPARTA IL	BALDWIN IL	IC	2.5	3.14	3.14	0.00	9.336	0	0%	0	0	0	0					
275 COALFIELD IL	PINE KNOXVILLE IL	IC	14.7	8.46	8.46	0.00	50.660	57.303	6.643	13%	13,203	16,000	2,797	2,797		X		
280 PINE KNOXVILLE IL	COALFIELD IL	IC	8.7	10.98	10.98	0.00	51.266	6.650	13%	13,203	16,000	2,797	2,797			X		
281 COALFIELD IL	CHRISTOPHER IL	IC	11.2	4.38	4.38	0.00	23.630	0	0%	0	0	0	0					
295 CHRISTOPHER IL	BENTON IL	IC	4.5	4.38	4.38	0.00	23.630	0	0%	0	0	0	0					
300 BENTON IL	AKINACT IL	IC	10.9	3.44	3.44	0.00	32.411	0	0%	0	0	0	0					
303 GILMAN IL	CHANDLER IL	IC	46.3	12.58	12.58	5.73	84.666	52.538	62%	27,373	34,758	7,385	27,373			X		
315 CHANDLER IL	MATTOON IL	IC	45.1	14.13	19.59	5.46	85.087	32.262	50%	33,087	39,262	6,175	28,182		X	X		
320 MATTOON IL	ORCAIR IL	IC	42.8	3.36	2.86	0.00	33.640	33.640	10%	4,743	5,840	1,097	1,097		X	X		
325 DECATUR IL	DECATUR IL	IC	21.1	2.30	2.30	0.00	10.218	4.001	40%	4,825	2,190	2,635	2,635		X	X		
330 DECATUR IL	PELHAM IL	IC	4.6	1.72	1.72	0.00	3.641	5.29	17%	1,460	1,460	0	0					
331 PELHAM IL	PEORIA IL	IC	7.7	1.72	1.72	0.00	3.641	5.29	17%	1,460	1,460	0	0					
340 PEORIA IL	SPRINGFIELD IL	IC	20.9	13.31	19.04	5.73	21.086	49.838	57%	31,853	50,130	18,277	18,277		X	X		
345 SPRINGFIELD IL	LUS IL	IC	16.8	3.44	3.44	0.00	10.377	2.238	27%	1,825	1,825	0	0					
350 LUS IL	NEWTON IL	IC	3.5	1.72	1.72	0.00	2.125	2.238	90%	1,825	1,825	0	0					
355 NEWTON IL	EDWARDS IL	IC	14.0	1.63	2.17	5.54	11.840	43.441	36%	41,804	72,035	30,231	30,231		X	X		
360 EDWARDS IL	CENTRALIA IL	IC	37.3	12.13	15.87	3.74	79.096	106.722	37%	15,330	35,008	19,678	19,678		X	X		
365 CENTRALIA IL	RENNING IL	IC	23.5	4.17	18.43	3.70	81.266	28.267	35%	14,800	33,215	18,415	18,415		X	X		
370 RENNING IL	DECATUR IL	IC	11.9	4.58	19.28	3.30	88.949	22.268	31%	19,343	33,215	13,872	13,872		X	X		
375 DECATUR IL	CARROLLVILLE IL	IC	18.9	17.00	19.28	3.72	70.267	22.453	35%	19,343	34,675	15,332	15,332		X	X		
380 CARROLLVILLE IL	CARROLL IL	IC	54.4	17.00	20.72	3.72	72.956	25.768	35%	17,410	27,000	9,590	9,590		X	X		
385 CARROLL IL	FULTON KY	IC	43.5	14.44	18.16	3.72	55.299	13.762	47%	17,410	27,000	9,590	9,590		X	X		
390 FULTON KY	AKINACT IL	IC	62.6	4.28	6.80	1.72	30.544	30.562	40%	29,365	37,595	8,230	8,230		X	X		
395 AKINACT IL	RUSS SPUR IL	IC	1	2.27	11.44	1.72	21.593	13.813	22%	29,365	37,595	8,230	8,230		X	X		
397 RUSS SPUR IL	FEELER IL	IC	6	11.42	13.16	1.72	70.073	15.819	22%	29,365	37,595	8,230	8,230		X	X		
400 FEELER IL	OKALATIA IL	IC	9.3	3.14	3.14	0.00	27.643	0	0%	0	0	0	0					
405 OKALATIA IL	BLUENADE IL	IC	9.3	1.72	1.72	0.00	9.08	0	0%	0	0	0	0					
410 BLUENADE IL	HARCO IL	IC	7.9	12.00	13.72	1.72	88.170	15.819	18%	30,565	37,595	7,030	7,030		X	X		
412 HARCO IL	DELTA 2 IL	IC	2.1	10.00	11.72	1.72	88.170	15.819	18%	30,565	37,595	7,030	7,030		X	X		
415 DELTA 2 IL	METROPOLIS IL	IC	42.6	9.22	11.44	1.72	82.211	15.819	19%	29,365	37,595	8,230	8,230		X	X		
420 METROPOLIS IL	CHILES KY	IC	3.3	9.14	10.86	1.72	79.203	91.123	20%	29,365	37,595	8,230	8,230		X	X		
432 CHILES KY	FULTON KY	IC	41.2	3.40	9.32	1.72	61.239	16.714	20%	31,144	47,990	16,846	16,846		X	X		
435 FULTON KY	DYERSBURG TN	IC	43.8	19.46	25.38	5.44	167.759	39.064	30%	46,133	68,308	22,175	22,175		X	X		
440 DYERSBURG TN	WOODSTOCK TN	IC	46	19.46	25.38	5.44	168.156	39.071	30%	46,133	68,308	22,175	22,175		X	X		
445 WOODSTOCK TN	Y & MV JCT TN	IC	12.3	0.86	0.86	0.00	0	0	0%	0	0	0	0					
447 Y & MV JCT TN	GREENADE WYE MS	IC	2.5	4.60	4.60	0.00	0	0	0%	0	0	0	0					
451 GREENADE WYE MS	WOODSTOCK TN	IC	15.1	20.72	26.16	5.44	109.417	38.948	36%	42,910	71,215	28,305	28,305		X	X		
455 WOODSTOCK TN	MEMPHIS YARD TN	IC	2.3	22.75	27.74	4.98	113.664	26.625	23%	47,682	58,217	10,535	10,535		X	X		
460 MEMPHIS YARD TN	LAKE COMFORT MS	IC	15.2	16.56	20.28	3.72	107.082	15.857	14%	44,165	47,813	3,648	3,648		X	X		
465 LAKE COMFORT MS	MARKS MS	IC	43.6	16.56	20.28	3.72	107.082	15.857	14%	44,165	47,813	3,648	3,648		X	X		
468 MARKS MS	SWAN LAKE MS	IC	27.3	16.56	20.28	3.72	109.980	15.871	14%	44,165	47,813	3,648	3,648		X	X		
485 SWAN LAKE MS	GREENWOOD MS	IC	29.4	16.56	20.28	3.72	109.980	15.871	14%	44,165	47,813	3,648	3,648		X	X		
500 GREENWOOD MS	YAZOO CITY MS	IC	52.7	16.56	20.28	3.72	109.980	15.871	14%	44,165	47,813	3,648	3,648		X	X		
505 YAZOO CITY MS	JACKSON MS	IC	44	16.56	20.28	3.72	109.980	15.871	14%	44,165	47,813	3,648	3,648		X	X		
511 JACKSON MS	BATESVILLE MS	IC	54.7	1.72	1.72	0.00	1.463	1.463	0%	0	0	0	0					

**ATTACHMENT B-1
CNRC ACQUISITION RAIL LINE SEGMENT MASTER TABLE**

Segment Description			Segment	Passenger and Freight Train Traffic (Per Day)			Freight Class Tonnage			Maximum Capacity/Year			Threats to Met				
Segment Number	From Station	To Station		Passenger (Per Day)	Freight (Per Day)	Freight (Per Day)	Freight (Per Day)	Freight (Per Day)	Freight (Per Day)	Passenger (Per Year)	Freight (Per Year)	Freight (Per Year)	Threats to Met	Threats to Met	Threats to Met	Threats to Met	
520	BATON ROUGE, MS	GRANDDA, MS	IC	40.5	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
521	GRANDDA, MS	BURRITT, MS	IC	32.5	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
522	BURRITT, MS	JACKSON, MS	IC	37.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
523	JACKSON, MS	BROOKHAVEN, MS	IC	33	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
524	JACKSON, MS	SARATOGA, MS	IC	48.9	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
525	SARATOGA, MS	HATTIESBURG, MS	IC	40.9	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
526	HATTIESBURG, MS	NEW ALBANY, MS	IC	19.5	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
527	NEW ALBANY, MS	BEAUMONT, MS	IC	19.5	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
528	BEAUMONT, MS	EVANSTON, MS	IC	31.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
529	EVANSTON, MS	PORTLAND, AL	IC	30.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
530	PORTLAND, AL	WANNILA, MS	IC	20.3	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
531	WANNILA, MS	BODALUSA, LA	IC	40.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
532	BODALUSA, LA	PERDUE, MS	IC	2.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
533	PERDUE, MS	NATON, MS	IC	46	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
534	NATON, MS	MEADOW, MS	IC	24.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
535	MEADOW, MS	WANNILA, LA	IC	41.1	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
536	WANNILA, LA	BATON ROUGE, LA	IC	43.6	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
537	BATON ROUGE, LA	ORLEANS, LA	IC	42.6	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
538	ORLEANS, LA	DESTER, LA	IC	3.5	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
539	DESTER, LA	RESERVE, LA	IC	10.7	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
540	RESERVE, LA	REMY, LA	IC	11.5	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
541	REMY, LA	GEORGE, LA	IC	20.6	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
542	GEORGE, LA	BATON ROUGE, LA	IC	28.3	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
543	BATON ROUGE, LA	MAYS, LA	IC	3.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
544	MAYS, LA	EAST BRIDGE, LA	IC	1.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
545	EAST BRIDGE, LA	SOUTHPORT, LA	IC	2.1	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
546	SOUTHPORT, LA	NEW ORLEANS, LA	IC	4.9	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
547	NEW ORLEANS, LA	SPARKSVILLE, MS	IC	29.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
548	SPARKSVILLE, MS	IMPERIAL, MS	IC	27.6	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
549	IMPERIAL, MS	BEAUMONT, MS	IC	1.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
550	BEAUMONT, MS	PORTLAND, AL	IC	3.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
551	PORTLAND, AL	SWARTZ, MS	IC	3.6	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
552	SWARTZ, MS	DURAND, MS	IC	3.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
553	DURAND, MS	BATTLE, MS	IC	14.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
554	BATTLE, MS	PAVILION, MS	IC	21.3	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
555	PAVILION, MS	SOUTH BEAUMONT, MS	IC	17.7	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
556	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	28.3	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
557	WELLSBORO, MS	GRIFITH, MS	IC	34.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
558	GRIFITH, MS	THORNTON, MS	IC	11.3	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
559	THORNTON, MS	HARVEY, MS	IC	2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
560	HARVEY, MS	BLAKE, MS	IC	3.9	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
561	BLAKE, MS	PAVILION, MS	IC	7.8	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
562	PAVILION, MS	SOUTH BEAUMONT, MS	IC	4.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
563	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	10.6	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
564	WELLSBORO, MS	GRIFITH, MS	IC	10.6	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
565	GRIFITH, MS	THORNTON, MS	IC	3.9	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
566	THORNTON, MS	HARVEY, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
567	HARVEY, MS	BLAKE, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
568	BLAKE, MS	PAVILION, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
569	PAVILION, MS	SOUTH BEAUMONT, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
570	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
571	WELLSBORO, MS	GRIFITH, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
572	GRIFITH, MS	THORNTON, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
573	THORNTON, MS	HARVEY, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
574	HARVEY, MS	BLAKE, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
575	BLAKE, MS	PAVILION, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
576	PAVILION, MS	SOUTH BEAUMONT, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
577	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
578	WELLSBORO, MS	GRIFITH, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
579	GRIFITH, MS	THORNTON, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
580	THORNTON, MS	HARVEY, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
581	HARVEY, MS	BLAKE, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
582	BLAKE, MS	PAVILION, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
583	PAVILION, MS	SOUTH BEAUMONT, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
584	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
585	WELLSBORO, MS	GRIFITH, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
586	GRIFITH, MS	THORNTON, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
587	THORNTON, MS	HARVEY, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
588	HARVEY, MS	BLAKE, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
589	BLAKE, MS	PAVILION, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
590	PAVILION, MS	SOUTH BEAUMONT, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
591	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
592	WELLSBORO, MS	GRIFITH, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
593	GRIFITH, MS	THORNTON, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
594	THORNTON, MS	HARVEY, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
595	HARVEY, MS	BLAKE, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
596	BLAKE, MS	PAVILION, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
597	PAVILION, MS	SOUTH BEAUMONT, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
598	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
599	WELLSBORO, MS	GRIFITH, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
600	GRIFITH, MS	THORNTON, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
601	THORNTON, MS	HARVEY, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
602	HARVEY, MS	BLAKE, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
603	BLAKE, MS	PAVILION, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
604	PAVILION, MS	SOUTH BEAUMONT, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
605	SOUTH BEAUMONT, MS	WELLSBORO, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
606	WELLSBORO, MS	GRIFITH, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
607	GRIFITH, MS	THORNTON, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
608	THORNTON, MS	HARVEY, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				
609	HARVEY, MS	BLAKE, MS	IC	2.2	1.72	1.72	1.72	1.72	1.72	1.72	0	0	0				

**ATTACHMENT B-1
CN/IC ACQUISITION RAIL LINE SEGMENT MASTER TABLE**

Segment Number	Segment Description		Length Miles	Passenger and Freight Trains Trains/Day				Freight Gross Tons/Day				Hazardous Commodity/Year				Through Miles/Day			
	From Station	To Station	Route	Pass Trains/Day	Freight Trains/Day	Freight Trains/Day	Freight Difference	Base	Merged	Difference	% Change	Base	Merged	Difference	% Change	Base	Merged	Difference	% Change
1123	SPRINGVILLE MI	ANN ARBOR MI	CN	17.4	7.72	6.13	-1.43	21,706	22,278	-1,978	-9%	16,000	17,120	-2,190	-14%	16,000	17,120	-2,190	-14%
1130	RICHMOND MI	DETROIT EAST YRD MI	CN	32.3	9.72	6.28	-1.44	21,706	22,278	-1,978	-9%	16,000	17,120	-2,190	-14%	16,000	17,120	-2,190	-14%
1135	DETROIT EAST YRD MI	MILWAUKEE ACT MI	CN	1.1	9.72	10.28	0.56	14,673	38,964	4,311	29%	16,425	20,805	5,380	33%	16,425	20,805	5,380	33%
1140	MILWAUKEE ACT MI	YUNEWOOD MI	CN	1	21.43	23.28	1.85	76,270	91,193	14,923	20%	23,360	33,945	10,585	45%	23,360	33,945	10,585	45%
1149	DAY CITY ACT MI	DETROIT MI	CN	1.2	6.42	6.42	0.00	19,449	18,533	-3,184	-16%	4,245	0,935	-2,190	-52%	4,245	0,935	-2,190	-52%
1158	DETROIT MI	WINDSOR ON	CN	3.9	0.26	11.06	10.80	1,845	1,803	-35	-2%	303	365	62	21%	303	365	62	21%
1161	ANN ARBOR MI	ANN ARBOR MI	CN	14.6	10.78	10.15	0.15	46,636	47,115	479	1%	12,057	13,493	1,436	12%	12,057	13,493	1,436	12%
1169	ANN ARBOR MI	LANC OH	CN	16.7	9.17	9.46	0.30	48,928	50,644	1,684	3%	10,990	11,315	325	3%	10,990	11,315	325	3%
1163	LANC OH	TOLEDO OH	CN	10.1	9.57	9.86	0.29	42,772	41,688	-3,084	-7%	10,990	11,315	325	3%	10,990	11,315	325	3%
1170	FLAT ROCK MI	ANN ARBOR MI	CN	23.3	4.29	4.39	0.00	14,345	13,544	-837	-6%	2,180	2,900	720	33%	2,180	2,900	720	33%
1209	MILWAUKEE ACT MI	DETROIT INTERMODAL	CN	6.4	13.14	13.26	1.28	52,715	52,765	50	0%	10,385	13,180	2,655	26%	10,385	13,180	2,655	26%
1221	DETROIT INTERMODAL	MAL ACT MI	CN	14.6	14.43	12.44	-1.99	52,183	56,551	4,370	8%	12,057	12,775	718	6%	12,057	12,775	718	6%
1225	MAL ACT MI	PONTIAC MI	CN	0.9	14.43	12.44	-1.99	52,183	56,551	4,370	8%	12,057	12,775	718	6%	12,057	12,775	718	6%
1230	PONTIAC MI	WEST PONTIAC MI	CN	2.7	13.18	13.27	0.09	53,663	59,039	5,377	10%	12,057	12,775	718	6%	12,057	12,775	718	6%
1235	WEST PONTIAC MI	DURAND MI	CN	36.3	13.18	13.27	0.09	53,663	59,039	5,377	10%	12,057	12,775	718	6%	12,057	12,775	718	6%
1262	DETROIT ACT MI	OAKWOOD ACT MI	CN	3	4.29	4.29	0.00	12,079	13,509	550	5%	2,853	3,283	430	15%	2,853	3,283	430	15%
1266	OAKWOOD ACT MI	WOODHAVEN MI	CN	3.4	2.29	2.29	0.00	4,368	9,173	4,805	110%	1,025	1,825	800	78%	1,025	1,825	800	78%
1268	WOODHAVEN MI	DAL ACT MI	CN	2.1	7.01	7.01	0.00	16,611	17,113	502	3%	2,920	2,920	0	0%	2,920	2,920	0	0%
1269	STERLING ON	RAIPER ON	CN	8.1	14.92	10.68	-1.04	56,902	57,516	614	1%	10,345	10,790	445	4%	10,345	10,790	445	4%
1443	PT ABIE ON	STEELETON MN	CN	14.2	2.13	11.13	-1.00	59,080	58,709	-371	-1%	10,135	10,580	445	4%	10,135	10,580	445	4%
1443	PT ABIE ON	BAFFALO NY	CN	11.5	8.72	8.72	0.00	58,975	28,579	-304	-1%	10,425	15,095	4,670	45%	10,425	15,095	4,670	45%
1450	ST LAMBERT PO	ROSELLES PT NY	CN	32.6	3.42	3.42	0.00	7,267	7,267	0	0%	1,460	1,460	0	0%	1,460	1,460	0	0%
1493	ROSELLES PT NY	EALBURGH VT	CN	10.6	2.00	2.00	0.00	7,207	7,040	-167	-2%	1,460	1,460	0	0%	1,460	1,460	0	0%
SPRAGUE	BAUDRETE MN	INTL BOUNDARY MN	CN	43.8	13.56	12.53	-1.04	53,598	55,313	1,715	3%	10,345	10,790	445	4%	10,345	10,790	445	4%

**ATTACHMENT B-2
CN/IC ACQUISITION INTERMODAL FACILITIES MASTER TABLE**

RR/road	Terminal Name	Base Case Origin/ Destination Lifts	Base Case Switch Lifts	Base Case Total Lifts	Base Case OTR Trucks	Merged Case Origin/ Destination Lifts	Merged Case Switch Lifts	Merged Case Total Lifts	Merged Case OTR Trucks	Change in Origin/ Destination Lifts	Change in Switch Lifts	Change in Total Lifts	Change in OTR Trucks
IC	COUNCIL BLUFFS INTERMODAL IA	4	0	4	3	4	0	4	3	1	0	1	0
GTW	DETROIT INTERMODAL MI	48	17	65	34	113	43	155	81	65	26	91	47
IC	FORT DODGE IA	2	0	2	1	2	0	2	1	0	0	0	0
IC	JACKSON MS	47	1	48	34	54	0	54	39	7	-1	6	5
IC	MEMPHIS INTERMODAL TN	169	1	170	122	234	24	257	169	65	23	87	47
IC	MOBILE AL	25	0	25	18	29	0	29	21	4	0	4	3
IC/CN	MOVERS/CHICAGO GATEWAY IL	477	5	482	346	599	67	665	433	121	62	183	88
IC	NEW ORLEAN INTERMODAL LA	131	0	131	95	140	0	140	101	9	0	9	7
IC	WATERLOO IA	1	0	1	1	1	0	1	1	0	0	0	0

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ATTACHMENT B-3 CN/IC ACQUISITION RAIL YARDS MASTER TABLE

Railroad	Yard	BASE			MERGED			DIFFERENCE			% Change in Total Yard Activity	Thresholds Met	
		Cars Switched/ Day	Cars Block Swapped/ Day	Total Cars Handled/ Day	Cars Switched/ Day	Cars Block Swapped/ Day	Total Cars Handled/ Day	Cars Switched/ Day	Cars Block Swapped/ Day	Total Cars Handled/ Day		Air	Noise
		53		11,829			13,308			1,479	12.5%	5	1
IC	BATON ROUGE LA	210	49	259	208	99	307	-2	50	48	19%		
GTW	BATTLE CREEK MI	472	126	598	474	256	730	2	130	132	22%		
IC	BOGALUSA LA	91	0	91	90	0	90	-1	0	-4	-1%		
IC	BROOKHAVEN MS	56	19	75	52	17	69	-4	-2	-6	-8%		
IC	CARBONDALE IL	0	32	32	0	47	47	0	15	15	47%		
IC	CEDAR RAPIDS IA	78	0	78	83	0	83	5	0	5	6%		
IC	CENTRALIA IL	340	264	604	431	311	742	91	47	138	23%		
IC	CHAMPAIGN IL	473	16	489	721	16	737	248	0	248	51%		
BRC	CLEARING YARD IL	517	0	517	327	0	327	-190	0	-190	-37%		
IC	COULTERVILLE IL	11	0	11	13	0	13	2	0	2	18%		
IC	COUNCIL BLUFFS IA	64	8	72	86	33	119	22	25	47	65%		
GTW	DEARBORN MI	87	0	87	90	0	90	3	0	3	3%		
IC	DECATUR IL	320	20	340	375	21	396	55	1	56	16%		
IC	DESTREHAN LA	92	0	92	92	0	92	0	0	0	0%		
GTW	DETROIT/DETROITE MI	82	0	82	117	16	133	35	16	51	62%	X	
IC	DUBUQUE IA	95	0	95	88	0	88	-7	0	-7	-7%		
IC	DUQUOIN IL	0	40	40	0	55	55	0	15	15	38%		
GTW	DURAND MI	139	0	139	144	0	144	5	0	5	4%		
GTW	ECORSE MI	91	0	91	102	0	102	11	0	11	12%		
GTW	EDISON MI	8	0	8	11	0	11	3	0	3	38%	X	
IC	JEFFERSONHAM IL	245	5	250	264	4	268	19	-1	18	7%		
IC	FERGUSON MS	174	46	220	172	46	218	-2	0	-2	-1%		
GTW	FLAT ROCK MI	666	41	707	714	37	751	48	-4	44	6%		
GTW	FLINT MI	247	39	286	276	42	318	29	3	32	11%		
IC	FORT DODGE IA	220	25	245	228	27	255	8	2	10	4%		
IC	FREETPORT IL	17	0	17	19	0	19	2	0	2	12%		
IC	FULTON KY	267	33	300	312	32	344	45	-1	44	15%		
IC	GEISMAR LA	377	36	413	376	34	410	-1	-2	-3	-1%		
IC	GLENN YARD IL	241	58	299	253	54	307	12	-4	8	3%		
IC	GLENVILLE MN	37	0	37	38	0	38	1	0	1	3%		
IC	HATTIESBURG MS	112	53	165	127	31	158	15	-22	-7	-4%		

**ATTACHMENT B.3
CN/IC ACQUISITION RAIL YARDS MASTER TABLE**

Railroad	Yard	BASE			MERGED			DIFFERENCE			% Change in Total Yard Activity	Thresholds Met	
		Cars Switched/ Day	Cars Block Swapped/ Day	Total Cars Handled/ Day	Cars Switched/ Day	Cars Block Swapped/ Day	Total Cars Handled/ Day	Cars Switched/ Day	Cars Block Swapped/ Day	Total Cars Handled/ Day		Air	Noise
IC	HAWTHORNE IL	34	6	40	33	30	63	-1	24	23	58%	X	
IC	JACKSON MS	771	180	951	648	289	937	-123	109	14	-1%		
IC	JOHNSTON YD TN	754	163	917	1,045	258	1,303	291	95	386	42%		
IC	KANKAKEE IL	97	0	97	97	0	97	0	0	0	0%		
GTW	LANSING MI	190	29	159	130	49	179	0	20	20	13%		
IC	MANCHESTER IA	0	31	31	0	37	37	0	6	6	19%		
IC	MARKHAM YARD IL	556	53	609	752	100	852	196	47	243	40%	X	
IC	MATTOON IL	0	155	155	0	226	226	0	71	71	46%		
IC	MAYS YARD LA	363	0	363	350	0	350	-13	0	-13	-4%		
IC	MCCOMB MS	66	28	94	64	24	88	-2	-4	-6	-6%		
IC	MOBILE AL	367	0	367	381	7	388	14	7	21	6%		
GTW	MONROE MI	160	0	160	163	0	163	3	0	3	2%		
IC	MOUNT PULASKI IL	72	41	113	79	44	123	7	3	10	9%		
DWP	POKEGAMA WI	370	0	370	319	0	319	-51	0	-51	-14%		
GTW	PONTIAC MI	203	2	205	209	2	211	6	0	6	3%		
GTW	PORT HURON MI	8	0	8	8	16	24	0	16	16	200%	X	X
DWP	RANIER MN	34	37	71	31	37	68	-3	0	-3	-4%		
IC	SIOUX CITY IA	53	0	53	57	0	57	4	0	4	8%		
IC	SPRINGFIELD IL	0	0	0	0	0	0	0	0	0	0%		
DWP	VIRGINIA MN	2	0	2	2	0	2	0	0	0	0%		
IC	WATERLOO IA	165	29	194	182	46	228	17	17	34	18%		
GTW	WOODHAVEN MI	127	4	131	126	6	132	-1	2	1	1%		

APPENDIX C

SAFETY ANALYSIS METHODS AND RESULTS

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APPENDIX C

SAFETY ANALYSIS METHODS AND RESULTS

Appendix C outlines the methods that SEA used to evaluate the safety impacts that may result from the proposed Acquisition and presents the results of these analyses. In general, SEA compared pre-Acquisition data with anticipated post-Acquisition conditions to assess how the proposed Acquisition would affect safety. The safety analysis examines the following:

- Rail operations for freight and passenger trains.
- Highway injuries and fatalities avoided as freight diverts from highway to rail.
- Hazardous materials transport safety at rail yards and on mainline rail line segments.
- Vehicle traffic safety at highway/rail at-grade crossings.

C.1 OVERVIEW

This section outlines the methods used to assess the following Acquisition-related issues:

- Rail line segment-specific estimates of the following: (1) freight train derailments; and (2) freight train collisions and other accidents on rail line segments where the number of freight trains would increase by eight or more per day, as a result of the proposed CN/IC Acquisition.
- County-by-county estimates of the number of highway injuries and fatalities avoided as a result of highway-to-rail freight diversions.
- Rail line segment-specific estimates of passenger train-freight train collision frequency on rail line segments where the following conditions exist: (1) passenger trains operate, and (2) the number of freight trains would increase by one or more per day.
- Identification of rail line segments that would remain or become Key Routes (i.e., carriers of greater than 10,000 carloads of hazardous materials annually) or Major Key Routes (i.e., routes where the volume of hazardous materials carloads would double to exceed a volume of 20,000 carloads annually, as a result of the proposed Acquisition).
- The change in hazardous materials release frequency on mainline rail line segments that would experience any daily increase in hazardous materials traffic.
- The change in hazardous materials release frequency at rail yards and intermodal facilities that would experience any daily increase in the number of cars switched and/or block-swapped per day.

- The Applicants' safety history (i.e., derailments, accidents, and hazardous materials releases).
- The change in highway/rail at-grade crossing accident frequency for rail line segments that would experience an increase of eight or more freight trains per day.

C.2 APPLICABLE REGULATIONS AND GUIDANCE

C.2.1 Federal Railroad Administration—Safety Issues

The Federal Railroad Administration (FRA) is the Federal agency with authority over the safety of railroads. FRA has regulatory and enforcement powers found in 49 CFR 200 through 240.

C.2.2 Rail Transport of Hazardous Materials

C.2.2.1 Surface Transportation Board Regulations

SEA performed analyses in accordance with the Board's regulation at 49 CFR 1105.7(e)(7), which requires a description of the effects of the proposed action on public health and safety. This regulation requires the Applicants to provide the following information to SEA because the proposed Acquisition would result in the transport of hazardous materials:

- Hazardous materials types and quantities.
- Frequency of service.
- Chemicals being transported that, if mixed, could react to form more hazardous compounds.
- Safety practices (including any speed restrictions).
- Applicant safety record on derailments, accidents, and hazardous materials spills.
- Contingency plans to address accidental hazardous materials releases.
- Likelihood of an accidental release of hazardous materials.
- Ozone-depleting chemicals.

C.2.2.2 Other Regulations

Other regulations that pertain to hazardous wastes and materials transported by rail include the following: (1) those promulgated pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (40 CFR 305 and 306); (2) those promulgated pursuant to the Resource Conservation and Recovery Act of 1976 (40 CFR 264 and 265); and (3) U.S. Department of Transportation (DOT) regulations found in 49 CFR (Parts 171, 172, 173, 178, 179, 180, and 185).

C.3 DATA SOURCES

This section presents the sources of data that SEA used to conduct the required safety analyses. To evaluate the safety effects of the proposed Acquisition, SEA used its own data, FRA data, and information from the Association of American Railroads (AAR). SEA used operating data for both before and after the Acquisition in the Applicants' Operating Plan. SEA obtained data from FRA's databases of Railroad Accident/Incident Reports. FRA's databases are compilations of accident reports submitted by railroads whenever a train accident causes damage above the FRA reporting threshold (\$6,500 for 1997), or whenever a vehicle-train accident occurs at a highway/rail at-grade crossing, regardless of the severity. SEA used the *AAR Factbook* and the *AAR Analysis of Class 1 Railroads* as a source for historical operating data.

C.3.1 Data Sources for Freight Rail Operations

For system-wide calculations, SEA used 1995 and 1996 accident rates from the FRA Accident/Incident Bulletin, 1995-1996, Table 37, and 1997 accident rate from the FRA database.

SEA evaluated the safety effects of highway-to-rail freight diversions resulting from the proposed CN/IC Acquisition from data published by DOT's National Highway Transportation Safety Administration (NHTSA). SEA used NHTSA's Traffic Safety Facts, 1996, Table 3 (Vehicles Involved in Crashes and Involvement Rates per Vehicle Miles of Travel and per Registered Vehicle Type and Crash Severity, 1975-1996), which contained data for large trucks.

C.3.2 Data Sources for Rail Transport of Hazardous Materials

The FRA Railroad Accident/Incident database (1993 to 1997) provided accident/incident reports that SEA used for rail line segment analyses of hazardous materials releases. SEA also obtained data for rail transport of hazardous materials from DOT's Hazardous Materials Incident Reporting System (HMIRS). The HMIRS reports document the occurrence, size, and nature of reported incidents.

SEA also used the *Risk Assessment for the Transportation of Hazardous Materials by Rail Reference Manual*, as provided by CN (1996) (*Reference Manual*), which includes data compiled by the InterIndustry Rail Safety Task Force (IIRSTF). The IIRSTF includes AAR, the Chemical Manufacturers' Association, and the Railway Progress Institute. SEA supplemented and updated data from the Reference Manual. For derailment calculations for rail yard switching events, SEA

used *Supplementary Report: Railroad Accident Rate and Risk Reduction Option Effectiveness Analysis and Data (Second Revision) (1996)*,¹ as provided by CN.

C.3.3 Data Sources for Passenger Rail Operations

SEA used the Applicants' Operating Plan data and a document entitled *Risk of Collisions Between Passenger and Freight Trains on Freight Railroad Track, July 15, 1998*² (which provided a passenger train-freight train collision rate) for SEA to perform the passenger train collision assessment.

C.3.4 Data Sources for Highway/Rail At-grade Crossings

SEA used the most recent version of the FRA database (1997) to compile accident data for all highway/rail at-grade crossings within each state and county that was affected by the proposed CN/IC Acquisition. SEA used the Applicants' Operating Plan data to identify the highway/rail at-grade crossings to be studied, based on the previously discussed threshold for environmental analysis (an increase in rail freight traffic of at least eight trains per day).

C.4 ANALYSIS OF SAFETY EFFECTS

The proposed CN/IC Acquisition would result in train traffic rerouting, which would generate increases and decreases in traffic on some rail line segments and in some rail yards when compared to conditions before the proposed Acquisition. The diversion of highway truck shipments to the integrated rail system resulting from the proposed CN/IC Acquisition could result in increased local truck traffic in and around intermodal facilities and a decrease in long-haul truck traffic. In addition, planned rerouting and consolidation activities could involve some rail line connection construction projects. Appendix D, "Transportation Analysis Methods and Results," provides details about the local traffic and long-haul truck traffic issues. Chapter 4, "Environmental Consequences—Operational Changes," further discusses the proposed rail line connections.

SEA conducted a quantitative evaluation by:

- Correlating historical accident information (i.e., the number of accidents per year) with historical operations information (i.e., annual train-miles or annual car-miles).
- Using knowledge of historical operations and expected future operations to estimate a relationship, generally expressed as an accident rate (e.g., accidents per million train-miles; accidents per million cars switched).
- Applying the information obtained through the above methods to draw conclusions regarding the changed operations that would result from the proposed Acquisition.

¹ Submitted to SEA by Arthur D. Little, Inc.

² Submitted by Arthur D. Little, Inc.

SEA conducted separate analyses for passenger train and freight train operations, highway/rail at-grade crossing accidents, and hazardous materials releases. In general, SEA studied safety effects that could result from the proposed CN/IC Acquisition to determine the following: (1) a system-wide effect; and (2) a rail line segment-specific (including a state-wide) effect. The system-wide analysis is based on the CN/IC integrated rail network as it would exist after the proposed CN/IC Acquisition.

C.5 ANALYTICAL METHODS FOR FREIGHT OPERATIONS SAFETY EFFECTS

To assess changes in freight train safety, SEA estimated a system-wide accident risk for rail freight operations. SEA also analyzed safety effects of highway-to-rail freight diversions that would occur as a result of the proposed CN/IC Acquisition.

C.5.1 System-wide Safety Effects Analysis

SEA analyzed the accident risk for system-wide rail freight operations before and after the proposed Acquisition using data on rail lines, rail yards, and intermodal facility accidents and reportable highway/rail at-grade crossing accidents. Table C-1, "Accident Rates and Train-Miles for CN and IC 1995 Through 1997," shows the Applicants' accident statistics for 1995 through 1997.

**TABLE C-1
ACCIDENT RATES AND TRAIN-MILES FOR CN AND
IC 1995 THROUGH 1997**

Year	CN ^a			IC ^b		
	Total Accidents	Train-miles (millions)	Accidents per million train-miles	Total Accidents	Train-miles (millions)	Accidents per million train-miles
1995	51	5.80	8.79	77	9.48	8.12
1996	36	6.12	5.88	88	8.95	9.83
1997	26	6.38	4.07	64	9.09	7.04

Source: FRA accident database.

^a CN represents GTW and DWP railroads.

^b IC represents IC, CCP, and Cedar River railroads. No accidents were reported for Cedar River Railroad during the years 1995 to 1997.

By weighting the average of the 1995 through 1997 accident rates for CN and IC by the number of train-miles traveled each year, SEA estimated a system-wide accident rate of 7.46 accidents per million train-miles. To estimate system-wide accident occurrence following the Acquisition, SEA used the following formula:

$$AR = AR_{AVG} * TM$$

where:

AR	=	Annual post-Acquisition estimated system-wide accident occurrence (accidents per year).
AR _{AVG}	=	Weighted average (1995 through 1997) accident rate per million train-miles for the CN and IC rail systems (estimated to be 7.46 accidents per million train-miles).
TM	=	Annual post-Acquisition train-miles for the integrated CN/IC rail system, provided by the Applicants' Operating Plan (estimated to be 13.75 million train-miles).

Attachment C-1, "CN and IC Freight Accident Rates," shows the system-wide freight accident rate calculations.

C.5.2 Safety Effects of Highway Truck-to-rail Diversions

SEA estimated the number of truckloads of freight that could expect to divert to rail because of the proposed CN/IC Acquisition and the corresponding reduction in large truck vehicle miles of travel (VMT). SEA estimated the reductions in injury, fatality, and property damage rates based on the VMT values calculated for the post-Acquisition scenario.

SEA calculated the annual injury, fatality, and property damage reductions, as follows:

$$HTR = HTR_{TM} * VMT$$

where:

HTR	=	Reduction in annual injury, fatality, or property damage rate.
HTR _{TM}	=	The per truck-mile heavy truck injury, fatality, or property damage rate (based on NHTSA data).
VMT	=	The annual reduction in truck-miles traveled as a result of the proposed Acquisition.

Attachment C-2, "Estimated Reduction in Injuries, Fatalities, and Property Damage as a Result of Highway-to-rail Freight Diversions," shows the results of the large-truck accident reduction calculations associated with the truck-to-rail freight diversion.

C.5.3 Rail Line Segment-specific Safety Effects Analysis

For freight rail operations, the Board's threshold for environmental analysis is eight or more additional freight trains per day on a rail line segment. According to the Applicants' Operating Plan, none of their rail line segments would experience an increase of eight or more additional freight trains per day. Thus, SEA concluded that the increase in mainline rail accidents on individual line segments would not be significant and did not analyze the issue further.

C.6 ANALYTICAL METHODS FOR SAFETY EFFECTS OF HAZARDOUS MATERIALS RAIL TRANSPORT

SEA reviewed historical data on hazardous materials releases. In addition, SEA analyzed potential safety impacts of the proposed CN/IC Acquisition related to hazardous materials transport on rail line segments and at rail yards. SEA considered rail line segments and rail yards that would experience any daily increase in hazardous materials traffic.

C.6.1 Historical Hazardous Materials Releases

Railroads must report to DOT on Form 5800.1 any unintentional release of hazardous materials that meets the criteria set forth in 49 CFR 171.16. DOT compiles the Forms to create the Hazardous Materials Incident Reporting System (HMIRS) database, which includes the following information: (1) when and where a hazardous materials release occurred, (2) the substance and quantity released, and (3) the source of the release. The HMIRS database includes incidents that do not meet FRA criteria for reportability (i.e., the database includes all releases, not just those in which property damages to equipment, signals, and track exceed \$6,500).

SEA reviewed a list of the HMIRS database entries for IC; IC's subsidiary Chicago, Central and Pacific Railroad Company (CCP); Cedar River Railroad; and CN's U.S. operating subsidiary Grand Trunk Corporation (GTW) for the years 1993 through 1997. CN's other U.S. operating subsidiary—Duluth, Winnipeg and Pacific Railroad (DWP)—reported no entries because it did not experience a reportable release in this 5-year period. SEA examined a 5-year history of hazardous materials releases ending with May 1998 incidents; however, the HMIRS database receives updates only once a year. In lieu of examining the January 1993 through April 1993 portions of the HMIRS database, SEA reviewed the Form 5800.1's submitted to DOT for January through May 1998 to ensure that the analysis represented the most recent 5-year period.

Attachment C-3, "Historical Hazardous Materials Releases," summarizes the hazardous materials release historical analyses. Attachment C-4, "List of Hazardous Materials To Be Transported," includes a list of hazardous materials for transport.

C.6.2 Key Route/Major Key Route Identification

A rail line segment that carries more than 10,000 annual carloads of hazardous materials is, according to AAR's Circular OT-55 B, a "Key Route." A pre-Acquisition rail line segment on which the annual volume of hazardous materials carloads would double and exceed 20,000 carloads as a result of the proposed CN/IC Acquisition is a "Major Key Route." The impact of rerouting hazardous material carloads is potentially significant if the change in volume due to the proposed CN/IC Acquisition would make a non-key route rail line segment into a Key Route or Major Key Route or make a Key Route into a Major Key Route.

SEA analyzed the post-Acquisition increases in hazardous materials traffic on a segment-by-segment basis. Attachment C-5, "New Key Routes and Major Key Routes Rail Line Segments," shows the results of the Key Route analysis.

C.6.3 Mainline Hazardous Materials Releases

SEA calculated the hazardous materials release rates before and after the proposed Acquisition for rail line segments that would experience an increase in hazardous materials activity. To do this, SEA first calculated for each of these rail line segments an accident rate, which consisted of the sum of the derailment rate and the collision rate. The two categories of accidents SEA analyzed consisted of:

- Derailments (based on segment train-miles and car-miles).
- Collisions and other accidents (based on segment train-miles and car-miles).

For each of these analyses, SEA calculated the train accident frequency for each segment. The cause of an accident can involve either a car or the train as a whole. For example, faulty brakes or a broken wheel are "car causes," whereas excessive speed or radio communication errors are "train causes." Accidents resulting from car causes are generally expressed in terms of accidents per billions of car-miles, and train-caused accidents are expressed in terms of accidents per millions of train-miles.

For a particular type of accident on a certain class of track, the accident rate from car causes is equal to the total accident rate per billion car-miles multiplied by the percentage of accidents attributable to car causes for that track class. Similarly, the accident rate from train causes is equal to the total accident rate per million train-miles multiplied by the percentage of accidents attributable to train causes for that track class.

The equations for each accident scenario follow:

Derailments, car causes:

$$DC = \text{DERATECM} * \text{DECM}/100 \text{ (per billion car-miles)}$$

where:

DC	=	Number of derailments from car causes per billion car-miles.
DERATECM	=	Number of derailments per billion car-miles.
DECM	=	Percentage of total number of derailments due to car causes.

Derailments, train causes:

$$DT = \text{DERATETM} * \text{DETM}/100 \text{ (per million train-miles)}$$

where:

DT	=	Number of derailments from train causes per million train-miles.
DERATETM	=	Number of derailments per million train-miles.
DETM	=	Percentage of total number of derailments due to train causes.

Collisions and other accidents, car causes:

$$CC = CORATECM * COCM/100 \text{ (per billion car-miles)}$$

where:

CC	=	Number of collisions and other accidents from car causes per billion car-miles.
CORATECM	=	Number of collisions and other accidents per billion car-miles.
COCM	=	Percentage of total number of collisions and other accidents due to car causes.

Collisions and other accidents, train causes:

$$CT = CORATETM * COTM/100 \text{ (per million train-miles)}$$

where:

CT	=	Number of collisions and other accidents from train causes per million car-miles.
CORATECM	=	Number of collisions and other accidents per million car-miles.
COTM	=	Percentage of total number of collisions and other accidents due to train causes.

DERATECM, DERATETM, CORATECM, and CORATETM are accident rates found in a table in the *Reference Manual* as a function of track class. DECM, DETM, COCM, and COTM are the percentages of derailments (DE) and collisions (CO) resulting from car causes (CM) and train causes (TM) provided in the *Reference Manual*.

Frequency of Derailments on Rail Line Segments

SEA used car-mile and train-mile derailment frequencies calculated above (i.e., DC and DT) to calculate the overall derailment frequency for a segment, DEFREQ. SEA calculated DEFREQ according to the following equation:

$$DEFREQ = SLENGTH * NTRAIN * [(NCAR * DC/10^6) + DT/10^6]$$

where:

DEFREQ	=	The number of derailments per year for a particular rail line segment.
SLENGTH	=	The segment length (miles).
NTRAIN	=	The annual number of train trips on a rail line segment.
NCAR	=	The number of cars per train.

In other words, the total derailment frequency for a particular rail line segment is a function of the car-miles and the train-miles traveled, multiplied by the derailment rates associated with car causes and train causes, respectively. SEA used the values for SLENGTH and pre-Acquisition and post-Acquisition NTRAIN from the Applicants' Operating Plan. SEA used a value for NCAR of approximately 66 cars per train, before the proposed CN/IC Acquisition, and 77 cars per train, after the proposed CN/IC Acquisition.

Frequency of Collisions and Other Accidents on Rail Line Segments

SEA calculated the collision and other accident annual frequency, COFREQ, for each rail line segment by using the following equation:

$$COFREQ = SLENGTH * NTRAIN * [(NCAR * CC/10^9) + CT/10^6]$$

Definitions of these variables appear above. Similar to the derailment equation, this equation simply states that the number of collisions is a function of the length of a rail line segment, the number of train trips on a rail line segment, and the collision rates associated with car causes and train causes.

Overall Accident Frequency on Rail Line Segments

To determine an overall car derailment frequency for a particular rail line segment, SEA multiplied the derailment frequency by the probability that one car would derail in a derailment (0.97) and multiplied the collision and other accident frequency by the probability that one car would derail in a collision or other accident (0.28). The probabilities appear in the *Reference Manual*. ACCFREQ, the overall frequency of collisions, derailments, and other accidents resulting in at least one derailment is the sum of these two values, as follows:

$$ACCFREQ = 0.97 * DEFREQ + 0.28 * COFREQ$$

The following example illustrates the use of this procedure. Consider a rail line segment with the following characteristics:

Segment Description:	Delaware, Iowa to Manchester, IA
Track Class:	4
Rail line segment length (SLENGTH):	6.1 miles
Number of trains on rail line segment (NTRAIN):	9.14 per day or 3336 per 365-day year
Number of cars per train (NCAR):	66
Number of hazardous materials cars per day:	10
Number of hazardous materials cars per train:	1.1

SEA obtained the following values in the AAR tables in the *Reference Manual* for a track class of 4:

DERATECM =	12.7 per billion car-miles.
DERATEM =	0.864 per million train-miles.

CORATECM	=	5.9 per billion car-miles.
CORATETM	=	0.406 per million train-miles.
DECM	=	83.86%.
DETM	=	16.14%.
COCM	=	17.05 %.
COTM	=	82.95%.

Using the above data, SEA calculated DC, DT, CC, CT, DEFREQ, COFREQ, and ACCFREQ as follows:

$$DC = DERATECM * DECM/100 \text{ (per billion car-miles)}$$

$$DC = 12.7 * 83.86/100$$

$$DC = 10.7 \text{ derailments per billion car-miles}$$

$$DT = DERATETM * DETM/100 \text{ (per million train-miles)}$$

$$DT = 0.864 * 16.14/100$$

$$DT = 0.14 \text{ derailments per million train-miles}$$

$$CC = CORATECM * COCM/100 \text{ (per billion car-miles)}$$

$$CC = 5.9 * 17.05/100$$

$$CC = 1.0 \text{ collisions and other accidents per billion car-miles}$$

$$CT = CORATETM * COTM/100 \text{ (per million train-miles)}$$

$$CT = 0.406 * 82.95/100$$

$$CT = 0.34 \text{ collision and other accidents per million train-miles}$$

SEA estimated the number of derailments and collisions occurring per year on the rail line segment as follows:

$$DEFREQ = SLENGTH * NTRAIN * [(NCAR * DC/10^6) + DT/10^6]$$

$$DEFREQ = 6.1 * 3336 * [(66.24 * 10.7/10^6) + 0.14/10^6]$$

$$DEFREQ = 0.017 \text{ derailment accident per year on the rail line segment}$$

$$COFREQ = SLENGTH * NTRAIN * [(NCAR * CC/10^6) + CT/10^6]$$

$$COFREQ = 6.1 * 3336 * [(66.24 * 1.0/10^6) + 0.34/10^6]$$

$$COFREQ = 0.0083 \text{ collision accident per year on the rail line segment}$$

SEA calculated the total accident frequency, ACCFREQ, as follows:

$$ACCFREQ = 0.98 * DEFREQ + 0.28 * COFREQ$$

$$ACCFREQ = 0.98 * 0.017 + 0.28 * 0.0083$$

$$ACCFREQ = 0.019 \text{ accident per year on the rail line segment}$$

SEA calculated the release rate per rail line segment as a function of the number of hazardous materials cars per train and track class. The track class variable takes into account train speed.

SEA calculated the chance of one or more hazardous materials cars releasing on a rail line segment as follows:

$$\text{CHANCE} = \text{ACCFREQ} * \text{RELEASE VALUE}$$

SEA used tables to determine the RELEASE VALUE. Table C-2, "Mainline Hazardous Materials Release Rate—66 Cars," shows pre-Acquisition release rates (based on an assumption of approximately 66 cars per train) and Table C-3, "Mainline Hazardous Materials Release Rate—77 Cars," shows post-Acquisition release rates (based on 77 cars per train) as a function of track class and number of cars of hazardous materials per day. As these tables show, SEA anticipates that each train will carry up to (but not exceed) 36 carloads of hazardous materials.

**TABLE C-2
MAINLINE HAZARDOUS MATERIALS RELEASE RATE—66 CARS**

Hazardous Materials Cars per Train	Track Class 1	Track Class 2	Track Class 3	Track Class 4
1	0.01	0.01	0.02	0.03
2	0.01	0.02	0.04	0.06
3	0.02	0.04	0.05	0.08
4	0.03	0.05	0.07	0.11
5	0.03	0.06	0.09	0.14
6	0.04	0.07	0.10	0.16
7	0.04	0.08	0.12	0.18
8	0.05	0.09	0.13	0.20
9	0.05	0.10	0.14	0.22
10	0.06	0.11	0.16	0.24
11	0.07	0.12	0.17	0.25
12	0.07	0.13	0.18	0.27
13	0.08	0.14	0.20	0.30
14	0.08	0.15	0.22	0.32
15	0.09	0.16	0.23	0.35
16	0.10	0.17	0.25	0.37
17	0.10	0.18	0.26	0.39
18	0.11	0.20	0.28	0.41
19	0.11	0.21	0.29	0.43
20	0.12	0.22	0.31	0.46

TABLE C-2
MAINLINE HAZARDOUS MATERIALS RELEASE RATE—66 CARS

Hazardous Materials Cars per Train	Track Class 1	Track Class 2	Track Class 3	Track Class 4
21	0.13	0.23	0.32	0.48
22	0.13	0.24	0.34	0.50
23	0.14	0.25	0.35	0.52
24	0.14	0.26	0.37	0.54
25	0.15	0.27	0.38	0.56
26	0.15	0.28	0.40	0.59
27	0.16	0.29	0.41	0.61
28	0.17	0.30	0.43	0.63
29	0.17	0.31	0.44	0.65
30	0.18	0.32	0.46	0.67
31	0.18	0.33	0.47	0.69
32	0.19	0.35	0.49	0.72
33	0.20	0.36	0.50	0.74
34	0.20	0.37	0.51	0.76
35	0.21	0.38	0.53	0.78
36	0.21	0.39	0.54	0.80

Source: Arthur D. Little, Inc. *Calculation of Accident and Hazardous Materials Release Rates*, July 24, 1998.

TABLE C-3
MAINLINE HAZARDOUS MATERIALS RELEASE RATE—77 CARS

Hazardous Materials Cars per Train	Track Class 1	Track Class 2	Track Class 3	Track Class 4
1	0.01	0.01	0.02	0.03
2	0.01	0.02	0.03	0.05
3	0.02	0.03	0.04	0.07
4	0.02	0.04	0.06	0.09
5	0.03	0.05	0.07	0.11
6	0.03	0.06	0.08	0.13
7	0.04	0.07	0.10	0.15
8	0.04	0.07	0.11	0.17
9	0.05	0.08	0.12	0.19
10	0.05	0.09	0.13	0.20
11	0.06	0.10	0.15	0.22
12	0.06	0.11	0.16	0.23
13	0.07	0.12	0.17	0.26
14	0.07	0.13	0.19	0.28
15	0.07	0.14	0.20	0.30
16	0.08	0.15	0.21	0.32
17	0.08	0.15	0.22	0.34
18	0.09	0.16	0.24	0.35
19	0.09	0.17	0.25	0.37
20	0.10	0.18	0.26	0.39
21	0.10	0.19	0.28	0.41
22	0.11	0.20	0.29	0.43
23	0.11	0.21	0.30	0.45
24	0.12	0.22	0.32	0.47
25	0.12	0.23	0.33	0.49
26	0.13	0.23	0.34	0.51
27	0.13	0.24	0.35	0.53
28	0.14	0.25	0.37	0.54

TABLE C-3
MAINLINE HAZARDOUS MATERIALS RELEASE RATE—77 CARS

Hazardous Materials Cars per Train	Track Class 1	Track Class 2	Track Class 3	Track Class 4
29	0.14	0.26	0.38	0.56
30	0.15	0.27	0.39	0.58
31	0.15	0.28	0.41	0.60
32	0.16	0.29	0.42	0.62
33	0.16	0.30	0.43	0.64
34	0.17	0.31	0.44	0.66
35	0.17	0.31	0.46	0.68
36	0.18	0.32	0.47	0.70

Source: Arthur D. Little, Inc. *Calculation of Accident and Hazardous Materials Release Rates*, July 24, 1998.

Thus, for the previous example, the RELEASE VALUE would equal 0.03, and SEA calculated CHANCE as follows:

$$\text{CHANCE} = \text{ACCFREQ} * \text{RELEASE VALUE}$$

$$\text{CHANCE} = 0.019 * 0.03$$

$$\text{CHANCE} = 0.0006 \text{ releases for the segment per year.}$$

So that the release rates could be compared for different rail line segment lengths, SEA divided CHANCE by SLENGTH, the segment length, to calculate the release frequency per mile:

$$\text{RELEASE FREQUENCY PER MILE} = \text{CHANCE/SLENGTH}$$

SEA calculated the interval between releases by taking the reciprocal of RELEASE FREQUENCY PER MILE, as follows:

$$\text{INTERVAL BETWEEN RELEASES} = 1/\text{RELEASE FREQUENCY PER MILE}$$

Continuing the example,

$$\text{RELEASE PER MILE} = 0.0006/6.1$$

$$\text{RELEASE PER MILE} = 0.0001 \text{ release per year per mile of rail line segment}$$

$$\text{INTERVAL BETWEEN RELEASES} = 1/\text{RELEASE PER MILE}$$

$$\text{INTERVAL BETWEEN RELEASES} = 10,000 \text{ years}$$

Attachment C-6, "All Rail Line Segments with an Estimated Increase in Hazardous Materials Activity," lists all rail line segments with an estimated increase in hazardous materials activity.

Attachment C-7, "Mainline Hazardous Materials Release Results," presents the results of the hazardous materials mainline release calculations.

C.6.4 Rail Yards

To determine the likelihood of a rail yard event resulting in a hazardous materials release, SEA considered rail yards that would experience any increase in the daily number of hazardous materials-containing cars switched and/or block-swapped. A car switched in and out of a train at the origin and destination points and a train reassembled in a classification yard are switching events. A small number (typically 1-5) of cars switched at a time is a switching event. Any larger number of cars switched at a time is a block swap. Based on information they provided in their Operating Plan, the average block swap for the Applicants involves 13.9 cars.

SEA calculated the car derailment frequency, DFREQ, at each rail yard by using the following equation:

$$DFREQ = NCARYD * DRATEY$$

where:

DFREQ	=	Estimated number of car derailments per year at a rail yard.
NCARYD	=	Number of hazardous materials cars switched per year at a rail yard.
DRATEY	=	Number of derailments per million switching events.

SEA calculated NCARYD from the data provided in the Applicants' Operating Plan on cars switched and cars block-swapped. In a block swap, cars are handled as a group (block) and not individually, so derailments are less likely to occur. For the Applicants, the average number of cars in a block is 13.9. A car in a block with between 10 and 15 cars is one-third as likely to experience a derailment as a car in an ordinary switching event.³ SEA multiplied the number of cars block-swapped at a rail yard by 0.33, to calculate an "equivalent" number of cars switched. The formula SEA used for the number of hazardous materials cars switched annually at a rail yard (NCARYD) is as follows:

$$NCARYD = (CARYD + (BSYD * 0.33)) * F$$

where:

CARYD	=	Annual number of cars switched at a rail yard in a traditional manner.
BSYD	=	Annual number of cars block-swapped at a rail yard.
F	=	The fraction of cars that carry hazardous materials.

³ Arthur D. Little, Inc. *Car Derailment Rate in Switching Operations*, July 15, 1998. For block swapping operations, ADL estimated an equivalent switching of 0.33 (one-third) for an average block size of 10 to 20 cars. Because CN's average block size consists of 13.9 cars, 0.33 was used in this analysis.

NCARYD = Number of hazardous materials cars switched per year at a rail yard.

SEA obtained the value of F from the Applicants' Operating Plan for CN and IC. F is equal to 0.075 for pre-Acquisition conditions, and 0.074 for post-Acquisition conditions.

SEA reviewed data from the FRA database (1995 through 1997) to determine a value for DRATEY of 36.3 cars derailed per million switching events. To calculate DRATEY, SEA analyzed the FRA database and determined how many accidents occurred between 1995 and 1997 that met the following criteria:

- Loaded car involved in accident.
- Freight car involved in accident.
- Number of loaded cars derailed in FRA reportable accident.

SEA included all industry, siding, or yard accidents if the above criteria were met. In addition, SEA included mainline accidents where a train meeting the above criteria was involved in a non-freight train accident, (i.e., an accident involving a cut of cars or a yard/switching train). SEA tallied the number of accidents meeting these criteria for each year between 1995 and 1997. Then, SEA divided the annual number of accidents for each railroad by the number of switching events. To compute the number of switching events, SEA assumed that the number of unit trains was negligible on CN and IC. Therefore, SEA used the relationship that a typical non-unit train carload experiences five switching events.⁴

SEA therefore calculated the number of switching events, for the purpose of DRATEY calculations, as follows:

$$\text{annual number of loaded car switching events} = 5 * \text{annual number of carloads originated}$$

SEA calculated DRATEY by dividing the total number of accidents meeting the above criteria for the 3-year period between 1995 and 1997 by the total number of loaded car switching events during the same period, as follows:

$$\text{DRATEY} = \text{total number of loaded cars derailed} / \text{total number of loaded car switching events}$$

SEA then applied an annual release rate of 0.038 hazardous materials releases per rail yard derailment, to the car derailment frequency at rail yards.⁵ SEA used the following equation to estimate the number of releases at a rail yard per year:

$$\text{Annual Releases} = \text{DFREQ} * 0.038$$

To calculate the estimated number of years between releases, SEA used the following equation:

⁴ Provided by Arthur D. Little, Inc.

⁵ Provided by Arthur D. Little, Inc.

$$\text{Number of years between releases} = 1/\text{Annual Releases}$$

The following example illustrates this procedure. Consider a rail yard with the following characteristics:

- 72 cars switched per day (26,280 cars switched per year) per the Applicants' Operating Plan.
- 41 cars block-swapped per day (14,965 cars block-swapped per year) per the Applicants' Operating Plan.

The pre-Acquisition car derailment frequency is calculated as follows:

$$DFREQ = NCARYD * DRATEY/10^6$$

$$NCARYD = [CARYD + (BSYD * 0.33)] * F$$

$$NCARHM = [26,280 \text{ cars switched/year} + 14,965 \text{ cars block-swapped per year} * 0.33] * 0.075$$

$$NCARYD = 2341 \text{ hazardous materials cars switched per year}$$

$$DRATEY = 36.3 \text{ cars derailed}/10^6 \text{ switching events}$$

$$DFREQ = 2341 * 36.3/10^6$$

$$DFREQ = 0.085 \text{ derailment per year}$$

$$\text{Annual Releases} = DFREQ * 0.038$$

$$\text{Annual Releases} = 0.085 * 0.038$$

$$\text{Annual Releases} = 0.0032 \text{ release per year}$$

$$\text{Number of years between releases} = 1/\text{Annual Releases}$$

$$\text{Number of years between releases} = 1/0.0032$$

$$\text{Number of years between releases} = 313 \text{ years}$$

Attachment C-8, "Rail Yard Hazardous Materials Release Results," provides the results of the yard release analyses.

C.7 ANALYTICAL METHODS FOR PASSENGER RAIL/COMMUTER OPERATION SAFETY EFFECTS

C.7.1 System-wide Safety Effects Analysis

Freight traffic and passenger traffic on the Applicants' rail line segments differ markedly from segment to segment. For example, passenger trains also frequently use some rail line segments near metropolitan or suburban areas. Conversely, freight trains exclusively use other rail line segments and do not carry Amtrak or commuter train traffic. Some scheduled Amtrak and commuter trains operate on separate parallel lines for part of their route. Because the use of these rail line segments differs so dramatically, it is not meaningful to try to predict potential increases

or decreases in accident rates on a system-wide basis. Therefore, SEA did not evaluate the potential safety effects to passenger rail operations on a system-wide level.

C.7.2 Rail Line Segment-specific Safety Effects Analysis

SEA performed a quantitative analysis of passenger train-freight train collisions on all rail line segments carrying both freight trains and passenger trains where at least one additional freight train per day would travel as a result of the proposed CN/IC Acquisition.

Arthur D. Little, Inc., a consulting firm hired by FRA to develop a rail passenger risk model, determined that nationally, the accident rate for collisions occurring between passenger and freight trains is 0.039 collisions per million commuter and inter-city passenger train-miles.⁶ On rail line segments where daily freight train traffic would increase by at least one train as a result of the proposed CN/IC Acquisition, SEA calculated a collision rate using the Arthur D. Little, Inc. rate and the following formula:

$$A_{\text{post-coll}} = TM * CR_{\text{pc}}$$

where:

- $A_{\text{post-coll}}$ = The pre-Acquisition annual passenger train-freight train collisions on a rail line segment.
- TM = The pre- or post-Acquisition annual passenger train-miles on a rail line segment where both freight trains and passenger trains travel.
- CR_{pc} = The national passenger train-freight train collision rate per passenger train-mile (0.039 collisions per million commuter and inter-city passenger train-miles).

SEA calculated the value of the TM term by assuming a 365-day operating year. SEA multiplied 365 days per year by the number of passenger trains on a rail line segment per day and by the length of the segment.

SEA used the above formula for pre-Acquisition operating conditions. For post-Acquisition operating conditions, SEA calculated collision accident rate as follows⁷:

$$\text{Collision Accident Rate After Traffic Change} = (CR_{\text{pc}}) * \frac{(\text{post-Acquisition Number of Freight Trains per Day})}{(\text{pre-Acquisition Number of Freight Trains per Day})}$$

⁶ Arthur D. Little, Inc. *Risk of Collisions Between Passenger and Freight Trains on Freight Railroad Tracks*, July 15, 1998.

⁷ *Ibid.*

Attachment C-9, "Collision Estimates for Rail Line Segments with Passenger Trains and an Increase of at Least One Freight Train Per Day," presents the collision rate increases and frequency estimates for passenger train-freight train operations. Note that segment length significantly affects the calculated interval between passenger train-freight train collisions.

Common Corridor Analysis

SEA calculated the change in the risk of a freight train encroaching upon a passenger train within the common corridor. The risk depends on the distance between the freight and passenger train tracks, the track class and speed, and the length of time it would take to warn the passenger train of a freight train encroachment. To calculate the change in the risk, SEA made the following assumptions based on observations and measurements:

- The track class is 3 and the average speed is 30 miles per hour.
- The average distance from nearest passenger rail to nearest freight rail is 23 feet on the mainline and 9 feet at train stations.
- The common corridor includes 10 train stations, each of which has approximately 750 feet of rail line associated with it.
- Passenger cars are 10 feet wide.
- A 2-minute "exposure period" exists, during which a passenger train is vulnerable to an encroachment.⁴ SEA assumed that after 2 minutes, the passenger train would avoid the accident because adequate warnings could occur during the 2 minutes.

SEA used the following equation to calculate the change in the risk of a freight train collision with a passenger train within the common corridor on the mainline and near train stations:

$$\text{RISK} = \text{ADDFREIGHT} * \text{LENGTH} * \text{PROB} * \text{TIME} * \text{ACCRATE}$$

where:

RISK	=	Change in the risk of a freight accident interfering with a passenger train.
ADDFREIGHT	=	Number of additional freight trains per year (7.6 trains per day between Harvey and Homewood, Illinois; 5.1 trains per day between Homewood and Matteson, Illinois; 7.1 trains per day between Matteson and University Park, Illinois).
LENGTH	=	Length of track within the common corridor (Mainline: 2.93 miles between Harvey and Homewood, Illinois; 4.63 miles between Homewood and Matteson, Illinois;

⁴ Arthur D. Little, Inc. *Illinois Central Common Corridor Obstruction Risk Calculation*, August 28, 1998.

		2.72 miles between Matteson and University Park, Illinois.
		Railroad Stations: 0.57 miles between Homewood and Matteson, Illinois; 0.28 miles between Matteson and University Park, Illinois).
PROB	=	Probability of an accident occurring (0.44 for mainlines; 0.68 near railroad station, 0.56 for platforms within train stations).
TIME	=	Length of time during which the passenger train would be exposed.
ACC RATE	=	Accident rate for track class 3 (1.19 accident per million train-miles). Section C.6.2 describes the method SEA used to calculate the accident rate.

In addition, SEA calculated the change in the risk of a freight train hitting a passenger platform at a Metra station within the common corridor, as follows:

$$\text{PLATFORM RISK} = \text{ADDFREIGHT} * \text{LENGTH} * \text{PROB} * \text{TIME} * \text{ACC RATE}$$

where PLATFORM RISK is the change in the risk of a freight train encroaching upon a platform where passengers could be present. The other variables were provided above; SEA used the railroad station values for the calculation of PLATFORM RISK.

SEA computed the TIME value used in the above equations as follows:

$$\text{TIME} = (\text{EXPOSURE} * \text{PASSENGER}) / (1440 \text{ minutes per day})$$

where:

EXPOSURE	=	2 minutes for the mainline and near railroad stations.
	=	10 minutes for passengers on the platform at a railroad station.
PASSENGER	=	Average number of passenger trains per day (48 Metra trains).

Attachment C-10, "Common Corridor Analysis," presents the results of the RISK and PLATFORM RISK calculations in terms of the number of years between potential encroachment accidents. SEA calculated the change in the number of years between accidents by taking the reciprocal of the value of RISK and PLATFORM RISK.

C.6 ANALYTICAL METHODS FOR SAFETY EFFECTS AT HIGHWAY/RAIL AT-GRADE CROSSINGS

This section presents methods to evaluate potential impacts of the proposed CN/IC Acquisition on highway/rail at-grade crossing safety. Appendix D, "Transportation Analysis Methods and Results," provides the methods used to evaluate potential traffic delays at highway/rail at-grade crossings.

SEA analyzed safety implications to roadway users from increased train operations resulting from the proposed CN/IC Acquisition. For rail lines, the most appropriate evaluation of impacts on roadway users was to assess accident potential at locations where tracks cross roadways at the same elevation (i.e., highway/rail at-grade crossings). SEA did not study overpasses or underpasses where the roadway and railroad are physically separated.

The Board's threshold for environmental analysis of highway/rail at-grade crossings is a rail line segment that would experience a daily increase of eight or more freight trains. The Applicants' Operating Plan included projections of freight train traffic increases on a rail line segment as a result of the proposed CN/IC Acquisition. SEA reviewed the Applicants' Operating Plan and determined that no rail line segments would exceed the Board's threshold for environmental analysis. Therefore, SEA concluded that safety effects at highway/rail at-grade crossings would not be significant and did not study this issue further.

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ATTACHMENT C-2

ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ^a	Estimated Reduction in Annual Fatalities ^a	Estimated Reduction in Annual Property Damage Accidents ^a	Total Reduction
Autauga	AL	23,573	0.012	0.00061	0.038	0.051
Baldwin	AL	23,647	0.013	0.00067	0.042	0.055
Blount	AL	18,014	0.0092	0.00047	0.029	0.039
Butler	AL	50,277	0.026	0.0013	0.081	0.11
Chambers	AL	3,051	0.0016	0.000079	0.0049	0.0066
Chilton	AL	43,080	0.022	0.0011	0.070	0.093
Conoceb	AL	40,990	0.021	0.0011	0.066	0.088
Cellman	AL	92,248	0.047	0.0024	0.15	0.20
De Kalb	AL	2,750	0.0014	0.000072	0.0045	0.0059
Elmore	AL	11,277	0.0058	0.00029	0.018	0.024
Escambia	AL	28,948	0.015	0.00073	0.047	0.062
Browh	AL	1,457	0.00074	0.000038	0.0024	0.0031
Greene	AL	56,284	0.029	0.0015	0.091	0.12
Jefferson	AL	120,109	0.061	0.0031	0.19	0.26
Lee	AL	9,902	0.0051	0.00026	0.016	0.021
Limestone	AL	83,500	0.043	0.0022	0.14	0.18
Lowndes	AL	24,372	0.012	0.00063	0.039	0.053
Macon	AL	10,321	0.0053	0.00027	0.017	0.022
Mobile	AL	47,441	0.024	0.0012	0.077	0.10
Montgomery	AL	35,069	0.018	0.00091	0.057	0.076
Morgan	AL	56,088	0.029	0.0015	0.091	0.12
Shelby	AL	22,845	0.012	0.00059	0.037	0.049
St. Clair	AL	1,663	0.00083	0.000043	0.0027	0.0036
Sumter	AL	49,333	0.025	0.0013	0.080	0.11
Tuscaloosa	AL	77,951	0.040	0.0020	0.13	0.17
AL TOTAL		936,192	0.48	0.024	1.50	2.0
Clark	AR	367,856	0.19	0.0096	0.60	0.79
Crittenden	AR	319,689	0.16	0.0083	0.52	0.69
Hempstead	AR	266,584	0.15	0.0073	0.46	0.62
Hot Spring	AR	341,100	0.17	0.0089	0.55	0.74
Lonoke	AR	329,919	0.17	0.0086	0.53	0.71
Miller	AR	239,934	0.12	0.0062	0.39	0.52
Mississippi	AR	48,999	0.025	0.0013	0.079	0.11
Monroe	AR	168,074	0.086	0.0044	0.27	0.36

ATTACHMENT C-2

ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ^a	Estimated Reduction in Annual Fatalities ^b	Estimated Reduction in Annual Property Damage Accidents ^c	Total Reduction
Nevada	AR	166,976	0.085	0.0043	0.27	0.36
Pringle	AR	256,147	0.13	0.0067	0.41	0.55
Polaski	AR	342,799	0.17	0.0089	0.56	0.74
Saline	AR	252,975	0.13	0.0066	0.41	0.55
St. Francis	AR	608,964	0.31	0.016	0.99	1.3
AR TOTAL		3,730,016	1.9	0.097	6.0	8.0
Fairfield	CT	11,533	0.0059	0.00030	0.019	0.025
Hartford	CT	10,456	0.0053	0.00027	0.017	0.023
Middlesex	CT	757	0.00039	0.000020	0.0012	0.0016
New Haven	CT	12,122	0.0062	0.00032	0.020	0.026
CT TOTAL		34,868	0.018	0.00091	0.056	0.075
Banks	GA	2,402	0.0012	0.000062	0.0039	0.0052
Clayton	GA	3,332	0.0017	0.000087	0.0054	0.0072
Conasa	GA	9,178	0.0047	0.00024	0.015	0.020
Dade	GA	1,356	0.00069	0.000035	0.0022	0.0029
De Kalb	GA	8,137	0.0041	0.00021	0.013	0.018
Franklin	GA	7,134	0.0036	0.00019	0.012	0.015
Fulton	GA	4,966	0.0025	0.00013	0.0060	0.011
Gwinnett	GA	9,409	0.0048	0.00024	0.015	0.020
Hall	GA	2,885	0.0015	0.000075	0.0047	0.0062
Harris	GA	272	0.00014	0.0000071	0.00044	0.00059
Han	GA	1,838	0.00094	0.000048	0.0030	0.0040
Jackson	GA	6,493	0.0033	0.00017	0.011	0.014
Meriwether	GA	949	0.00048	0.000025	0.0015	0.0020
Troup	GA	9,954	0.0051	0.00026	0.016	0.021
GA TOTAL		68,307	0.035	0.0018	0.11	0.15
Alexander	IL	3,433	0.0018	0.000089	0.0056	0.0074
Bond	IL	1,045	0.00053	0.000027	0.0017	0.0023
Champaign	IL	36,581	0.019	0.0010	0.059	0.079
Clark	IL	1,581	0.00081	0.000041	0.0026	0.0034
Colles	IL	23,037	0.012	0.00060	0.057	0.050
Cook	IL	50,557	0.026	0.0013	0.082	0.11
Cumberland	IL	5,342	0.0027	0.00014	0.0087	0.012
Douglas	IL	15,011	0.0077	0.00039	0.024	0.032

ATTACHMENT C-2

ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ^a	Estimated Reduction in Annual Fatalities ^a	Estimated Reduction in Annual Property Damage Accidents ^a	Total Reduction
Effingham	IL	28,279	0.014	0.00074	0.046	0.061
Fayette	IL	9,334	0.0048	0.00024	0.015	0.020
Ford	IL	6,063	0.0031	0.00016	0.010	0.013
Franklin	IL	18,626	0.0095	0.00049	0.030	0.040
Grundy	IL	29,541	0.015	0.00077	0.048	0.064
Ingrao	IL	40,236	0.021	0.0010	0.065	0.087
Jefferson	IL	23,284	0.013	0.00066	0.041	0.055
Kankakee	IL	22,724	0.012	0.00059	0.037	0.049
Lavaca	IL	68,047	0.035	0.0018	0.11	0.15
Logan	IL	61,578	0.031	0.0016	0.10	0.13
Macoupin	IL	22,584	0.012	0.00059	0.037	0.049
Madison	IL	94,380	0.048	0.0025	0.15	0.20
Marion	IL	29,658	0.015	0.00077	0.048	0.064
McLean	IL	97,420	0.050	0.0025	0.16	0.21
Montgomery	IL	40,506	0.021	0.0011	0.066	0.087
Pulaski	IL	16,042	0.0082	0.00042	0.026	0.033
Sangamon	IL	74,877	0.038	0.0019	0.12	0.16
Shelby	IL	6,082	0.0031	0.00016	0.010	0.013
St. Clair	IL	6,986	0.0036	0.00018	0.011	0.015
Union	IL	18,578	0.0095	0.00048	0.030	0.040
Will	IL	87,249	0.044	0.0023	0.14	0.19
Williamson	IL	20,439	0.010	0.00053	0.033	0.044
IL TOTAL		961,170	0.49	0.025	1.6	2.1
Allen	IN	6,511	0.0033	0.00017	0.011	0.014
Bartholomew	IN	4,925	0.0025	0.00013	0.0090	0.011
Clark	IN	4,713	0.0024	0.00012	0.0076	0.010
Clay	IN	761	0.00039	0.000020	0.0012	0.0016
De Kalb	IN	3,702	0.0019	0.00010	0.0060	0.0080
Delaware	IN	2,672	0.0014	0.000069	0.0043	0.0058
Floyd	IN	310	0.00016	0.0000081	0.00050	0.00067
Grant	IN	5,514	0.0028	0.00014	0.0069	0.012
Hamilton	IN	1,846	0.00094	0.000048	0.0030	0.0040
Hancock	IN	1,078	0.00055	0.000028	0.0017	0.0023
Hendricks	IN	1,112	0.00057	0.000029	0.0018	0.0024

ATTACHMENT C-2
ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL
FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ¹	Estimated Reduction in Annual Fatalities ²	Estimated Reduction in Annual Property Damage Accidents ³	Total Reduction
Henry	IN	1,104	0.00056	0.00079	0.0018	0.0024
Huntington	IN	3,219	0.0017	0.00086	0.0054	0.0072
Jackson	IN	4,304	0.0022	0.00011	0.0070	0.0093
Johnson	IN	4,188	0.0021	0.00011	0.0068	0.0090
La Porte	IN	41,393	0.021	0.0011	0.067	0.069
Lake	IN	53,714	0.027	0.0014	0.087	0.12
Madison	IN	6,201	0.0032	0.00016	0.010	0.013
Marion	IN	7,058	0.0036	0.00018	0.011	0.015
Porter	IN	50,930	0.026	0.0013	0.083	0.11
Putnam	IN	1,307	0.00067	0.000034	0.0021	0.0028
Scott	IN	2,734	0.0014	0.000071	0.0044	0.0059
Steuben	IN	3,985	0.0020	0.00010	0.0065	0.0086
Vigo	IN	918	0.00047	0.000024	0.0015	0.0020
Wayne	IN	1,344	0.00069	0.000035	0.0022	0.0029
Wells	IN	839	0.00043	0.000022	0.0014	0.0018
IN TOTAL		216,482	0.11	0.0056	0.35	0.47
Barren	KY	282,552	0.14	0.0073	0.46	0.61
Boone	KY	436,472	0.22	0.011	0.71	0.94
Bullitt	KY	455,215	0.23	0.012	0.74	0.98
Campbell	KY	348	0.00028	0.000014	0.00089	0.0012
Carroll	KY	275,951	0.14	0.0072	0.45	0.59
Edmonson	KY	36,700	0.019	0.0010	0.059	0.079
Gallatin	KY	390,783	0.20	0.010	0.63	0.84
Hardin	KY	797,420	0.41	0.021	1.3	1.7
Hart	KY	496,218	0.25	0.013	0.80	1.1
Henry	KY	435,957	0.22	0.011	0.71	0.94
Jefferson	KY	714,208	0.36	0.019	1.2	1.5
Kenton	KY	234,405	0.12	0.0061	0.38	0.51
Oldham	KY	413,898	0.21	0.011	0.67	0.89
Simpson	KY	307,258	0.16	0.0080	0.50	0.66
Warren	KY	738,404	0.38	0.019	1.2	1.6
KY TOTAL		6,015,989	3.1	0.16	9.7	13.0
Acadia	LA	11,082	0.0057	0.00029	0.018	0.024
Bossier	LA	1,631	0.00063	0.000042	0.0026	0.0035

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ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ^a	Estimated Reduction in Annual Fatalities ^b	Estimated Reduction in Annual Property Damage Accidents ^c	Total Reduction
Caddo	LA	6,608	0.0034	0.0017	0.011	0.014
Caldwell	LA	14,721	0.0075	0.0038	0.024	0.032
East Baton Rouge	LA	19,333	0.0099	0.0050	0.031	0.042
Iberville	LA	8,820	0.0045	0.0023	0.014	0.019
Jefferson Davis	LA	9,898	0.0050	0.0026	0.016	0.021
Jefferson	LA	634	0.0032	0.0016	0.010	0.014
Lafayette	LA	5,522	0.0028	0.0014	0.0089	0.012
Livestock	LA	30,394	0.016	0.0079	0.049	0.066
Madison	LA	5,647	0.0029	0.0015	0.0091	0.012
Orleans	LA	39,950	0.020	0.010	0.065	0.086
Ouachita	LA	1,678	0.0086	0.00044	0.0027	0.0036
Richland	LA	3,990	0.0020	0.0010	0.0065	0.0086
St. Charles	LA	494	0.0025	0.00013	0.0080	0.011
St. John	LA	1,376	0.0070	0.00026	0.0022	0.0030
St. Martin	LA	9,529	0.0049	0.0025	0.015	0.021
St. Tammany	LA	36,604	0.019	0.010	0.069	0.079
Tangipahoa	LA	48,615	0.025	0.013	0.079	0.10
West Baton Rouge	LA	8,271	0.0042	0.0022	0.013	0.018
LA TOTAL		264,797	0.14	0.069	0.43	0.57
Franklin	MA	8,117	0.0041	0.0021	0.013	0.018
Hampden	MA	6,810	0.0035	0.0018	0.011	0.015
Hampshire	MA	4,187	0.0021	0.0011	0.0068	0.0090
MA TOTAL		19,114	0.0097	0.0050	0.031	0.041
Washington	MD	5,203	0.0027	0.0014	0.0084	0.011
MD TOTAL		5,203	0.0027	0.0014	0.0084	0.011
Allegan	MI	4,622	0.0024	0.0012	0.0075	0.010
Berrien	MI	111,234	0.057	0.029	0.18	0.24
Branch	MI	5,015	0.0026	0.0013	0.0081	0.011
Calhoun	MI	97,046	0.049	0.025	0.16	0.21
Clinton	MI	15,409	0.0079	0.0040	0.025	0.033
Eaton	MI	33,477	0.017	0.0087	0.054	0.072
Genesee	MI	20,289	0.010	0.0053	0.033	0.044
Ingham	MI	1,115	0.0057	0.00029	0.0018	0.0024
Jackson	MI	68,230	0.035	0.018	0.11	0.15

ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ^a	Estimated Reduction in Annual Fatalities ^a	Estimated Reduction in Annual Property Damage Accidents ^a	Total Reduction
Kalamazoo	MI	74,469	0.038	0.0019	0.12	0.16
Kenosha	WI	1,921	0.0010	0.000050	0.0031	0.0041
Livingston	MI	1,544	0.00079	0.000040	0.0025	0.0033
Macomb	MI	62,915	0.032	0.0016	0.10	0.14
Monroe	MI	622,811	0.32	0.016	1.0	1.3
Oakland	MI	46,379	0.024	0.0012	0.075	0.10
Ottawa	MI	1,378	0.00070	0.000036	0.0022	0.0030
Saginaw	MI	14,399	0.0073	0.00037	0.023	0.031
Saint Clair	MI	53,644	0.027	0.0014	0.067	0.12
Shiawassee	MI	19,016	0.0097	0.00049	0.031	0.041
Van Buren	MI	76,220	0.039	0.0020	0.12	0.16
Washtenaw	MI	67,924	0.035	0.0018	0.11	0.15
Wayne	MI	639,401	0.34	0.017	1.1	1.4
MO TOTAL		2,058,678	1.0	0.054	3.3	4.4
Boone	MO	138	0.00070	0.000036	0.0022	0.0030
Callaway	MO	169	0.00086	0.000044	0.0027	0.0036
Cooper	MO	171	0.00087	0.000044	0.0028	0.0037
Jackson	MO	170	0.00087	0.000044	0.0028	0.0037
Lafayette	MO	225	0.0011	0.00006	0.0036	0.0049
Mississippi	MO	24,479	0.012	0.00064	0.040	0.053
Montgomery	MO	116	0.00059	0.000030	0.0019	0.0025
New Madrid	MO	31,990	0.016	0.00083	0.052	0.069
Perkins	MO	31,600	0.016	0.00082	0.051	0.068
Saline	MO	133	0.00068	0.000035	0.0022	0.0029
St. Charles	MO	169	0.00086	0.000044	0.0027	0.0036
St. Louis	MO	119	0.00061	0.000031	0.0019	0.0026
St. Louis City	MO	1,079	0.0055	0.00028	0.00175	0.0023
Warren	MO	105	0.00054	0.000027	0.0017	0.0023
MO TOTAL		90,663	0.046	0.0024	0.35	0.20
Carroll	MS	61,217	0.031	0.0016	0.099	0.13
Copiah	MS	28,329	0.014	0.00074	0.046	0.061
De Soto	MS	59,221	0.030	0.0015	0.096	0.13
Forsyth	MS	8,196	0.0042	0.00021	0.013	0.018
Grenada	MS	45,980	0.023	0.0012	0.074	0.099

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ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ¹	Estimated Reduction in Annual Fatalities ²	Estimated Reduction in Annual Property Damage Accidents ³	Total Reduction
Hancock	MS	5,122	0.0026	0.00013	0.0083	0.011
Harrison	MS	6,233	0.0032	0.00016	0.010	0.013
Hinds	MS	55,736	0.028	0.0014	0.090	0.12
Holmes	MS	82,209	0.042	0.0021	0.13	0.18
Jackson	MS	7,067	0.0036	0.00018	0.011	0.015
Jasper	MS	52,972	0.027	0.0014	0.086	0.11
Jones	MS	52,495	0.027	0.0014	0.085	0.11
Lamar	MS	45,772	0.023	0.0012	0.074	0.099
Lauderdale	MS	58,274	0.030	0.0015	0.094	0.13
Lincoln	MS	25,406	0.013	0.00066	0.041	0.055
Madison	MS	113,833	0.058	0.0030	0.18	0.25
Montgomery	MS	33,279	0.017	0.00087	0.054	0.072
Newton	MS	1,813	0.00092	0.000047	0.0029	0.0039
Panola	MS	78,967	0.040	0.0021	0.13	0.17
Pearl River	MS	59,387	0.030	0.0015	0.096	0.13
Pike	MS	27,046	0.014	0.00070	0.044	0.058
Rankin	MS	1,599	0.00082	0.000042	0.0026	0.0034
Scott	MS	1,530	0.00078	0.000040	0.0025	0.0033
Tate	MS	38,432	0.020	0.0010	0.062	0.083
Warren	MS	1,690	0.00086	0.000044	0.0027	0.0036
Yalobusha	MS	57,290	0.029	0.0015	0.093	0.12
Yazoo	MS	4,566	0.0023	0.00012	0.0074	0.010
MS TOTAL		1,013,661	0.52	0.026	1.6	2.2
Cleveland	NC	1,901	0.0010	0.000049	0.0031	0.0041
Gaston	NC	6,774	0.0035	0.00018	0.012	0.015
Iredell	NC	15,237	0.0078	0.00040	0.025	0.033
Mecklenburg	NC	9,058	0.0046	0.00024	0.015	0.020
Surry	NC	7,692	0.0039	0.00020	0.012	0.017
Yadkin	NC	4,902	0.0025	0.00013	0.0079	0.011
NC TOTAL		43,564	0.023	0.0012	0.074	0.098
Bergen	NJ	3,250	0.0017	0.000085	0.0053	0.0070
Essex	NJ	1,100	0.00056	0.000029	0.0018	0.0024
Hunterdon	NJ	6,787	0.0035	0.00018	0.011	0.015
Morris	NJ	5,186	0.0026	0.00013	0.0084	0.011

ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries*	Estimated Reduction in Annual Fatalities*	Estimated Reduction in Annual Property Damage Accidents*	Total Reduction
Passaic	NJ	2,036	0.0010	0.000033	0.0033	0.0046
Somerset	NJ	4,135	0.0021	0.00011	0.0067	0.0089
Warren	NJ	1,794	0.00091	0.000047	0.0029	0.0039
NJ TOTAL		24,308	0.012	0.00063	0.039	0.052
Bronx	NY	2,018	0.0010	0.000052	0.0033	0.0044
Broome	NY	3,901	0.0020	0.00010	0.0063	0.0084
Chautauque	NY	6,075	0.0031	0.00016	0.010	0.013
Cortland	NY	3,048	0.0016	0.000079	0.0049	0.0066
Eric	NY	6,134	0.0031	0.00016	0.010	0.013
Jefferson	NY	5,291	0.0027	0.00014	0.0087	0.012
New York	NY	367	0.00019	0.000010	0.00059	0.00079
Oneida	NY	3,485	0.0018	0.000091	0.0056	0.0073
Oswego	NY	3,661	0.0019	0.00010	0.0059	0.0079
Westchester	NY	4,969	0.0025	0.00013	0.0080	0.011
NY TOTAL		39,049	0.020	0.0010	0.063	0.084
Allen	OH	535,684	0.27	0.014	0.87	1.2
Ashland	OH	2,843	0.0014	0.000074	0.0046	0.0061
Ashubula	OH	5,155	0.0026	0.00013	0.0084	0.011
Auglaize	OH	299,997	0.15	0.0078	0.49	0.65
Bowler	OH	317,427	0.16	0.0083	0.51	0.68
Clark	OH	1,694	0.00086	0.000044	0.0027	0.0037
Clermont	OH	869	0.00044	0.000023	0.0014	0.0019
Clinton	OH	1,377	0.00070	0.000036	0.0022	0.0030
Cuyahoga	OH	2,907	0.0015	0.000076	0.0047	0.0063
Delaware	OH	3,751	0.0019	0.00010	0.0061	0.0081
Fayette	OH	2,104	0.0011	0.000055	0.0034	0.0045
Franklin	OH	4,362	0.0022	0.00011	0.0071	0.0094
Geauga	OH	950	0.00048	0.000025	0.0015	0.0020
Greene	OH	872	0.00044	0.000023	0.0014	0.0019
Hamilton	OH	413,548	0.21	0.011	0.67	0.89
Hancock	OH	661,927	0.34	0.017	1.1	1.4
Lake	OH	3,563	0.0018	0.000093	0.0058	0.0077
Lucas	OH	254,487	0.13	0.0066	0.41	0.55
Madison	OH	2,112	0.0011	0.000055	0.0034	0.0046

ATTACHMENT C-2

ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries ^a	Estimated Reduction in Annual Fatalities ^a	Estimated Reduction in Annual Property Damage ^a	Total Reduction
Medina	OH	4,170	0.0021	0.00011	0.0068	0.0090
Miami	OH	506,415	0.36	0.013	0.82	1.1
Montgomery	OH	607,065	0.31	0.016	0.98	1.3
Monroe	OH	3,413	0.0017	0.000089	0.0055	0.0074
Pickaway	OH	91	0.000046	0.0000024	0.00015	0.00020
Predde	OH	949	0.00048	0.000025	0.0015	0.0020
Richland	OH	2,951	0.0015	0.000077	0.0048	0.0064
Shelby	OH	600,865	0.31	0.016	0.97	1.3
Summit	OH	2,460	0.0013	0.000064	0.0040	0.0053
Warren	OH	199,476	0.10	0.0052	0.32	0.43
Wayne	OH	1,397	0.00071	0.000036	0.0023	0.0030
Wood	OH	868,087	0.44	0.023	1.4	1.9
OH TOTAL		5,312,963	2.7	0.14	8.6	11
Berks	PA	11,089	0.0057	0.00029	0.018	0.024
Cumberland	PA	19,222	0.0098	0.00050	0.031	0.041
Dauphin	PA	7,068	0.0016	0.00018	0.011	0.015
Erie	PA	7,246	0.0037	0.00019	0.012	0.016
Franklin	PA	10,259	0.0052	0.00027	0.017	0.022
Lackawanna	PA	2,666	0.0014	0.000069	0.0043	0.0057
Lebanon	PA	6,552	0.0033	0.00017	0.011	0.014
Lehigh	PA	6,889	0.0035	0.00018	0.011	0.015
Luzerne	PA	4,607	0.0023	0.00012	0.0075	0.010
Northampton	PA	3,697	0.0019	0.00010	0.0060	0.008
Schuylkill	PA	4,432	0.0023	0.00012	0.0072	0.010
Susquehanna	PA	2,811	0.0014	0.00007	0.0046	0.0061
PA TOTAL		86,538	0.044	0.0022	0.14	0.19
Anderson	SC	13,715	0.0070	0.00036	0.022	0.030
Cherokee	SC	9,517	0.0049	0.00025	0.015	0.021
Greenville	SC	5,791	0.0030	0.00015	0.0094	0.012
Spartanburg	SC	11,148	0.0067	0.00029	0.018	0.024
SC TOTAL		40,171	0.020	0.0010	0.065	0.087
Beaton	TN	89,498	0.046	0.0023	0.14	0.19
Bradley	TN	1,100	0.00056	0.000029	0.0018	0.0024
Chatham	TN	230,418	0.12	0.0060	0.37	0.50

ATTACHMENT C-2 ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction In Annual Injuries*	Estimated Reduction In Annual Fatalities*	Estimated Reduction in Annual Property Damage Accidents*	Total Reduction
Cocke	TN	119	0.00061	0.000031	0.00019	0.00026
Davidson	TN	746,370	0.38	0.019	1.2	1.6
Decatur	TN	206,428	0.10	0.0053	0.33	0.44
Dickson	TN	370,344	0.19	0.0096	0.60	0.80
Fayette	TN	450,723	0.23	0.012	0.73	0.97
Giles	TN	59,153	0.030	0.0015	0.096	0.13
Greene	TN	1,980	0.0010	0.000051	0.0032	0.0043
Hamblen	TN	309	0.00016	0.0000080	0.00050	0.00067
Hamilton	TN	1,848	0.00094	0.000048	0.0030	0.0040
Haywood	TN	454,757	0.23	0.012	0.74	0.98
Henderson	TN	541,196	0.28	0.014	0.88	1.2
Hempstead	TN	629,735	0.32	0.016	1.0	1.4
Jefferson	TN	1,350	0.00069	0.000035	0.0022	0.0029
Knox	TN	2,322	0.0012	0.000060	0.0038	0.0050
Loudon	TN	982	0.00050	0.000026	0.0016	0.0021
Madison	TN	650,649	0.33	0.017	1.1	1.4
Marshall	TN	39,544	0.020	0.0010	0.064	0.083
Maury	TN	55,271	0.028	0.0014	0.090	0.12
McMinn	TN	1,604	0.00082	0.000042	0.0026	0.0035
Monroe	TN	732	0.00037	0.000019	0.0012	0.0016
Robertson	TN	441,867	0.23	0.011	0.72	0.95
Sevier	TN	454	0.00023	0.000012	0.00074	0.0010
Shelby	TN	618,803	0.32	0.016	1.0	1.3
Sullivan	TN	1,285	0.00066	0.000033	0.0021	0.0028
Sumner	TN	205,652	0.10	0.0053	0.33	0.44
Washington	TN	337	0.00017	0.0000088	0.00055	0.00073
Williamson	TN	55,611	0.028	0.0014	0.090	0.12
TN TOTAL		5,859,541	3.0	0.15	9.5	13
Angelina	TX	34,720	0.018	0.00090	0.056	0.075
Atascosa	TX	16,497	0.0084	0.00043	0.027	0.036
Bell	TX	55,009	0.043	0.0022	0.14	0.18
Bexar	TX	114,828	0.059	0.0030	0.19	0.25
Bowie	TX	490,817	0.25	0.013	0.80	1.1
Camp	TX	11,047	0.0056	0.00029	0.018	0.024

ATTACHMENT C-2

ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction in Annual Injuries*	Estimated Reduction in Annual Fatalities*	Estimated Reduction in Annual Property Damage Accidents*	Total Reduction
Cass	TX	62,946	0.032	0.0016	0.10	0.14
Collin	TX	27,119	0.014	0.00071	0.044	0.058
Comal	TX	62,361	0.032	0.0016	0.10	0.13
Dallas	TX	243,423	0.12	0.0063	0.39	0.52
Ellis	TX	76,154	0.039	0.0020	0.12	0.16
Franklin	TX	107,832	0.055	0.0028	0.17	0.23
Frio	TX	78,038	0.040	0.0020	0.13	0.17
Gregg	TX	5,214	0.0027	0.00014	0.008	0.011
Harris	TX	36,847	0.019	0.0010	0.060	0.079
Harrison	TX	38,606	0.020	0.0010	0.063	0.083
Hays	TX	54,037	0.028	0.0014	0.088	0.12
Hill	TX	52,403	0.027	0.0014	0.085	0.11
Hopkins	TX	352,810	0.18	0.0092	0.57	0.76
Hunt	TX	273,115	0.14	0.0071	0.44	0.59
La Salle	TX	108,902	0.056	0.0028	0.18	0.235
Liberty	TX	14,306	0.0074	0.00038	0.023	0.031
Marion	TX	13,695	0.0070	0.00036	0.022	0.030
McLennan	TX	120,150	0.061	0.0031	0.19	0.26
Medina	TX	23,952	0.012	0.00062	0.039	0.052
Montgomery	TX	17,860	0.0091	0.00046	0.029	0.039
Morris	TX	102,559	0.052	0.0027	0.17	0.22
Neurodeches	TX	49,591	0.025	0.0013	0.080	0.11
Orange	TX	7,013	0.0036	0.00018	0.011	0.015
Panola	TX	40,902	0.021	0.0011	0.066	0.088
Polk	TX	60,103	0.031	0.0016	0.097	0.13
Rockwall	TX	132,051	0.067	0.0034	0.21	0.28
San Jacinto	TX	21,462	0.011	0.00056	0.035	0.046
Shelby	TX	29,149	0.015	0.00076	0.047	0.063
Smith	TX	17,408	0.0089	0.00045	0.028	0.038
Travis	TX	216,315	0.11	0.0056	0.35	0.47
Travis	TX	70,704	0.036	0.0018	0.11	0.15
Upshur	TX	22,959	0.012	0.00060	0.037	0.049
Webb	TX	92,415	0.047	0.0024	0.15	0.20
Williamson	TX	68,961	0.035	0.0018	0.11	0.15

ATTACHMENT C-2
ESTIMATED REDUCTION IN INJURIES, FATALITIES, AND PROPERTY DAMAGE AS A RESULT OF HIGHWAY-TO-RAIL
FREIGHT DIVERSIONS

County	State	Annual Truck-to-Rail Diverted Miles	Estimated Reduction In Annual Injuries*	Estimated Reduction In Annual Fatalities*	Estimated Reduction In Annual Property Damage Accidents*	Total Reduction
TX TOTAL		3,454,480	1.8	0.090	5.6	7.4
Aguila	VA	15,030	0.0077	0.0039	0.024	0.032
Bolton	VA	10,066	0.0051	0.0026	0.016	0.022
Carroll	VA	7,262	0.0037	0.0019	0.012	0.016
Frederick	VA	10,108	0.0052	0.0026	0.016	0.022
Monterey	VA	10,592	0.0054	0.0028	0.017	0.023
Pulaski	VA	8,204	0.0042	0.0021	0.013	0.018
Rossmore	VA	7,622	0.0039	0.0020	0.012	0.016
Rockbridge	VA	17,569	0.0090	0.0046	0.028	0.038
Rockingham	VA	11,515	0.0059	0.0030	0.019	0.025
Shenandoah	VA	16,424	0.0084	0.0043	0.027	0.035
Smyth	VA	1,374	0.00070	0.00036	0.0022	0.0030
Washington	VA	1,858	0.00095	0.00048	0.0030	0.0040
Wythe	VA	5,318	0.0027	0.0014	0.0086	0.011
VA TOTAL		122,942	0.663	0.00320	0.20	0.27
Caledonia	VT	13,382	0.0068	0.0035	0.022	0.029
Orange	VT	9,669	0.0049	0.0025	0.016	0.021
Orleans	VT	8,104	0.0041	0.0021	0.013	0.017
Windham	VT	13,411	0.0068	0.0035	0.022	0.029
Windsor	VT	13,662	0.0070	0.0036	0.022	0.029
VT TOTAL		58,228	0.030	0.0015	0.094	0.13
Berkeley	WV	12,141	0.0062	0.0032	0.020	0.026
WV TOTAL		12,141	0.0062	0.0032	0.020	0.026
GRAND TOTAL		30,471,070	15.54	0.79	49.36	65.70

* The estimates for injuries, fatalities, and property damage accidents are based on accident statistics maintained by the National Highway Traffic Safety Administration (NHTSA). The NHTSA classifies each accident in one of the three listed categories only.

ATTACHMENT C-3 HISTORICAL HAZARDOUS MATERIALS RELEASES

An unintentional release of hazardous materials meeting the criteria set forth in 49 CFR 171.16 must be reported to the U.S. Department of Transportation (DOT) on Form 5800.1. DOT compiles the Forms to create the Hazardous Materials Incident Report System (HMIRS) database, which includes information regarding the following: (1) when and where a hazardous materials release occurred, (2) the substance and quantity released, and (3) the source of the release. The HMIRS database includes incidents that do not meet Federal Railroad Administration criteria for reportability, that is, the database includes all releases and not just those in which property damages exceeded \$6,500 (1997 threshold). SEA obtained the HMIRS database report for CN and IC and reviewed the incident information to evaluate trends in the data.

CN and IC reported 164 rail line incidents involving hazardous materials from June 1993 through May 1998. IC (IC and CCP) accounted for about three-quarters of these incidents, and CN (GTW and DWP) accounted for one-quarter of these incidents. DWP did not report any hazardous materials releases during the 5-year period. Table 1, "Total Incidents Reported by the Applicants Between June 1993 and May 1998," shows the annual number of hazardous materials incidents reported by IC and CN between June 1993 and May 1998.

ATTACHMENT C-3
TABLE 1
TOTAL INCIDENTS REPORTED BY THE APPLICANTS
BETWEEN JUNE 1993 AND MAY 1998

Carrier	6/93-12/93	1994	1995	1996	1997	1/98-5/98	Total
CCP	0	1	1	0	0	0	2
IC	6	29	22	18	31	16	122
DWP	0	0	0	0	0	0	0
GTW	2	11	12	5	7	3	40
TOTAL	8	41	35	23	38	19	164

CN reported the highest number of releases over the 5-year period in 1995. Since 1995, however, the number of releases has declined. IC reported the highest number of accidents in 1997, when 31 reportable releases occurred.

Four derailments listed in the HMIRS database caused no release; they were listed because a derailment occurred. Four incidents reported in the HMIRS database resulted in no release—two of these incidents were the result of condensation on a tank car. These two "releases" were initially thought to be hazardous materials releases, but were later determined to be only

condensate. Thus, eight of the reported incidents did not involve an actual hazardous materials release.

Table 2, "Summary of Incidents Reported by CN and IC Between June 1993 and May 1998," lists the total number of incidents reported by IC, CCP, GTW, and DWP, from June 1993 through May 1998, in the states where the incidents occurred. System-wide, the railroads reported the highest number of incidents in Michigan (38 incidents reported), Louisiana (37 incidents reported), and Illinois (36 incidents reported). In general, the number of incidents reported in each state reflects the individual railroad's level of activity in a state. The higher number of incidents indicates a greater level of rail activity (that is, a high amount of rail traffic and the presence of rail yards and intermodal facilities).

ATTACHMENT C-3

TABLE 2

SUMMARY OF INCIDENTS REPORTED BY CN AND IC
BETWEEN JUNE 1993 AND MAY 1998

State	CCP	IC	DWP	GTW	Applicants' Total
Alabama	0	2	0	0	2
Iowa	2	0	0	0	2
Illinois	0	36	0	0	36
Indiana	0	0	0	2	2
Kentucky	0	2	0	0	2
Louisiana	0	37	0	0	37
Michigan	0	0	0	38	38
Mississippi	0	23	0	0	23
Tennessee	0	22	0	0	22
TOTAL	2	122	0	40	164

Table 3, "Reported Causes of Incidents Involving Hazardous Materials by CN and IC, June 1993 Through May 1998," shows the hazardous materials incidents categorized by cause. For each of the 164 hazardous materials incidents reported, the causes fall into one of four general categories: human error, packaging, derailments, and "other." Typical sources of human error include the following: unsecured bolts, missing gaskets, open or improperly sealed valves, and tank over-filling. Packaging-related releases resulted from inner liner failure, broken bolts, defective valves, and gasket failure. The "other" category includes fires, improper loading, materials incompatibility, and venting-related incidents. Releases where the cause was unknown were included in the "other" category.

ATTACHMENT C-3

TABLE 3

REPORTED CAUSES OF INCIDENTS INVOLVING HAZARDOUS MATERIALS BY
CN AND IC, JUNE 1993 THROUGH MAY 1998^a

Cause	IC	CCP	GTW	Total
Derrailment	16 ^b	1	2	23
Human Error	37	1	25	63
Package Failure	40	0	6	46
Other	21 ^b	0	7	32
TOTAL	122	2	40	164

^a The DWP is not listed in this table because no incidents occurred between June 1993 and May 1998 (see Table 2, "Summary of Incidents Reported by CN and IC Between June 1993 and May 1998.")

^b IC also reported four accidents that did not result in a release.

The HMIRS report attributed 86 percent of the 164 incidents to human error, package failure, or "other." The report attributed 14 percent of the incidents to derailments. However, four of the derailments and four other reported incidents did not involve a hazardous materials release. Adjusting the number of incidents to include only incidents in which a release occurred, 12 percent of the 156 incidents involved derailments. CN releases resulting from derailment were 5 percent of the total number of incidents; whereas, derailments made up 16 percent of the total incidents for IC. Adjusting to remove the non-release incidents, derailments made up 14 percent of the total incidents for IC.

CN and IC reported hazardous materials released in quantities of gallons for liquids and pounds for solids. The single largest hazardous liquid release for the 5-year period was 20,869 gallons of toluene diisocyanate released by IC in 1996 as a result of a derailment. CN's largest liquid release occurred in 1994 when 50.19 gallons of naphtha solvent were released as a result of a human error. IC reported the largest solid release, a release of 100,000 pounds of solid-form carbon dioxide in 1998 resulting from a ruptured disc/venting problem. During a fire in 1994, CN experienced its largest solid release, an entire tank containing 49,904 pounds of self heat subsolids. Table 4, "Quantity of Hazardous Materials Released by Incident Cause As Reported by CN and IC—June 1993 to May 1998," shows the range of magnitudes of the releases, subdivided by cause of release.

ATTACHMENT C-3
TABLE 4
QUANTITY OF HAZARDOUS MATERIALS RELEASED BY INCIDENT CAUSE
AS REPORTED BY CN AND IC—JUNE 1993 TO MAY 1998

Carrier	Incident Cause	Released Quantity Range (units are gallons or pounds)				Total Incidents
		<1	1 to 100	101 to 1000	>1000	
IC	Human Error	17	18	2	0	37
	Packaging	17	15	7	1	40
	Derailment	7	5	4	4	20
	Other	15	8	0	2	25
CCP	Human Error	0	1	0	0	1
	Packaging	0	0	0	0	0
	Derailment	0	0	0	1	1
	Other	0	0	0	0	0
DWP	Human Error	0	0	0	0	0
	Packaging	0	0	0	0	0
	Derailment	0	0	0	0	0
	Other	0	0	0	0	0
QTW	Human Error	13	12	0	0	25
	Packaging	1	5	0	0	6
	Derailment	1	1	0	0	2
	Other	4	2	0	1	7
TOTAL		75	67	13	9	164

* Railroad release reports indicate either gallons or pounds depending on the material released.

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cans Per Year	Post-Acquisition Cans Per Year	Change in Cans Per Year	Description
2821144	12521	13687	1166	PLASTICS RESINS OR GUMS NEC OT LIQUID
2812220	10084	10084	0	SODIUM (SODA) CAUSTIC (SODIUM HYDROXYDE), LIQUID
4930040	9295	9593	298	SULPHURIC ACID, CLASS 8, UN1830
2821140	9151	9192	41	POLYSTYRENE-OT LIQUID
2812815	8373	8373	0	CHLORINE GAS, LIQUEFIED
4935240	5688	5567	-121	SODIUM HYDROXIDE SOLUTION, CLASS 8, UN1824
2819450	5387	5387	0	MURIATIC-HYDROCHLORIC- ACID
2899991	5377	5385	8	CHEMICALS NEC
4904210	5219	5219	0	AMMONIA, ANHYDROUS, LIQUEFIED/SOLUTIONS, 2.4/1003
2871315	5130	5173	43	NITROGEN PERTZ SOL. CONS WATER/AGRIC AMM NTE 35%
4905421	5183	5135	-48	LPG (PROPANE) - UN 1075
2911415	3672	4989	1317	PETROLEUM LUBRICATING OIL
4912403	4724	4882	158	SULPHUR, MOLTEN, CLASS 4.1, UN2448
3710990	2648	4407	1760	AUTO PARTS AND ACCESSORIES, MIXED CARLOAD
2819315	4248	4248	0	OIL, SULPHURIC ACID OR OIL OF VITRIOL
2911791	3485	4127	642	PETROLEUM OIL NEC
3710420	3590	4117	527	INTERNAL COMBUSTION ENGINES, MOTOR VEHICLE
4905430	4011	4011	0	LPG (ISOBUTANE) UN 1073
2813966	3794	3794	0	VINYL CHLORIDE GAS, INHIBITED
2813320	3683	3683	0	CARBON DIOXIDE GAS LIQUEFIED
4907265	3259	3417	158	STYRENE MONOMER, INHIBITED, CLASS 3, UN2055
2843128	3285	3333	48	FATTY OR CYCLIC ALCOHOLS, ETHOXYLATED
2821139	3181	3340	159	POLYPROPYLENE-OT LIQUID
4905437	3270	3270	0	LPG (PROPYLENE) NOT ODORIZED - UN 1073
2871244	3139	3139	0	AMMONIUM NITRATE FERTILIZER
2818426	3076	3076	0	METHANOL-METHYL-ALCOHOL
1471620	2870	2870	0	SULPHUR LIQUID OR MOLTEN
4920523	2461	2537	76	CHLORINE, CLASS 2.3, UN1017
2819815	2532	2532	0	AMMONIA, ANHYDROUS
2911985	2189	2306	117	BUTADIENE FROM PETROLEUM, INHIBITED
4961605	2729	2269	-460	ELEVATED TEMPERATURE LIQUID, NOS, CLASS 9, UN3257
2818239	2175	2175	0	ETHYLENE OXIDE
4905792	3648	2150	-1498	VINYL CHLORIDE, INHIBITED, CLASS 2.1, UN1086
2912190	2059	2059	0	LIQUEFIED PETROLEUM GAS, NEC, COMPRESSED
4918723	2019	2028	9	SODIUM CHLORATE, CLASS 5.1, UN1495
4905752	1754	1884	130	LPG, CLASS 2.1, UN1073
4906620	1026	1847	821	PROPYLENE OXIDE, CLASS 3, UN1280
4816316	1657	1657	0	WASTE FLAMMABLE SOLIDS, SPONTANEOUSLY COMBUSTIBLE
2821245	1629	1629	0	LATEX-LIQUID RUBBER-SYNTHETIC
2819438	1618	1618	0	HYDROFLUORIC ACID

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4950150	1272	1491	219	E.A.K. NOS <A.F.R. SHIPTRON-FL-CAR SHIP, COMMERCIAL>
2819454	1490	1490	0	PHOSPHORIC ACID
2818342	1444	1444	0	STYRENE, LIQUID
2899810	1428	1428	0	ANTIFREEZING COMPOUNDS NEC DRY OR LIQ
4908132	1377	1414	37	CYCLOHEXANE, CLASS 3, UN1143
2815131	1402	1402	0	DINITROTOLUENE (DINITROTOLUOL) DRY
4905704	1370	1370	0	BUTADIENES, INHIBITED, 2,1,1,0,0 <FROM PETROLEUM>
2815166	1330	1361	31	TOLUENE DIISOCYANATE
2821143	1263	1311	47	PLASTICS RESINS OR GUMS NEC LIQUID
3274110	1283	1293	10	LIME COMMON/QUICK
4909201	1264	1264	0	ISOPRENE & PENTENE, CLASS 3, UN1993
4909132	1124	1143	19	DENATURED ALCOHOL, 3/1987 <ETHYL ALCOHOL, ANH> <US>
2818265	1032	1032	0	PROPYLENE OXIDE
2818491	962	1002	40	FATTY ALCOHOL, INEDIBLE NEC ANIMAL FAT OR VEGETABLE
4904509	717	992	275	CARBON DIOXIDE, REFRIGERATED LIQUID, 2,2,2,1,7
2818197	976	976	0	CHLOROPRENE
4905423	908	908	0	LPG (BUTANE) - UN 1073
2911982	618	898	280	PETROLEUM NAPHTHA
4905906	252	891	639	WHITE ASBESTOS, CLASS 9.1, UN2590
4900442	838	886	48	SULPHURIC ACID, SPENT, CLASS 8, UN1832
2871450	878	878	0	PHOSPHATIC FERTILIZER SOLUTION
2911715	829	829	0	FUEL OIL, AAO DIESEL OIL
4921598	734	827	93	PHENOL, MOLTEN, CLASS 6.1, UN2312
2818546	659	759	100	BHTYLENE GLYCOL
4906420	615	743	128	ACRYLONITRILE, INHIBITED, CLASS 3, UN1093
2815154	734	734	0	PETROALKYLATE DETERGENT, INTERMEDIATE
4932329	733	733	0	FEROUS CHLORIDE, SOLUTION, 3/1760 <US>
2841920	686	732	46	CLING SCRUB OR WASHING COMPOUNDS NEC LIQ
4909230	696	696	0	METHANOL, CLASS 3, UN1230
2819931	695	695	0	HYDROGEN PEROXIDE - HYDROGEN DIOXIDE
2818144	672	672	0	FORMALDEHYDE LIQUID
2818915	667	667	0	ACETONE CYANOHYDRIN
4907280	654	654	0	VINYLIDENE CHLORIDE, INHIBITED, CLASS 3, UN1303
4925212	600	650	50	ADIPONITRILE, CLASS 6.1, UN2203
4918335	594	630	46	HYDROGEN PEROXIDE OR AQUE SOLUTIONS, STAB. 5,1,2,0,1,5
4511110	618	623	5	SHIPPERS ASSOCIATION TRAFFIC OR SIMILAR
4912210	621	621	0	FUEL OIL OR FUEL OIL, NO 1, 2, 4, 5, OR 6, 3/202
2818446	605	605	0	BHTYL ALCOOL, ANHYD, DENAT W PET & CHEMLS NOT EX 588
2818112	602	602	0	METHYL METHACRYLATE MONOMER, INHIBITED
4960131	602	594	-8	E.H.S. LIQ, NOS, CLASS 9.2, UN3082

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4907250	583	591	8	METHYL METHACRYLATE, MONOMER, INHIBITED, 3/1247
2818164	573	573	0	GLYCOL ETHERS, NEC
3714790	276	572	296	AUTOMOBILE BODY PARTS, NEC
4910324	560	560	0	1-OCTENE, CLASS 3, UN1993 <PETROLEUM NAPHTHA>
2911610	539	539	0	ASPHALT PETROL BYPROD LIQD
4956111	535	535	0	ADIPIC ACID, CLASS 9.2, NA9077
2911927	527	527	0	HEXENE
2904120	515	515	0	WINES, NEC, OTHER THAN IN TANK CARS
4920504	487	487	0	HYDROGEN CHLORIDE, REFRIGERATED LIQUID, 2-3/2186
4909205	457	484	27	ISOPROPANOL OR ISOPROPYL ALCOHOL, CLASS 3, UN1219
2879258	483	483	0	TREE OR WEED KILLING COMPOUNDS, NEC
2819997	475	475	0	SULPHUR DIOXIDE
4930247	470	470	0	PHOSPHORIC ACID, CLASS 8, UN1805 <PHOSPHATIC FERTZ>
4920308	440	444	4	SULPHUR DIOXIDE, LIQD OR SULPHUR DIOXIDE, 2-3/2079
2815112	440	440	0	ANILINE OIL-AMINO BENZENE
2818602	432	432	0	ACID, ACRYLIC
4907270	431	431	0	VINYL ACETATE, INHIBITED, CLASS 3, UN1301
4909305	429	429	-70	TOLUENE, CLASS 3, UN1294
2818102	416	416	0	ACRYLONITRILE
2818199	410	410	0	CHLOROFORM, NEC, TECHNICAL GRADE
2083190	281	402	121	LIQUORS, ALCOHOLIC, NEC
4905424	341	402	61	GAS MIXT, CNPSD, CLASS 2.1
2911990	273	385	112	PARAFFIN OR PETROLEUM WAX, NEC
2818151	380	380	0	METHYL CHLOROFORM
2818150	376	376	0	METHYL ETHYL OR METHYL ISOBUTYL KETONE
2812410	364	364	0	POTASSIUM CAUSTIC
4931405	360	360	0	ACRYLIC ACID, INHIBITED, CLASS 8, UN2218
4909348	349	340	-9	XYLENES, CLASS 3, UN1307
4905703	331	331	0	BUTADIENES, INHIBITED, 2-1/1010 <PETROLEUM BY-PROD>
2818416	328	328	0	BUTYL ALCOHOLS
3333235	321	321	0	ZINC OR ZINC ALLOY DUST OR POWDER
4909249	176	319	143	TRIPROPYLENE, CLASS 3, UN2057
2611150	317	317	0	WASTE PAPER PULP, WET
4930228	248	316	68	HYDROCHLORIC ACID OR SOLUTION, CLASS 8, UN1789
2861276	312	312	0	PITCH TALL OIL
2813987	310	310	0	FLOOREME GAS NON FLAMMABLE
4912675	302	308	6	PROPYLENE TETRAMER, CLASS 3, UN2850
2812355	307	307	0	SODIUM SULPHATE CRUDE SALT CAKE
2818115	304	304	0	ACRYLATES BUTYL ETHYL
4966326	301	301	0	E H S, SLD, NOS (CONT COPPER & LEAD \$6.9/5077 <US>

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
2819924	298	298	0	SODIUM CHLORIDE
2818947	294	294	0	METHYL CHLORIDE
4929133	294	294	0	R A M. LOW SPECIFIC ACTIVITY, NOS. CLASS 7, UN2912
4920353	452	287	-165	ETHYLENE OXIDE, CLASS 2.1, UN1040
4905428	280	280	0	LPG (BUTYLENE) NOT ODORIZED - UN 1073
2812328	277	277	0	SODIUM CYANIDE
4909159	273	276	3	ETHANOL OR ETHANOL SOLUTIONS, CLASS 3, UN1170
2818127	274	274	0	DIETHANOLAMINE OR MONO
2899835	229	270	41	ADDITIVES FUEL OIL T 50% PETRO BY WT
4960133	266	266	0	EM S, SLD, NOS. CLASS 9.2, UN3077
4916408	263	263	0	CALCIUM CARBIDE, CLASS 4.3, UN1402
4912044	264	264	0	FORMALDEHYDE SOL. FLAM. 3/1/98 <FORMALDEHYDE, LQD>
4916141	264	264	0	PHOSPHORUS, WHITE/YELLOW, DRY/SOLAND, 4.2/1/381
4925133	259	259	0	ACRYLAMIDE, CLASS 6.1, UN2074
4918310	238	238	0	AMMONIUM NITRATE FERTILIZERS, CLASS 5.1, UN2067
4950130	32	255	223	F A K, NOS <R BRIGHT FORWARDER TRAFFIC>
4941100	251	251	0	O R S, SLD, NOS. 9/3077 <ELECTRODE BINDER> <US>
4912590	681	250	-431	FLAM LQD, NOS. 3/1/93 <AROMATIC CONCENTRATES>
2814167	239	239	0	TOLUENE - TOLUOL OR METHYLBENZENE-
2818420	238	238	0	ISOPROPYL ALCOHOL
2899425	208	236	28	FATTY ACIDS ANIMAL, NEC INEDIBLE
2818113	235	235	0	ALLYL CHLORIDE
4905715	231	231	0	BUTYLENE - UN 1012
2819992	229	229	0	SODIUM SILICATE OT DRY
4932059	228	228	0	FORMALDEHYDE SOLUTIONS, CLASS 8, UN2209
4908182	228	227	-1	1-HEXENE, CLASS 3, UN2320
2911987	223	223	0	PETROLEUM OIL OR PRODUCTS IN MIXED CARLOAD
2818175	223	223	0	TRICHLOROETHYLENE
4966325	221	221	0	COPPER CONCENTRATE CONT ARS & LEAD S M, 9/3082 <US>
2815127	217	217	0	METHYLENE DIPHENYL DIISOCYANATE
4912342	217	217	0	FERRIC CHLORIDE SOLUTION, CLASS 8, UN2582 <CRUDE>
4930248	216	216	0	PHOSPHORIC ACID, CLASS 8, UN1805
2818196	212	212	0	FLAMMABLE LIQUIDS, NOS ISOPROPYL-AMINES
4905436	211	211	0	LPG (PROPYLENE) - UN 1075
2815151	183	205	22	ISOCYANATE
2818148	198	198	0	ETHYLAMINES, DIETHYLAMINE, MONOETHYLAMINE
4909382	262	197	-65	PET DIST, NOS. 3/1/88 <OIL, PETROLEUM, NEC>
4918697	195	195	0	AMMONIUM NITRATE FERTILIZERS, NOS. 5.1/2072
2815147	193	193	0	NITROBENZENE (NITROBENZOL) (OIL, MIRBANE)
2818610	192	192	0	ACETIC ACID, GLACIAL OR LIQUID

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
2851220	190	190	0	SOLVENTS, ADHESIVES, GUM, LACKER, PAINT, PTCRESNA
4905707	190	190	0	LPG, CLASS 2.1, UN1075 <BUTENE OR ISOBUTENE, LQFD>
4021990	92	189	98	METAL OR METAL-ALLOY SCRAP NEC N I RAD
2812536	162	182	0	POTASSIUM NITRATE OR CRUDE
4411110	179	179	0	FREIGHT FORWARDER TRAFFIC
4024120	178	178	0	WASTE PAPER GRND WASTE
4930030	178	178	0	SULPHURIC ACID, FUMING, CLASS 8, UN1831
4905761	178	178	0	METHYL CHLORIDE, CLASS 2.1, UN1063
4941104	174	174	0	OTHER REGULATED SUBSTANCES, LQD, NOS, 9/2082 <US>
2818967	173	173	0	PLASTICIZERS, PAINT, LACQUER OR VARNISH INC, GUM OR RE
4918737	160	160	160	POTASSIUM NITRATE, CLASS 5.1, UN1486
4912215	167	167	0	BUTYL ACRYLATE, INHIBITED, CLASS 3, UN2348
2861250	153	166	13	ROSIN SOLUTION
4961606	173	163	50	ELEVATED TEMPERATURE LIQUID, NOS, CLASS 9, UN3257
4908183	84	153	71	HEXANES, CLASS 3, UN1208
4908175	154	154	0	GASOLINE OR MOTOR SPIRIT, CLASS 3, UN1203
4909178	206	149	-57	TOLUENE, CLASS 3, UN1294 <TOLUENE SOLUTIONS, NEC>
2809415	148	148	0	ESTERS PATTY ACID ANIMAL OILS ALSO FISHETC OILS NEC
2814145	147	147	0	HEPTANE
4931315	146	146	0	FERRIC SULFATE SOLUTION, CLASS 8, UN1760
2819426	143	143	0	CHROMIC ACID
2815135	141	143	2	PHTHALIC ANHYDRIDE
4918775	142	142	0	HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS, 3.1/2014
2912120	142	142	0	ETHYLENE, CRYOGENIC LIQUID
2813934	141	141	0	DIETHYLAMINE ANHYDROUS
4909279	61	140	79	NAPHTHA, CLASS 3, UN1236
2818136	140	140	0	ETHYL ACETATE
1021210	140	140	0	COPPER CONCENTRATES
2899871	140	140	0	RESIN SOLUTION, RESIN COMPOUND, LIQUID
2841915	74	139	66	CLEANING COMPOUNDS NEC OR AN OR PWDR
4908110	63	138	75	BENZENE, CLASS 3, UN1114
2818445	138	138	0	ETHYL ALCOHOL, ETHANOL
4830221	138	138	0	WASTE CORROSIVE LIQUIDS, NOS*, UN1760 (ACIDIC)
2879966	137	137	0	WEED KILLING ACID LQ
2818181	137	137	0	PERCHLOROETHYLENE
2899951	136	136	0	SODIUM CHLORATE & SOD CHLORIDE, IN WATER SOL
4909243	96	135	39	ETHYL METHYL KETONE OR METHYL, ETHYL KETONE, 3/1193
4909160	129	129	0	ETHYL ACETATE, CLASS 3, UN1173
4905431	124	124	0	LPG (ISOBUTANE) NOT ODORIZED - UN 1075
4935230	90	123	33	POTASSIUM HYDROXIDE, SOLUTION, CLASS 8, UN1814

LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change In Cars Per Year	Description
2813979	123	123	0	REFRIGERANTS, LIQ OR GAS OT COMPRESSED
2831210	121	121	0	EPICHLOROHYDRIN
4936330	120	120	0	MALEIC ANHYDRIDE OR MALEIC ACID, CLASS 8, UN2215
2819340	120	120	0	FUMING SULFURIC ACID
2871316	120	120	0	ANHYDROUS AMMONIA & NITROGEN SALTS IN WATER
2813922	120	120	0	HYDROGEN CHLORIDE, ANHYDROUS LIQUEFIED
2818668	117	117	0	VINYL ACETATE
4921575	116	116	0	TOLUENE DIOXYANATE, CLASS 6.1, UN2078
4910237	114	114	0	NAPHTHA, ISOPRENE, CLASS 3, UN1993
4936556	40	112	72	BATTERIES, WET, FILLED WITH ACID, CLASS 8, UN2394
2814125	111	111	0	COAL TAR CREOSOTE - CREOSOTE OR DEAD OIL -
4950110	112	111	-1	P.A.K. NOS <ACIDS, CHEMS & OT ARTICLES, MIXD LOADS>
2818026	110	110	0	ETHYLENE GLYCOL MONOBUTYL ETHER
2814170	109	109	0	XYLENE - DIMETHYLBENZENE OR XYLOL -
4905778	108	108	0	VINYL CHLORIDE
4932055	107	107	0	CORR LIQ, ACIDIC, ORGANIC, NOS, CLASS 8, UN3265
4943770	106	106	0	SULFUR, MOLTEN, CLASS 9, UN2448 <US>
4909198	147	108	-42	XYLENES, 3/1307 <METAXYLENE>
2911735	83	104	21	PETROLEUM PRIND FRP
4941139	85	104	19	CHEMICALS, NEC
4960145	28	103	75	BT M, LIQ, NOS, CLASS 9, UN3257
2611230	3	102	100	SULPHATE BLACK LIQUOR SKIMMINGS N PROC LIQ
2991230	62	102	40	PBT OIL ADDITIVE, MT 30% WGT OF PETROLEUM
2899440	101	101	0	FATTY ACIDS COCOANUT OIL
4916179	100	100	0	SODIUM DITHIONITE, CLASS 4.2, UN1384
4910256	66	100	34	PET DIST, NOS, 3/1268 <PETROLEUM NAPHTHA, NAPHTHA>
4905782	100	100	0	PROPYLENE UN 1077
4962136	100	100	0	ETHYLENE GLYCOL, CLASS 9, NA3082
2815190	100	100	0	DYE INTERMEDIATES, NEC
4966329	98	98	0	LEAD SULFIDE, CLASS 9, UN3077 <US>
4908177	122	98	-24	GASOLINE MOTOR SPIRIT, 3/1203 <GASOLINE, BLENDED>
3333250	96	96	0	ZINC BAGHOUSE FUME, COTTELL OR FLUE
4918311	91	95	4	AMMONIUM NITRATE, CLASS 5.1, UN1942
2611215	94	94	0	LIGNIN LIQUOR
4936540	91	91	0	CORROSIVE LIQUIDS, NOS, CLASS 8, UN1760
4912247	0	90	90	CHEMDS, CLEAN LIQD, 3/1993 <COMPOUNDS, CLEANING> <US>
4908105	69	90	21	ACETONE, CLASS 3, UN1090
3313310	90	90	0	FERRO SILICON, INCLUDING P103
4915185	91	89	-2	COMBUSTIBLE LIQUID, NOS, NA1993 <US>
4931447	46	88	-42	PROPIONIC ACID, CLASS 8, UN1848

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STOC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
2813881	88	88	0	DISPERSANT GASES NEC NONFLAMMABLE
2819432	88	88	0	CHLOROSULFONIC ACID
2818108	87	87	0	GLYOXAL
4900219	101	86	-15	FLAM LQD, NOS, 31993 <GLYCOL ETHERS, NEC>
4900197	85	85	0	S.H.S. SLD, NOS, 91077 <SOIL, LOW-L.R.C. DRY> <US>
4914247	39	85	46	PET DIST, NOS, COMB LQD, UN1268 <OIL, PETROLE> <US>
4913035	85	85	0	DIETHYLBENZENE, CLASS 3, UN2049
4923275	84	84	0	POISONOUS LIQUIDS, NOS, CLASS 6.1, UN2810
4921722	84	24	0	HEXACHLOROCYCLOPENTADIENE, CLASS 6.1, UN2646
2818210	82	82	0	ACRYLAMIDE SOLUTION
2815111	81	81	0	CARBOLIC ACID-PHENOL
4909255	81	81	0	DICHLOROPROPENE, CLASS 3, UN2047
4921410	80	80	0	ANILINE, CLASS 6.1, UN1547
4907210	80	80	0	ACETALDEHYDE, CLASS 3, UN1089
4905749	79	79	0	HYDROCARBON GAS OR MIXT, LIQUEFIED, NOS, 2.1/1965
4909130	79	79	0	BUTANOLS, CLASS 3, UN1120
4025129	79	79	0	CRACKCASE DRAININGS SUITABLE ONLY FOR REFINING
4941144	81	79	-2	POLYMERIC BEADS, EXPANDABLE, CLASS 9.1, UN2211
4920355	78	78	0	METHYL MERCAPTAN, CLASS 2.3, UN1064
2818480	78	78	0	ISO NONYL ALCOHOL
2819434	77	77	0	HYDROCYANIC ACID
2815187	76	76	0	DICYCLOPENTADIENE
2818190	76	76	0	CHLOROFORM NEC Q/T TECH GRADE
2899953	75	75	0	TALL OIL PRODUCTS BLENDED
3613911	80	74	-6	TRANSFORMERS, ELEC, NEC, NLT 25 LB EACH
4860107	74	74	0	WASTE, HAZ, SOLID, NOS, CLASS 9, NA3077
2818159	73	73	0	PROPYLENE DICHLORIDE
4923227	45	72	27	SODIUM CYANIDE, CLASS 6.1, UN1689 <LIQUOR>
4905712	72	72	0	ETHYL CHLORIDE, CLASS 2.1, UN1037
2991290	49	71	22	LUBES
3332235	71	71	0	LEAD BATHHOUSE FUME, CONTRELL-OR FLUE
4930024	69	69	0	HYDROGEN FLUORIDE, ANHYDROUS, CLASS 8, UN1052
4912220	69	69	0	FUEL OIL, NO 5 OR GAS OIL, CLASS 3, UN1202
4936518	0	69	69	CORR LQD, NOS, CLASS 8, UN1760 <ADDITIVES, FUEL>
2899868	68	68	0	ELECTRODE BINDER
4904304	68	68	0	1,1,1,2-TETRAFLUOROETHANE, CLASS 2.2, UN3159
2818652	67	67	0	BUTYL ACETATE
4909202	5	66	61	METHYL CYANIDE OR ACETONITRILE, CLASS 3, UN1648
4930066	66	66	0	SULPHURIC ACID, FUMING, CLASS 8, UN1831
4907829	64	64	0	FLAMMABLE LIQUIDS, CORROSIVE, NOS, CLASS 3, UN2920

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Curs Per Year	Post-Acquisition Curs Per Year	Change in Curs Per Year	Description
4914256	10	64	54	PET DIST, NOS, COMB LQD, UN1268 <PETROLEUM NA> <US>
4923106	64	64	0	ARSENIC ACID, LIQUID, CLASS 6.1, UN1553
2818558	63	63	0	TRIETHYLENE GLYCOL
2911717	63	63	0	BUNKER C FUEL OIL
4935640	62	62	0	HEXAMETHYLENEDIAMINE, SOLID, CLASS 8, UN2280
4912504	62	62	0	SOLDERING FLUX, NBC, LIQUID
4931304	61	61	0	ACETIC ANHYDRIDE, CLASS 8, UN1715
2821124	61	61	0	PHENOL FORMALDEHYDE RESINS
4910196	66	61	-5	DICYCLOPENTADIENE, CLASS 3, UN1993
1471330	60	60	0	POTASSIUM NITRATE CRUDE
4966323	60	60	0	LEAD SULFIDE, CLASS 9, UN3077
2818490	60	60	0	ALCOHOLS, NEC, OTHER THAN ALCOHOLIC LIQUORS
2899990	59	59	0	CHEMICALS OR ALLIED PRODS MIXDCL
4025176	59	59	0	RESINOUS PETROLEUM RESIDUE
2813990	59	59	0	COMPRESSED GASES, NEC, OTHER THAN POISON
4905762	57	57	0	LPG, CLASS 2.1, UN1075 <BUTADIENE FROM PETROLEUM>
4966110	56	56	0	ADIPIC ACID, CLASS 9, UN3077 <US>
2812342	56	56	0	SODIUM PERBORATE
2818644	56	56	0	ACETIC ANHYDRIDE-ACETIC OXIDE, ACETYL OXIDE-
4912620	54	54	0	FUEL OIL, NO 6, CLASS 3, NA1993 <US>
4905439	54	54	0	LPG (PROPANE/PROPYLENE MIX) NOT ODORIZED - UN 1075
2819984	53	53	0	WEED KILLING COMPOUND & CHLORDANE MIXTURE
2818961	53	53	0	CARBON BISULPHIDE
4907230	54	53	-1	ISOPRENE, INHIBITED, CLASS 3, UN1218
4905510	48	52	4	DIMETHYLAMINE, ANHYDROUS, CLASS 2.1, UN1032
2813196	52	52	0	STYRENE/ETHYLBENZENE MIXTURE
4910102	4	52	44	ALC BEV, 3/2065 <ALCOHOL, IN BIND, OT DENATURED>
4936655	9	51	42	CRESYLIC SODIUM SOLUTIONS SPENT, CONT HYDRO, 8/1760
4921720	51	51	0	PHENOL, SOLID, CLASS 6.1, UN1671
4966970	51	51	0	LEAD SULFATE, CLASS 9, UN3077 <CRUDE> <US>
2818119	51	51	0	CARBON TETRACHLORIDE
4921005	51	51	0	EPICHLOROHYDRIN, CLASS 6.1, UN2023
4905417	41	50	9	LPG, CLASS 2.1, UN1075 <BUTADIENE FROM PETROLEUM>
2819414	50	50	0	ARSENIC ACID OT FUSED
4912540	50	50	0	ET M, LQD, FLAM, NOS, CLASS 3, UN3256
2911926	49	49	0	HEXANE
4860123	48	48	0	WASTE MISCELLANEOUS HAZARDOUS MATERIAL
4923228	54	47	-7	SODIUM CYANIDE, CLASS 6.1, UN1689
2818616	47	47	0	FORMIC ACID
2814135	47	47	0	COAL TAR NAPHTHA SOLVENT

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4916163	46	46	0	SELF-HEATING SUBSTANCES, SOLID, NOS. 4.2/3048
4930201	46	46	0	CORR LQD, NOS, CLASS 8, UN1760 <ACIDS, INORGANICS>
2815260	46	46	0	TOLUENE DIAMINE
4905427	46	46	0	LPG (BUTYLENE) - UN 1075
2819974	46	46	0	SODIUM SILICATE, DRY
4925202	45	45	0	TETRAPERCHLOROETHYLENE, CLASS 6.1, UN1897
2818664	44	44	0	PROPYL ACETATE
2899975	44	44	0	SOLVENT, CONSG MIX BENZENE, ETC, SUIT FUJHT REFG
4941167	44	44	0	SOLDERING FLUX, NEC, LIQUID
2819917	43	43	0	ARSENIC, WHITE-ARSENIC TRIOXIDE
4963818	43	43	0	FERRIC SULPHATE, CLASS 9.2, NA9121 <IRON, DRY, OTC>
4860679	43	43	0	WASTE MISCELLANEOUS HAZARDOUS MATERIAL
4910239	44	43	-1	NAPHTHA, CLASS 3, UN2553
4935235	43	43	0	SODIUM HYDROXIDE OR CAUSTIC SODA, SOLID, 8/823
2991915	30	42	12	NEATSFOOT OIL, PETROLEUM, AAO TRANSFORMER OIL
4962127	42	42	0	RUBBER EXTENDER OR PROCESSING OIL, PETROLEUM BASE
4935273	42	42	0	SODIUM HYDROXIDE, SOLUTION, 8/1824 <SODIUM HYD BOR>
2842245	41	41	0	CLEANING COMPOUNDS IORS NEC LQ
4905438	41	41	0	LPG (PROPANE/PROPYLENE MIXTURE) - UN 1075
4910185	44	40	-4	FLAMMABLE LIQUIDS, NOS, CLASS 3, UN1993
4910414	0	40	40	CARBOL, CLEAN LQD, 3/1993 <COMPOUNDS, WALL CLE> <US>
4912514	0	40	40	CMFDS, CLEAN LQD, 3/1993 <COMPOUNDS, WALL CLE> <US>
4966109	40	40	0	O R S, SLD, NOS (METHYLENE DIPH DIISOCYAN), 9/3077
4963832	40	40	0	FERRIC SULPHATE, CLASS 9.2, NA9125
4908101	40	40	0	NATURAL GASOLINE, CLASS 3, UN1237
2899898	40	40	0	TECHNICAL OR INTERMEDIATE CHEM USED FOR HERB INSECT
4962137	40	40	0	ETHYLENE GLYCOL, CLASS 9, NA3082 <US>
4935608	42	40	-2	CORR LQD, NOS (CONT SODIUM HYDROXIDE), 8/1760
3585300	40	40	0	REFRIGERATORS NEC
4914164	40	40	0	FUEL OIL, NA1993 <PET DIST FUEL/DIESEL/GAS OIL> <US>
4935251	39	38	-1	SODIUM HYDROXIDE, SOLUTION, 8/1824 <BLACK LIQUOR>
4936015	36	38	2	CORROSTIVE LIQUIDS, POISONOUS, NOS, CLASS 8, UN2922
4810560	9	38	29	WASTE FLAM LQD, CLASS 3, UN1993
4907215	38	38	0	ETHYL ACRYLATE, INHIBITED, CLASS 3, UN1917
2818217	38	38	0	CAPROLACTAM
4910280	37	37	0	RESIN SOLUTION, CLASS 3, UN1866
4920513	36	36	0	HYDROGEN SULPHIDE OR LIQUEFIED, CLASS 2.3, UN1053
2818385	36	36	0	MORPHOLINE
4916774	36	36	0	AMMONIUM NITRATE, LIQUID, CLASS 5.1, UN2426
4915590	36	36	0	PETROLEUM NAPHTHA, COMB LQD, NA1993 <US>

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
2611220	36	36	0	PULP MILL LIQUID
4041196	36	36	0	ASPHALT
4909227	39	36	-3	ISOPROPANOLISOPROPYL ALCOHOL, 3/1219 <FUEL OIL>
2819131	35	35	0	AMMONIUM NITRATE
4061602	35	35	0	ELEVATED TEMPERATURE LIQUID, NOS, CLASS 9, UN3257
4930026	41	35	-6	FLUOSILICIC OR HYDROFLUOSILICIC ACID, 8/1778
4916301	34	34	0	FERROSILICON, CLASS 4.3, UN1408
2891182	34	34	0	PYROXYLIN SOLUTIONS, NEC, LIQUID
4963863	34	34	0	NICKEL HYDROXIDE, CLASS 9.2, UN3077
2818002	33	33	0	2-AMINO-2-METHYL-1-PROPANOL
4908119	33	33	0	BUTYRALDEHYDE, CLASS 3, UN1129
4905414	32	32	0	METHYLAMINE, ANHYDROUS, CLASS 2.1, UN1061
4914007	32	32	0	ALCOHOLS, NOS, COMB LOD, UN1987 <DCTYL, PERF> <US>
2812333	32	32	0	SODIUM HYDROSULFIDE
2819523	32	32	0	IRON CHLORIDE, CRUDE, LIQUID, LIQ 50% WTR
4901384	31	31	0	ALCOHOL C-13-C-13 POLY (1-6) ETHOXY AL, 9/3082 <US>
4913196	31	31	0	COMB LOD, NOS (CONT XYLENE, NAPHTHALEX, NA 1993 <US>
2899982	30	30	0	STABILIZERS, WATER SOLUBLE, NEC
2809828	30	30	0	DEFOAMING COMPOUND, NEC, LIQUID
2815149	30	30	0	METATOLUIDINE
4921706	29	29	0	CRESOLS, CLASS 6.1, UN2076
4916321	29	29	0	ALUMINUM PROCESSING BY-PRODUCTS, CLASS 4.3, UN3170
4909190	29	29	0	HEPTANES, CLASS 3, UN1206
2801259	29	29	0	ROSIN SIZING LIQUID
4914041	29	29	0	PARAFENIC & AROMATIC HYDRO, COMB LOD, NA1993 <US>
4962131	28	28	0	ELEVATED TEMPERATURE LIQUID, NOS, CLASS 9, UN3257
4904503	28	28	0	ARGON, REFRIGERATED LIQUID, CLASS 2.2, UN1951
2819446	28	28	0	HYDROFLUOSILICIC ACID
2815174	28	28	0	TETRAHYDROFURAN
2818646	27	27	0	AMYL ACETATE
4909244	27	27	0	METHYL ISOBUTYL KETONE, CLASS 3, UN1245
2818658	27	27	0	ISOPROPYL ACETATE
2911315	27	27	0	PETROLEUM FUEL OIL DISTILLATE
4026115	26	26	0	RUBBER SCRAP, HARD PULVERIZED
4907245	26	26	0	METHYL ACRYLATE, INHIBITED, CLASS 3, UN1919
2819631	26	26	0	ALUMINUM CHLORIDE, LIQ
2861231	26	26	0	PINE OIL
2815267	26	26	0	N-METHYL PYRROLIDONE
2818656	26	26	0	ISOBUTYL ACETATE
2871317	26	26	0	NITROGEN FERTILIZER SOLUTION, CONT 2% FORMALDEHYDE

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
2818412	25	25	0	ALCOHOL DISTILLATES, SYNTHETIC
4910444	0	25	25	FLAM LQD, NOS, 3/1993 <ROSIN SOLUTION>
2819542	25	25	0	ZINC CHLORIDE, LIQUID
2813984	25	25	0	FLUORETHANE GASES FLAMMABLE
4900758	25	25	0	METHYL ACETYLENE & PROPADIENE MIXT, STAB, 2.1/1060
4963361	25	25	0	BENZO-A-PYRENE, 9.7/3081 <COAL TAR OIL, CRUDES>
4908255	26	25	-1	ISOPENTANE OR N-PENTANE, CLASS 3, UN1265
4960146	26	24	-2	ETM LQD, NOS, CLASS 9, UN1257
4909267	24	24	0	N-PROPANOL, CLASS 3, UN1274 <PROPYL ALCOHOL>
2899952	24	24	0	GASOLINE PRESERVATIVE, NEC LQ
4910320	24	24	0	FLAM LQD, NOS, 3/1993 <PULP MILL LIQUID>
2818662	1	23	22	ADIPIC ACID
2899915	7	23	16	ANTIFREEZE PREPARATIONS
4910242	20	23	3	PET DIST, NOS, CLASS 3, UN1268
3331210	23	23	0	BRASS BRONZE OR COPPER ASH AAO RESIDUE OR RESIDUM
2899929	23	23	0	BATTERY FLUID, NEC
4909239	23	23	0	FLAM LQD, NOS, 3/1993 <WASTE, CHEM PLANT, CONS WAS>
2818930	22	22	0	MERCAPTANS, PETROLEUM
2911637	22	22	0	MTC, PETROLEUM
4905419	22	22	0	LPG (PROPANE) - NOT ODORIZED - UN 1075
4915209	22	22	0	2-ETHYL HEXYL ALCOHOL, COMB LQD, NA1993 <PER> <US>
4915399	23	22	-1	COMB LQD, NOS, NA1993 <OIL, PETROLEUM, NEC> <US>
4910259	27	22	-5	NAPHTHA, CLASS 3, UN1235
4950120	66	22	-44	P A K, NOS <MIXED LOADS OF PETROLEUM OIL PRODUCTS>
2871430	24	22	-2	FERTILIZING COMPOUNDS, NEC DRY
4916147	0	21	21	PYROPHORIC LIQUIDS, NOS, CLASS 4.2, UN2545
4932370	0	21	21	SILICON TETRACHLORIDE, CLASS 8, UN1818
2899842	21	21	0	COMPOUNDS, GAS PURIFYING, NEC
4910485	21	21	0	BENZENE, STYRENE POLYETHYL BENZENE, TOLUENE, 3/1993
2812629	21	21	0	CALCIUM CARBIDE
4915349	21	21	0	PETROLEUM NAPHTHA, COMB LQD, NA1993 <US>
4932320	20	20	0	BATTERY FLUID, ACID, CLASS 8, UN2796
2891118	20	20	0	COMPOUNDS, CALKING CAULKING OR GLAZING
2861248	20	20	0	PINE TAR
2818427	20	20	0	OCTYL ALCOHOL, OF PERFUMERY GRADE
4912505	20	20	0	FLAM LQD, ETM, NOS, CLASS 3, NA9276 <US>
2813946	20	20	0	HYDROGEN SULPHIDE
4918471	20	20	0	OXID SUBS, SLID, NOS, 5.1/1479 <FERTILIZING CMPS>
4935665	14	20	6	ETHANOLAMINE OR ETHANOLAMINE SOLUTIONS, 8/2491
4910282	19	19	0	RESIN SOLUTION, 3/1866 <PLASTICS, RESINAGUMS, NEC>

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Carg Per Year	Post-Acquisition Carg Per Year	Change in Carg Per Year	Description
4914119	19	19	0	ALCOHOLS, NOS, COMB LOD, UN1987 <US>
4963303	19	19	0	ALUMINUM SULPHATE, SOLID, CLASS 9.2, NA9078
4914833	19	19	0	ALCOHOLS, NOS, COMB LOD, UN1987 <FATTY ALCOHOL> <US>
4914040	19	19	0	NAPHTHA SOLVENT, COMB LOD, NA1993 <US>
2818463	19	19	0	MIXTURE OF METHANOL & ACETONE
4931484	19	19	0	DIMETHYLAMINOETHANOL, CLASS R, UN2051
4905725	19	19	0	DIMETHYL ETHER, CLASS 2.1, UN1033
2899540	18	18	0	COMPOUNDS WATER TRNG, INDUSTRIAL
4910535	18	18	0	FLAM LOD, NOS, 3/1993 <ADDITIVES, FUEL OIL, GASOL>
4931444	18	18	0	ACID, CHLOROACETIC
2812367	18	18	0	SODIUM HYDROXIDE & SODIUM BOROHYDRIDE SOLUTION
2085120	18	18	0	ALCOHOL IN BOND, OT DENATURED
4960147	18	18	0	ET M, LOD, NOS, CLASS 9, UN3257
4905720	18	18	0	1-CHLORO-1,1-DIFLUOROETHANE, 2/12517 <FLUOROE GAS>
4914245	18	18	0	PET OIL, COMB LOD, UN1270 <US>
4907219	20	18	-2	DICYCLOPENTADIENE, CLASS 3, UN2048
4921475	18	18	0	POISONOUS LIQUIDS, NOS, CLASS 6.1, UN2810
3364767	18	18	0	FILTERS, NEC
4921019	0	17	17	ALLYL ALCOHOL, CLASS 6.1, UN1098
4927034	0	17	17	HYDROGEN CYAN, ANH, STABHYDROCH ACID, LOD, 6.1/1051
2818418	3	17	14	DECYL ALCOHOL, OT PERUMERY GRAD8
2818423	17	17	0	ISOBUTYL ALCOHOL
2818235	17	17	0	ETHYL ETHER-SULPHURIC, OTHER THAN ANESTHESIA
4963330	18	17	-1	E H S, LOD, NOS (CONT CREOSOTE), 9/2082 <US>
4945708	17	17	0	WHITE ASBESTOS, CLASS 9.1, UN2590 <ASBESTOS SCRAP>
4909179	17	17	0	PIGOLINES, CLASS 3, UN2313
3313462	16	16	0	BILLETS BLOOMS INDOTS PGS SHOT SPONGE MET ALLOY
4912006	0	16	16	HEXANOLS, 3/2282 <HEXYL ALCOHOL, OT PERUMERY>
4931666	16	16	0	NAPHTHENE SODIUM SOLUTIONS SPENT, CLASS 8, UN1760
2814137	16	16	0	COAL TAR OIL, CRUDE, NEC
2818331	16	16	0	HEXACHLOROCYCLOPENTADIENE
2861239	16	16	0	ROSIN
4914397	16	16	0	RESIN SOLUTION, COMB LOD, UN1866 <PLASTICS, R> <US>
2912122	16	16	0	BUTENE-BUTYLENE GAS, LIQUIFIED, AAO ISOBUTENE
4910101	16	15	-1	PAINT/REL MATL, 3/1263 <ALUMINUM PAINT>
2818124	15	15	0	DIETHYL PHOSPHORCHLORODITHIOATE
2818565	15	15	0	POLYGLYCOLS NEC
4941201	15	15	0	ROOFING TAR
2818222	15	15	0	DIETHYLENETRIAMINE
2082330	15	15	0	SPENT GRAINS, DRIED

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4860102	15	15	0	WASTE SOLID, NOS, CLASS 9, NA3077
1031210	15	15	0	LEAD CONCENTRATES
2099515	15	15	0	GROCERIES & GROCERS SUPPLIES, MIXED CARLOADS
2912111	14	14	0	PROPANE GAS LIQUIFIED
2818634	14	14	0	PROPIONIC ACID
4921831	14	14	0	CARBON TETRACHLORIDE, CLASS 6.1, UN1846
4921060	14	14	0	POIS LQD, FLAM, NOS, CLASS 6.1, UN2929
4907235	14	14	0	STYRENE MONOMER, INHIBITED, 32055 <SPENT, RECYCL>
3742219	14	14	0	CARS, RAILWAY FREIGHT, NEC, NOT MOOV
4916490	14	14	0	ORGANOMETALLIC CMPND, D/S, W.R, SLFLNOS, 4.3/3207
2818419	14	14	0	DENATURED ALCOHOL, LIQUID
4936653	0	13	13	SODIUM SULFIDE SOLUTIONS SPENT (HYDROXIDE), 8/1760
4910306	0	13	13	XYLENE, TOLUENE, CLASS 3, UN1903
4960148	13	13	0	ETM, LQD, NOS, CLASS 9, UN3257
4925262	13	13	0	DIETHYLPHOSPHOROCHLORIDOTHIOATE, CLASS 6.1, UN2810
2899643	13	13	0	CARBON ACTIVATED, ABSORBENT
4908125	13	13	0	CARBON DISULPHIDE, CLASS 3, UN1131
4910167	66	13	-53	XYLENE, ETHYLBENZENE, CLASS 3, UN1993 <OT SOLUTION>
4960104	3	13	10	WASTE MISCELLANEOUS HAZARDOUS MATERIAL
2818672	12	12	0	LACTIC ACID
4936366	12	12	0	BATTERIES, WET, FILLED WITH ACID, 82794 <BATCHEL>
4931757	12	12	0	LACTIC ACID, CLASS 8, UN1760
4925131	5	12	7	DICHLOROMETHANE OR METHYLENE CHLORIDE, 6.1/1593
2818103	0	12	12	ACETALDEHYDE-ACETIC ALDEHYDE, ETC
4921221	12	12	0	POIS LQD, FLAM, NOS, 6.1/2929 <PIH ZONE B> <US>
2818105	12	12	0	ACETONE, NEC
4930204	12	12	0	CHLOROSULFONIC ACID, CLASS 8, UN1754
4905753	12	12	0	ISOBUTANE OR ISOBUTANE MIXTURES, 2.1/1075 <US>
4908156	12	12	0	DIETHYLETHYL ETHER, 3.1/155 <OT ANESTHESIA GRADE>
4941102	12	12	0	CAPROLACTAM, CLASS 9, NA3062 <US>
2819602	12	12	0	ALUMINUM ALKYL, NEC
2818147	12	12	0	ETHYL FORMATE OR METHYL FORMATE
2818131	12	12	0	DIMETHYL SULFATE
2843125	12	12	0	COMPOUNDS, ORGNC
2815142	12	12	0	BENZYL CHLORIDE
4918476	12	12	0	OXID SUBS, SLD, NOS, 3.1/1479 <OXYGEN GEN CANDLES>
4929125	11	11	0	R A M, FISSILE, NOS, 77918 <CORES/CORE ASS/FUEL B>
4935262	11	11	0	SODIUM HYDROXIDE OR CAUSTIC SODA, SLD, 8/1823 <LVE>
2911135	11	11	0	GASOLINE BLND MOTOR FUEL CONT 90% MORE OF GAS
2818031	11	11	0	DIPHENYLMETHANE 4,4-DISOCYANATE

LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4908176	11	11	0	GASOLINE/MOTOR SPIRIT, 31203 <GASOLINE, NATURAL>
4935268	11	11	0	SODIUM HYDROSULFIDE, SOLUTION, CLASS 8, NA2922 <US>
4950100	11	11	0	E H S, LIQ, NOS (CONT DIETHANOLAMINE), 93082 <US>
2818188	11	11	0	DIBETHYLENE OXIDE
4966380	11	11	0	SODIUM PHOSPHATE, DIBASIC, CLASS 9, UN3077 <US>
2819633	11	11	0	ALUMINUM CHLORHYDRATE SOLUTION
4916123	12	11	-1	ALUMINUM ALKYL HALIDES, CLASS 4.2, UN3052
4900198	11	11	0	E H S, SLD, NOS, CLASS 9.2, UN3077 <SOLIDS/DEBRIS>
4904516	11	11	0	DICHLORODIFLUOROMETHANE, 2,21028 <FLUOROMETHA GAS>
4022190	10	10	0	RAGS, NEC
4962661	10	10	0	FUMARIC ACID, CLASS 9.2, NA9126
4910179	10	10	0	KETONES, LIQUID, NOS, CLASS 3, UN1224
4912082	0	10	10	FUEL OIL OR GAS OIL, 31202 <PET RES FUEL OIL/DIES>
4961163	10	10	0	E H S, SLD, NOS, 93077 <INS, AGR, NEC, LIQD> <US>
4905457	10	10	0	LPG, CLASS 2.1, UN1075
4931303	10	10	0	ACETIC ACID, GLACIAL OR SOLUTION, CLASS 8, UN2789
4907419	10	10	0	FLAMMABLE LIQUIDS, POISONOUS, NOS, CLASS 3, UN1992
4912043	10	10	0	METHYL ISOBUTYL CARBINOL, CLASS 3, UN2053
4905711	10	10	0	LPG, CLASS 2.1, UN1075 <PETROLEUM BY-PRODUCT, FFP>
2813465	10	10	0	ARGON GAS, LIQUID, OT COMPRESSED
4900656	10	10	0	E H S, LIQ, NOS (CONT FORMALDEHYDE), 93082 <US>
2819173	10	10	0	AMMONIUM THIOSULPHATE SOLUTION
4904520	10	10	0	CHLORODIFLUOROMETHANE, CLASS 2.2, UN1018 <DISP GAS>
4921445	10	10	0	MOTOR FUEL, ANTIKNOCK MIXTURES, CLASS 6.1, UN1649
4962104	10	10	0	ALCOHOL, C-12-C-14 POLY (1-3) ETHYOXYLA, 93082 <US>
4910409	16	10	-6	TOLUENE, 31294 <PLASTICS, RESINS/COMS, LIQUID>
2844190	10	10	0	TOILET PREPARATIONS, NEC
2085123	9	9	0	SPIRITS, GRAIN NEUTRAL, INBOND
4918746	9	9	0	SODIUM NITRATE, CLASS 5.1, UN1498
2818691	9	9	0	ACID, NEC, LIQUID ORGANIC
4904529	9	9	0	AEROSOLS, CLASS 2.2, UN1950
2842310	9	9	0	BUFFING COMPOUND
2812341	9	9	0	SODIUM NITRITE
4910241	9	9	0	ISOPROPANOL/ISOPROPYL ALCOHOL, 31219 <COMPNDS, ORG>
4910206	9	9	0	NAPHTHALENE, BENZENE, COMB LIQD, NA1993 <US>
4912637	17	9	-2	AROMATIC PETROLEUM SOLVENT, CLASS 3, UN1993
2879863	9	9	0	HERBICIDES OR PLANT HORMONES
4910225	8	8	0	ALC BEV, 31065 <LIQUORS/LIQUEURS, ALCOHOLIC, NEC>
4910142	8	8	0	COATING SOLUTION, CLASS 3, UN1139
4960134	8	8	0	ZINC SULPHIDE

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STOC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4907815	8	8	0	DIBETHYLAMINE, CLASS 3, UN1154
2818926	0	8	8	DITRON INTERMEDIATES, QT CYCLIC OR PETRO
2899877	5	8	3	CARBON GUN OR SLUDGE MFG COMPOUNDS NEC
4909383	8	8	0	PETROLEUM DISTILLATES, NOS, CLASS 3, UN1268
4966103	8	8	0	ROSTIN
2871431	8	8	0	FERTILIZING COMPOUNDS NEC LIQUID OR PASTE
4904552	8	8	0	CHLORODIFLUOROMETHANE, CLASS 2.2, UN1018 <FLUO GAS>
4907877	8	8	0	TRIETHYLAMINE, CLASS 3, UN1296
4909151	8	8	0	DENATURED ALCOHOL, 301986 <ETHYL ALCOHOL, ANH> <US>
2813988	8	8	0	FLUOROETHANE & FLUOROMETHANE GAS MIXTURE
4860610	8	8	0	WASTE ASBESTOS, CLASS 9, NA3077
4921403	8	8	0	DIMETHYL SULPHATE, CLASS 6.1, UN1595
4923114	8	8	0	CHLOROACETIC ACID, SOLUTION, CLASS 6.1, UN1750
4915121	8	8	0	NAPHTHALENE, COMB LOQ, NA1993 <METHYLENEDIAMINE> <US>
4935645	8	8	0	HEXAMETHYLENEDIAMINE, SOLUTION, CLASS 3, UN1783
2818436	8	8	0	DIACETONE - DIACETONE ALCOHOL
4916127	11	8	-3	ALUMINUM ALKYL, CLASS 4.2, UN3051
4918764	8	8	0	OXID SUBT, SLD, NOS, 317479 <WEED KILL ACIDS, D>
4917171	8	8	0	NITROCELLULOSE WITH ALCOHOL, CLASS 4.1, UN2536
4925181	8	8	0	TRICHLOROETHYLENE, CLASS 6.1, UN1710
4910109	8	8	0	ADHESIVES, 31133 <BOX TOE GLUES>
4912213	8	8	0	FUEL OIL OR GAS OIL, 31202 <PET DIST FUEL OIL, DI>
4934021	8	7	-1	CORR LOQ, NOS, CLASS 8, UN1760 <WASTE LIQUOR>
4961166	7	7	0	ENGINES, INTERNAL COMBUSTION, CLASS 9.1, UN3166
4932383	7	7	0	STANNIC CHLORIDE, ANHYDROUS, CLASS 8, UN1827
2861243	7	7	0	ROSTIN RESIDUE
2871314	7	7	0	NITROGEN FERT SOL, CONS WATER/AGRIC ADM NTE, 50%
4914121	7	7	0	CHEM WASTE, NEC, COMB LOQ, NA1993
4908194	7	7	0	ISOPROPYLAMINE, CLASS 3, UN1221
4909301	7	7	0	AMYL ALCOHOLS, CLASS 3, UN1103
4935245	7	7	0	SODIUM HYDROXIDE, SOLUTION, 81824 <CAUSTIC, MIXED>
4904879	7	7	0	AMMONIA, ANHYDROUS, LOQ OR SOLU, 241025 <TUNDRA>
4905765	7	7	0	LPG - NOT ODOORIZED - UN 1075
4961614	7	7	0	ET M, LOQ, NOS, CLASS 9, UN3257
4909141	7	7	0	DENATURED ALCOHOL, CLASS 3, NA1986 <US>
4025187	7	7	0	CAUSTIC SODA SOLUTION, SPENT
2818141	7	7	0	METHY-N-AMYL KETONE
4966150	7	7	0	PHTHALIC ANHYDRIDE, LIQUID, CLASS 9, UN3082 <US>
4907241	9	7	-2	STYRENE, ETHYL BENZENE, CLASS 3, UN1993
2821226	7	7	0	RUBBER COMPOUNDS NEC

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change In Cars Per Year	Description
3621110	7	7	0	ELECTRIC MOTORS
4910205	7	7	0	PRINTING INK, CLASS 3, UN1210
2891124	8	7	-1	ADHESIVES, NEC, AAO ADHESIVE CEMENTS, GLUES OR PASTES
4909242	6	6	0	METHYL BUTYL KETONE, CLASS 3, UN1224
4925201	6	6	0	SODIUM FLUORIDE, CLASS 6.1, UN1690
4905110	6	6	0	METHYLNAPHTHYLENES, LQD & NAPHTHALENE, NOS. 9.2/3082
4904583	6	6	0	AEROSOLS, CLASS 2.2, UN1950
4918405	6	6	0	OXID SUBS, SLD, NOS. 5.1/1479 <TETRABENZED KILL CFB>
4930216	6	6	0	BATTERY FLUID, ACID, CLASS 8, UN2796 <ELECTRO ACID>
4936545	6	6	0	CORROSIVE SOLIDS, NOS, CLASS 8, UN1759
4909349	6	6	0	XYLENES, 3/307 <ORTHOXYLENE>
1311110	6	6	0	PETROLEUM OIL OR SHALE OIL, CRUDE
2899917	6	6	0	HEAT TRANSFER AGENTS OR MEDIA, NEC
2861233	6	6	0	ROSIN GLOSS OR ESTER GUM
2891215	6	6	0	PETROLEUM TREATING COMPOUND CRUDE NEC
4025113	6	6	0	CATALYST MERCURIC CHLORIDE & CHL, SPENT
4025190	6	6	0	CHEMICAL PLANT WASTE, NEC
4905781	6	6	0	PROPANE - UN 1978
4912085	6	6	0	DIETHYLAMINODIMETHANOL, CLASS 3, UN2666
4910171	6	6	0	MIXTURE OF METHANOL & ACETONE, CLASS 3, UN1993
4914834	6	6	0	ALCOHOLS, NOS. COMB LQD, UN1987 <EATY ALCOHO> <US>
4921210	6	6	0	PHENOL SOLUTION, CLASS 6.1, UN2821 <GIL>
4932393	6	6	0	ZINC CHLORIDE, SOLUTION, CLASS 8, UN1840
4934221	6	6	0	CORR LQD, NOS (CONT FERRIC SULPHATE), 3/1760
4935206	6	6	0	SODIUM HYDROXIDE, SOLUTION, 3/1824 <CAUSTIC SODA S>
4935276	6	6	0	SODIUM HYDROSULFIDE, SOLUTION, 3/1824 <PETR> <US>
4914009	6	6	0	ETHYLENE GLYCOL BUTYL ETHER, COMB LQD, NA1993 <US>
4960196	6	6	0	ETHYLENE GLYCOL, CLASS 9, UN3002 <US>
4909215	6	6	0	FUEL, AVIATION, TURBINE ENGINE, CLASS 3, UN1863
3333235	6	6	0	ZINC OR ZINC ALLOY SKIMMINGS OR SLIMES
4905748	11	6	-5	ISOBUTYLENE, CLASS 2.1, UN1055
4850130	6	6	0	WASTE F A K (FREIGHT FORWARDER TRAFFIC)
3333215	6	6	0	ZINC OR ZINC ALLOY ASHES OR SCALE
4925270	6	6	0	PESTICIDES, LQD/TOX/NOS, 6.1/2902 <AGR>
4921891	5	5	0	BENZONITRILE, CLASS 6.1, UN2224
4966333	5	5	0	AIR BAG INFLATORS/MODULES/SEAT BELT PRET, 9.1/3268
2912181	5	5	0	PETROLEUM BY-PROD, NEC, IMPURE BUTANE, ETC, FPP
2094250	5	5	0	FISH MEAL GROUND PULVERIZED OR SCREENED INC FISH RO
4918472	5	5	0	OXID SUBS, LQD, NOS, 3.1/3139 <PLOSOPHIC CHEMS>
4963102	5	5	0	ZINC SULFIDE, CLASS 9, UN3077 <US>

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
2085115	5	5	0	RUM DENATURED
4921222	5	5	0	ETHYLENEAMINES, CLASS 6.1, UN2927
4905747	5	5	0	ISOBUTANE - UN 1069
2818370	5	5	0	CYCLOHEXANE
4935252	5	5	0	ALKYLAMINES OR POLYALKYLAMINES, NOS. 8/2734 <ING L>
2818258	5	5	0	ETHYL ACETATE
2818356	5	5	0	METHOXYDIHYDROPYRAN
4941110	5	5	0	OTHER REGULATED SUBSTANCES, SOLID, NOS. 9/3077 <US>
2815158	5	5	0	POLYETHYLENE, AAO DIETHYLBENZENE
2815155	5	5	0	PSEUDOCUMENE
2818413	5	5	0	AMYL ALCOHOLS, FLAMMABLE
4931435	5	5	0	SODIUM HYDROXIDE, CLASS 8, UN1760
2819210	5	5	0	NITRATING ACID-MIXED NITRIC AND SULPHURIC
2812365	5	5	0	SODIUM HYDROXIDE, SODIUM SULPHIDE SOLUTION
4961612	5	5	0	E.T.M. LQD, NOS. CLASS 9, UN3257
4830212	5	5	0	SPENT CAUSTIC SOLUTIONS, CLASS 8, UN1760
4905705	5	5	0	BUTADIENES, INHIBITED, 2.1/1010 <FROM ALCOHOL>
4941304	5	5	0	CREOSOTE, CLASS 9, NA3082 <US>
2813985	5	5	0	FLUOROETHANE GASES VIZ DICHLOROTETRAFLUOROETHANE
4907873	7	5	-2	PETROLEUM NAPHTHA, XYLENE, CLASS 3, UN1993
4930207	5	5	0	PHOSPHORIC ACID, NITRIC ACID, CLASS 8, UN1760
4905709	5	5	0	AEROSOLS, CLASS 2.1, UN1950
4935601	5	5	0	ALKYLAMINES OR POLYALKYLAMINES, NOS. 8/2735
2893320	5	5	0	FIREWORKS NEC
2818690	5	5	0	ACID, NEC, DRY, ORGANIC
4916466	5	5	0	ZINC POWDER OR ZINC DUST, CLASS 4.3, UN1436
4925136	5	5	0	RESORCINOL, CLASS 6.1, UN2876
4910127	22	5	-17	NAPHTHA, 3/255 <CIGAR OR CIGARETTE LIGHTER LIQUID>
4929950	5	5	0	RADIOACTIVE MATERIAL, SPECIAL FORM, NOS. 7/2974
2821345	5	5	0	SYNTHETIC FIBRE OR RAYON, NEC
4914011	5	5	0	COMB LQD, NOS. NA1993 <PETROLEUM OIL, ADDITIVE> <US>
4909229	6	5	-1	ISOPROPANOLISOPROPYL ALCOHOL, 3/1219 <ISOPROPANOL>
4914242	5	5	0	METHYL BUTYL KETONE, COMB LQD, UN1224 <US>
4921787	5	5	0	XYLENOLS, CLASS 6.1, UN2261
4918856	5	5	0	OXID SUBS, SLD, NOS. 3.1/1479 <BATH SALT CRYSTALS>
4021948	4	4	0	SCRAP NICKEL
4918795	4	4	0	CALCIUM HYPOCHLORITE, HYDRATED OR MIXTURE, 5.1/2880
4912045	4	4	0	LACTIC ACID, CLASS 8, UN3265
4025167	0	4	4	SODIUM SULFIDE SOLUTIONS, SPENT, CONT SODIUM HYDROX
2819674	4	4	0	SODIUM ALUMINATE

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4909107	4	4	0	AMYL ALCOHOL, CLASS 3, UN1105
2611233	4	4	0	WASTE LIQUOR, NLT 50% WGT WATER, SULFONATE PROCESS
2813991	4	4	0	GAS MIXTURES, NEC, COMPRESSED, OTHER THAN POISON
4940364	4	4	0	FORMALDEHYDE SOLUTIONS, CLASS 8, UN2209
2813179	4	4	0	CYCLOHEXANONE
2014488	4	4	0	TANKAGE, CRUDE, DRIED OF FEEDING
4905429	4	4	0	ISOBUTANE NOT ODOORIZED - UN 1969
2819990	4	4	0	SODIUM AZIDE
2818510	4	4	0	GLYCERINE CRUDE - SPENT LYE - CONCENTRATED
2819413	4	4	0	AMORPHOUS PHOSPHORUS
4931442	4	4	0	CRESYLIC ACID, CLASS 8, UN1760
4927002	4	4	0	POSS LQD, NOS, CLASS 6.1, UN2810 <PH ZONE A> <US>
4912217	4	4	0	FUEL OIL, NO 2, CLASS 3, NA1993 <US>
2819995	4	4	0	SODIUM BICROMATE SOLUTION
4916172	4	4	0	PHOSPHOROUS WHITE, MOLTEN, CLASS 4.2, UN2447
2818471	4	4	0	PROPANOL SOLUTIONS, NEC
4910325	4	4	0	1-OCTENE, CLASS 3, UN1993
2818247	4	4	0	ISOBUTYL ISOBUTYRATE
4935211	4	4	0	ALKYLAMINES OR POLYALKYLAMINES, NOS, 8/2734
4925229	4	4	0	D,N-BUTYLAMINE, CLASS 8, UN2248
4901526	4	4	0	EXPLOSIVE, BLASTING, TYPE E, CLASS 1.1D, UN0241
4914031	4	4	0	C8-C15 ALCOHOL, OLIGOMER MIX, COMB LQD, NA1993 <US>
4935261	4	4	0	HYDROXYLAMINE SULPHATE, CLASS 8, UN2865
4913101	4	4	0	COMB LQD, NOS, NA1993 <ROSIN RESIDUE> <US>
4966368	4	4	0	NICKEL SULPHATE, CLASS 9.2, NA9141
4936558	8	4	-4	CORR SLD, NOS (WITH SULFURIC ACID), 8/1759
4925117	4	4	0	1-CHLORO-3-BROMOPROPANE, CLASS 6.1, UN2608
4929150	8	4	-4	R A M, FISSILE, NOS, 7/2918 <RADIOACTIVE SPECIAL S>
4904565	4	4	0	NITROGEN, COMPRESSED OR NITROGEN, CLASS 2.2, UN1966
4850150	4	4	0	WASTE P A K (ALL PRT RATE/TRAILER SHIP, COMMERCIAL)
3999149	4	4	0	METAL POWDER NEC, IRAD NOR RPS
4907875	4	4	0	1-OCTENE, CLASS 3, UN1993 <OIL, PETROLEUM, NEC>
4930223	4	4	0	NITRIC ACID, CLASS 8, UN2031
4935647	4	4	0	SODIUM HYDROXIDE, SOLUTION, 8/1824 <RUBBER ACC SOF>
4950470	4	4	0	E A K, NOS <AUTO PARTS & ACCESSORIES, MIXED LOADS>
4021916	4	4	0	SCRAP MAGNESIUM-MAGNESIUM ALLOY FOR RECLAIMING OF M
2818421	4	4	0	DENATURING ALCOHOL, NEC
2831190	4	4	0	DRUGS OR MEDICINES, NEC
4918448	3	3	0	TRICHLOROISOCYANURIC ACID, DRY, CLASS 5.1, UN2468
4925182	3	3	0	R140A (1,1,1-TRICHLOROETHANE), CLASS 6.1, UN2831

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4929105	4	3	-1	R A M, LSA, NOS, CLASS 7, UN2912
4912660	3	3	0	FLAM LQD, NOS, 3/1993 <CHEMICAL PLANT WASTE, NEC>
3692112	3	3	0	BATTERIES, ELECTRIC, NEC
4910240	3	3	0	ETHANOL SOLUTIONS, 3/1170 <ALCOHOL, IN BOND, OT DE>
4917348	3	3	0	SYSTEMS, AUTOMOBILE CRASH PROTECTION, GAS GENERATING TYPE
4904311	3	3	0	ABROSOLS, CLASS 2.2, UN1950
3309137	3	3	0	IRON, POWDERED, NEC
4862310	3	3	0	WASTE CUPRIC ACETATE, CLASS 9.2, NA9106, RQ
4935243	3	3	0	SODIUM HYDROXIDE, CLASS 8, UN1780 <SODIUM, CAUSTIC>
2818221	3	3	0	DIMETHYL FORMAMIDE
4850155	3	3	0	WASTE F A K (ALL PRT RATE/TRAILER SHPM, GOVERNMENT)
2818249	3	3	0	ISOPROPYL ETHER
4909351	3	3	0	KYLENES, 3/1307 <PARAXYLENE>
4909124	3	3	0	ISOBUTANOL OR ISOBUTYL ALCOHOL, CLASS 3, UN1212
4909361	3	3	0	PETROLEUM NAPHTHA, N-BUTYL ALCOHOL, CLASS 3, UN1993
4909237	3	3	0	METHANOL, 3/1230 <METHANOL, CONTAMINATED, FOR REPT>
4966106	3	3	0	O R S, SLD, NOS (CONTAINS NICKEL HYDROXIDE), 9/3077
4962128	3	3	0	ELEVATED TEMPERATURE LIQUID, NOS, CLASS 9, UN3257
2812526	3	3	0	POTASSIUM CYANIDE
4907872	3	3	0	HEXAMETHYLENEMINE, CLASS 3, UN2493
4921030	3	3	0	TETRAETHYL LEAD, ETHYL DIBRIDICH, CLASS 6.1, UN1649
2812210	3	3	0	CAUSTIC SODIUM A CAUSTIC POTASSIUM IN SOLUTION
4961619	3	3	0	ASPHALT PETROLEUM LIQUID, CLASS 9, UN325
2611232	3	3	0	SLFT BLACK LIQ WASTE, FROM WDP, P PRCSG
4910478	3	3	0	FLAM LQD, NOS, 3/1993 <GASOLINE PRESERVATIVE, NEC>
4912269	3	3	0	FUSIL OIL, CLASS 3, UN1301
4918733	3	3	0	OXIDIZING SUBSTANCES, LQD, NOS, CLASS 5.1, UN3139
4918360	3	3	0	SODIUM CHLORIDE, CLASS 5.1, UN1496
4912529	3	3	0	ROOFING TAR
4915276	3	3	0	DIETHYLENE GLYCOL MONO ETHER, COMB LQD, NA1993 <US>
4914006	3	3	0	OLBRN, PARA FRN, COMB LQD, NA1993 <US>
4912084	3	3	0	DIMETHYLETHANOLAMINE, CLASS 3, UN2051
4929127	3	3	0	R A M, EXC PACK, LIMITED QUANTITY OF MATL, 7/2910
4812130	3	3	0	WASTE PERROSS CHLORIDE SOLUTION
2815101	3	3	0	DICYCLOHEXYLAMINE
4809190	3	3	0	WASTE FLAMMABLE LIQUIDS
2818637	3	3	0	ACID, ETHYL HEXOIC
2818647	3	3	0	BUTYL ACETATE SECONDARY
2818547	3	3	0	GLYCOL BOTTOMS
2879926	3	3	0	DEFOLIANT, FERTZ, FUNGICIDES, MIT ADH/ADJUS SPREAD

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4909396	4	3	-1	XYLENES, 3/1307 <XYLENE SOLUTIONS>
4910215	6	3	-3	XYLENES, 3/1307 <PLASTICS, RESINS OR GUMS, NEC>
4904569	3	3	0	NITROGEN, COMPRESSED OR NITROGEN, 2.2/1066 <DEV SY>
4932032	3	3	0	CORR LIQD, BASIC, ORGANIC, NOS, CLASS 8, UN2267
4912850	3	3	0	PET OIL, 3/1270 <ADDITIVES, FUEL OIL, GASOLINE>
4916219	3	3	0	AMINES, SOLID, CORROSIVE, NOS, CLASS 8, UN3259
4912063	3	3	0	ETHYL LACTATE, CLASS 3, UN1192
4921622	3	3	0	1,3-DICHLOROACETONE, CLASS 6.1, UN2649
4621150	3	3	0	TEXTILE CLTH OR FAB, OR DRYGD, MXD, IN TRLR
4925238	3	3	0	LEAD COMPOUNDS, SOLUBLE, NOS, CLASS 6.1, UN2291
4910254	3	3	0	PAINT/REL MATL, 3/1263 <TIRE LACQUER, PAINT/SHELLA>
4921272	3	3	0	POIS LIQD, NOS, CLASS 6.1, UN2810 <PH 2 B> <US>
4923943	3	3	0	POIS LIQD, NOS, 6.1/2810 <TECHNICAL/INTERMED CHEMS>
2818730	3	3	0	SILICONE
4900160	3	3	0	E H S, LIQD, NOS, 9/2082 <OIL, PETROLEUM, NEC> <US>
4910150	3	3	0	PAINT/REL MATL, 3/1263 <ENAMELING COMPOUNDS, GLASS>
4918762	3	3	0	OXID SUBS, SLID, NOS, 5.1/1479 <NITROGEN SALTS, OR>
4121150	3	3	0	POTASSIUM (POTASH) METALLIC
4935263	3	3	0	CORR LIQD, BASIC, ORGANIC, NOS, CLASS 8, UN2267
4912079	3	3	0	CYCLOHEXANONE, CLASS 3, UN1915
4925206	0	2	2	4-THIAPENTANAL, CLASS 6.1, UN2785
4936568	2	2	0	BATTERY FLUID, ACID, CLASS 8, UN2796 <BATTERY SETS>
4918761	2	2	0	OXIDIZING SUBSTANCES, SLID, NOS, CLASS 5.1, UN1479
4929115	2	2	0	URANIUM HEXAFLUORIDE, FISSILE, CLASS 2, UN2977
4904574	2	2	0	DICHLORODIFLUOROMETHANE, CLASS 2.2, UN1029
4904561	2	2	0	DICHLORODIFLUOROMETHANE, 2.2/1028 <DISPERSANT GAS>
2818153	2	2	0	METHYLENE CHLORIDE - DICHLOROMETHANE
4921640	4	2	-2	NITROANILINES, CLASS 6.1, UN1661 <DYE INTERM, NEC>
4917338	2	2	0	NAPHTHALENE, CRUDE/REFINED, CLASS 4.1, UN1334
4912302	2	2	0	ALUMINUM CHLORIDE, ANHYDROUS, CLASS 8, UN1726
4921675	2	2	0	ORGANOPHOSPHORUS PEST, LIQD/TOXANOS, 6.1/2018 <AGR>
2893123	2	2	0	PRINTING INK, NEC
4905540	0	2	2	TRIMETHYLAMINE, ANHYDROUS, CLASS 2.1, UN1083
2818220	2	2	0	DICHLOROETHYLENE
4921498	2	2	0	DINITRO-O-CRESOL, CLASS 6.1, UN1598
2818415	2	2	0	ANTERBEZE ALCOHOL
2819330	2	2	0	ACID, SULPHURIC, SPENT
4835230	2	2	0	WASTE POTASSIUM HYDROCAUSTIC POTASH, SOL, UN1814, RQ
4931423	2	2	0	CORR LIQD, FLAM, NOS, 8/2920 <ADDITIVES, FUEL OIL>
2815103	2	2	0	PHENOL ACETATE

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
2812327	2	2	0	CYANIDE OF SODIUM LIQUID
4921276	2	2	0	SULFUR CHLORIDE, CLASS 6.1, UN2927
4950114	2	2	0	E.H.S. LIQ. NOS. 93082 <CHLORINATED HYDROCAR> <US>
4860130	2	2	0	WASTE, HAZ. SOLID, CLASS 9, NA3077
4950163	2	2	0	MISCELLANEOUS MILITARY EXPLOSIVES, MIXED LOADS, 1.1
4963104	2	2	0	2.4-D SALT, CLASS 9, UN3082
4921278	2	2	0	SULFUR CHLORIDE, CLASS 6.1, UN3289
4905422	2	2	0	BUTANE NOT ODOORIZED - UN 1011
4025115	2	2	0	CHLORINATED HYDROCARBON RESIDUE FURTH PROCG
2812690	2	2	0	CALCIUM OR LIME SALTS
4910229	2	2	0	TOLUENE, METHYL ETHYL KETONE, CLASS 3, UN1993
2818706	2	2	0	ISONONYL ACETATE
4850140	2	2	0	WASTE F A K (SHIPPER ASSN OR SIMILAR TRAFFIC)
4907871	2	2	0	PETROLEUM NAPHTHA. XYLENE, CLASS 3, UN1993
4914109	2	2	0	COMB. LIQ. NOS. NA1993 <ADDITIONS, FUEL OIL> <US>
4909393	2	2	0	XYLENES, 3/1307 <DYES OR COLORS, COAL TAR, OT IND>
2819129	2	2	0	AMMONIUM FLUORIDE
4809188	2	2	0	WST FLAM LIQ. NOS (TOLUENE, XYLENE), 3/1993
2814128	2	2	0	POLYBUTANE OIL PETRO NF MOL DING PLSTC ART
2818226	2	2	0	DIMETHYLAMINODETHANOL OR DIMETHYLETHANOLAMINE
4909380	2	2	0	METHANOL, CLASS 3, UN1230 <OIL, PETROLEUM, NEC>
4900309	2	2	0	1-METHOXY-2-PROPANOL, CLASS 3, UN3092
4910184	2	2	0	FLAM LIQ. NOS (CONT NAPHTHALENE), 3/1993
2818368	2	2	0	FURFURAL, FURFURAL
4909391	2	2	0	XYLENES, 3/1307 <ADDITIONS, FUEL OIL, GASOLINE>
4913158	2	2	0	ALCOHOLS, NOS, COMB LIQ, UN1987 <OCTYL, PERE> <US>
2843126	2	2	0	FATTY ALC, CYCLIC, CYANODETHYLATED & HYDGIN
4905257	2	2	0	ISOBUTYLENE, CLASS 2.1, UN1075 <US>
2094220	2	2	0	FISH OIL RESIDUUM DEHYDRATED
4912414	2	2	0	TURPENTINE, 3/1299 <TURPENTINE, SPIRITS OF>
4912816	2	2	0	ETL, FLAMMABLE, NOS, CLASS 3, UN3256
2818065	2	2	0	METHOXYISOPROPYLAMINE
4966312	2	2	0	E.H.S. LIQ. NOS (CONT BENZOBIFLUORAN), 93082 <US>
4915298	2	2	0	2-ETHYLHEXANOL, COMB LIQ, UN1987 <US>
2842319	2	2	0	DRESSING OR BLACKING, AUTOMOBILE TOP INC, SHOE, LEATHE
4915374	2	2	0	HEXANOL, OCTANOL, COMB LIQ, NA1993 <US>
2818086	2	2	0	3-METHYL BUTAN-2-ONE
2851930	2	2	0	PAINTS, STAINS, LACQUERS OR VARNISHES
4921032	2	2	0	TETRAETHYL LEAD (ETHYLENE DIBROMIDE), 6.1/1649
4905780	2	2	0	LPG, CLASS 2.1, UN1075 <PINTSCH GAS>

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4915407	2	2	0	ETHYLENE GLYCOL MONOBUETHER, COMB LOD, NA1993 <US>
4905776	2	2	0	PROPANE NOT ODOORIZED - UN 1978
2861234	2	2	0	ROSION OIL
4914223	2	2	0	ETHYLENE GLYCOL MONOBUETHER, CLASS CL/1993 <US>
2818036	2	2	0	ISOPRENE STILL BOTTOMS
2812120	2	2	0	CHLORINATED LIME - CHLORIDE OF LIME - DRY
4909268	2	2	0	N-PROPYL ACETATE, CLASS 3, UN1276
4912046	2	2	0	FURFURAL, CLASS 3, UN1199
4914168	2	2	0	FUEL OIL, COMB LOD, NA1993 <US>
2818117	2	2	0	DI-N-PROPYLAMINE
4907272	2	2	0	PET OIL, 3/1270 <PET NAPHTHA, NAPHTHA DISTILLATE>
2818166	2	2	0	DIMETHYL SULPHIDE
2952243	2	2	0	PIPE LINE COATING CONDENSATION PREVENTIVE
4866368	2	2	0	WASTE MISCELLANEOUS HAZARDOUS MATERIAL
4918765	2	2	0	SODIUM CHLORATE, AQUEOUS SOLUT, CLASS 5.1, UN2428
4913262	2	2	0	PROPYLENE TETRAMER, COMB LOD, UN2650 <US>
2899809	2	2	0	CHELATING COMPOUND, GRANULAR OR POWDER
4912235	2	2	0	N-BUTYL METHACRYLATE, CLASS 3, UN2227
4909210	2	2	0	ISOPROPYL ACETATE, CLASS 3, UN1220
1031110	2	2	0	LEAD ORE GR AAO GALENA ORE
4909391	3	2	-1	XYLENES, 3/1307 <FUEL OIL TREATING COMPOUNDS>
4909278	185	2	-183	NAPHTHA, 3/1256 <COAL TAR NAPHTHA SOLVENT>
2899936	2	2	0	INK MATERIALS NEC
4925222	2	2	0	SODIUM FLUOROSILICATE, CLASS 6.1, UN2674
4934223	2	2	0	PHTHALIC ANHYDRIDE, CLASS 8, UN2214
4960184	2	2	0	TRIARYL PHOSPHATES, CLASS 9, UN3082 <US>
4913233	2	2	0	OCTYL ALCOHOL, COMB LOD, NA1993 <PERPUMERY> <US>
4925208	2	2	0	FURFURYL ALCOHOL, CLASS 6.1, UN2874
4907886	2	2	0	METHYL ISOBUTYL KETONE, METHYL ETHYL KETONE, 3/1224
4925155	2	2	0	ANISIDINES, LIQUID OR SOLID, CLASS 6.1, UN2431
4925034	2	2	0	POIS SLD, NOS, 6.1/2811 <POLYCHLOR AGR INS/PUNO>
4921436	2	2	0	PESTICIDES, LIQD TOXNOS, 6.1/2902 <AGR>
4925273	2	2	0	ORGANOPHOSPHORUS PEST, SLD TOXNOS, 6.1/2783 <AGR>
4917384	2	2	0	METAL POWDERS, FLAMMABLE, NOS, CLASS 4.1, UN3089
2891190	2	2	0	CEMENT NEC, LIQUID
4905706	2	2	0	BUTANE - UN 1011
4916492	2	2	0	ZINC ASHES, CLASS 4.3, UN1433
4936510	2	2	0	CORR LOD, NOS, CLASS 8, UN1760 <DYES OR COLORS>
4917404	2	2	0	PARAFORMALDEHYDE, CLASS 4.1, UN2213
4925299	2	2	0	DYES, SOLID, NOS, 6.1/3143 <DYE STUFFS> <US>

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4930252	2	2	0	CORR LQD, NOS, CLASS 8, UN1760 <SLUDGE, ACID/ALKAL>
4931461	2	2	0	DYES OR DYE INTERMEDIATES, SOLID, NOS, 6.1/3143
4932332	2	2	-1	CORR LQD, NOS, CLASS 8, UN1760 <CHLORINATED LIME>
4935202	2	2	0	SODIUM HYDROXIDE & POTASSIUM HYDROXIDE, 8/1719
4916311	5	2	-3	WATER-REACTIVE SUBSTANCES, LQD, NOS, 4.3/3148
4936574	1	1	0	BATTERIES, WET, NON-SPILLABLE, 8/2200 <BATTERY CELLS>
4905702	1	1	0	BUTANE OR BUTANE MIXTURES, 2/1101 <PET BY-PRODUCT>
4912410	1	1	0	ALC BEV, 3/065 <VERMOUTH>
4921466	3	1	-1	NITROANILINES, CLASS 6.1, UN1651 <NITROANILINE>
2844125	1	1	0	PERFUMERY
4910341	1	1	0	ALC BEV, 3/065 <WINE, CHAMPAGNE/VERMOUTH, SPOILED>
4921209	1	1	0	BENZYL CHLORIDE, CLASS 4.1, UN1738
2952255	1	1	0	ROOFING COATING OTHER THAN PAINT, STAIN OR VARNISH
4936547	1	1	0	CORR LQD, NOS, CLASS 8, UN1760 <WEED KILLING ACIDS>
4917442	1	1	0	LEAD PHOSPHITE DIBASIC, CLASS 4.1, UN2989
4935221	1	1	0	SODIUM HYDROXIDE, CLASS 8, UN1719
4914234	1	1	0	METHYL ISOAMYL KETONE, COMB LQD, UN1224 <US>
4918743	1	1	0	SODIUM BROMATE, CLASS 5.1, UN1494
4909103	1	1	0	ALCOHOLS, NOS, CLASS 3, UN1987
4960135	1	1	0	E H S, SLD, NOS, CLASS 9, UN3077
4909114	1	1	0	ISOPROPANOL & TOLUENE, CLASS 3, UN1993
4910448	1	1	0	ADHESIVES, 3/113 <CEMENT, BONDING, EMBEDDING>
4936659	1	1	0	CORR LQD, NOS, CLASS 8, UN1760 <STABILIZER/EMULSI>
4931466	1	1	0	CORR LQD, ACIDIC, ORGANIC, NOS, CLASS 8, UN3265
2812639	1	1	0	CALCIUM NITRATE
4918796	1	1	0	UREA HYDROGEN PEROXIDE, CLASS 5.1, UN1511
4903370	1	1	0	CARTRIDGES, POWER DEVICE, 1.4S0323 <DRILL TOOLS>
4931413	1	1	0	CORR SLD, NOS, CLASS 8, UN1759 <COAL TAR OIL, CRUD>
4931310	1	1	0	ALKYLARYL TOLUENE SULPHONIC ACID, LIQUID, 8/2585
4925165	1	1	0	CHLOROTOLUIDINES, LIQUID OR SOLID, 6.1/2239
4936505	1	1	0	CORR LQD, NOS, CLASS 8, UN1760 <COMPOUNDS, BOILER>
2871433	1	1	0	FERT SOLUTION, WATER-FREE AMMONIA, SULPHUR, AMMONIA 30%
4925258	1	1	0	POIS LQD, NOS, 6.1/2810 <SOLUTION, COPPER PLATING>
2084135	1	1	0	BRANDY, ALCOHOLIC
3309144	1	1	0	MAGNESIUM METAL, PWDRD, ATOMIZED SPHERICAL
4921676	1	1	0	ORGANOPHOSPHORUS PEST, SLD/TOX/NOS, 6.1/2783 <OTA>
4940373	1	1	0	O R S, LQD, NOS, 3/001 <PERCHLOROTRICHLO, 9/0082 <US>
2911940	1	1	0	PETROLEUM ROAD OIL
4904827	1	1	0	ACCUMULATORS, PRESS, PNEUMHYD, 2.2/1936 <SHO P> <US>
4905722	1	1	0	PROPADIENE, INHIBITED, CLASS 2.1, UN2200

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-acquisition Cars Per Year	Post-acquisition Cars Per Year	Change in Cars Per Year	Description
4912228	1	1	0	N-BUTYL ALCOHOL, 2-BUTOXYETHANOL, CLASS 3, UN1993
4936606	1	1	0	ALUMINUM CHLORIDE, SOLUTION, CLASS 8, UN2581
2815198	1	1	0	METHYL CYCLOHEXYLAMINE
2815220	1	1	0	METHYLENEDIANILINE OR MDA OR DIAMINODIPHENYLMETHANE
2815212	1	1	0	CHLOROTOLUENES
4912813	1	1	0	E.T.L. FLAMMABLE, NOS, CLASS 3, UN3256
4918499	1	1	0	SODIUM DICHROMATE, CLASS 5.1/ UN1479
4933827	1	1	0	FERRIC SULFATE, CLASS 9, UN3082 <US>
4914016	1	1	0	COMB LQD, NOS (CONT COAL TAR), NA1993 <US>
4912362	1	1	0	FLAM LQD, NOS, 3/1993 <PNE TAR>
4907627	1	1	0	METHANOL & ORGANIC AMINES, CLASS 3, UN2924
2899909	1	1	0	ESSENTIAL OILS, NATURAL OR ARTIFICIAL, NEC
2899515	1	1	0	COMPOUNDS, BLR, CLNSQ, OR PRSVQ, LQD OR PASTE
4912342	1	1	0	FLAM LQD, NOS, 3/1993 <PETROLEUM LUBRICATING OIL>
4963101	1	1	0	LEAD SULFIDE, CLASS 9, UN3077 <ZINC CONCENTRA> <US>
4905745	1	1	0	HYDROGEN, REFRIGERATED LIQUID, CLASS 2.1, UN1966
4918689	1	1	0	HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS, 5.1/2984
4963334	1	1	0	DICAMBA, CLASS 9, UN3083 <INSECTICL AGR, LQD> <US>
4940322	1	1	0	O.R.S. LQD, NOS (CONT 35% HYDRAZ) SOLI, 9/3082 <US>
4965018	1	1	0	PENTENE, CLASS 3, UN1993
4936601	1	1	0	CORROSIVE LIQUIDS, FLAMMABLE, NOS, CLASS 8, UN2920
4961608	1	1	0	E.T.M. LQD, NOS, CLASS 9, UN3257
4961181	1	1	0	POLYCYCLIC ORGANIC MATTER, CLASS 9, UN3082 <US>
2813964	1	1	0	TRIFLUOROCYCLOETHYLENE GAS
4961616	1	1	0	E.T.M. LQD, NOS, CLASS 9, UN3257
4916169	1	1	0	FEROUS METAL BORINGS/SHAVINGS/TURNACUT, 4.2/2793
2813978	1	1	0	REFRIGERANTS, NEC LQD OT COMPRESSED
4960202	1	1	0	O.R.S. LQD, NOS (CONT BICAM, BEN(BIF), 9/3082 <US>
4908151	1	1	0	DIMETHYL SULPHIDE, CLASS 3, UN1104
2813992	1	1	0	HYDROCARBON GAS, NEC
2812613	1	1	0	BARIUM CARBONATE
4960188	1	1	0	E.H.S. LQD, NOS (CONT COAL TAR & CREO), 9/3082 <US>
4905717	1	1	0	ETHYLENE, ACETYL & PROPYL MX, REF LQ, 2.1/2138 <US>
4960181	1	1	0	E.H.S. LQD, NOS (CONT NAPHTHALENE), 9/3082 <US>
4909128	1	1	0	BUTYL ACETATES, CLASS 3, UN1123
4908221	1	1	0	ETHYL ALCOHOL & ETHYL TERT-BUTYL ETHER, 3/1993
4907893	1	1	0	TOUJENE, METHANOL, CLASS 3, UN1993
2812334	1	1	0	SODIUM HYDROSULFITE
4915660	1	1	0	COMB LQD, NOS (CONT NAPHTHALENE), NA1993 <US>
4905411	1	1	0	ETHYLAMINE, CLASS 2.1, UN1036

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4912507	1	1	0	ET.M. FLAMMABLE, NOS. CLASS 3, UN3256
4914030	1	1	0	C10-C12, UNSATURATED HYDROCARBONS, COMB. LIQD, NA1993 <US>
4912654	1	1	0	METHYL CYCLOACETATE, CLASS 3, UN1993
4917459	1	1	0	NAPHTHALENE, MOL-TEN, CLASS 4.1, UN2304
4915378	1	1	0	PETROLEUM DISTILLATES, COMB. LIQD, NA1993 <US>
2814149	1	1	0	NAPHTHLENE-NAPHTHOLIN-CRUDE
4962129	1	1	0	ELEVATED TEMPERATURE LIQUID, NOS. CLASS 9, UN3257
4932006	1	1	0	CORR. LIQD, NOS. (CONT. NAPHTHALENE, METHYL, UN1760)
4830201	1	1	0	WASTE CORR. LIQD, NOS. 1, UN1760 <ACIDS, INORGANIC>
4931427	1	1	0	ALIPHATIC AMINES, CLASS 8, UN2734
4835308	1	1	0	WASTE LIQ, ALK, CORR. MAT, CLASS 8, UN1719
4931436	1	1	0	DIETHYLENETRIAMINE, METHYL ISOBUTYL KETONE, 8/2734
4910106	1	1	0	FLAM. LIQD, NOS. 3/1993 <PROP. ANTI-FREEZE/ENG. COOLA>
2815242	1	1	0	PHENOL RAFFINATE (PUREZ WATER - PHENOL MIXTURE)
4907010	1	1	0	ETHYL NITRATE, CLASS 3, UN1993
4925128	1	1	0	ETHYLENE GLYCOL MONOBUTYL ETHER, CLASS 6.1, UN2369
2818965	1	1	0	ISOPROPANOLAMINE STILL BOTTOM MATR
4932020	1	1	0	CORR. LIQD, ACID, ORG. NOS. (CONT. HEXOIC ACID), 8/265
4921830	1	1	0	CARBON TETRACHLORIDE, 6/1/846 <CHLOR. HYD. RES>
4850110	1	1	0	WASTE P.A.K. ACIDS, CHEMS. & OTHER ARTICLES, MIX. LIDS
4936041	1	1	0	TALLOW ALKYLAMINES, CLASS 8, UN2735
4910389	1	1	0	FLAM. LIQD, NOS. (CONT. ETHANOL), CLASS 3, UN1993
4931454	1	1	0	POLYAMINES, NOS. (CONT. ALKYLAMINES), CLASS 8, UN2734
2818890	1	1	0	GASES, COMPRESSED, NEC, POISON
4025132	1	1	0	SODIUM SOLUTION WASTE
4025164	1	1	0	NAPHTHENIC SODIUM SOLUTIONS, SPENT, CONT. SODIUM HYD.
4809384	1	1	0	WASTE FLAMMABLE LIQUID
4910260	1	1	0	METHYL ETHYL KETONE, ISOLUENE, CLASS 3, UN1993
2818465	1	1	0	PLASTICIZER ALCOHOL
2818456	1	1	0	ISOPROPANOL SOLUTIONS, NEC
4910283	1	1	0	ETHYL BENZENE & 4,6-DINITRO-O-CRESOL, 3/1992
4910274	1	1	0	NAPHTHA, 3/1255 <PIPERYLENE CONCENTRATE>
4914130	1	1	0	BUTANOLS, COMB. LIQD, UN120 <BUTYL ALCOHOLS> <US>
4906030	1	1	0	METAL ALKYL, SOL. NOS. 3/1993 <METAL ALKYL> <US>
4810215	1	1	0	WASTE FLAMMABLE LIQUID
4910168	1	1	0	FLAM. LIQD, NOS. 3/1993 <TECHNICAL INTERMEDIATE CHEM>
4910281	1	1	0	TOLUENE, ISOPROPYL ALCOHOL, CLASS 3, UN2733
4930224	1	1	0	PHOSPHORIC ACID, SULFURIC ACID, 8/1760 <PHOSPHATIC>
4910402	1	1	0	ALCOHOLS, NOS. 3/1987 <ANTI-FREEZE ALCOHOLS>
2818845	1	1	0	DICHLORODIETHYL SULFIDE (MUSTARD GAS)

LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STQC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4906343	1	1	0	AMMONIUM SULPHIDE, SOLUTION, CLASS 8, UN2683
4860132	1	1	0	WASTE, HAZ, LIQUID, CLASS 9, NA3082
4921015	1	1	0	CHLOROPICRIN, CLASS 6.1, UN2929
4875509	1	1	0	WASTE, HAZ, NOS (F003), CLASS 9, NA3077
4875525	1	1	0	WASTE, HAZ, NOS (F002), CLASS 9, NA3077
4904903	1	1	0	HYDROGEN CHLORIDE, ANHYDROUS, CLASS 2.3, UN1050
2952270	1	1	0	ROOFING TAR
2819215	1	1	0	NITRIC ACID
4966101	1	1	0	ESTER GUM OR ROSIN GLOSS
4899208	1	1	0	4-METHOXY-4-METHYL PENTAN-2-ONE, CLASS 3, UN2293
4910243	1	1	0	PET OIL, 3/1220 <PET, PARTIALLY REFINED>
4914050	1	1	0	LIGHT CYCLE OIL (COMB LIQUID NOS), NA1993
4816141	1	1	0	WASTE PHOSPHORUS, WHITE OR YELLOW, SOL, UN1381, RQ
4909176	1	1	0	FLAM LOD, NOS (CONT ACETONE), CLASS 3, UN1993
4936532	1	1	0	COMPOUNDS, TREE/WEED KILLING, LIQUID, 8/1760 <US>
4918767	1	1	0	SODIUM PERBORATE, CLASS 5.1/UN1479
4935614	1	1	0	DIETHYLENETRIAMINE, CLASS 8, UN2079
4909356	1	1	0	TOLUENE, 3/1294 <RECLAIMED SOLVENTS, DERIVED INKS>
4921999	1	1	0	PHENYL CHLOROFORMATE, CLASS 6.1, UN2746
4909395	1	1	0	XYLENES, 3/1307 <DYE INTERMEDIATES, NEC>
4909377	1	1	0	METHANOL, 3/1230 <CARBON, GUM/SLUDGE REMOVING COMP>
2818343	1	1	0	TERPINEOL
4921508	1	1	0	DISULFOTON, CLASS 6.1, UN2783
2818276	1	1	0	VINYLIDENE CHLORIDE INHIBITED
4910447	1	1	0	PET OIL, CLASS 3, NA1270 <US>
4909328	1	1	0	METHOXYDIHYDROPYRAN, CLASS 3, UN1993
4914201	1	1	0	XYLENE, ETHYLBENZENE, COMB LOD, NA1993 <US>
4860103	1	1	0	WASTE MISCELLANEOUS HAZARDOUS MATERIAL
4910501	1	1	0	ALCOHOLS, NOS, 3/1987 <ALCOHOL, CONTAMINATED>
2818237	1	1	0	ETHYL HEXALDEHYDE
4909338	1	1	0	DIETHYL DISULPHIDE, CLASS 3, UN2311
4910303	2	1	-1	XYLENE, CLASS 3, UN1993
4910105	2	1	-1	FLAM LOD, NOS, 3/1993 <ANTI-FREEZING COMPS, NEC>
4910542	1	1	0	ADHESIVES, 3/1133 <INS ADHESIVES, SPREADSTICK, LQ>
4910475	1	1	0	PAINT/REL MATL (CONT 1,1,1-TRICHLORO, 3,2,126) <IN40>
4935220	1	1	0	CAUSTIC ALKALI LIQUIDS, NOS, CLASS 8, UN1719
2819527	1	1	0	IRON SULPHATE DRY OT ORUDE
2879961	1	1	0	WEED KILLING ACIDS DRY
4905866	1	1	0	REFRIGERATING MACHINES, CLASS 2.1, NA1934 <US>
4935278	1	1	0	CAUSTIC ALK LODS, NOS, 8/1719 <DE-INKING COMPOUNDS>

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change In Cars Per Year	Description
4966360	1	1	0	NICKEL AMMONIUM SULFATE, CLASS 9, UN3077 <US>
4961317	1	1	0	CUPRIC SULFATE, CLASS 9.2, UN3077 <US>
4932328	2	1	-1	CORR SOL, NOS, CLASS 8, UN1759 <SODIUM SILICATE LQ>
2871310	1	1	0	AMMONIUM NITRATE FERTILIZER, LIQUID
4910325	1	1	0	FLAM LQD, NOS, 3/1993 <PET OIL ADDITIVE>
4922033	1	1	0	CORR LQD, ACIDIC, ORGANIC, NOS, CLASS 8, UN3265
4904535	1	1	0	CARBON DIOXIDE, COMPRESSED CARBON DIOXIDE, 2.2/1013
4917356	1	1	0	MATCHES, SAFETY, CLASS 4.1, UN1944
2819541	1	1	0	ZINC CHLORIDE, DRY
4912497	1	1	0	FLAM LQD, NOS, 3/1993 <INSECTICIDES, AGRICULTURAL>
4902815	1	1	0	FIREWORKS, CLASS 1.3G, UN0335
4918976	1	1	0	ORGANIC PEROXIDE TYPE C, LIQUID, CLASS 5.2, UN3103
4921454	1	1	0	POIS LQD, NOS, CLASS 6.1, UN2810 <AGR>
4916185	1	1	0	CARBON, ACTIVATED, CLASS 4.2, UN1362
4905777	1	1	0	RECEPTACLES, SMALL, CONTAINING GAS, 2.1/2037
4936060	1	1	-1	ETHOXALATED TALLOW ALKYLAMINES, CLASS 8, UN2735
4921061	1	1	0	ORGANOPHOSPHORUS PEST, LIQUID, NOS, 6.1/2018 <AGR>
2819547	1	1	0	ZINC CHLORATE
4918740	1	1	0	POTASSIUM PERMANGANATE, CLASS 5.1, UN1490
4845706	1	1	0	WST WHITE ASBESTOS, 9.1/2590
4932303	1	1	0	AMMONIUM HYDROGEN FLUORIDE, SOLID, CLASS 8, UN1727
4936320	1	1	0	ALKYLARYL/TOLUENE SULFONIC ACID, SOLID, 3/2383
4923350	1	1	0	SELENATES OR SELENITES, CLASS 6.1, UN3630
2819050	1	1	0	METAL ALKYL S, NEC
4905798	1	1	0	AEROSOLS, CLASS 2.1, UN1950
4910423	1	1	0	PERFUMERY PRODUCTS, CLASS 3, UN1266
2818617	1	1	0	PUMARIC ACID
2844130	1	1	0	BATH SALTS, MEDICATED OR PERFUMED
2851250	1	1	0	PAINT RELATED MATERIALS, NEC
4925203	1	1	0	O-DICHLOROBENZENE, CLASS 6.1, UN1591
4920160	1	1	0	PHOSPHINE, CLASS 2.3, UN2199
2851221	1	1	0	COMPOUNDS PAINT INCR RDCG
4917447	1	1	0	TITANIUM SPONGE GRANULES POWDERS, CLASS 4.1, UN2838
4918979	1	1	0	ORGANIC PEROXIDE TYPE D, SOLID, CLASS 5.2, UN3106
4912363	1	1	0	FLAM LQD, NOS, 3/1993 <TAR, COAL>
4925092	1	1	0	BARIUM COMPOUNDS, NOS, CLASS 6.1, UN1564
4918978	1	1	0	ORGANIC PEROXIDE TYPE D, LIQUID, CLASS 5.2, UN3105
4913280	1	1	0	ESTERS, NOS, COMB LQD, UN3272 <US>
4921203	1	1	0	POIS LQD, CORR, NOS, CLASS 6.1, UN2927
4935225	1	1	0	POTASSIUM HYDROXIDE, SOLID, CLASS 8, UN1813

LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4909371	1	1	0	DISOBUTYLENE, ISOMERIC COMPOUNDS, 3/2050 <OIL, PE>
2818420	1	1	0	DENATURED ALCOHOL SOLVENT
4932309	1	1	0	ALKYLARYL TOLUENE SULPHONIC ACID, LIQUID, 8/2586
4909120	1	1	0	ISOPROPANOL, CLASS 3, UN1993 <COMPOUNDS, CLEANING>
4904575	1	1	0	SULFUR HEXAFLUORIDE, CLASS 2.2, UN1080
4907614	1	1	0	ESTERS, NOS, CLASS 3, UN3272
4922166	1	1	0	COTTON WASTE, NEC NOT PACKING OR WIPING
4925046	1	1	0	PHENOXY PEST, LQD/TOX/NOS, 6/1300 <AGR>
4904820	1	1	0	FIRE EXTINGUISHERS, CLASS 2.2, UN1044
4910207	1	1	0	ISOPROPYL ALCOHOL, CLASS 3, UN1993
4910251	1	1	0	PAINT/REL MATL, 3/1263 <PAINT, STAINSP/ARNISHES>
4904172	1	1	0	E H S, SLD, NOS, 9/3077 <WELL PACKING MATERIAL> <US>
4935208	1	1	0	CAUSTIC ALK LQDS, NOS, 8/1719 <WASTE LIQOR>
4925020	1	1	0	CHEMICALS, NEC
4932316	1	1	0	ANTIMONY TRICHLORIDE, SOLID, CLASS 8, UN1733
4932318	1	1	0	ANTIMONY TRICHLORIDE, SOLUTION, CLASS 8, UN1733
4910250	1	1	0	PAINT/REL MATL, 3/1263 <PAINT/ARNISH DRIERS, NEC>
4909228	1	1	0	ISOPROPANOL/ISOPROPYL ALCOHOL, 3/1219 <COMPOUNDS>
4910371	1	1	0	TINGSTEN HEXAFLUORIDE, CLASS 2.3, UN2196
3585325	1	1	0	COOLING BOXES OR COOLING RMS OT HOUSEHOLD TYPE
4931443	1	1	0	TRIETHYLENETETRAAMINE, CLASS 8, UN2735
4910181	1	1	0	EXTRACTS, FLAVORING, LIQUID, CLASS 3, UN1197
4925143	1	1	0	2-METHYL-5-ETHYLPYRIDINE, CLASS 6.1, UN2300
4925126	1	1	0	4,4'-DIAMINODIPHENYL METHANE, CLASS 6.1, UN2651
4931404	1	1	0	CURR LQD, NOS, CLASS 8, UN1760 <ACID, NEC, LQD, OR>
4931412	1	1	0	CORR LQD, NOS, CLASS 8, UN1760 <COAL TAR OIL, CRUD>
2899887	1	1	0	COMPOUNDS OR FLUIDS, INTCH/SENG, STARTING
4931320	1	1	0	FORMIC ACID, CLASS 8, UN1779
4925113	1	1	0	DIPHENYL METHANE-4,4'-DIISOCYANATE, 6/12489
4916725	1	1	0	PHOSPHORUS, AMORPHOUS OR RED, CLASS 4.1, UN1338
2815691	1	1	0	DYE STUFFS, NEC
4931452	1	1	0	ALKYLAMINES, NOS (CONT) ISOPHORONE DIAMINE, 8/2735
4920349	1	1	0	BORON TRICHLORIDE, CLASS 2.3, UN1741
4936078	1	1	0	POLYALUMINUM CHLORIDE SOLUTIONS, CLASS 8, UN1760
4935624	1	1	0	ISOPHORONEDIAMINE, CLASS 8, UN2289
4904305	1	1	0	ARTICLES, PRESSURIZED, PNEUHYDR, CLASS 2.2, UN3164
2815152	1	1	0	ORTHODICHLOROBENZENE (ORTHODICHLOROBENZOL), AAO, ORTH
4936526	1	1	0	CORR LQD, NOS, CLASS 8, UN1760 <BLACK LIQOR>
4936502	1	1	0	CALSIUM HYDROXIDE, SOLUTION, CLASS 8, UN2681
2815612	1	1	0	DYES, COAL TAR, OT INDIGO, LQD OR PASTE AAO, COLORS

**ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED**

STUC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4933025	1	1	0	CORR LOD, NOS (CONT ISOCYANOBENZOTRIFLUORIDE), 8/1760
4901714	1	1	0	ROCKETS, CLASS 1.2C, UN0436
4916462	1	1	0	MAGNESIUM HYDRIDE, CLASS 4.3, UN2010
4936512	1	1	0	BATTERIES, WET, NON-SPILLABLE, 82800 <STORAGE BAT>
4921581	1	1	0	XYLIDINES, CLASS 6.1, UN1711
3356322	1	1	0	CATALYST, NICKEL, NOT SPENT
4916318	1	1	0	ZINC PHOSPHIDE, CLASS 4.3, UN1714
2911634	1	1	0	TAR, COAL
4916164	1	1	0	METAL ALKYLARYL HYDRIDES, NOS, CLASS 4.2, UN3050
4932010	1	1	0	BORON TRIBROMIDE, CLASS 2, UN2892
4923383	1	1	0	SELENIUM DISULPHIDE, CLASS 6.1, UN2657
4926331	1	1	0	FERRIC CHLORIDE, CLASS 8, UN1773
4910313	0	0	0	TURPENTINE, CLASS 3, UN1299
4930186	0	0	0	MIXED LOAD (CONT POISON GAS CLASS 2.3, REQ PLACARD)
4912522	0	0	0	FLAM LOD, NOS, 3/1993 <PERFUMERY>
4910107	0	0	0	ALC BEV, 3/065 <BRANDY, ALCOHOLIC>
4935671	0	0	0	CORR LOD, NOS, CLASS 8, UN1760 <PAYING JOINT CMPS>
4912550	0	0	0	ETM LOD, FLAM, NOS, CLASS 3, UN3256
4914300	0	0	0	ALC BEV, COMB LOD, UN3065 <SPIRITS, GRAIN> <US>
4960149	0	0	0	ETM LOD, NOS (CONT BENZOPIRENE & DIB), 9/3257
4910432	0	0	0	ALC BEV, 3/065 <ALCOHOL SPIRITS, FRUIT, EXC GRAPE>
4910145	0	0	0	FLAM LOD, NOS, 3/1993 <BOND BREAKING COMPOUND>
4912409	0	0	0	ALC BEV, 3/065 <WINE, SPARKLING, OT CHAMPAGNE>
4913074	0	0	0	OXID SUBS, LOD, NOS, 5.1/3139 <PERM HAIR WAVING S>
4907885	0	0	0	PETROLEUM NAPHTHA, ACETONE, CLASS 3, UN1993
4909182	0	0	0	FLAM LOD, NOS (CONT METHANOL), CLASS 3, UN1993
2999435	0	0	0	PACKING OR WIPING WASTE, MFG, NEC, OILED
4946987	0	0	0	LEAD SULFIDE, CLASS 9, UN3077 <CMPS, LEADZ> <US>
4914107	0	0	0	ALC BEV, COMB LOD, UN3065 <BRANDY, ALCOHOLIC> <US>
2084115	0	0	0	VERMOUTH, OT IN TANK CARS
4936315	0	0	0	CMPS, CLEAN LOD, 8/1760 <SCOURING OR WASHING> <US>
4910309	0	0	0	ALC BEV, 3/065 <SPIRITS, GRAIN, NEUTRAL, IN BOND>
2034110	0	0	0	COPRA (DRIED COCOANUT MEAT)
4912020	1	0	-1	XYLENE, ETHYL BENZENE, CLASS 3, UN1993 <ADDITIVES>
4916128	1	0	-1	ALUMINUM ALKYL, 4.2/3051 <TOLUENE, W ALUM ALKYL>
4910272	1	0	-1	BENZENE, CLASS 3, UN1215
4910190	1	0	-1	XYLENE, ETHYL BENZENE, PETROLEUM PARAFFINS, 3/1993
4912308	1	0	-1	FLAM LOD, NOS, 3/1993 <DEFOAMING COMPOUND, NEC, LO>
4909135	1	0	-1	N,N-DIMETHYLFORMAMIDE, CLASS 3, UN2265
4912612	1	0	-1	STODDARD SOLVENT, CLASS 3, UN1993

ATTACHMENT C-4
LIST OF HAZARDOUS MATERIALS TO BE TRANSPORTED

STCC	Pre-Acquisition Cars Per Year	Post-Acquisition Cars Per Year	Change in Cars Per Year	Description
4910130	1	0	-1	FLAM LQD, NOS, 3/1993 <CARBON, GUM OR SLUDGE REMOV>
4910224	1	0	-1	TOLUENE, XYLENE, PETROLEUM NAPHTHA, CLASS 3, UN1993
4910236	1	0	-1	FLAM LQD, NOS, 3/1993 <MOTOR FUEL, NEC, LIQUID>
4910273	1	0	-1	BENZENE, ISOPRENE, CLASS 3, UN1255
4907255	1	0	-1	METHYL METHACRYLATE MONOMER, UNINHIBITED, 3/1993
4910238	1	0	-1	NAPHTHA, 3/1255 <PETROLEUM CONDENSATE>
4908112	1	0	-1	BENZENE, CLASS 3, UN1993
4910257	2	0	-2	NAPHTHA, 3/1255 <PETROLEUM DISTILLATE FUEL OIL>
4909360	2	0	-2	DIISOBUTYLENES, SEC-BUTYL ALCOHOL, CLASS 3, UN1993
4910211	2	0	-2	TOLUENE, XYLENE, ETHYL BENZENE, HEXANE, CUM, 3/1255
4910212	3	0	-3	TOLUENE, XYLENE, ETHYL BENZENE, HEXANE, NAP, 3/1255
4913840	5	0	-5	PETROLEUM NAPHTHA, TOLUENE, CLASS 3, UN1993
4910843	5	0	-5	XYLENE, SOLVENT NAPHTHA, CLASS 3, UN1993
4910203	9	0	-9	XYLENE, ETHYL BENZENE, CLASS 3, UN1993
TOTAL	247063	256806	9743	

ATTACHMENT C-3 NEW KEY ROUTES AND MAJOR KEY ROUTES RAIL LINE SEGMENTS

Segment Number	Segment Description	To Station	Road (miles)	Passenger and Freight Train Traffic Per Day				Freight Gross Tons Per Day				Hazardous Materials Cars Per Day				Key Route Analysis		
				Pre-Acquisition Freight Trains	Post-Acquisition Freight Trains	% Change Freight Trains	Pre-Acquisition Gross Tons	Post-Acquisition Gross Tons	% Change Gross Tons	Pre-Acquisition Hazardous Materials Cars	Post-Acquisition Hazardous Materials Cars	% Change Hazardous Materials Cars	Existing Key Route	New Key Route	New Major Key Route			
ILLINOIS																		
157	Chicago 21st Street	IL	IC	1.3	8.9	12.6	12.1	-3%	45,410	66,264	40%	14,600	18,615	28%	X			
158	Bridgeport	IL	IC	0.3	8.9	8.1	8.1	0%	39,423	40,263	2%	14,449	14,924	3%	X			
170	Chicago	IL	IC	1.3	4.9	12.6	12.1	-3%	45,410	66,264	46%	14,600	18,615	28%	X			
171	Chicago 94 Street	IL	IC	1.3	4.9	12.6	12.1	-3%	45,410	66,264	46%	14,600	18,615	28%	X			
173	Chicago 94 Street	IL	IC	2.2	4.9	16.9	16.4	-3%	49,825	70,478	41%	15,330	18,980	24%	X			
174	127th (Harvey)	IL	IC	2.7	4.9	18.7	18.3	-2%	53,263	77,441	46%	17,520	21,513	23%	X			
175	Harvey	IL	IC	3.5	4.0	19.2	20.4	39%	67,944	123,241	82%	24,268	40,911	65%	X			
183	Homewood	IL	IC	3.2	4.0	12.9	18.0	40%	79,922	118,834	49%	27,375	40,315	48%	X			
187	Matteson	IL	IC	26.6	4.0	13.9	20.0	50%	72,346	135,254	76%	26,645	54,385	104%	X			
190	Kankakee	IL	IC	5.2	4.0	13.4	20.6	52%	82,454	140,782	71%	27,010	54,385	101%	X			
205	Otto	IL	IC	20.6	4.0	13.4	20.6	52%	84,333	143,182	69%	27,010	54,385	101%	X			
235	Church	IL	IC	14.7	8.9	8.9	8.9	0%	50,000	50,000	13%	13,305	18,000	35%	X			
275	Centerville	IL	IC	14.7	8.9	8.9	8.9	0%	50,000	50,000	13%	13,305	18,000	35%	X			
280	Pineberryville	IL	IC	8.7	8.9	8.9	8.9	0%	51,266	57,195	11%	13,505	16,000	19%	X			
305	Gilman	IL	IC	46.2	4.0	12.6	18.3	45%	84,666	137,224	62%	27,375	54,750	100%	X			
313	Champaign	IL	IC	45.1	4.0	14.2	19.6	38%	89,087	141,309	59%	27,087	53,269	104%	X			
340	Marengo	IL	IC	26.9	4.0	13.6	19.0	40%	93,886	143,604	53%	31,023	50,138	61%	X			
355	Elginwood	IL	IC	14.9	4.0	16.4	21.9	33%	118,640	164,084	38%	44,895	72,635	62%	X			
360	Centralia	IL	IC	37.3	4.0	12.2	13.9	31%	50,095	108,722	37%	15,530	33,040	129%	X			
365	Centralia	IL	IC	33.5	4.0	14.7	18.4	24%	81,766	110,403	35%	16,860	33,213	107%	X			
370	Rock Island	IL	IC	11.7	4.0	15.6	19.3	24%	90,949	119,217	31%	16,860	33,213	107%	X			
375	Quincy	IL	IC	18.9	4.0	12.9	20.7	57%	78,347	105,760	35%	19,345	34,615	79%	X			
380	Carbondale	IL	IC	54.4	2.0	17.8	20.7	17%	73,926	98,686	33%	12,440	29,040	138%	X			
390	Edwardsville	IL	IC	63.6	2.0	4.3	6.0	40%	30,544	55,162	80%	29,565	37,595	27%	X			
395	Alton Junction	IL	IC	1.0	2.0	9.7	11.4	18%	71,955	87,173	22%	29,565	37,595	27%	X			
397	Alton Junction	IL	IC	6.0	2.0	11.4	13.1	15%	70,972	86,292	22%	29,565	37,595	27%	X			
410	East St. Louis	IL	IC	7.9	2.0	12.0	13.7	14%	88,520	104,339	18%	29,565	37,595	27%	X			
412	East St. Louis	IL	IC	2.1	2.0	10.0	11.7	17%	86,070	102,609	18%	29,565	37,595	27%	X			
415	Delta 2	IL	IC	42.6	2.0	9.7	11.4	18%	85,211	101,030	19%	29,565	37,595	27%	X			
1060	Thompson Junction	IL	CN	2.0	2.0	18.1	19.4	6%	77,512	102,369	32%	24,435	32,120	31%	X			
1070	Harvey	IL	CN	3.5	2.0	12.6	14.1	-11%	62,419	53,789	-14%	19,345	13,870	-28%	X			
1075	Blue Island Junction	IL	CN	7.8	2.0	10.1	9.0	-11%	49,738	40,443	-19%	19,710	11,315	-43%	X			
385	Capo	IL	IC	43.5	2.0	14.4	18.2	26%	55,200	80,071	45%	12,410	27,041	118%	X			
430	Metropolis	IL	IC	3.3	2.0	9.1	10.3	18%	10,268	13,016	27%	29,565	37,595	27%	X			
ILL. TOTAL																		
INDIANA																		
1055	Carlisle	IN	CN	11.3	0.9	19.6	19.4	-1%	84,421	102,927	22%	27,375	33,120	21%	X			
1062	South Bend	IN	CN	28.3	2.0	23.0	23.8	3%	122,118	140,575	15%	49,273	53,845	10%	X			
1064	Wabash	IN	CN	34.8	2.0	23.0	22.1	-4%	110,214	129,671	18%	47,815	54,000	13%	X			
IN. TOTAL																		
KENTUCKY																		

ATTACHMENT C-3

NEW KEY ROUTES AND MAJOR KEY ROUTES RAIL LINE SEGMENTS

Segment Description			Passenger and Freight Train Traffic Per Day				Freight Green Tonn Per Day				Hazardous Materials Cars Per Day				Key Route Analysis	
Segment Number	From Station	To Station	Length (miles)	Passenger Trains	Freight Trains	% Change Freight Trains	Pre-Acquisition Freight Tonn	Post-Acquisition Freight Tonn	% Change Freight Tonn	Pre-Acquisition Hazardous Materials Cars	Post-Acquisition Hazardous Materials Cars	% Change Hazardous Materials Cars	Existing Key Route	New Major Key Route		
430	Chillico	KY Fulton	41.9	2.0	9.7	32%	61,339	80,253	30%	38,325	45,990	20%	X			
435	Fulton	KY Drenburg	45.8	3.0	25.3	27%	107,729	140,823	29%	46,355	60,350	30%	X			
KY TOTAL			87.7													
LOUISIANA																
605	Hammond	LA Baton Rouge	43.6	2.0	2.0	0%	11,412	13,395	17%	10,583	13,340	26%	X			
610	Hammond	LA Orleans Junction	42.6	2.0	9.1	0%	44,205	44,905	2%	37,850	38,600	2%	X			
615	Orleans Junction	LA Des Moines	3.5	7.4	7.4	0%	44,530	41,643	-6%	50,005	44,165	-12%	X			
620	Deerhaven	LA Reserve	19.7	7.4	7.4	0%	33,568	34,902	4%	41,635	37,595	-10%	X			
625	Reserve	LA Remy	11.5	6.9	6.9	0%	31,431	28,490	-9%	41,435	37,195	-10%	X			
630	Remy	LA Gellmar	20.6	6.0	6.0	0%	26,318	23,376	-11%	43,435	37,595	-13%	X			
635	Gellmar	LA Ranges Route	25.1	1.7	1.7	0%	10,345	12,988	26%	17,155	22,630	32%	X			
640	Orleans Junction	LA Mays Yard	3.9	2.0	9.7	0%	34,453	33,414	-3%	35,405	31,155	-10%	X			
LA TOTAL			170.5													
MICHIGAN																
1050	Pavilion	MI South Bend	57.7	24.4	23.6	-4%	110,236	129,707	18%	48,180	54,750	14%	X			
1055	Sarnia	ON Springville	4.9	2.0	20.4	-4%	91,961	98,936	8%	43,260	46,556	8%	X			
1060	Springville	MI Springville	29.8	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1065	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1070	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1075	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1080	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1085	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1090	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1095	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1100	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1105	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1110	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1115	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1120	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1125	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1130	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1135	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1140	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1145	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1150	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1155	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1160	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1165	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1170	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1175	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1180	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1185	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1190	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1195	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1200	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1205	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1210	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1215	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1220	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1225	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1230	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1235	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1240	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1245	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1250	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1255	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1260	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1265	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1270	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1275	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1280	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1285	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1290	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1295	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1300	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1305	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1310	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1315	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1320	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1325	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1330	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1335	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1340	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1345	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1350	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1355	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1360	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1365	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1370	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1375	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1380	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1385	Springville	MI Springville	27.6	2.0	14.2	-3%	60,073	74,909	25%	29,200	32,485	11%	X			
1390	Springville	MI Springville														

**ATTACHMENT C-5
NEW KEY ROUTES AND MAJOR KEY ROUTES BAIL LINE SEGMENTS**

Segment Description				Passenger and Freight Train Traffic Per Day				Freight Gross Tons Per Day				Hazardous Materials Card Per Day				Key Route Analysis	
Segment Number	From Station	To Station	Length (miles)	Passenger Trains	Pre-Acquisition Freight Trains	Post-Acquisition Freight Trains	% Change Freight Trains	Pre-Acquisition Gross Tons	Post-Acquisition Gross Tons	% Change Hazardous Materials Cards	Pre-Acquisition Hazardous Materials Cards	Post-Acquisition Hazardous Materials Cards	% Change Hazardous Materials Cards	Existing Key Route	New Major Key Route		
1270	Roanoke	WIN Station	161.2		12.1	11.1	-8%	58,000	58,205	-1%	19,135	16,580	-13%	X			
2846	Lovelle	MB Rainy River	43.4		13.5	12.8	-5%	53,308	50,313	-6%	19,345	16,750	-13%	X			
TN TOTAL																	
MISSISSIPPI																	
640	McComb	MS McComb	52.1	2.0	11.1	11.1	0%	55,617	58,200	5%	43,435	44,530	3%	X			
466	Lake Cormorant	MS Wicks	45.6	2.0	16.5	20.3	22%	109,862	125,729	14%	44,163	47,815	8%	X			
485	Mark	MS Swan Lake	27.3	2.0	16.6	20.3	22%	109,980	125,831	14%	44,540	48,180	8%	X			
495	Swan Lake	MS Greenwood	29.4	2.0	16.6	20.3	22%	109,980	125,831	14%	44,540	48,180	8%	X			
500	Greenwood	MS Yazoo City	52.7	2.0	16.6	20.3	22%	109,017	124,928	15%	44,163	47,815	8%	X			
505	Yazoo City	MS Jackson	44.0	2.0	16.6	20.3	22%	100,088	125,087	14%	44,540	48,180	8%	X			
535	Jackson	MS Brookhaven	33.0	2.0	15.1	15.1	0%	79,473	82,758	4%	42,765	43,800	3%	X			
540	Jackson	MS Saratoga	49.9		7.1	7.1	0%	46,219	45,958	-1%	10,950	9,400	-13%	X			
790	Saratoga	MS Hainesburg	40.9		7.1	7.1	0%	42,493	42,235	-1%	10,280	9,125	-11%	X			
595	Brookhaven	MS McComb	24.6	2.0	11.1	11.1	0%	59,059	61,725	4%	43,880	44,895	3%	X			
MS TOTAL																	
NEW YORK																	
1445	Pl Erie	OH Ballinger	11.3		8.3	8.3	0%	21,925	25,559	15%	16,423	15,695	-4%	X			
NY TOTAL																	
OHIO																	
1165	Lang	OH Toledo	10.1		9.6	9.9	3%	42,772	41,688	-3%	10,950	11,315	3%	X			
OH TOTAL																	
TENNESSEE																	
453	Woodstock	TN Grapeland WY	15.7		20.7	26.2	26%	109,417	148,305	36%	48,910	71,125	46%	X			
475	West Junction	TN Lake Cormorant	15.2		16.6	20.3	22%	109,862	125,729	14%	44,163	47,815	8%	X			
440	Dyersburg	TN Winnsboro	68.0		19.9	23.1	17%	108,116	147,207	36%	46,335	69,390	50%	X			
455	Memphis Yards	TN Memphis Yards	2.3		22.8	27.7	22%	113,644	140,289	23%	47,683	58,257	22%	X			
TN TOTAL																	

* These segments are currently managed as key routes by CTN.

* These segments are no longer key routes after the proposed Acquisition.

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ATTACHMENT C-4 ALL RAIL LINE SEGMENTS WITH AN ESTIMATED INCREASE IN HAZARDOUS MATERIALS ACTIVITY

Segment Number	Segment Description										Passenger and Freight Trains Per Day				Freight Gross Tons Per Day				Hazardous Materials Cars Per Year				Analysis	
	From Station	To Station	Road	Length (miles)	Passenger Trains	Pre-Accession Freight Trains	Post-Accession Freight Trains	% Change Freight Trains	Pre-Accession Gross Tonnage	Post-Accession Gross Tonnage	% Change Gross Tonnage	Pre-Accession Hazardous Materials Cars	Post-Accession Hazardous Materials Cars	% Change Hazardous Materials Cars	Existing Key Route	New Key Route	New Major Key Route							
IOWA																								
111	Des Moines	IA Des Moines	IA IC	40.6		3.7	6.0	16%	31,203	30,202	21%	1,650	4,012	10%										
112	Des Moines	IA Des Moines	IA IC	6.1		9.1	9.1	3%	34,809	40,910	28%	3,650	4,745	28%										
120	Des Moines	IA Des Moines	IA IC	18.2		3.4	2.0	1%	5,952	6,248	5%	0	361											
122	Des Moines	IA Des Moines	IA IC	3.4		2.0	2.0	0%	5,861	6,248	5%	0	361											
IA TOTAL																								
ILLINOIS																								
100	Bridgeport	IL Bridgeport	IL IC	3.8		9.7	9.7	3%	38,377	39,299	31%	4,180	2,682	25%										
102	Bridgeport	IL Bridgeport	IL IC	0.7		9.7	9.7	25%	34,877	63,623	64%	4,280	8,395	92%										
104	Bridgeport	IL Bridgeport	IL IC	2.5		6.4	6.4	3%	24,441	30,910	107%	3,650	8,395	128%										
127	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	1.3	8.9	12.6	12.6	3%	43,410	68,394	46%	14,600	18,415	26%										
138	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	6.3	8.9	8.1	8.1	0%	39,473	40,763	3%	14,440	14,924	3%										
140	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	1.3	8.9	12.6	12.6	3%	43,410	68,394	46%	14,600	18,415	26%										
171	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	11.3	4.9	12.6	12.6	3%	54,410	68,394	40%	14,600	18,415	26%										
172	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	5.2	4.9	12.6	12.6	3%	40,415	70,818	41%	15,330	18,940	24%										
174	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
176	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
178	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
185	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
187	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
190	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
205	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
230	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
235	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
275	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
280	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
305	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
315	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
320	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
325	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
340	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
345	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
350	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
355	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
360	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
365	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
370	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
375	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
380	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
390	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
395	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
397	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
410	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
412	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
415	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.7	4.9	12.6	12.6	3%	51,203	71,359	46%	15,330	18,940	24%										
1060	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	2.0		14.3	14.3	6%	77,513	102,169	31%	24,425	32,130	31%										
345	Chicago 2nd Street	IL Chicago 2nd Street	IL IC	43.5	2.0	14.4	14.4	26%	53,209	80,971	67%	32,410	21,810	188%										

**ATTACHMENT C-6
ALL RAIL LINE SEGMENTS WITH AN ESTIMATED INCREASE IN HAZARDOUS MATERIALS ACTIVITY**

Segment Description		Passenger and Freight Train Traffic Per Day				Freight Gross Tons Per Day				Hazardous Materials Cars Per Year				Analysis	
Segment Number	From Station	To Station	Length (miles)	Passenger Trains	Pre-Application Freight Trains	Post-Application Freight Trains	% Change Freight Trains	Pre-Application Gross Tons	Post-Application Gross Tons	% Change Hazardous Materials	Existing Key Route	New Key Route	New Major Line		
INDIANA															
420	Ellettsville	EL CHILLER	3.3		9.1	10.8	18%	10,364	13,046	27%	X	X			
IN TOTAL															
425	Greensburg	IN Thomas Junction	11.3	6.5	19.6	19.4	19%	64,321	160,977	22%	X	X			
430	South Bend	IN South Bend	38.3		31.8	31.8	-5%	122,118	140,573	13%	X	X			
435	Wabash	IN Ellettsville	34.8		23.0	22.1	-4%	180,214	129,621	13%	X	X			
IN TOTAL															
KENTUCKY															
430	Claire	KY Nolen	41.9		6.0	9.7	22%	61,529	89,753	30%	X	X			
435	Paducah	KY Dymally	43.8	3.0	10.0	25.3	27%	107,259	146,823	36%	X	X			
KY TOTAL															
LOUISIANA															
405	Shreveport	LA Baton Rouge	43.8		2.0	2.0	0%	11,413	13,350	17%	X	X			
415	Gretna	LA Baton Rouge	23.1		1.7	1.7	0%	10,345	12,918	20%	X	X			
LA TOTAL															
MICHIGAN															
1000	Flint	MI South Bend	37.7		24.4	23.6	-4%	110,230	129,707	18%	X	X			
1005	Southfield	MI Ann Arbor	29.3	3.0	14.9	14.2	-5%	60,073	74,929	25%	X	X			
1015	Flint City	MI Detroit	27.8	2.0	13.9	14.2	2%	60,073	74,929	25%	X	X			
1020	Berwyn	MI Flint	3.5	2.0	14.2	14.2	0%	57,914	74,929	29%	X	X			
1025	Flint	MI Flint	3.5	2.0	21.3	21.3	0%	69,463	89,763	29%	X	X			
1030	Swartz Creek	MI Detroit	21.7	2.0	21.3	21.3	0%	69,463	89,763	29%	X	X			
1035	Swartz Creek	MI Bunker Creek	8.2	2.0	26.3	24.0	-9%	107,377	120,341	19%	X	X			
1040	Swartz Creek	MI Pontiac	31.3		24.4	23.0	-6%	110,126	129,707	19%	X	X			
1045	Bay City	MI River Rouge	4.2		19.0	18.9	-1%	74,011	74,011	0%	X	X			
1050	River Rouge	MI Flint	40.0		23.3	23.4	0%	93,903	94,451	5%	X	X			
1101	Flint Tower	MI Oak Ridge	3.9		27.5	27.5	0%	116,224	129,012	11%	X	X			
1105	Dearborn	MI Flint	2.2		30.4	30.4	0%	116,333	119,813	3%	X	X			
1135	Dearborn	MI Milwaukee Junction	1.1		9.7	10.3	6%	24,043	34,043	42%	X	X			
1140	Milwaukee Junction	MI Vineland	3.0	4.0	21.4	23.3	9%	36,220	91,145	250%	X	X			
1140	Bay City	MI Detroit	4.2		6.4	6.4	0%	15,349	18,533	21%	X	X			
1150	Flint Tower	MI Detroit	18.6		10.7	10.8	1%	46,636	47,115	1%	X	X			
1170	Flint	MI Detroit	23.5		4.3	4.3	0%	14,361	13,544	-6%	X	X			
1220	Milwaukee Junction	MI Detroit	6.4	4.0	15.1	13.6	-10%	52,715	32,766	-38%	X	X			
1225	Dearborn	MI Detroit	14.6	4.0	14.4	12.8	-11%	52,181	30,551	-42%	X	X			
1225	Dearborn	MI Pontiac	0.9	4.0	14.4	12.8	-11%	52,181	30,551	-42%	X	X			
1230	Pontiac	MI West Farms	2.2		13.4	13.3	-1%	53,652	59,039	10%	X	X			
1235	West Farms	MI Detroit	18.3		13.6	13.3	-1%	53,652	59,039	10%	X	X			
1400	Dearborn	MI Long	16.7		9.2	9.1	-1%	10,928	11,315	3%	X	X			
1400	Dearborn	MI Long	16.7		9.2	9.1	-1%	10,928	11,315	3%	X	X			
1000	Flint	MI Southfield	40.0	2.0	22.4	20.4	-9%	91,901	94,996	3%	X	X			
MI TOTAL															
MISSISSIPPI															
600	Bastrop	LA JC	42.3	3.0	11.1	11.1	0%	55,617	58,200	5%	X	X			
LA TOTAL															

**ATTACHMENT C-6
ALL RAIL LINE SEGMENTS WITH AN ESTIMATED INCREASE IN HAZARDOUS MATERIALS ACTIVITY**

Segment Number	Segment Description	Freight and Freight Train Miles Per Day				Freight Car Miles Per Day				Hazardous Materials Cars Per Year				Analysis		
		Length (Miles)	Passenger Trains	Pre-Acquisition Freight Trains	Post-Acquisition Freight Trains	% Change Predicted Traffic	Pre-Acquisition Freight Car Miles	Post-Acquisition Freight Car Miles	% Change Hazardous Materials	Pre-Acquisition Hazardous Materials Cars	Post-Acquisition Hazardous Materials Cars	% Change Hazardous Materials	Hazardous Materials Cars Per Year	Existing Key Materials	New Key Materials	New Major Key Materials
419	Lake Carmichael	MS JC	45.6	16.6	20.3	21%	109,862	125,729	14%	44,165	47,815	8%	8%	X		
480	Maple	MS JC	27.3	16.6	20.3	21%	109,862	125,729	14%	44,165	47,815	8%	8%	X		
491	Swan Lake	MS JC	28.4	16.6	20.3	21%	109,862	125,729	14%	44,165	47,815	8%	8%	X		
500	Unimproved	MS JC	32.7	16.6	20.3	21%	109,862	125,729	14%	44,165	47,815	8%	8%	X		
508	Yukon City	MS JC	44.0	16.6	20.3	21%	109,862	125,729	14%	44,165	47,815	8%	8%	X		
531	Jackson	MS JC	53.0	18.1	18.1	0%	79,471	82,738	4%	42,703	43,801	3%	3%	X		
591	Brookhaven	MS JC	24.6	11.1	11.1	0%	59,858	61,734	4%	43,801	44,895	3%	3%	X		
MS TOTAL			331.6													
OH																
1465	Lake	OH CN	10.1	5.6	9.9	36%	42,772	41,638	-3%	10,950	11,315	3%	3%	X		
OH TOTAL																
TR																
433	Woodstock	TR JC	15.1	20.7	26.2	26%	109,417	148,305	36%	44,090	71,175	46%	46%	X		
475	West Amherst	TR JC	15.2	16.6	20.3	22%	109,417	125,729	14%	44,165	47,815	8%	8%	X		
480	Dyersburg	TR JC	19.0	19.0	23.3	21%	109,417	147,287	36%	44,165	60,350	36%	36%	X		
495	Memphis North	TR JC	2.3	21.1	31.3	22%	113,644	140,289	23%	47,688	58,757	23%	23%	X		
TR TOTAL			59.7													

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ATTACHMENT C-7
MAINLINE HAZARDOUS MATERIALS RELEASE RESULTS

Operating Segment Number	Segment Description		Operating Segment Origin	Operating Segment Destination	Road (Miles)	Passenger Trains	Passenger and Freight Train Traffic Per Day				Freight Train Traffic Per Day				Passenger and Freight Train Traffic Per Year				Freight Train Traffic Per Year			
	Pre-Acquisition Freight Trains	Post-Acquisition Freight Trains					% Change Freight Trains	Pre-Acquisition Material Mails	Post-Acquisition Material Mails	% Increase Material Mails	Pre-Acquisition Gross Tons	Post-Acquisition Gross Tons	% Change Gross Tons	Pre-Acquisition Miles	Post-Acquisition Miles	% Change Miles	Pre-Acquisition Gross Tons	Post-Acquisition Gross Tons	% Change Gross Tons	Pre-Acquisition Miles	Post-Acquisition Miles	% Change Miles
115	Delaware	LA	Delaware	LA	40.6		3.7	6.8	82%	3,696	4,003	8%	102	102	0%	31,203	32,303	3%	8,356	9,114	9%	
117	Delaware	LA	Delaware	LA	6.1		9.1	9.4	3%	3,258	4,745	46%	20%	20%	0%	34,202	47,091	38%	10,111	11,144	10%	
120	Marshall	LA	Marshall Junction	LA	35.2		3.8	3.0	8%	0	363	363	0%	0%	0%	0%	3,668	6,168	68%	20,323	20,323	0%
123	Marshall Junction	LA	Central Junction	LA	3.4		3.8	2.4	6%	0	363	363	0%	0%	0%	0%	5,168	5,168	0%	20,323	20,323	0%
LA TOTAL																						
HAWAII																						
200	Bridges	LA	BRC-CCP Crossing	LA	2.8		9.7	9.6	2%	4,301	7,663	78%	73%	73%	0%	38,477	59,299	54%	3,935	2,236	-43%	
202	BRC-CCP Crossing	LA	Blawie Yard	LA	0.7		9.7	12.1	24%	4,301	8,293	91%	91%	91%	0%	38,477	62,627	64%	3,935	1,762	-55%	
204	Blawie Yard	LA	Blawie Yard	LA	5.3		6.6	9.0	37%	3,610	8,293	130%	130%	130%	0%	34,341	58,910	71%	3,736	4,222	13%	
207	C. M. Smith Street	LA	Blawie Yard	LA	1.2		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
210	Bridges	LA	Blawie Yard	LA	6.3		5.1	3.1	-4%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
212	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
213	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
214	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
215	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
216	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
217	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
218	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
219	Chicago 2nd Street	LA	Chicago 2nd Street	LA	1.3		12.6	12.4	-1%	14,000	14,015	0%	0%	0%	0%	43,110	43,314	0%	1,418	1,418	0%	
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862	17%	1,366	1,366	0%
220	Adams Plots	LA	Springfield	LA	23.1		2.3	3.1	62%	0	130	130	0%	0%	0%	0%	11,851	13,862				

**ATTACHMENT C-7
MAINLINE HAZARDOUS MATERIALS RELEASE RESULTS**

Segment Description										Passenger and Freight Train Traffic Per Day				Hazardous Materials Cars Per Year				Freight Cars Per Day				Analysis	
Operating Segment Number	Operating Segment Origin	Operating Segment Destination	Length (miles)	Passenger		Pre-Acquisition Freight Trains	Post-Acquisition Freight Trains	% Change Freight Trains	Pre-Acquisition Hazardous Materials Cars	Post-Acquisition Hazardous Materials Cars	% Increase Hazardous Materials Cars	Pre-Acquisition Acquisition Gross Tons	Post-Acquisition Acquisition Gross Tons	% Change Acquisition Gross Tons	Pre-Acquisition Release Per Mile	Post-Acquisition Release Per Mile							
				Trains	Trains																		
505	Vassar City	MS Jackson	115	1C	44.0	2.0	20.3	22.9	44,530	43,180	1%	110,043	125,087	12%	596	596							
535	Wendover	MS Jackson	115	1C	53.0	2.0	15.1	15.1	42,705	43,100	1%	79,473	82,738	4%	590	1,120							
595	Wendover	MS Jackson	115	1C	24.0	2.0	11.1	11.1	44,895	44,895	0%	59,069	61,223	4%	1,051	1,076							
601	Wendover	MS Jackson	115	1C	52.2	2.0	11.1	11.1	44,435	44,530	0%	55,617	59,200	5%	1,055	1,076							
MS TOTAL						22.8																	
CHRD																							
1163	Lang	OH Toledo	OH	CN	10.1		9.6	9.6	40,950	13,315	3%	42,772	41,643	-3%	343	355							
OH TOTAL				10.1																			
TRNS																							
448	Dyersburg	TN Woodstock	TN	IC	60.0	2.0	19.9	29%	46,354	69,350	50%	108,136	127,207	16%	925	610							
453	Wendover	TN Woodstock	TN	IC	15.7		20.7	26%	48,010	71,173	48%	108,117	141,216	30%	414	360							
455	Memphis Yard	TN Memphis Yard	TN	IC	2.3		22.8	22%	47,648	54,217	22%	113,044	140,289	23%	377	327							
455	Wendover	TN Lake County	TN	IC	13.2	2.0	10.0	22%	44,163	47,615	8%	109,893	123,219	12%	596	973							
TN TOTAL				89.2																			

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ATTACHMENT C-3
RAIL YARD HAZARDOUS MATERIALS RELEASE RESULTS

State	Vint Name	E&P Date	Pre-Application Cars Switched Per Day			Post-Application Cars Switched Per Day			% Change Material Costs Material Costs Switched	Increase In Material Costs Switched	Pre-Application Material Costs Material Costs Switched	Post-Application Material Costs Material Costs Switched	Pre-Application Interval between Material Costs Material Costs Switched (Years)	Post-Application Interval between Material Costs Material Costs Switched (Years)
			Cars Switched	Cars Blocked - Switched	Material Costs Material Costs Switched	Cars Switched	Cars Blocked - Switched	Material Costs Material Costs Switched						
AL	Alabama	EC	307	51	256	281	7	274	2%	2%	0.0119	0.0142	72	76
IL	Illinois	EC	285	2	283	261	4	279	5%	5%	0.0094	0.0096	407	402
IL	California	EC	0	52	0	0	47	0	47%	47%	0.0094	0.0096	2,474	1,735
IL	California	EC	340	264	76	431	211	220	27%	27%	0.0162	0.0166	63	51
IL	California	EC	473	36	437	224	16	208	49%	49%	0.0111	0.0149	53	37
IL	California	EC	11	0	11	13	0	0	17%	17%	0.0004	0.0005	2,356	2,662
IL	California	EC	320	29	291	371	21	350	14%	14%	0.0141	0.0141	81	31
IL	California	EC	40	40	0	41	41	0	36%	36%	0.0065	0.0067	2,023	1,483
IL	California	EC	13	41	28	39	41	0	15%	15%	0.0066	0.0067	1,564	1,349
IL	California	EC	249	59	190	243	34	206	25%	25%	0.0090	0.0109	401	400
IL	California	EC	34	0	34	33	34	0	19%	19%	0.0044	0.0044	241	624
IL	California	EC	0	41	41	42	0	0	3%	3%	0.0017	0.0034	372	277
IL	California	EC	536	53	483	753	100	653	34%	34%	0.0218	0.0218	44	31
IL	California	EC	0	155	155	205	205	0	47%	47%	0.0099	0.0099	510	361
IL	California	EC	72	41	31	79	41	38	7%	7%	0.0032	0.0032	208	288
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	53,045
IL	California	EC	78	41	37	86	41	45	5%	5%	0.0031	0.0031	340	324
IL	California	EC	64	6	58	66	33	33	43%	43%	0.0035	0.0036	364	277
IL	California	EC	95	0	95	85	41	44	4%	4%	0.0046	0.0047	239	349
IL	California	EC	320	23	297	258	23	235	17%	17%	0.0067	0.0067	116	114
IL	California	EC	0	31	31	0	31	0	16%	16%	0.0044	0.0044	2,534	2,213
IL	California	EC	33	0	33	57	0	4	4%	4%	0.0031	0.0031	465	476
IL	California	EC	469	29	438	162	46	116	10%	10%	0.0066	0.0066	161	137
IL	California	EC	267	37	230	317	33	284	13%	13%	0.0046	0.0046	93	64
IL	California	EC	210	49	161	258	49	209	4%	4%	0.0060	0.0060	117	112
IL	California	EC	91	41	50	90	0	0	3%	3%	0.0035	0.0035	390	399
IL	California	EC	92	41	51	92	0	0	3%	3%	0.0035	0.0035	288	294
IL	California	EC	177	26	151	278	34	244	3%	3%	0.0044	0.0044	64	76
IL	California	EC	363	0	363	359	0	359	0%	0%	0.0039	0.0039	27	37
IL	California	EC	473	156	317	474	256	218	6%	6%	0.0095	0.0097	51	44
IL	California	EC	0	63	63	90	0	0	2%	2%	0.0033	0.0033	403	360
IL	California	EC	0	0	0	13	13	0	43%	43%	0.0031	0.0031	371	221
IL	California	EC	144	0	144	0	0	0	2%	2%	0.0035	0.0035	190	187
IL	California	EC	94	41	53	102	0	1	1%	1%	0.0034	0.0034	291	265
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	3,229	2,271
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	39	37
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL	California	EC	0	0	0	0	0	0	0%	0%	0.0000	0.0000	0	0
IL														

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ATTACHMENT C-9
COLLISION ESTIMATES FOR RAIL LINE SEGMENTS WITH PASSENGER TRAINS AND AN INCREASE
OF AT LEAST ONE FREIGHT TRAIN PER DAY

Operating Segment Number	Operating Segment Origin	Operating Segment Destination	Road	Length (miles)	Passenger Trains Per Day	Passenger Trains Per Year	Pre-Acquisition Freight Trains Per Day	Pre-Acquisition Freight Trains Per Year	Post-Acquisition Freight Trains Per Day	Post-Acquisition Freight Trains Per Year	Change % GTN	Pre-acquisition Interval between Passenger-Freight Train Collisions (years)	Post-Acquisition Interval between Passenger-Freight Train Collisions (years)
ILLINOIS													
175	Harvey	IL Homewood	IL	10	4	1,460	19.2	2,024	26.8	9,779	32%	5,818	3,604
185	Homewood	IL Mazon	IL	5.2	4	1,460	12.0	4,634	18.0	6,570	49%	3,377	2,413
197	Mazon	IL Mazon	IL	26.6	4	1,460	12.9	4,094	20.0	7,300	76%	660	425
191	Franklin	IL Ohio	IL	5.2	4	1,460	13.4	4,906	30.6	7,512	71%	3,377	2,200
203	Ohio	IL Illinois	IL	20.6	4	1,460	13.4	4,906	30.6	7,512	69%	853	557
303	Illinois	IL Champaign	IL	46.3	4	1,460	12.6	4,902	18.3	6,580	62%	370	261
313	Champaign	IL Mazon	IL	45.1	4	1,460	14.2	5,163	19.6	7,150	59%	389	281
340	Mazon	IL Mazon	IL	26.9	4	1,460	13.6	4,953	19.0	6,939	53%	643	466
355	Elgin	IL Elgin	IL	14.0	4	1,460	10.4	3,997	21.9	7,983	38%	1,179	815
360	Elgin	IL Centralia	IL	37.3	4	1,460	12.2	4,433	15.9	5,793	37%	471	360
365	Centralia	IL Centralia	IL	23.5	4	1,460	14.2	5,377	18.4	6,728	35%	747	597
370	Centralia	IL Du Quoin	IL	11.7	4	1,460	13.0	3,687	19.3	7,037	31%	1,201	1,213
375	Du Quoin	IL Carbondale	IL	18.9	4	1,460	17.0	6,205	20.7	7,563	35%	920	762
380	Carbondale	IL Carbondale	IL	34.4	2	730	17.0	6,205	20.7	7,563	35%	646	530
385	Carbondale	IL Fulton	IL	43.5	2	730	14.4	5,271	18.2	6,628	47%	807	642
IL TOTAL													
383.6													
MICHIGAN													
1140	Marquette Junction	MI Nileswood	MI	3.0	4	1,460	21.4	7,822	23.3	8,497	20%	5,854	5,389
MI TOTAL													
3.0													
TENNESSEE													
435	Dyersburg	TN Pullen	TN	45.8	2	730	19.9	7,249	25.3	9,235	36%	767	602
440	Dyersburg	TN Woodstock	TN	66.0	2	730	19.9	7,249	25.3	9,235	36%	532	418
475	West Jackson	TN Lake County	MS	12.2	2	730	16.6	6,044	20.3	7,402	14%	2,311	1,867
TN TOTAL													
127.0													
MISSISSIPPI													
480	Lake County	MS Marks	MS	45.6	2	730	16.6	6,044	20.3	7,402	14%	770	629
485	Marks	MS Swan Lake	MS	27.3	2	730	16.6	6,044	20.3	7,402	14%	1,287	1,051
495	Swan Lake	MS Greenwood	MS	29.4	2	730	16.6	6,044	20.3	7,402	14%	1,193	976
500	Greenwood	MS Yazoo City	MS	52.7	2	730	16.6	6,044	20.3	7,402	15%	667	544
505	Yazoo City	MS Jackson	MS	44.0	2	730	16.6	6,044	20.3	7,402	14%	790	652
MS TOTAL													
179.0													

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**ATTACHMENT C-10
COMMON CORRIDOR ANALYSIS**

Analysis	Segment Description		
	Harvey, IL to Homewood, IL	Homewood, IL to Matteson, IL	Matteson, IL to University Park, IL
Length (Miles)	3.5	5.2	3.0
Number of Passenger Trains Per Day	48	48	48
Change in the Number of Freight Trains Per Day	7.6	3.1	7.1
Accident Rate (Train-Miles)	0.000012	0.000012	0.000012
Average Exposure Time of a Passenger Train (Minutes)	2	2	2
Exposure of Train in Fraction of a Day	0.07	0.07	0.07
Average Exposure Time of People on Platforms (Minutes)	10	10	10
Exposure of People in Fraction of a Day	0.33	0.33	0.33
Number of Stations Per Segment	4	4	2
Length of IC Track Adjacent to Metra Stations (Miles)	0.57	0.57	0.28
Length of IC Track Away from Metra Stations (Miles)	2.93	4.63	2.72
Change in the Predicted Annual Accidents on Mainlines	0.00028	0.00030	0.00025
Change in the Interval Between Predicted Accidents on Mainlines (Years)	3,546	3,297	4,047
Change in the Predicted Annual Accidents near Train Stations	0.00008	0.00006	0.00004
Change in the Interval Between Predicted Accidents near Train Stations (Years)	11,839	17,390	25,037
Change in the Predicted Annual Accidents Involving Platforms	0.00035	0.00024	0.00016
Change in the Interval Between Predicted Accidents Involving Platforms (Years)	2,875	4,223	6,080

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APPENDIX D
TRANSPORTATION ANALYSIS
METHODS AND RESULTS

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APPENDIX D

TRANSPORTATION ANALYSIS METHODS AND RESULTS

The proposed Canadian National Railway Company/Illinois Central Corporation (CN/IC) Acquisition would result in changes in train traffic routes across individual rail line segments and in activity levels at some intermodal facilities. These changes could affect local and long-distance truck traffic patterns, vehicle delays at highway/rail at-grade crossings, and passenger rail service on rail line segments that carry both freight and passenger train traffic. To assess the potential impacts of the proposed CN/IC Acquisition on transportation systems, the Section of Environmental Analysis (SEA) evaluated the proposed changes for the following transportation areas:

- Passenger rail service and increased freight train activity on certain rail line segments.
- Vehicle delay at highway/rail at-grade crossings.
- Emergency vehicle response and potential delays.
- Local traffic and changes in activity at intermodal facilities.
- The national highway system and potential effects of the freight diversion from truck transport to rail transport.
- Navigation and train traffic over bridges.

D.1 OVERVIEW

Appendix D summarizes SEA's methods of identifying and evaluating potential effects of the proposed CN/IC Acquisition on transportation. This Appendix includes discussions of the following: (1) applicable Board regulations for transportation impact analysis; (2) the threshold screening process; (3) data sources, data types, and assumptions; and (4) criteria for determining whether the potential effects would be significant. This Appendix also presents the detailed information on existing conditions and analysis results that SEA used to develop its conclusions regarding impacts for navigation and at construction projects.

D.2 APPLICABLE REGULATIONS AND GUIDANCE

The Surface Transportation Board (Board) regulations at 49 CFR 1105.7(c)(2) require SEA to evaluate potential changes to local and regional traffic and transportation systems that would result from the proposed CN/IC Acquisition. Pursuant to the regulations, SEA evaluated the

effects of the proposed CN/IC Acquisition on transportation systems, patterns, and the estimated amount of passenger or freight traffic that would "be diverted to other transportation systems or modes."

D.3 SCREENING PROCESS

SEA used the Board's thresholds for environmental analysis to screen rail activities that would require an evaluation of transportation effects. Table D-1, "The Board's Thresholds for Transportation Analysis," summarizes these thresholds.

**TABLE D-1
THE BOARD'S THRESHOLDS FOR TRANSPORTATION ANALYSIS**

Impact Area	Threshold(s)
Passenger Rail Service	One or more additional freight trains per day for rail line segments with passenger rail service.
Highway/Rail At-grade Crossings	In air quality nonattainment or Class I areas: rail line segments with three or more additional freight trains per day or a 50 percent increase in annual gross ton-miles. In air quality attainment areas: rail line segments with eight or more additional freight trains per day or 100 percent increase in annual gross ton-miles.
Intermodal Facilities	Increase of 50 or more over-the-road trucks per day or a 10 percent increase in average daily traffic volume for affected roads.

D.4 DATA SOURCES AND TYPES

SEA used the following data sources and types in their analysis of transportation effects:

- Federal Railroad Administration (FRA) location and inventory databases. These databases include information about highway/rail at-grade crossings, average daily traffic (ADT) at highway/rail at-grade crossings, and train speed.
- Current passenger and commuter rail schedules for affected rail line segments.
- State and local department of transportation ADT data for affected roadways.
- The Applicants' proposed Operating Plan, traffic studies, and historical operating data from intermodal facilities.

D.5 TRANSPORTATION ANALYSIS

D.5.1 Effects on Passenger Rail Service

SEA identified and evaluated the potential effects of increased freight train activity on passenger rail service. The analysis included both intercity (Amtrak) and commuter rail operations. SEA analyzed all rail line segments with passenger rail service with a proposed increase of one or more freight trains per day. The analysis included data from the following:

- The Applicants' Operating Plan.
- Train volumes and schedules (both passenger and freight).
- Existing capacity of affected rail line segments.
- Current operating agreements between passenger service operators and the Applicants.

Based on these factors, SEA determined whether the Applicants' rail line segments could accommodate the proposed higher freight train volumes. SEA considered the effect on passenger service to be significant if an increase in freight train operations would reduce passenger train service by one or more trains per day. SEA concluded that no significant effects on passenger service would occur if the analysis showed that rail line segments could accommodate the higher train volumes. Attachment D-1, "Rail Line Segments with Passenger Service, in Descending Order of Change in Freight Activity," summarizes the changes on rail line segments with passenger service.

To identify effects on capacity for a series of rail line segments (i.e., a rail corridor) that exceeded the Board's threshold for analysis, SEA identified the rail line segment with least excess capacity, using a model CN developed to calculate the train running time between track sidings.¹ SEA then conducted a qualitative review of site-specific factors to evaluate potential effects on passenger rail service for that specific segment. SEA predicted no adverse effect on passenger rail service on the rail corridor if the existing passenger train traffic plus the estimated freight train traffic on the worst case segment would be less than the estimated capacity of that rail line segment.

To identify the impacts on individual rail line segments (i.e., segments not in a corridor that exceeded the Board's thresholds for analysis) SEA conducted a similar qualitative review of each segment that met or exceeded the Board's thresholds for environmental analysis.

In its qualitative analysis, SEA considered several factors including track design, locomotive horsepower, train length, and distance between track sidings. SEA compared the estimated

¹ Canadian National Railroad. *Train Performance Calculator*.

capacity of the most congested rail line segment with estimated number of trains (both freight and passenger) on that rail line segment following the proposed CN/IC Acquisition to determine whether the proposed Acquisition would affect passenger service.

Using this model, SEA calculated that the longest train running time would occur on the rail line segment between Carbondale, Illinois and Cairo, Illinois; therefore, this rail line segment would be the most restricted in terms of capacity. The longer running time would occur because of slower train speeds due to tighter curves, steeper grades, and greater distance between track sidings on this rail line segment. Based on train running times, SEA conservatively estimated that this rail line segment would accommodate a total of 26 trains per day (freight and passenger).² SEA compared this number to its post-Acquisition estimate for train traffic on this rail line segment and concluded that the proposed CN/IC Acquisition would not affect passenger rail operations because only 22.7 trains per day would operate over this rail line segment (i.e., 20.7 freight trains and two passenger trains).

SEA also determined the following in their analysis of capacity effects on the Chicago-to-New Orleans rail line corridor:

- This rail line corridor has no commuter service.
- The Applicants operate a second north-south rail line between Edgewood, Illinois and Fulton, Kentucky. Freight trains can use this rail line corridor to alleviate any bottlenecks that may occur on the parallel rail corridor between Carbondale, Illinois and Cairo, Illinois.
- Because of contractual and statutory obligations, Amtrak trains would continue to receive operating priority over the Applicants' freight trains following the proposed CN/IC Acquisition.

D.5.2 Transportation Effects at Highway/Rail At-grade Crossings

The proposed changes in freight train activity could cause vehicle delays at highway/rail at-grade crossings on rail line segments where the Applicants propose to increase freight train activity. SEA evaluated vehicle delays at highway/rail at-grade crossings with an ADT volume of 5,000 or more vehicles per day on rail line segments that would meet or exceed the Board's thresholds for environmental analysis listed above. SEA generally considered potential vehicle delays at highway/rail at-grade crossings with lower ADT volumes to be insignificant; however, SEA also considered situations where increased freight train activity may significantly affect closely spaced highway/rail at-grade crossings. To address such situations, SEA evaluated rail line segments,

² To establish this capacity estimate, SEA applied a 60 percent safety factor to the theoretical rail line capacity of 43 trains per day, based on typical rail industry practices for estimating rail line capacity. The 60 percent safety factor would account for potential dispatching or train handling problems.

regardless of ADT volumes, where two or more affected highway/rail at-grade crossings are within 800 feet of each other.

SEA analyzed vehicle delays from single-train events (i.e., any given train passby) by calculating the following parameters, described below:

- Blocked crossing time per train.
- Crossing delay per stopped vehicle.
- Maximum vehicle queue.

SEA concluded that single-train event effects would be significant if the average crossing delay per stopped vehicle increased by 30 seconds or more because of the proposed CN/IC Acquisition.

To evaluate the effects that would occur over an entire day from multiple train passbys (i.e., multiple-train events), SEA analyzed the following:

- Number of vehicles delayed per day.
- Average delay for all vehicles.
- Traffic level of service (LOS) described below.

SEA concluded that multiple-train event effects would be significant if either of the following situations occur:

- The post-Acquisition LOS would be E or F (regardless of LOS before the proposed CN/IC Acquisition).
- The LOS before the proposed Acquisition would decrease to D (or worse) from a LOS of C or better.

Table D-2, "Traffic Level of Service Ratings," presents the delay time, in seconds, for levels of service A through F.

TABLE D-2
TRAFFIC LEVEL OF SERVICE RATINGS

Level of Service (LOS)	Average Delay for All Vehicles (In seconds)
A	≤5.0
B	>5.0 to ≤15.0
C	>15.0 to ≤25.0
D	>25.0 to ≤40.0
E	>40.0 to ≤60.0
F	>60.0

Blocked Crossing Time Per Train

SEA estimated the blocked crossing time per train (D_C)—the time required for a train to pass by the highway/rail at-grade crossing—using the following equation:³

$$\text{Blocked crossing time } (D_C) = \left[\frac{L}{V \times 88} \right] + 0.50$$

where:

- D_C = Time required, in minutes, for the train to pass the highway/rail at-grade crossing, including the time required for gate closing and opening.
- L = Train length, in feet.
- V = Train speed, in miles per hour, over the highway/rail at-grade crossing. SEA obtained this value from the FRA's highway/rail at-grade crossing database.
- 88 = Conversion factor from miles per hour to feet per minute (1 mile per hour = 88 feet per minute).
- 0.50 = Time required, in minutes, for gate closing and opening before and after train passage.

SEA used the value for blocked crossing time D_C to estimate the crossing delay per stopped vehicle, maximum vehicle queue, and average delay for all vehicles, as discussed in the following sections.

³ Federal Railroad and Highway Administration. *Stanford Research Institute Report, RP-31, Volume 3, Appendix C, August 1974.*

Crossing Delay Per Stopped Vehicle

The crossing delay per stopped vehicle (D_A) represents the average amount of time that a driver would have to wait at a highway/rail at-grade crossing for a train to pass. SEA calculated the crossing delay per stopped vehicle for each highway/rail at-grade crossing for conditions both before and after the proposed CN/IC Acquisition to establish the estimated change in crossing delay. For ease of analysis, SEA assumed that vehicles arrive at a highway/rail at-grade crossing in a uniform distribution, although under actual conditions this generally would not be the case. SEA used the following equation to calculate the crossing delay per stopped vehicle:⁴

$$\text{Crossing Delay per Stopped Vehicle } (D_A) = \frac{D_C \times (S_C / S_C - S_Q)}{2} \quad \text{where:}$$

- D_A = Crossing delay per stopped vehicle, in minutes.
- D_C = Blocked crossing time per train, in minutes.
- S_C = Vehicle departure rate, per minute per lane. SEA assumed a value of 1,400 vehicles per hour per lane (equivalent to 23.3 vehicles per minute per lane).
- S_Q = Average arrival rate of traffic in vehicles per minute per lane. SEA obtained this value from ADT volume information in the FRA's highway/rail at-grade crossing database with updates from state and local departments of transportation, where available.
- 2 = An averaging factor used to account for vehicles that do not experience delays for the entire time that the train blocks the highway/rail at-grade crossing.

SEA used the estimated value of D_A in the equation to calculate the average delay for all vehicles.

Maximum Vehicle Queue

The maximum vehicle queue (Q) represents the estimated longest line of vehicles that would occur at a highway/rail at-grade crossing as a result of the proposed CN/IC Acquisition. SEA assumed that the maximum vehicle queue would occur during the peak hour of roadway traffic. It assumed the peak-hour traffic to be equal to 10 percent of the ADT volume—a typical assumption used by traffic engineers. SEA used the following equation to calculate the maximum vehicle queue:

⁴ Institute of Transportation Engineers. *Transportation and Traffic Engineering Handbook*, 2nd Edition, 1982.

$$\text{Maximum Vehicle Queue (Q)} = \text{ADT} \times 0.1 \times \left[\frac{0.6}{60} \right] \times \left[\frac{D_c}{NL / 2} \right]$$

where:

- Q = Maximum vehicle queue (number of vehicles) in peak-hour traffic.
- ADT = Average daily traffic volume for the highway/rail at-grade crossing, in vehicles per day. SEA obtained this value from FRA's highway/rail at-grade crossing database, with updates from state and local departments of transportation, where available.
- 0.1 = Conversion factor to convert ADT volume, in vehicles per day, to peak-hour traffic volume, in vehicles per hour. The 10 percent conversion factor is a typical value used in traffic engineering analyses.
- 0.6 = A 60 percent factor to convert two-way traffic to peak-direction traffic. SEA assumed that traffic flow volume is greater in one direction during the peak hour. The 60 percent conversion factor is a typical value used in traffic engineering analyses.
- 60 = Factor to convert traffic volume per hour to traffic volume per minute.
- D_c = Blocked crossing time per train, in minutes, including gate opening and closing.
- NL = Number of highway lanes at the highway/rail at-grade crossing. SEA obtained this value from FRA's highway/rail at-grade crossing database and verified it with a site visit.
- 2 = Factor to convert the total number of highway lanes to the number of lanes in the peak direction (for example, on a two-lane road, the number of lanes in the peak direction would equal one).

Number of Vehicles Delayed Per Day

The number of vehicles delayed per day represents the number of vehicles in a 24-hour period that would be stopped for trains at a highway/rail at-grade crossing. SEA estimated the number of vehicles delayed per day (T_D) at a highway/rail at-grade crossing using the following equation:

$$\text{Vehicles Delayed Per Day (T}_D\text{)} = \left[\frac{D_c}{1,440} \right] \times N \times \text{ADT}$$

where:

- T_D = Number of vehicles delayed per day.
- D_c = Blocked crossing time per train, in minutes, including time for gate closing and opening.

- 1,440 = Minutes per day.
 N = Number of trains per day. This value appeared in the Applicants' Operating Plan.
 ADT = Average daily traffic volume for the highway/rail at-grade crossing, in vehicles per day. SEA obtained this value from the FRA's highway/rail at-grade crossing database, with updates from state and local departments of transportation, where available.

Average Delay for All Vehicles

The average delay for all vehicles (D_v) is the estimated delay experienced by all drivers at the affected highway/rail at-grade crossing, including vehicles not delayed by train traffic. SEA used the following equation to estimate the average delay for all vehicles:

$$\text{Average Delay for All Vehicles } (D_v) = D_c \times N \times D_A \times \left[\frac{24}{1,440} \right] \times 0.0833$$

where:

- D_v = Average delay for all vehicles, in minutes per vehicle.
 D_c = Blocked crossing time per train, in minutes, including gate opening and closing.
 N = Number of trains per day. SEA obtained this value from the Applicants' Operating Plan.
 D_A = Crossing delay per stopped vehicle, in minutes.
 24 = Number of hours per day.
 1,440 = Number of minutes per day.
 0.0833 = A factor used to double the uniform hourly traffic distribution as a proportion of daily traffic. If traffic is uniformly distributed, then the hourly arrival rate is one twenty-fourth (0.0417) of the daily arrival rate. Doubling this value results in a factor of 0.0833. This factor approximates a 95 percent confidence level that the peak queue length (or delay) would not exceed twice the average. This practice is generally accepted in traffic engineering analyses to produce a conservative estimate of vehicle delay.

Traffic Level of Service

The Transportation Research Board developed the LOS system, described in the *Highway Capacity Manual*,⁵ to estimate roadway operational efficiency at signaled intersections. SEA

⁵ Transportation Research Board. *Highway Capacity Manual, Special Report 209*, 3rd Edition, 1994.

considered the use of LOS acceptable for estimating vehicle delay effects at highway/rail at-grade crossings for the following reasons: (1) similarities between signaled intersections and highway/rail at-grade crossings, and (2) the lack of a similar measure of efficiency for highway/rail at-grade crossings.

SEA determined the LOS for conditions both before and after the proposed CN/IC Acquisition to estimate the change in LOS for each affected highway/rail at-grade crossing. Attachment D-2, "Highway/Rail At-grade Crossing Vehicle Delay and Queues," presents the results of SEA's analysis of vehicle delays at highway/rail at-grade crossings. LOS is expressed in terms of letter grades ranging from A (free flowing) to F (severely congested), where the letter grade is based on the Average Delay for All Vehicles (D_v). Table D-2, "Traffic Level of Service Ratings," shows the LOS ratings.

D.5.3 Effects on Emergency Vehicle Response

In some communities, fire, police, and emergency medical service vehicles must cross rail lines at highway/rail at-grade crossings to respond to emergencies. Because blocked highway/rail at-grade crossings can delay the emergency vehicles (as well as volunteers in volunteer emergency service areas), SEA evaluated the extent of these projected delays following the proposed CN/IC Acquisition. Because of the wide variation in local conditions and the randomness of emergency response vehicle events and freight train schedules, SEA concluded that it could not reasonably quantify the Acquisition-related effects on emergency vehicle response on a system-wide basis.

To determine which highway/rail at-grade crossings would require an analysis of potential effects on emergency vehicle response time, the Board established a threshold for increased freight train traffic of eight trains or more per day. Based on the Board's thresholds for environmental analysis of transportation impacts from the proposed CN/IC Acquisition, SEA concluded that effects on emergency vehicle response time would not be significant for changes in freight traffic below this threshold.

For highway/rail at-grade crossings that would meet or exceed the threshold for freight train traffic increases, SEA analyzed the effects on emergency vehicle response by evaluating the following site-specific conditions:

- Geographic layout of the area, including locations of hospitals, police and fire stations, and population of the emergency response service area.
- Existing highway and road networks.
- Locations of nearby grade-separated crossings.
- Types of emergency services provided.

- Service area covered by emergency service providers.
- Emergency dispatch procedures.
- Available communications technology.
- Number of emergency vehicles crossing tracks on a typical day.
- Emergency service routes.
- Typical procedures when an emergency vehicle driver arrives at a blocked crossing.
- Typical train speeds.

D.5.4 Transportation Effects at Intermodal Facilities

The proposed CN/IC Acquisition would cause activity levels at intermodal facilities to change because of new truck-to-rail diversions, extended hauls, and single-line service. Because the number of containers and trailers transported to and from intermodal facilities by rail would change, the over-the-road (OTR) truck traffic volumes on local roads near the intermodal facilities would also change.

SEA analyzed the effects on local roads for intermodal facilities that would meet or exceed the Board's thresholds for environmental analysis of transportation effects. SEA assumed that OTR truck traffic volume changes would be directly proportional to the change in the number of origin/destination lifts performed at the facility. For this analysis, SEA defined an origin/destination lift as one intermodal container or trailer lifted onto or off a rail car (dropped off at the intermodal facility by an OTR truck or picked up at the intermodal facility by an OTR truck). To estimate the change in daily truck traffic, SEA used the following formula:

$$\text{Daily Change OTR Trucks} = \left[\frac{\text{origin/destination lifts (change)}}{365 \text{ days of operation}} \right] \times \left[\frac{1 \text{ OTR truck}}{1.38 \text{ origin/destination lifts}} \right]$$

SEA developed a conversion factor of one OTR truck per 1.38 origin/destination lifts to account for situations where trucks enter or leave an intermodal facility without a load. SEA derived this conversion factor from historical intermodal facility operations data.

SEA determined that the only intermodal facility that would meet or exceed the Board's threshold for environmental analysis is the Moyers Intermodal Terminal in Harvey, Cook

County, Illinois.⁶ SEA estimates an additional 88 trucks per day, increasing levels of activity from 346 to 434 trucks per day, would use the Moyers facility after the proposed CN/IC Acquisition.

SEA analyzed the effects from increased truck traffic on local roads by calculating a percent increase in ADT volume. Each additional OTR truck would increase the ADT volume of affected roads in the vicinity of the intermodal facility by two truck trips. SEA identified the most likely route(s) between the intermodal facility and the nearest major highway from the Applicants' intermodal facility manager. Where available, SEA obtained ADT data from state or local departments of transportation for the most likely route(s). SEA then calculated the change in ADT volume by adding the additional truck trips per day to the ADT of the affected road(s) identified along the most likely truck route(s). If more than one likely truck route was available for an intermodal facility, then SEA estimated the percentage of trucks that would use the different routes and applied this percentage to the analysis. See Attachment D-3, "Truck Routes and ADT Information for the Moyers Intermodal Terminal," for more information.

SEA did not establish specific criteria to identify significant effects from activity changes at intermodal facilities. SEA evaluated each intermodal facility on a case-by-case basis, considering the percent increase in ADT and the traffic volume capacity of the affected roadway to determine whether the projected changes in truck traffic volume would have a significant effect. For the Moyers facility, SEA determined that Acquisition-related changes would increase the local ADT of affected roads by less than 1 percent; SEA concluded that these effects would be insignificant.

D.5.5 System-wide Effects from Truck-to-rail Diversions

SEA conducted a study to estimate the number of truck loads of freight that would be diverted from long-distance truck hauls to rail transport following the proposed CN/IC Acquisition.⁷ SEA used this study to estimate the number of truck-miles removed from the national highway system following truck-to-rail freight diversions. Because the proposed CN/IC Acquisition would reduce truck traffic on major highways, SEA did not establish criteria of significance for truck-to-rail diversions. Attachment D-4, "Truck-Miles Removed from Highway System," of this Appendix summarizes SEA's estimate of the reduction in truck-miles by state and county.

SEA also estimated potential savings in annual highway-related expenditures that the reduction in truck traffic would cause and computed the cost benefit associated with the proposed reduction of "marginal" highway costs from shipping freight by rail instead of truck. "Marginal" highway

⁶ The Applicants propose to combine CN's Gateway and IC's Moyers intermodal facilities and would name the combined facility the Moyers Intermodal Terminal. The estimated change in daily truck traffic represents the combined operations of both facilities.

⁷ Bryan, Joseph G. B. Verified Statement in Railroad Control Application, Volume 2, 1998, pp. 66-101.

costs include pavement maintenance, congestion reduction, accident costs (property damage, medical costs, etc.), and noise abatement. SEA used the following assumptions in its analysis:

- A 60,000-pound, five-axle semi-trailer represents the type of truck removed from the highway system.
- Traffic reduction on a highway mix consists of 90 percent rural interstate roads and 10 percent urban interstate roads.

SEA used the Federal Highway Administration's estimates of marginal costs for various combinations of vehicle classes and highway classes.² SEA estimated that the proposed CN/IC Acquisition would result in a marginal cost savings of 8.89 cents for each truck-mile removed from the highway system. Attachment D-4, "Truck-Miles Removed from Highway System," of this Appendix presents a breakdown of the estimated reduction in highway-related costs by state and by county.

SEA estimated the reduced number of highway accidents and fuel consumption following the projected truck-to-rail diversions. Chapter 4, "Environmental Consequences—Operational Changes," presents the estimated reductions in highway accidents (see Section 4.1, "Freight Rail Operations Safety") and fuel consumption savings (see Section 4.10, "Energy").

D.5.6 Navigation Effects

SEA reviewed the following changes in the operations and facilities to estimate potential effects on navigation:

- Proposed changes in freight train activity on rail line segments, based on the Applicants' Operating Plan. These changes could affect the operation of movable bridges on that rail line segment and thus be subject to U.S. Coast Guard regulations.
- Proposed new bridges or alterations to existing bridges that would be subject to U.S. Coast Guard approval and U.S. Army Corps of Engineers approvals for dredge and fill activities.

Table D-3, "Current and Proposed Traffic on Movable Bridges in the Integrated CN/IC System," provides data regarding the movable bridges in the CN/IC system.

The Applicants currently use four of the six bridges for freight rail operations. The two bridges not used for freight rail operations are:

² Federal Highway Administration. *Federal Highway Cost Allocation Study*, 1997.

- The bridge connecting Omaha, Nebraska with Council Bluffs, Iowa over the Missouri River. This bridge is not operable and is left open during the navigation season.⁹ The Applicants' freight train traffic between Omaha, Nebraska and Council Bluffs, Iowa typically uses a Union Pacific rail line.
- The bridge over the Chicago River in Chicago, Illinois. IC, the Union Pacific Railroad Company, and The Burlington Northern and Santa Fe Railway Company jointly own this bridge. The Applicants operate no freight train traffic over this bridge, which Amtrak and other freight railroads primarily use.

**TABLE D-3
CURRENT AND PROPOSED TRAFFIC ON MOVABLE BRIDGES IN THE
INTEGRATED CN/IC SYSTEM**

Waterway	City	State	Railroad	FRA Record No.	River Mile	Bridge Type	Average Pre- Acquisition Bridge Traffic (Trains Per Day)	Proposed Change in Bridge Traffic (Trains per Day)
Mississippi River	Dubuque	IA	IC (CCP)	00900	579.9	Swing	5.4	0.3
Missouri River ^a	Council Bluffs	IA	IC (CCP)	00930	618.3	Swing	0	0
Pass Manchac	Manchac	LA	IC	01139	6.7	Bascule	9.1	0
Black River	Port Huron	MI	CN (GTW)	00131	1.56	Bascule	22.6	(2.2) ^d
Rainy River ^b	Rainier	MN	CN (DWP)	01223	85.0	Rolling Lift	12.0	(1.0)
Chicago River South Branch ^c	Chicago	IL	St. Charles Airline	00274	3.4	Bascule	0	0

^a Bridge is not operable and remains open during the navigation season.

^b Bridge crosses from Rainier, Minnesota to Port Francis, Ontario. The movable portion is on the U.S. side of the river.

^c IC owns 50% of St. Charles Airline, Union Pacific Railroad Company 25%, and The Burlington Northern and Santa Fe Railway Company 25%. Although IC is a joint owner of this bridge, it operates no freight traffic over this bridge.

^d Proposed traffic changes in parentheses indicate decreases.

⁹ This bridge can be closed manually and used for freight train operations in an emergency.

U.S. Coast Guard rules specify that waterborne navigation has the right-of-way at movable bridges provided that train traffic is not within a block containing the movable bridge.¹⁰ In addition, SEA estimated that only one movable bridge would experience a small increase in freight train traffic; the other bridges would experience no change or decreases in freight train traffic. (See Table D-3, "Current and Proposed Traffic on Movable Bridges in the Integrated CN/IC System.") Thus, SEA concluded that Acquisition-related changes in train traffic would not affect waterborne navigation. In addition, the Applicants do not propose to construct any new bridges or modify existing bridges as part of the proposed CN/IC Acquisition; therefore, SEA did not address potential effects with appropriate U.S. Coast Guard and U.S. Army Corps of Engineers offices. Accordingly, SEA did not establish criteria of significance for navigation effects.

The Applicants propose to maintain current service to the ports of New Orleans, Louisiana and Mobile, Alabama; therefore, SEA concluded that the proposed CN/IC Acquisition would not affect these Gulf Coast ports.

SEA reviewed the Applicants' estimate for potential diversions of freight shipped between Europe and Eastern seaboard ports in the U. S. The Applicants estimated that about 95,000 tons of freight per year would divert to the ports of Montreal, Quebec and Halifax, Nova Scotia for transfer to the Applicants' rail system. These port diversions would account for about 6 percent of the total increase in freight tonnage on the Applicants' rail system following the proposed CN/IC Acquisition. SEA determined that the proposed CN/IC Acquisition would reduce some freight shipments currently handled by U.S. ports. The shippers are expected to divert this freight to these United States ports.

However, SEA concludes that these port diversions would not significantly affect port operations in the Eastern United States. Therefore, SEA determined that mitigation is not warranted.

D.6 TRANSPORTATION EXISTING CONDITIONS AND ANALYSIS RESULTS AT CONSTRUCTION PROJECT SITES

SEA considered the effects on highway/rail at-grade crossing, and on local roads for the Applicants' construction projects at Cicero, Illinois and Jackson, Mississippi.

D.6.1 Cicero, Illinois

The IC rail line in Cicero, Illinois runs east-west; the BRC rail line intersects the IC tracks at-grade, east of Cicero Avenue and south of 31st Street. (See Figure 5-2, "Proposed Rail Line Connection at Cicero, Illinois.") An IC rail spur extends from the southwest, continues north, and intersects the IC tracks just west of the BRC intersection. All of the rail lines in the area are currently in use. No street in the vicinity of the proposed connection crosses the IC or BRC

¹⁰ 33 CFR 117.9.

tracks at-grade. The IC tracks travel eastward on a bridge across Cicero Avenue, and the BRC tracks cross under the 31st Street bridge. In the vicinity of the BRC tracks, neither 32nd nor 33rd Streets are through streets. A short segment of 34th Street begins at Cicero Avenue and extends east, crosses the IC spur, and terminates at the entrance to Melrose Transport Systems; however, 34th Street does not intersect the BRC tracks.

Thirty-fourth Street is a two-lane road that is asphalt-paved for approximately 500 feet east of Cicero Avenue. The remaining 500 feet of 34th Street is unpaved, and no signs are present to identify the highway/rail at-grade crossing at the IC spur. No ADT data is available for 34th Street; however, based on a field review conducted in preparing their PDEA, the Applicants determined it is used mainly by employees of the seven companies located along 34th Street. Freight trucks affiliated with the various transport companies whose entrances are along 34th Street also use this street, but it is not a public street in the vicinity of the proposed connection. Thirty-fourth Street currently ends east of the IC spur (at the entrance of Melrose Transport Systems), southwest of the nearest point of the proposed connection. SEA identified one highway/rail at-grade crossing that the proposed construction project would eliminate because the Melrose Property (currently accessed by 34th Street) would no longer be occupied. Other businesses located along 34th Street would continue to have access to their property via this street.

SEA evaluated public transportation routes and schedules to determine whether the construction and operation of the proposed connection would affect existing schedules or routes. SEA determined that no public transportation routes run along 34th Street; consequently, the proposed connection would not affect any public transportation routes.

D.6.2 Jackson, Mississippi

Two IC rail lines run north-south through the Jackson Yard, which consists of six arrival tracks, 18 classification tracks, six bad order support tracks, five locomotive service tracks, and one passenger thoroughfare track. The Applicants currently use all of the rail lines in the Jackson Yard.

SEA determined that the proposed bypass would not cross any roadways at-grade. An overpass at Woodrow Wilson Avenue, a major thoroughfare, allows traffic to cross the tracks at the north end of Jackson Yard. An overpass at Fortification Street, a major artery on the south end of the rail yard, also allows traffic to cross the rail tracks. (See Figure 5-7, "Proposed Bypass at Jackson Yard, Jackson, Mississippi.") SEA concludes that no other roadways cross railroad tracks in the vicinity of the proposed bypass.

SEA did not evaluate public transportation routes and schedules to determine the effect of the proposed bypass because it would cross no roadways.

ATTACHMENT D-1

RAIL LINE SEGMENTS WITH PASSENGER SERVICE, IN DESCENDING ORDER OF CHANGE IN FREIGHT ACTIVITY

Segment Description			Owner	Seg Length (miles)	Type of Passenger Service*	1996 Base			Passenger and Freight Train Miles (per day)†		
Between	And	1996 Base				Post-Acquisition					
		Passenger				Freight	Total	Passenger	Freight	Total	Change in Freight
CHICAGO YARDS	IL CHICAGO YARDS	IL IC	3.5	A	4.0	19.2	23.2	4.0	26.8	30.8	7.6
HOMERWOOD	IL MATTHESON (J&E)	IL IC	5.2	A	4.0	12.9	16.9	4.0	18.0	22.0	7.2
MATTHESON (J&E)	IL KANKAKEE	IL IC	26.6	A	4.0	12.9	16.9	4.0	20.0	24.0	7.2
KANKAKEE	IL OTTO	IL IC	5.2	A	4.0	13.4	17.4	4.0	20.6	24.6	7.1
OTTO	IL GILMAN	IL IC	20.0	A	4.0	13.4	17.4	4.0	20.6	24.6	5.7
GILMAN	IL CHAMPAGN	IL IC	46.3	A	4.0	12.8	16.6	4.0	18.3	22.3	5.5
CHAMPAGN	IL MATTOON	IL IC	45.1	A	4.0	14.2	18.2	4.0	19.6	23.6	5.4
MATTOON	IL EFFINGHAM	IL IC	26.9	A	4.0	13.6	17.6	4.0	19.0	23.0	5.4
EFFINGHAM	IL EDGEWOOD	IL IC	14.9	A	4.0	16.4	20.4	4.0	21.9	25.9	5.4
EDGEWOOD	IL CENTRALIA	IL IC	37.3	A	4.0	12.2	16.2	4.0	15.9	19.9	5.4
CENTRALIA	IL BENLAKMINE	IL IC	23.5	A	4.0	14.7	18.7	4.0	18.4	22.4	5.1
BENLAKMINE	IL DIKORIN	IL IC	11.7	A	4.0	15.6	19.6	4.0	19.3	23.3	3.8
DIKORIN	IL CARBONDALE	IL IC	18.9	A	4.0	17.0	21.0	4.0	20.7	24.7	3.7
CARBONDALE	IL CAIRO	IL IC	54.4	A	2.0	17.0	19.0	2.0	20.7	22.7	3.7
CAIRO	IL FULTON	IL IC	43.5	A	2.0	14.4	16.4	2.0	18.2	20.2	3.7
FULTON	IL DYERSBURG	IL IC	45.8	A	2.0	19.9	21.9	2.0	24.3	27.3	3.7
DYERSBURG	IL WOODSTOCK	IL IC	66.0	A	2.0	19.9	21.9	2.0	24.3	27.3	3.7
WOODSTOCK	IL LAKE CORMORANT	IL IC	15.7	A	2.0	16.6	18.6	2.0	20.3	22.3	3.7
LAKE CORMORANT	IL MARKS	IL IC	45.6	A	2.0	16.6	18.6	2.0	20.3	22.3	3.7
MARKS	IL SWAN LAKE	IL IC	27.3	A	2.0	16.6	18.6	2.0	20.3	22.3	3.7
SWAN LAKE	IL GREENWOOD	IL IC	29.4	A	2.0	16.6	18.6	2.0	20.3	22.3	3.7
GREENWOOD	IL YAZOO CITY	IL IC	52.7	A	2.0	16.6	18.6	2.0	20.3	22.3	3.7
YAZOO CITY	IL JACKSON	IL IC	44.0	A	2.0	16.6	18.6	2.0	20.3	22.3	3.7
MILWAUKEE ACT	IL VINWOOD	IL IC	3.0	A	4.0	21.4	25.4	4.0	23.3	27.3	1.9
BRIDGEPORT	IL GLENN YARD	IL IC	6.3	A, C	8.9	8.1	17.0	8.9	8.1	17.0	0.0
GLENN YARD	IL JOLIET	IL IC	27.0	A, C	8.9	1.4	10.3	8.9	1.4	10.3	0.0
WOODSTOCK	IL Y & MV ACT	IL IC	12.3	A	2.0	0.9	2.9	2.0	0.9	2.9	0.0
JACKSON	IL BROOKHAVEN	IL IC	53.0	A	2.0	15.1	17.1	2.0	15.1	17.1	0.0
BROOKHAVEN	IL MCCOMB	IL IC	24.6	A	2.0	11.1	13.1	2.0	11.1	13.1	0.0
MCCOMB	IL HAMMOND	IL IC	32.3	A	2.0	11.1	13.1	2.0	11.1	13.1	0.0
HAMMOND	IL ORLEANS JCT	IL IC	42.6	A	2.0	9.1	11.1	2.0	9.1	11.1	0.0
ORLEANS ACT	IL MAYS YARD	IL IC	3.9	A	2.0	9.7	11.7	2.0	9.7	11.7	0.0
MAYS YARD	IL EAST BRIDGE ACT	IL IC	1.2	A	2.0	4.0	6.0	2.0	4.0	6.0	0.0
EAST BRIDGE ACT	IL SOUTHPORT ACT	IL IC	2.1	A	2.0	4.0	6.0	2.0	4.0	6.0	0.0
BELSAV	IL FLINT	IL IC	3.5	A	2.0	14.2	16.2	2.0	14.2	16.2	0.0
FLINT	IL SWARTZ CREEK	IL IC	8.6	A	2.0	21.3	23.3	2.0	21.3	23.3	0.0

ATTACHMENT D-1
RAIL LINE SEGMENTS WITH PASSENGER SERVICE, IN DESCENDING ORDER OF CHANGE IN FREIGHT ACTIVITY

Segment Description			Owner	Seg Length (miles)	Type of Passenger Service*	1996 Data			Predicted Freight Train Data (per day)			Change in Freight
Between	And	Passenger				Freight	Total	Passenger	Freight	Total		
SWARTZ CREEK	MI DURAND	MI CN	8.2	A	2.0	21.3	23.3	2.0	21.3	23.3	0.0	
ST LAMBERT	PQ ROUSES PT	NY CN	39.6	A	2.4	3.4	5.9	2.4	3.4	5.9	0.0	
GRIFFITH	IN THORNTON JCT	IL CN	11.3	A	0.7	19.6	20.3	0.7	19.4	20.1	-0.2	
CHICAGO 21ST STR	IL BRIDGEPORT	IL IC	1.3	A, C	0.0	12.6	12.6	0.0	12.1	12.1	-0.4	
CHICAGO	IL CHICAGO 21ST STR	IL IC	1.3	A	4.9	12.6	17.4	4.9	12.1	17.3	-0.4	
CHICAGO	IL CHICAGO 94 STR	IL IC	11.3	A	4.9	12.6	17.4	4.9	12.1	17.3	-0.4	
CHICAGO 94 STR	IL 137th (RIVERDALE)	IL IC	3.2	A	4.9	16.9	21.7	4.9	16.4	21.6	-0.4	
137th (RIVERDALE)	IL HARVEY	IL IC	2.7	A	4.9	18.7	23.6	4.9	18.3	23.4	-0.4	
SPARLINGVILLE	MI DELAY CITY	MI CN	29.8	A	2.0	14.9	16.9	2.0	14.2	16.2	-0.7	
IMLAY CITY	MI BELLEVILLE	MI CN	27.6	A	2.0	14.9	16.9	2.0	14.2	16.2	-0.7	
MILWAUKEE JCT	MI DETROIT INTERMODAL	MI CN	6.4	A	4.0	15.1	19.1	4.0	13.6	17.6	-1.5	
DETROIT INTERMODAL	MI MAL ICT	MI CN	14.6	A	4.0	14.4	18.4	4.0	12.8	16.8	-1.6	
MAL ICT	MI FONTIAC	MI CN	0.9	A	4.0	14.4	18.4	4.0	12.8	16.8	-1.6	
SARINIA	ON SPARLINGVILLE	MI CN	4.9	A	2.0	22.6	24.6	2.0	20.4	22.4	-2.2	
DURAND	MI BATTLE CREEK	MI CN	34.2	A	2.0	26.3	28.3	2.0	24.0	26.0	-2.3	

* A = Amtrak Inland Service, C = Commuter Rail Service

ATTACHMENT D-9
 ATTORNEY GENERAL'S OFFICE
 1000 PENNSYLVANIA AVENUE, N.W.
 WASHINGTON, D.C. 20540

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**ATTACHMENT D-3
TRUCK ROUTES AND ADT INFORMATION
FOR THE MOYERS INTERMODAL TERMINAL**

Track Route	Affected Road	ADT*
To Moyers Intermodal Terminal		
From Interstate 94 (southbound)	State Route 83 (west)	25,300
	State Route 1 (south)	17,800
	155 th Street	N/A*
	Commercial Avenue	N/A
From Interstate 94 (northbound)	State Route 6 (west)	27,300
	State Route 1 (north)	18,500
	155 th Street	N/A
	Commercial Avenue	N/A
From Interstate 80	State Route 1 (north)	18,500 to 26,900*
	155 th Street	N/A
	Commercial Avenue	N/A
From Interstate 294	State Route 6 (east)	27,900
	South Park Avenue	N/A
	157 th Street	N/A
	Commercial Avenue	N/A
From Moyers Intermodal Terminal		
To Interstate 80	Center Street	N/A
	167 th Street	N/A
	State Route 1 (south)	26,900
To Interstate 94	Center Street	N/A
	167 th Street	N/A
	State Route 1 (north)	22,300
	State Route 6 (east)	27,300

**ATTACHMENT D-3
TRUCK ROUTES AND ADT INFORMATION
FOR THE MOYERS INTERMODAL TERMINAL**

Truck Route	Affected Road	ADT ^a
To Interstate 294	Center Street	N/A
	167 th Street	N/A
	State Route 1 (north)	22,300
	State Route 6 (west)	27,900

- ^a Average Daily Traffic (ADT) Volume (vehicles per day) from the Illinois Department of Transportation for 1994.
- ^b Not Available.
- ^c Three ADT volume figures were available from the Illinois Department of Transportation at various points on State Route 1. This table presents the range of ADTs.

**ATTACHMENT D-4
TRUCK MILES REMOVED FROM HIGHWAY SYSTEM**

County	State	Annual Truck Miles Removed from Highways	Annual Highway-Related Cost Reduction from Reduced Truck Miles (\$)
AUTAUGA	AL	23,573	2,096
BALDWIN	AL	25,642	2,280
BLOUNT	AL	18,014	1,601
BUTLER	AL	50,277	4,470
CHAMBERS	AL	3,051	271
CHILTON	AL	43,080	3,830
CONECUH	AL	40,990	3,644
CULLMAN	AL	92,248	8,201
DE KALB	AL	2,750	244
ELMORE	AL	11,277	1,003
ESCAMBIA	AL	28,948	2,573
ETOWAH	AL	1,457	130
GREENE	AL	56,284	5,000
JEFFERSON	AL	120,149	10,678
LEE	AL	9,502	841
LOWESTONE	AL	83,500	7,423
LOWNDES	AL	24,372	2,167
MACON	AL	10,321	918
MOBILE	AL	47,441	4,218
MONTGOMERY	AL	35,069	3,118
MORGAN	AL	56,088	4,986
SHELBY	AL	22,843	2,031
ST CLAIR	AL	1,665	148
SUMTER	AL	49,333	4,386
TUSCALOOSA	AL	77,951	6,930
AL Total		936,892	83,227
CLARK	AR	367,856	32,702
CRITTENDEN	AR	319,689	28,420
HEMPSTEAD	AR	286,584	25,477
HOT SPRING	AR	341,100	30,324
LONOKE	AR	329,919	29,330
MILLER	AR	239,934	21,330
MISSISSIPPI	AR	48,999	4,356
MONROE	AR	168,074	14,942
NEVADA	AR	166,976	14,844
PRAIRIE	AR	256,147	22,771
PULASKI	AR	342,799	30,475
SALINE	AR	252,975	22,489
ST FRANCIS	AR	608,964	54,137
AR Total		3,730,016	338,898
FAIRFIELD	CT	11,533	1,025
HARTFORD	CT	10,456	931
MIDDLESEX	CT	757	67
NEW HAVEN	CT	12,122	1,078
CT Total		34,868	3,101
BANKS	GA	2,402	214
CLAYTON	GA	3,332	296
COWETA	GA	9,178	816
DADE	GA	1,356	121
DE KALB	GA	8,137	723
FRANKLIN	GA	7,134	634
FULTON	GA	4,966	441
GWINNETT	GA	9,409	836
HALL	GA	2,885	256
HARRIS	GA	272	24
HART	GA	1,838	163
JACKSON	GA	6,493	577
MERIWETHER	GA	949	84

**ATTACHMENT D-4
TRUCK MILES REMOVED FROM HIGHWAY SYSTEM**

County	State	Annual Truck Miles Removed from Highways	Annual Highway-Related Cost Reduction from Reduced Truck Miles (\$)
TROUP	GA	9,954	885
GA Total		68,307	6,072
ALEXANDER	IL	3,433	305
BOND	IL	1,045	93
CHAMPAIGN	IL	36,981	3,252
CLARK	IL	1,581	141
COLES	IL	23,037	2,048
COOK	IL	50,557	4,493
CUMBERLAND	IL	5,342	475
DOUGLAS	IL	15,011	1,334
EFFINGHAM	IL	28,279	2,514
PAYETTE	IL	9,334	830
FORD	IL	6,063	539
FRANKLIN	IL	18,696	1,662
GRUNDY	IL	29,541	2,626
IROQUOIS	IL	40,236	3,577
JEFFERSON	IL	25,284	2,248
KANKAKEE	IL	22,724	2,020
LIVINGSTON	IL	68,047	6,049
LOGAN	IL	61,578	5,474
MACOUPIN	IL	22,584	2,008
MADISON	IL	24,380	2,190
MARION	IL	24,658	2,197
MCLEAN	IL	97,420	8,661
MONTGOMERY	IL	40,506	3,603
PULASKI	IL	16,042	1,426
SANDAMON	IL	74,877	6,657
SHELBY	IL	6,082	541
ST CLAIR	IL	6,986	621
UNION	IL	18,572	1,652
WILL	IL	87,249	7,756
WILLIAMSON	IL	28,439	2,517
IL Total		963,178	85,448
ALLEN	IN	6,511	579
BARTHOLOMEW	IN	4,925	438
CLARK	IN	4,713	419
CLAY	IN	761	68
DEKALB	IN	3,702	329
DELAWARE	IN	2,072	184
FLOYD	IN	310	28
GRANT	IN	5,514	490
HAMILTON	IN	1,846	164
HANCOCK	IN	1,078	96
HENDRICKS	IN	1,112	99
HENRY	IN	1,104	98
HUNTINGTON	IN	3,319	293
JACKSON	IN	4,304	383
JOHNSON	IN	4,188	372
LA PORTE	IN	41,393	3,680
LAKE	IN	53,714	4,723
MADISON	IN	6,201	551
MARION	IN	7,058	627
PORTER	IN	50,990	4,528
PUTNAM	IN	1,307	116
SCOTT	IN	2,734	243
STUBEN	IN	3,985	354
WAGO	IN	918	82
WAYNE	IN	1,344	119

**ATTACHMENT D-4
TRUCK MILES REMOVED FROM HIGHWAY SYSTEM**

County	State	Annual Truck Miles Removed from Highways	Annual Highway-Related Cost Reduction from Reduced Truck Miles (\$)
WELLS	IN	839	75
IN Total		286,482	19,245
BARREN	KY	282,352	25,119
BOONE	KY	436,472	38,802
BULLITT	KY	455,215	40,469
CAMPBELL	KY	548	49
CARROLL	KY	275,951	24,532
EDMONSON	KY	36,780	3,263
GALLATIN	KY	390,783	34,741
HARDIN	KY	297,420	26,891
HART	KY	496,218	44,114
HENRY	KY	435,957	38,757
JEFFERSON	KY	714,208	63,893
KENTON	KY	234,405	20,839
OLDHAM	KY	413,898	36,796
SIMPSON	KY	307,258	27,515
WARREN	KY	738,404	65,644
KY Total		6,015,989	534,821
ACADIA	LA	11,082	985
BOSSIER	LA	1,631	145
CADDO	LA	6,608	587
CALCASIEU	LA	14,721	1,309
E BATON ROUGE	LA	19,333	1,719
IBERVILLE	LA	8,820	784
JEFF DAVIS	LA	9,898	880
JEFFERSON	LA	634	56
LAFAYETTE	LA	5,522	491
LIVINGSTON	LA	30,394	2,702
MADISON	LA	5,647	502
ORLEANS	LA	39,950	3,552
OUACHITA	LA	1,678	149
RICHLAND	LA	3,990	355
ST CHARLES	LA	494	44
ST JOHN	LA	1,376	122
ST MARTIN	LA	9,529	847
ST TAMMANY	LA	36,674	3,254
TANGIPAHOA	LA	48,615	4,322
W BATON ROUGE	LA	8,271	735
LA Total		264,797	23,540
FRANKLIN	MA	8,117	722
HAMPDEN	MA	6,810	605
HAMPSHIRE	MA	4,187	372
MA Total		19,114	1,699
WASHINGTON	MD	5,203	463
MD Total		5,203	463
ALLEGAN	MI	4,622	411
BERRIEN	MI	111,254	9,890
BRANCH	MI	5,015	446
CALHOUN	MI	97,046	8,627
CLINTON	MI	15,409	1,370
EATON	MI	33,477	2,976
GENESSE	MI	20,289	1,804
INGHAM	MI	1,115	99
JACKSON	MI	68,250	6,066
KALAMAZOO	MI	74,469	6,620
KENT	MI	1,921	171
LIVINGSTON	MI	1,544	137
MACOMB	MI	62,915	5,593

**ATTACHMENT D-4
TRUCK MILES REMOVED FROM HIGHWAY SYSTEM**

County	State	Annual Truck Miles Removed from Highways	Annual Highway-Related Cost Reduction from Reduced Truck Miles (\$)
MONROE	MI	622,811	55,368
OAKLAND	MI	46,379	4,141
OTTAWA	MI	1,378	123
SAGINAW	MI	14,399	1,280
SAINT CLAIR	MI	53,644	4,769
SHIAWASSEE	MI	19,016	1,691
VAN BUREN	MI	76,220	6,776
WASHTENAW	MI	67,924	6,038
WAYNE	MI	659,481	58,621
MI Total		2,888,678	183,816
BOONE	MO	138	12
CALLAWAY	MO	169	15
COOPER	MO	171	15
JACKSON	MO	170	15
LAFAYETTE	MO	225	20
MISSISSIPPI	MO	24,479	2,176
MONTCOMERY	MO	116	10
NEW MADRID	MO	31,990	2,844
PENNSCOT	MO	31,600	2,809
SALINE	MO	133	12
ST CHARLES	MO	169	15
ST LOUIS	MO	119	11
ST LOUIS CITY	MO	1,079	96
WARREN	MO	103	9
MO Total		90,663	8,068
CARROLL	MS	61,217	5,442
COPIAH	MS	28,329	2,518
DE SOTO	MS	59,221	5,265
FORREST	MS	8,196	729
GRENADA	MS	45,980	4,088
HANCOCK	MS	5,122	455
HARRISON	MS	6,233	554
HINDS	MS	53,736	4,933
HOLMES	MS	82,209	7,308
JACKSON	MS	7,067	628
JASPER	MS	52,972	4,709
JONES	MS	52,495	4,667
LAMAR	MS	45,772	4,069
LAUDERDALE	MS	58,274	5,181
LINCOLN	MS	25,406	2,259
MADISON	MS	113,833	10,120
MONTCOMERY	MS	33,279	2,959
NEWTON	MS	1,813	161
PANOLA	MS	78,967	7,020
PEARL RIVER	MS	59,387	5,280
PIKE	MS	27,046	2,404
RANKIN	MS	1,399	142
SCOTT	MS	1,530	136
TATE	MS	38,432	3,417
WARREN	MS	1,690	150
YALOBUSHA	MS	57,290	5,093
YAZOO	MS	4,366	406
MS Total		1,813,661	98,114
CLEVELAND	NC	1,901	169
GASTON	NC	6,774	602
IREDELL	NC	15,237	1,355
MECKLENBURG	NC	9,058	805
SURRY	NC	7,692	684

**ATTACHMENT D-4
TRUCK MILES REMOVED FROM HIGHWAY SYSTEM**

County	State	Annual Truck Miles Removed from Highways	Annual Highway-Related Cost Reduction from Reduced Truck Miles (\$)
YADKIN	NC	4,912	436
NC Total		45,564	4,051
BERGEN	NJ	3,250	289
ESSEX	NJ	1,111	91
HUNTERDON	NJ	6,787	603
MORRIS	NJ	5,116	461
PASSAIC	NJ	2,056	183
SOMERSET	NJ	4,133	368
WARREN	NJ	1,794	159
NJ Total		24,306	2,161
BRONX	NY	2,111	179
BROOME	NY	3,911	347
CHAUTAUQUA	NY	6,073	540
CORTLAND	NY	3,044	271
ERIE	NY	6,134	545
JEFFERSON	NY	5,391	479
NEW YORK	NY	367	33
ONONDAGA	NY	3,485	310
OSWEGO	NY	3,661	325
WESTCHESTER	NY	4,969	442
NY Total		59,849	5,471
ALLEN	OH	535,684	47,622
ASHLAND	OH	2,843	253
ASHTABULA	OH	5,153	458
AUGLAIZE	OH	299,997	26,670
BUTLER	OH	317,427	28,319
CLARK	OH	1,694	151
CLERMONT	OH	869	77
CLINTON	OH	1,377	122
CUYAHOGA	OH	2,907	258
DELAWARE	OH	3,751	333
FAYETTE	OH	2,174	187
FRANKLIN	OH	4,362	388
GEAUGA	OH	959	84
GREENE	OH	872	78
HAMILTON	OH	413,548	36,764
HANCOCK	OH	661,927	58,845
LAKE	OH	3,563	317
LUCAS	OH	254,487	22,624
MADISON	OH	2,112	188
MEDINA	OH	4,170	371
MIAMI	OH	506,415	45,020
MONTGOMERY	OH	607,063	53,968
MORROW	OH	3,413	303
PICKAWAY	OH	91	8
PREBLE	OH	949	84
RICHLAND	OH	2,951	262
SHELBY	OH	600,863	53,417
SUMMIT	OH	2,460	219
WARREN	OH	199,476	17,733
WAYNE	OH	1,397	124
WOOD	OH	868,087	77,173
OH Total		5,312,968	472,323
BERKS	PA	11,089	986
CUMBERLAND	PA	19,222	1,709
DAUPHIN	PA	7,068	628
ERIE	PA	7,246	644
FRANKLIN	PA	10,259	912

**ATTACHMENT D-4
TRUCK MILES REMOVED FROM HIGHWAY SYSTEM**

County	State	Annual Truck Miles Removed from Highways	Annual Highway-Related Cost Reduction from Reduced Truck Miles (\$)
LACKAWANNA	PA	2,666	237
LEBANON	PA	6,552	582
LEHIGH	PA	6,889	612
LUZERNE	PA	4,607	410
NORTHAMPTON	PA	3,697	329
SCHUYLKILL	PA	4,432	394
SUSQUEHANNA	PA	2,811	250
PA Total		86,538	7,693
ANDERSON	SC	13,715	1,219
CHEROKEE	SC	9,517	846
GREENVILLE	SC	5,791	515
SPARTANBURG	SC	11,148	991
SC Total		40,171	3,571
BENTON	TN	29,498	2,956
BRADLEY	TN	1,100	98
CHEATHAM	TN	230,418	20,484
COCKE	TN	119	11
DAVIDSON	TN	746,370	66,352
DECATUR	TN	205,428	18,263
DICKSON	TN	370,344	32,924
FAYETTE	TN	450,723	40,069
GILES	TN	59,153	5,259
GREENE	TN	1,980	176
HAMBLE	TN	309	27
HAMILTON	TN	1,848	164
HAYWOOD	TN	454,737	40,428
HENDERSON	TN	541,196	48,112
HUMPHREYS	TN	629,735	55,983
JEFFERSON	TN	1,350	120
KNOX	TN	2,322	206
LOUDON	TN	982	87
MADISON	TN	630,649	57,843
MARSHALL	TN	39,644	3,524
MAURY	TN	35,271	3,914
MCMINN	TN	1,604	143
MONROE	TN	732	65
ROBERTSON	TN	441,867	39,282
SEVIER	TN	454	40
SHELBY	TN	618,803	55,012
SULLIVAN	TN	1,285	114
SUMNER	TN	205,652	18,282
WASHINGTON	TN	337	30
WILLIAMSON	TN	55,611	4,944
TN Total		5,859,841	520,913
ANGELINA	TX	34,720	3,087
ATASCOSA	TX	16,497	1,467
BELL	TX	85,009	7,557
BEXAR	TX	114,828	10,208
BOWIE	TX	490,817	43,634
CAMP	TX	11,047	982
CASS	TX	62,946	5,596
COLLIN	TX	27,119	2,411
COMAL	TX	62,361	5,544
DALLAS	TX	243,423	21,640
ELLIS	TX	76,134	6,770
FRANKLIN	TX	187,832	16,886
Frio	TX	78,038	6,930
GREGG	TX	5,214	464

**ATTACHMENT D-4
TRUCK MILES REMOVED FROM HIGHWAY SYSTEM**

County	State	Annual Truck Miles Removed from Highways	Annual Highway-Related Cost Reduction from Reduced Truck Miles (\$)
HARRIS	TX	36,747	3,276
HARRISON	TX	38,606	3,432
HAYS	TX	54,037	4,844
HILL	TX	52,403	4,659
HOPKINS	TX	352,810	31,363
HUNT	TX	273,115	24,280
LA SALLE	TX	108,902	9,681
LIBERTY	TX	14,506	1,290
MARION	TX	13,695	1,217
MCLENNAN	TX	120,150	10,681
MEDINA	TX	23,952	2,129
MONTGOMERY	TX	17,800	1,588
MORRIS	TX	102,559	9,117
NACOGDOCHES	TX	49,591	4,409
ORANGE	TX	7,013	623
PANOLA	TX	40,902	3,636
POLK	TX	60,103	5,343
ROCKWALL	TX	132,051	11,739
SAN JACINTO	TX	21,462	1,908
SHELBY	TX	29,149	2,591
SMITH	TX	17,400	1,548
TITUS	TX	216,315	19,230
TRAVIS	TX	70,794	6,286
UPSHUR	TX	22,959	2,041
WEBB	TX	92,415	8,216
WILLIAMSON	TX	68,961	6,131
TX Total		3,454,488	307,903
AUGUSTA	VA	15,030	1,336
BOTETOURT	VA	10,066	895
CARROLL	VA	7,262	646
FREDERICK	VA	10,108	899
MONTGOMERY	VA	10,592	942
PELASKI	VA	8,204	729
ROANOKE	VA	7,622	678
ROCKBRIDGE	VA	17,569	1,562
ROCKINGHAM	VA	11,515	1,024
SHENANDOAH	VA	16,424	1,460
SMYTH	VA	1,374	122
WASHINGTON	VA	1,858	165
WYTHE	VA	5,318	473
VA Total		122,942	10,930
CALEDONIA	VT	13,382	1,190
ORANGE	VT	9,669	860
ORLEANS	VT	8,104	720
WINDHAM	VT	13,411	1,192
WINDSOR	VT	13,662	1,215
VT Total		58,228	5,176
BERKELEY	WV	12,141	1,079
WV Total		12,141	1,079
Grand Total		38,471,076	3,711,879

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APPENDIX E
ENERGY ANALYSIS METHODS
AND RESULTS

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APPENDIX E

ENERGY ANALYSIS METHODS AND RESULTS

E.1 OVERVIEW

The Surface Transportation Board (Board), Section of Environmental Analysis (SEA) evaluated the potential effects of the proposed CN/IC Acquisition on energy. Appendix E summarizes SEA's methods for identifying and evaluating the potential effects of the proposed CN/IC Acquisition on energy transport, consumption, and overall efficiency. This Appendix includes the following: (1) a discussion of applicable Federal and state regulations for impact analysis, (2) the screening thresholds SEA used to determine which facilities or issues to analyze, (3) the sources and types of data SEA collected, and (4) the assumptions SEA used in its analysis and criteria to determine whether the potential effects would be significant.

E.2 APPLICABLE REGULATIONS AND GUIDANCE

The Board's regulations at 49 CFR 1105.7(e)(4) require SEA to review the following potential effects of the proposed CN/IC Acquisition:

- The transportation of energy resources and recyclable commodities.
- System-wide changes in overall energy efficiency.
- The extent of diversions from rail to trucks.

E.3 SCREENING PROCESS

SEA estimated fuel consumption changes resulting from the projected changes in rail operations and related activities including:

- Diversions from rail-to-truck transport and truck-to-rail transport.
- Intermodal facility operations.
- Vehicle delays at highway/rail at-grade crossings.

SEA then estimated the net change in energy consumption resulting from the proposed CN/IC Acquisition.

The Board's regulations set the threshold for the analysis of energy impacts from rail-to-truck diversions to be more than 1,000 carloads per year or an average of 50 rail carloads per mile/per year for any part of the affected rail line. Based on its review of the Applicants' Operating Plan, SEA does not expect any rail-to-truck diversions from the proposed CN/IC Acquisition. Therefore, SEA projected no change in energy consumption because of rail-to-truck diversions.

E.4 DATA SOURCES AND TYPES

SEA used the following data sources and types to evaluate potential effects on energy:

- The Applicants' proposed Operating Plan and traffic studies.
- 1996 data for commodities transported by the Applicants.
- The Applicants' fuel consumption and gross ton-mile (GTM) data for 1997.
- The Applicants' estimates of truck-to-rail diversions.

E.5 ASSUMPTIONS, EVALUATION CRITERIA, AND ANALYSIS

The following sections discuss SEA's analysis of effects of the proposed CN/IC Acquisition on the transportation of energy resources and recyclable commodities and overall energy efficiency.

E.5.1 Transportation of Energy Resources

SEA evaluated the potential effects of the proposed CN/IC Acquisition on the transportation of energy resources. SEA transported 321,714 carloads of energy-producing materials in 1996, and coal accounted for more than 96 percent of the total energy resources transported. SEA estimated that the transportation of energy resources would slightly increase (about 0.2 percent) as a result of the proposed CN/IC Acquisition. The Applicants stated that this small increase in volume of energy resources transported would be from diversions of these materials from other railroads and trucks to the integrated CN/IC rail system. Coal would continue to be the dominant (i.e., more than 96 percent) material transported following the proposed CN/IC Acquisition.

SEA analyzed the potential effects of the proposed CN/IC Acquisition on energy resources transportation using information about the types and quantities of energy-producing materials transported on the Applicants' rail lines. SEA reviewed and tabulated 1996 commodity data by Standard Commodity Classification Code (STCC) for carloads and tonnage of energy-producing commodities transported. SEA included the following STCCs in this review:

- 1100 series (Coal).
- 1300 series (Crude Oil).
- 29111 (High Volatile Fuels).
- 29112 (Kerosene).
- 29113 (Fuel Oils).
- 29117 (Heavy Fuel Oils).
- 2912110 (Butane).
- 2912111 (Propane).
- 2912112 (Isobutane).
- 2912130 (Coal Gas).
- 2912131 (Pintsch Gas).
- 2912190 (LPGs).
- 29911 (Solid Fuels).

SEA did not include wood products (STCC series 2400) or pulp and paper products (STCC series 2600) in its review of energy-producing materials because these materials are not used primarily for energy production.

SEA compared the 1996 data with post-Acquisition estimates for the same energy-producing commodity STCCs to obtain the change in volume transported. Attachment E-1, "Change in Energy Resources Transported," of this Appendix presents the results of this analysis by affected rail line segment. SEA concluded, based on these estimates, that the proposed CN/IC Acquisition would not significantly affect the transportation of energy resources.

E.5.2 Transportation of Recyclable Commodities

SEA analyzed the potential effects of the proposed CN/IC Acquisition on recyclable commodities transportation by identifying the types and quantities of recyclable material transported on their rail lines. SEA tabulated and reviewed 1996 commodity data by STCC to identify the number of carloads and tons of recyclable commodities transported. The Applicants transported 36,102 carloads of recyclable commodities in 1996. Scrap iron and steel (about 41 percent of the total) and fiberboard wastes (about 43 percent of the total) were the dominant recyclable commodities transported. The STCCs included in this review are part of the 4000 series (Waste or Scrap Materials).

SEA compared the 1996 data with post-Acquisition estimates for the same recyclable commodity STCCs to obtain the estimated change in volume transported. SEA estimated that the transportation of recyclable commodities would increase by about 6 percent as a result of the proposed CN/IC Acquisition. The Applicants stated that the increase in transportation of recyclable commodities would be from diversions of these materials from other railroads to the integrated CN/IC rail system. Scrap iron, steel, and fiberboard waste would continue to account for more than 85 percent of the total recyclable material transported after the proposed CN/IC Acquisition. SEA concluded, based on these estimates, that the proposed CN/IC Acquisition would not affect the transportation of recyclable commodities. Attachment E-2, "Change in Recyclable Commodities Transported," of this Appendix presents the results of this analysis by affected rail line segment.

E.5.3 Overall Energy Efficiency

SEA estimated the overall energy efficiency and fuel consumption effects of the proposed CN/IC Acquisition for the following activities:

- Truck-to-rail diversions.
- Operations at intermodal facilities.
- Vehicle delays at highway/rail at-grade crossings.

For each activity, SEA estimated the change in diesel fuel or gasoline consumption (change in fuel consumption (ΔFC)) resulting from Acquisition-related operational changes. SEA projected

no change in fuel consumption as a result of rail-to-truck diversions due to the proposed CN/IC Acquisition because the projections indicated that no rail-to-truck diversions would occur.

SEA evaluated fuel consumption changes that would result from operational changes at rail yards. SEA concluded that those operational changes would result from diversions of rail freight from other railroads. These diversions would cause decreases in rail yard activity at other railroads, along with corresponding decreases in fuel consumption at those rail yards. These fuel consumption decreases would offset fuel consumption increases that would occur at the Applicants' rail yards; therefore, operational changes at rail yards would not cause system-wide changes in fuel consumption. As a result, SEA's evaluation of system-wide changes in energy consumption did not include an analysis of changes resulting from diversions of freight from other railroad systems.

E.5.3.1 Energy Changes from Truck-to-rail Diversions

SEA used the following data and assumptions to estimate the change in fuel consumption from Acquisition-related truck-to-rail diversions:

- SEA's estimate for truck GTM diverted to rail, based on data from the Applicant's Operating Plan: SEA derived this estimate by adding GTM between the origin and destination point factors for each diverted truck trip (i.e., GTM removed from highways).
- The Applicants' fuel consumption and GTM data from 1997: SEA used these data to estimate average fuel efficiency (GTM/gallon) for the proposed CN/IC system. SEA calculated the merged system's fuel efficiency factor to be 733.4 GTM/gallon.
- An estimated truck fuel efficiency factor of 140 GTM/gallon: This factor represents an average value for trucks involved in medium-distance and long-distance hauls of various commodities.¹

SEA estimated the change in fuel consumption (ΔFC) from truck-to-rail diversions using the following formula:

$$\Delta FC \text{ (truck diversions)} = \left[\frac{\text{Additional rail GTM/yr}}{733.4 \text{ GTM/gal}} \right] - \left[\frac{\text{Diverted truck GTM/yr}}{140 \text{ GTM/gal}} \right]$$

SEA estimated that the proposed CN/IC Acquisition would result in the annual diversion of approximately 28,085 truck loads of freight to rail transport.² SEA estimated that the proposed CN/IC Acquisition would result in an additional 1.419 billion GTM per year of freight on the

¹ Abacus Technology Corporation. *Rail vs. Truck Efficiency: The Relative Fuel Efficiency of Truck Competitive Rail Freight and Truck Operations Compared in a Range of Corridors*, 1991.

² Bryan, Joseph G. B. *Verified Statement in Railroad Control Application*, Volume 2, 1998, pp. 66-101.

integrated CN/IC rail system from truck-to-rail diversions. SEA estimated that system-wide diesel fuel consumption by trains would increase by 1.94 million gallons per year because of the increased freight transported by rail. This increase would partially offset a decrease in diesel fuel consumption by trucks, which SEA estimated to be 6.3 million gallons per year. SEA also estimated that 881 million truck GTM per year of freight would be removed from major U.S. highways. Based on these figures, SEA estimated that the proposed CN/IC Acquisition would result in a net decrease in fuel consumption of approximately 4.36 million gallons per year from truck-to-rail diversions.

E.5.3.2 Changes in Energy Consumption at Intermodal Facilities

SEA estimated the change in fuel consumption resulting from operational changes at all intermodal facilities affected by the proposed CN/IC Acquisition. SEA's analysis focused on operational changes that would result from truck-to-rail diversions of intermodal freight because these diversions represent additional freight that was not previously transported by rail. As previously stated, the increased energy use at the Applicants' intermodal facilities from rail-to-rail diversions of freight would be offset by a corresponding reduction in energy use at intermodal facilities operated by other railroads.

SEA estimated that changes in intermodal facility operations from truck-to-rail diversions would result in an annual increase in diesel fuel consumption of about 132,000 gallons. Attachment E-3, "Change in Fuel Consumption at Intermodal Facilities," presents a summary of estimated fuel consumption changes for intermodal facilities owned by the Applicants. SEA evaluated these estimates and concluded that this increase would be insignificant when compared with the substantial decrease in annual diesel fuel consumption that would result from truck-to-rail diversions.

Based on the Applicants' traffic studies, SEA estimated that truck-to-rail diversions would account for 42.3 percent of the total change in intermodal freight that would be transported after the proposed CN/IC Acquisition. Rail-to-rail and port-to-rail diversions of freight would account for the other 57.7 percent of the increase in intermodal freight transported by the Applicants.³ SEA's analysis included energy changes attributable to the following primary vehicles associated with intermodal facility operations: (1) over-the-road (OTR) trucks, (2) lift equipment, and (3) and yard trucks. SEA did not consider switch engine activity in the analysis because switch engine activity at intermodal facilities is minimal and would not cause significant changes in diesel fuel consumption. SEA concluded that diversions of freight from other railroads and ports to their rail system would not cause a system-wide fuel consumption change.

³ The Applicants estimated that port-to-rail diversions would primarily affect freight shipped between Europe and ports in the Eastern U.S. The Applicants estimated that shippers would, instead, ship this freight to Montreal, Quebec and Halifax, Nova Scotia, for transfer to the Applicants' rail system. The Applicants estimated that port-to-rail diversions would account for about 6 percent of the total post-Acquisition increase in freight tonnage on their rail system.

OTR Trucks

SEA used the following data and assumptions to estimate the change in fuel consumption from OTR trucks at intermodal facilities:

- The Applicants' estimated changes in OTR trucks per day at intermodal facilities.
- The Applicants' estimated average time that an OTR truck is present in an intermodal facility. SEA derived an estimate of 38 minutes from operations data for 1995 through 1997.
- OTR trucks' fuel consumption of 1.75 gallons per hour while in an intermodal facility.
- Intermodal facilities operate 365 days per year.
- Truck-to-rail diversions would account for 42.3 percent of the total change in intermodal freight on the integrated CN/IC rail system.

SEA estimated the change in fuel consumption (ΔFC) for OTR trucks using the following formula:

$$\Delta FC \text{ (OTR truck)} = \left[\frac{\text{OTR trucks (change)}}{\text{day}} \right] \times \left[365 \frac{\text{days}}{\text{year}} \right] \\ \times \left[38 \frac{\text{minutes}}{\text{truck}} \right] \times \left[\frac{1 \text{ hour}}{60 \text{ minutes}} \right] \times \left[\frac{1.75 \text{ gallons fuel consumed}}{\text{hour}} \right] \times 0.423$$

Lift Equipment

SEA used the following data and assumptions to estimate the change in fuel consumption for lift equipment at intermodal facilities:

- The estimated change in the annual operating hours of lift equipment, which SEA derived from the estimated change in the number of primary lifts per year.⁴ SEA estimated the change in primary lifts per year, based on the Applicants' traffic studies and estimates of the number of intermodal containers and trailers that would be handled at the intermodal facility following the proposed CN/IC Acquisition. The Applicants also provided SEA with the number of total lifts per primary lift based on intermodal facility operating data.

⁴ SEA defined primary lifts as the sum of origin/destination lifts and switch lifts (inter-train transfers). SEA defined total lifts as the sum of primary and secondary lifts. Secondary lifts generally involve moving containers to or from storage areas or lifting containers between trucks and storage areas.

- Lift equipment uses an average of 5.7 gallons of diesel fuel per hour. SEA derived this estimate from lift equipment vendor data.
- Lift equipment makes an average of 12.6 lifts per hour, based on statistical data the Applicants maintain for their intermodal facilities.
- Truck-to-rail diversions would account for 42.3 percent of the total change in intermodal freight on the integrated CN/IC rail system.

SEA estimated the change in fuel consumption (ΔFC) for lift equipment using the following formula:

$$\Delta FC \text{ (lift equipment)} = \left[\frac{\text{primary lifts (change)}}{\text{year}} \right] \times \left[\frac{2.26 \text{ total lifts}}{\text{primary lift}} \right] \\ \times \left[\frac{1 \text{ hour}}{12.6 \text{ total lifts}} \right] \times \left[\frac{5.7 \text{ gallons}}{\text{hour}} \right] \times 0.423$$

Yard Trucks

SEA used the following data and assumptions to estimate the change in fuel consumption (ΔFC) for yard trucks at intermodal facilities:

1. Yard trucks use an average of 4.5 gallons of diesel fuel per hour. SEA derived this estimate based on yard truck data and specifications obtained from operators and vendors.
2. Yard trucks make an average of 0.95 move for each primary lift, based on statistical data the Applicants maintain for their intermodal facilities.
3. Yard trucks make an average of 6.4 moves per hour based on statistical data the Applicants maintain for their intermodal facilities.
4. Truck-to-rail diversions would account for 42.3 percent of the total post-Acquisition change in intermodal freight on the integrated CN/IC rail system.

SEA estimated the change in fuel consumption (ΔFC) for yard trucks using the following formula:

$$\Delta FC \text{ (yard trucks)} = \left[\frac{\text{primary lifts (change)}}{\text{year}} \right] \times \left[\frac{0.95 \text{ moves}}{\text{primary lift}} \right] \\ \times \left[\frac{1 \text{ hour}}{6.4 \text{ moves}} \right] \times \left[\frac{4.5 \text{ gallons}}{\text{hour}} \right] \times 0.423$$

Attachment E-3 of this Appendix, "Change in Fuel Consumption at Intermodal Facilities," presents SEA's analytical results for changes in energy consumption at intermodal facilities.

E.5.3.3 Energy Changes from Vehicle Delays at Highway/Rail At-grade Crossings

SEA analyzed the changes in annual fuel consumption resulting from the projected increase in vehicle delays at highway/rail at-grade crossings. The analysis included highway/rail at-grade crossings where the average daily traffic (ADT) volume is greater than 5,000 vehicles on rail line segments that exceeded Board's thresholds for environmental analysis. SEA used a fuel consumption factor for idling vehicles of 0.65 gallon/hour in this analysis, which is a composite of idle fuel consumption rates for a variety of gasoline-powered vehicles.⁵

SEA estimated the change in fuel consumption (ΔFC) for idling vehicles using the following formula:

$$\Delta FC \text{ (vehicle delays)} = [(T_D \times D_A)_{\text{PostAcquisition}} - (T_D \times D_A)_{\text{PreAcquisition}}] \\ \times \left[\frac{0.65 \text{ gallons}}{1 \text{ hour}} \right] \times \left[\frac{1 \text{ hour}}{60 \text{ minutes}} \right] \times \left[\frac{365 \text{ days}}{\text{year}} \right]$$

where:

- T_D = Number of vehicles delayed per day
- D_A = Crossing delay per stopped vehicle, in minutes per vehicle.

Appendix D, "Transportation Analysis Methods and Results," contains the formulas used to estimate the number of vehicles delayed per day and the crossing delay per stopped vehicle. Attachment E-4, "Fuel Consumption from Vehicle Delays at Highway/Rail At-grade Crossings," presents the results of the analysis of energy changes from vehicle delays at highway/rail at-grade crossings. SEA estimated that annual gasoline consumption would increase by about 7,600 gallons (i.e., approximately 21 gallons per day) because of increased vehicle delays at highway/rail at-grade crossings. SEA concluded that this increase would be insignificant when compared with the substantial decrease in annual diesel fuel consumption resulting from truck-to-rail diversions.

E.5.3.4 Summary of Energy Changes

Table E-1, "Summary of Fuel Consumption Changes," summarizes the projected changes in fuel consumption from the proposed CN/IC Acquisition. As shown in Table E-1, SEA estimated that

⁵ U.S. Department of Transportation, Federal Highway Administration. *Procedure for Estimating Highway User Costs, Fuel Consumption and Air Pollution*, March 1980.

overall fuel consumption would decrease by 4.22 million gallons per year as a result of the proposed CN/IC Acquisition.

TABLE E-1
SUMMARY OF FUEL CONSUMPTION CHANGES

Activity	Change in Fuel Consumption (Δ FC) (gallons per year)
Truck-to-rail diversions	(4,360,000) ^a
Operations at intermodal facilities	132,000
Vehicle delays at highway/rail at-grade crossings	7,600
TOTAL	(4,220,400)^a

^a Changes noted in parentheses indicate reductions.

SEA's Conclusions

SEA concludes that the proposed CN/IC Acquisition would have a positive effect on overall energy consumption because it would cause overall fuel consumption to decrease by about 4.22 million gallons per year.

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ATTACHMENT E-1 **CHANGE IN ENERGY RESOURCES TRANSPORTED**

STCC*	Carloads Per Year		Change	Description	Percent of Total	
	Pre-Acquisition	Post-Acquisition			Pre-Acquisition	Post-Acquisition
111110	3	3	0	ANTHRACITE TO BREAKERS OR WASHERIES	0.00%	0.00%
111215	833	833	0	ANTHRACITE PEA OR SMALLER	0.36%	0.36%
112130	3,117	3,117	0	BITUMINOUS COAL FOR METALLURGICAL OR COKING PURPOSES	0.97%	0.97%
112290	311,998	311,638	440	BITUMINOUS COAL FOR FUEL OR STEAM PURPOSES	96.37%	96.70%
131110	6	6	0	PETROLEUM OIL OR SHALE OIL, CRUDE	0.00%	0.00%
291115	11	11	0	GASOLINE BLND MOTOR FUEL CONT 39% MORE OF GAS	0.00%	0.00%
291215	27	27	0	PETROLEUM FUEL OIL DISTILLATE	0.01%	0.01%
291715	829	829	0	FUEL OIL, AAA DIESEL OIL	0.26%	0.26%
291727	63	63	0	BUNKER C FUEL OIL	0.02%	0.02%
291735	33	304	21	PETROLEUM FUEL OIL, FFP	0.03%	0.03%
291791	3,485	3,749	264	PETROLEUM OIL, NEC	1.08%	1.16%
291810	2,059	1,897	-162	LIQUIDIFIED PETROLEUM GAS, NEC, COMPRESSED	0.64%	0.59%
TOTAL	321,214	323,237	203			

* Standard Commodity Classification Code

Source: Multimodal 7/24/93

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**ATTACHMENT E-2
CHANGE IN RECYCLABLE COMMODITIES TRANSPORTED**

SYCC	Tonnage Per Year			Description	Percent of Total	
	Pre-Annexation	Post-Annexation	Change		Pre-Annexation	Post-Annexation
401133	12	12	0	RICE HULL ASHES	0.03%	0.03%
4021187	40	40	0	BATTERY CYLINDERS, STEEL, BURNT OUT AND BATTERY PLATE	0.12%	0.11%
4021188	1	1	0	ANNEALING BONES OR BONE, BONE, BURNT OUT	0.00%	0.00%
4021188	21	21	0	BORINGS, FILLINGS, GRINDINGS, TURNINGS, BORS N R P M P L T	0.06%	0.07%
4021188	36	36	0	BORINGS, FILLINGS, GRINDINGS, TURNINGS, BORS F REMELT	0.11%	0.11%
4021123	514	514	0	SCRAP, BORS NEC, COPPER CLAD	1.53%	1.44%
4021123	11,464	13,631	2,167	SCRAP, IRON-STEEL, NEC, NOT COPPER CLAD, REMELTING PURPOSE	44.33%	43.69%
4021123	0	3	3	TIN PLATE OR TERNAL PLATE SCRAP, REMELTING PURPOSE	0.01%	0.01%
4021124	23	23	0	SCRAP, IRON OR STEEL, STAINLESS, NEC, VALUE REM PU	0.07%	0.07%
4021124	1	1	0	WATER METERS OLD, USED, VERP	0.00%	0.00%
4021137	10	10	0	BROUETTES IRON OR STEEL SCRAP, NEC	0.03%	0.03%
4021137	9	9	0	INGOT MOLDS, IRON OR STEEL, BURNT OR WORN OUT	0.03%	0.03%
4021145	2	2	0	AXLES, RMY CAR, LOCO, OLD WD, ATCHTS F REMELT R P M L T	0.01%	0.01%
4021145	2	2	0	AXLES, RMY CAR, LOCAL, OLD WD, ATCHTS F CUTTING HEATING	0.01%	0.01%
4021148	2	2	0	RAILWAY TRACK MATLS, BORS FOR REMELTING, REROLLING	0.01%	0.01%
4021149	280	268	-12	RAILWAY TRACK RAILS, BORS OLD	0.83%	0.78%
4021152	1	1	0	RAILWAY CAR WHEELS, BORS OLD	0.00%	0.00%
4021158	4	4	0	TIN CANS, OLD, USED OR DEFECTIVE	0.01%	0.01%
4021159	1	1	0	CANS, OLD, USED OR DEFECTIVE, BORS TIN PLATE, REMELTING	0.00%	0.00%
4021225	4	4	0	CLIPPINGS, BRASS, BRONZE OR COPPER	0.01%	0.01%
4021240	69	29	-40	SCRAP, NEC, BRASS, BRONZE OR COPPER, REMELTING PURPOSE	0.36%	0.15%
4021250	1	1	0	SWEEPINGS, BRASS, BRONZE OR COPPER	0.00%	0.00%
4021265	1	1	0	CUPRO-NICKEL SCRAP	0.00%	0.00%
4021310	2	2	0	BATTERY CYLINDERS, LEAD OR ZINC, NO AND PLATES	0.01%	0.01%
4021345	2	2	0	ZINC OR ZINC ALY BORING, GRIND OR TURNING	0.01%	0.01%
4021355	1	1	0	ZINC OR ZINC ALLOY SHAVINGS	0.00%	0.00%
4021395	3	3	0	ZINC-ZINC ALLOY SCRAP, NEC, VALUE FOR REMELTING PURPOSE	0.01%	0.01%
4021425	1	1	0	ALUMINUM OR ALUMINUM ALLOY SAWINGS	0.00%	0.00%
4021430	83	219	137	ALUMINUM OR ALUMINUM ALLOY SCRAP, NEC	0.24%	0.61%
4021433	1	1	0	ALUMINUM FOIL SCRAP	0.00%	0.00%
4021440	1	34	33	ALUMINUM DROSS WASTE	0.00%	0.09%
4021444	4	4	0	SCRAP, MAGNESIUM-MAGNESIUM ALLOY, FOR RECLAIMING OR M	0.01%	0.01%
4021456	4	4	0	SOLDER, BORINGS, SCRAP OR TURNINGS	0.01%	0.01%
4021458	44	44	0	TYPE METAL SCRAP	0.13%	0.12%
4021460	1	1	0	JEWELERS SWEEPINGS, METAL	0.00%	0.00%
4021463	0	33	33	ANTIMONY METAL SCRAP	0.00%	0.09%
4021443	2	2	0	TITANIUM METAL SCRAP	0.01%	0.01%
4021445	1	1	0	URANIUM METAL SCRAP, BORD FOR RPS	0.01%	0.01%
4021448	4	4	0	SCRAP, NICKEL	0.01%	0.01%
4021452	1	1	0	NICKEL-IRON SCRAP, NLT 50% NICKEL	0.00%	0.00%
4021460	1	1	0	METALLIC TIN SCRAP FOR REMELTING PURPOSE	0.00%	0.00%
4021468	3	3	0	STEREOTYPE PLATES, CHNG, OR SCRAP, VERP	0.01%	0.01%
4021490	93	194	101	METAL OR METAL ALLOY SCRAP, NEC, N BOND	0.27%	0.53%
4021491	4	4	0	NONFERROUS METAL OR ALLOY SCRAP, MIXED FOR REMELTING	0.01%	0.01%
4021491	1	1	0	WASTE, COTTON, WITH LITTLE OR NO FIBRES	0.01%	0.00%
4021493	2	2	0	CARPET BELTAOR SCRAP	0.01%	0.01%
4021493	1	1	0	FELT BASE FLR CVRG REFUSE, SCRAP OR WASTE	0.00%	0.00%
4021493	28	28	0	ROOFING OR FELT STOCK, WOOL	0.08%	0.08%
4021493	3	3	0	CLEANINGS CTN GEN CLUB OR CTN SWEEPINGS	0.01%	0.01%
4021493	1	1	0	TWINE, OLD	0.00%	0.00%
4021493	1	1	0	COTTON WASTE, NEC, NOT PACKING OR WIPING	0.00%	0.00%
4021493	43	43	0	CLOTHING, OLD	0.13%	0.12%
4021493	1	1	0	SCRAP, HOSIERY OR KNIT GOODS	0.00%	0.00%
4021493	2	2	0	WASTE, RAYON OR SYNTHETIC FIBRE	0.01%	0.01%
4021493	10	10	0	BAGS, NEC	0.03%	0.03%
4021493	0	0	0	REJECT WOODPULP SCRAP OR WASTE	0.00%	0.00%
4021493	333	333	0	SCRAP PAPER OR PAPER CLIPPINGS	1.00%	0.94%
4021493	15,732	16,944	1,212	FIBERBOARD OR PULPBOARD WASTE	46.10%	47.15%
4021493	178	178	0	WASTE PAPER OR NO WASTE	0.53%	0.50%
4021493	129	129	0	AGRICULTURAL PLANT OR GARDEN MULCH	0.38%	0.36%
4021493	149	149	0	OLD NEWSPAPERS	0.44%	0.42%
4021493	0	0	0	PAPER STOCK	0.02%	0.02%
4021493	1	1	0	CHEMICAL WASTE, NEC, LIQUID	0.00%	0.00%

ATTACHMENT E-2 CHANGE IN RECYCLABLE COMMODITIES TRANSPORTED

SYTC ^a	Tons/Year			Description	Percent of Total	
	Pre-Acquisition	Post-Acquisition	Change		Pre-Acquisition	Post-Acquisition
4025110	1	1	0	SCRAP CARBON	0.00%	0.00%
4025113	0	0	0	CATALYST MERCURIC CHLORIDE & CHL. SPENT	0.02%	0.02%
4025115	2	2	0	CHLORINATED HYDROCARBON RESIDUE FURTH PROCG	0.01%	0.01%
4025124	24	24	-6	CRANKCASE DRAININGS SUITABLE ONLY FOR REGRINDING	0.23%	0.21%
4025132	1	1	0	SODIUM SOLUTION WASTE	0.00%	0.00%
4025133	1	1	0	WASTE MATERIALS ROXAOT	0.00%	0.00%
4025135	25	25	0	SILICA OIL CATALYST SPENT	0.07%	0.07%
4025144	1	1	0	NAPHTHENEIC SODIUM SOLUTIONS SPENT, CONT SODIUM HYD	0.00%	0.00%
4025167	0	4	4	SODIUM SULFIDE SOLUTIONS SPENT, CONT SODIUM HYDROX	0.00%	0.04%
4025173	3	3	0	ALUMINA OXIDE CATALYST FINES SPENT	0.01%	0.01%
4025176	59	59	0	RESINOUS PETROLEUM RESIDUE	0.56%	0.56%
4025178	12	12	0	CATALYST ALUMINA SPENT	0.04%	0.04%
4025179	2	2	0	CATALYZER COPPER OR NICKEL SPENT	0.01%	0.01%
4025187	7	2	0	CAUSTIC SODA SOLUTION SPENT	0.03%	0.02%
4025194	4	5	-1	CHEMICAL PLANT WASTE NEC	0.03%	0.04%
4025198	59	24	0	WASTE OIL NEC	0.56%	0.23%
4026110	8	7	-1	PLASTIC CELLULOSE EXPANDED OR FOAMED SOLAR OR WASTE	0.02%	0.02%
4026115	26	26	0	RUBBER SCRAP HARD POLYMERIZED	0.04%	0.04%
4026120	24	23	-1	SCRAP RUBBER NEC	0.22%	0.20%
4026125	9	3	-1	SCRAP RUBBER TIRES	0.04%	0.01%
4026134	80	80	0	HARD RUBBER SHAVINGS OR TURNINGS	0.24%	0.23%
4026135	2	2	0	SYNTHETIC PLASTIC SCRAP NEC	0.01%	0.01%
4026137	31	31	0	PLASTIC SCRAP, W FILLER, VULF FERTILIZER INC FOR APT	0.09%	0.09%
4026140	50	50	0	CLIPPINGS OR TRIMMS RUBBER LATEX FOAM	0.17%	0.16%
4026143	1	1	0	POLYURETHANE SCRAP	0.00%	0.00%
4026164	17	17	0	RUBBER SCRAP OR WASTE NEC VPRCN	0.05%	0.05%
4026171	14	9	-6	TIRES, RUBBER, WASTESCRAP, CRGMPULVACHSH, FULL	0.04%	0.02%
4027114	5	5	0	BRICK, CRSHD, UNND OR BRKN - BRICK BATS	0.01%	0.01%
4029100	24	24	0	ASH SLUDGE, METAL BEARING	0.07%	0.07%
4029115	3	3	0	SLAG RESIDUE FOR RECLAMATION PURPOSES	0.01%	0.01%
4029118	1	1	0	CRUSHED AUTO BODIES	0.00%	0.00%
4029120	35	35	0	WASTE WATER	0.10%	0.10%
4029124	1	1	0	FERTILIZER SYNTHETIC GUM OR RESIN SCRAP	0.00%	0.00%
4029127	14	14	0	SLUDGE, SOWA OIL DRY FERTILIZER MATERIAL	0.04%	0.04%
4029134	1	1	0	FILTER CAKE CONTAINING DIBS WAX REFUSE	0.00%	0.00%
4029135	2	2	0	FIXTURES PLUMBERS, CST (IRON), CHINA, RTIAD MNT INSULIBL	0.00%	0.00%
4029133	20	20	0	AUTOMOBILE PLUFF OR SHREDDER RESIDUE, OF METALS	0.06%	0.06%
4029143	1	1	0	GRAPHITE SCRAP	0.00%	0.00%
4029163	1	1	0	TELEPHONE CONDENSERS,ND VALVE OF RMTG	0.00%	0.00%
4029174	14	14	0	AUTOMOBILE SHREDDER RESIDUE	0.04%	0.04%
4029184	22	22	0	SILICON CARBIDE SCRAP	0.07%	0.06%
4029192	7	7	0	RAILROAD TIES, WOOD, WHOLE OR PROCESSED, SCRAP	0.02%	0.02%
TOTAL	33,618	33,794	2,164			

^a Standard Commodity Classification Code

Source: Multimodal 7/24/98

ATTACHMENT E-3
CHANGE IN FUEL CONSUMPTION AT INTERMODAL FACILITIES

Intermodal Facility	State	Pre-Acquisition Fuel Consumption (gal/year)			Post-Acquisition Fuel Consumption (gal/year)			Change in Total Fuel Consumption (gal/year)
		OTR Trucks	Lift Equipment	Yard Trucks	OTR Trucks	Lift Equipment	Yard Trucks	
Mobile	AL	3,061	3,831	2,347	3,544	4,435	2,950	1,490
Council Bluffs	IA	471	589	392	545	682	454	229
Fort Dodge	IA	235	295	196	235	295	196	0
Waterloo	IA	87	109	72	87	109	72	0
Meyers	IL	59,143	74,749	49,709	74,173	103,160	68,603	62,335
New Orleans	LA	16,232	20,316	13,510	17,360	21,727	14,449	3,477
Detroit	MI	5,886	10,003	6,652	13,940	24,038	15,985	31,422
Jackson	MS	5,799	7,444	4,950	6,666	8,405	5,590	2,468
Memphis	TN	20,941	26,348	17,522	28,933	39,856	26,505	30,483
Total		111,854	143,683	95,551	145,484	202,707	134,803	131,905

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**ATTACHMENT E-4
FUEL CONSUMPTION FROM VEHICLE DELAYS AT HIGHWAY RAIL AT-GRADE CROSSINGS**

Seg No.	County	Crossing Number	City	Street Name	Pre-Adaptation			Post-Adaptation			In Fuel Consumption (gallons per year)
					No. of Vehicles Delayed per day	Crossing Delay per Stopped Vehicle (minutes)	Fuel Consumption (gallons per year)	No. of Vehicles Delayed per day	Crossing Delay per Stopped Vehicle (minutes)	Fuel Consumption (gallons per year)	
100	COOK	2694BT	CHICAGO	PULASKI ROAD	205	1.82	1,638	264	2.11	4,992	1,073
104	COOK	26942M	BERWYN	HARLEM AVENUE	282	1.35	1,531	448	1.54	2,733	1,204
104	COOK	26943B	RIVERSIDE	26TH STREET	163	1.18	670	224	1.35	1,197	327
104	COOK	26943L	RIVERSIDE	DES PLAINES AVENUE	153	1.19	721	239	1.36	1,286	367
104	COOK	26943T	RIVERSIDE	CERMAK RD-22ND ST	330	1.32	3,653	515	1.65	2,952	1,299
104	COOK	26943A	RIVERSIDE	DOUGHERTY ST AVE	327	1.41	1,820	511	1.63	3,251	1,431
104	COOK	26943Q	BROADVIEW	17TH WILMAN AVE	117	1.16	526	143	1.32	948	412
223	DOE WITT	21532H	CLINTON	LG ROUTE 31	12	0.89	44	26	1.01	105	59
187	KANKAKEE	26852H	MANTENO	THURST	68	0.71	198	117	0.79	363	173
187	KANKAKEE	26852C	MANTENO	DIVISION ST.	63	0.71	176	109	0.79	340	164
187	KANKAKEE	26852S	BRADLEY	NORTH ST	111	0.70	306	192	0.78	597	286
236	SAUNDERS	32640T	SPRINGFIELD	N. GRAND	30	0.68	165	54	1.01	215	105
181	WILL	26840Y	UNIVERSITY PARK	STUBBINS ROAD	91	0.71	344	157	0.62	511	247
TOTAL FUEL CONSUMPTION							11,875			19,659	7,594

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**APPENDIX F
AIR QUALITY ANALYSIS METHODS
AND RESULTS**

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APPENDIX F

AIR QUALITY ANALYSIS METHODS AND RESULTS

The Surface Transportation Board (Board), Section of Environmental Analysis (SEA) evaluated the potential effects of the proposed CN/IC Acquisition on air quality. Appendix F describes the methods of analysis SEA used to determine potential air quality impacts on the proposed Canadian National Railway Company/Illinois Central Corporation (CN/IC) Acquisition.

F.1 OVERVIEW

The following sections, which describe the process SEA used to identify and evaluate the potential impacts on air quality, include: (1) applicable regulations; (2) the threshold screening process; (3) data types and sources; and (4) assumptions, evaluation criteria, and analysis. SEA performed system- and county-wide analyses for the following:

- Changes in locomotive emissions resulting from operational changes on rail line segments.
- Changes in locomotive emissions resulting from operational changes at rail yards.
- Changes in emissions from freight trains, trucks, and heavy equipment resulting from operational changes at intermodal facilities.
- Changes in emissions resulting from the diversion of freight from truck to rail.
- Changes in emissions resulting from idling vehicles delayed at highway/rail at-grade crossings.

F.2 APPLICABLE REGULATIONS AND GUIDANCE

SEA considered the existing air quality in determining the potential environmental impacts of the proposed CN/IC Acquisition on air quality. SEA also reviewed the requirements of the Clean Air Act (CAA), as amended; U.S. Environmental Protection Agency (EPA) guidelines; and the Board's regulations at 49 CFR [Code of Federal Regulations] 1105.7(e).

F.2.1 EPA and National Ambient Air Quality Standards

The CAA, as amended, required EPA to develop National Ambient Air Quality Standards (NAAQS) for several air pollutants, known as "criteria" pollutants. These pollutants include the following:

- Nitrogen dioxide (NO₂) (often expressed as nitrogen oxides (NO_x) to determine emissions).
- Sulfur dioxide (SO₂).
- Carbon monoxide (CO).
- Ozone (O₃).
- Particulate matter with a diameter of 10 microns or less (PM₁₀).
- Lead (Pb).

EPA determined that emissions of NO_x and volatile organic compounds (VOCs), or hydrocarbons, contribute to the formation of surface level ozone in the presence of sunlight. Regulatory limits on emissions of NO_x and VOCs are based on their potential to form ozone. Railroad and trucking operations can emit these criteria pollutants and VOCs as a result of the combustion of diesel fuel in locomotive engines, trucks, and heavy equipment.

EPA determines compliance with the NAAQS on a county or jurisdictional basis and categorizes the level of compliance, expressed as attainment status, with the NAAQS as follows:

- If a county or jurisdiction is in compliance with the NAAQS for a specific criteria pollutant, the county or jurisdiction is considered to be an attainment area for that specific criteria pollutant.
- If a county or jurisdiction is not in compliance with the NAAQS for a specific criteria pollutant, then EPA considers the county or jurisdiction to be a nonattainment area for that specific criteria pollutant. EPA has classified nonattainment areas according to their level (extreme, severe, serious, moderate, and marginal) of noncompliance with the NAAQS.
- If the county or jurisdiction is in compliance with the NAAQS, but was previously not in compliance (nonattainment status), the county or jurisdiction is considered a maintenance area.

Attachment F-1, "Air Quality Attainment Status by County," contains the air quality attainment status for all U.S. counties affected by the proposed CN/IC Acquisition.

In addition, other regulations further classify air quality by area. The 1977 Clean Air Act Amendments (CAAA) designated certain areas (such as national parks and wilderness areas) as Prevention of Significant Deterioration (PSD) Class I areas. More stringent standards for particular pollutants (PM₁₀, NO₂, and SO₂) protect these areas from air quality deterioration.

F.2.2 The Board's Thresholds for Environmental Analysis

The Board has identified thresholds for environmental analysis at 49 CFR 1105.7(e) for rail line segments, rail yards, and intermodal facilities. SEA analyzed the air quality effects of operational changes that would meet or exceed the Board's thresholds for environmental analysis.

Table F-1, "The Board's Thresholds for Analysis of Air Quality Impacts," contains the Board's thresholds for environmental analysis of air quality effects.

TABLE F-1
THE BOARD'S THRESHOLDS FOR ANALYSIS OF AIR QUALITY IMPACTS

Activity	Threshold
Attainment Areas [49 CFR 1105.7(e)(5)(i)]^a	
Rail line segment	Increase of eight trains per day or 100 percent, in gross ton-miles annually.
Rail yard	100 percent increase, in carload activity. ^b
Intermodal facility	Increase in truck traffic more than 10 percent of average daily traffic (ADT) or 50 trucks per day.
Nonattainment Areas and Class I Areas [49 CFR 1105.7(e)(5)(ii)]	
Rail line segment	Increase of three trains per day or 50 percent, in gross ton-miles annually.
Rail yard	20 percent increase in carload activity. ^b
Intermodal facility	Increase in truck traffic greater than 10 percent of ADT or 50 trucks per day.

^a SEA applied attainment area thresholds to maintenance areas (i.e., EPA redesignated these areas, which were previously not in compliance with the NAAQS, to attainment status because of air quality improvements).

^b SEA defined carload activity as rail car switching and block swapping for determining threshold increases in rail yards.

F.2.3 State Regulations

States are required to adopt their own air quality standards, which must be at least as stringent as the NAAQS. States must also develop state implementation plans that describe the measures that they will implement to attain and maintain compliance, at a minimum, with NAAQS.

F.3 SCREENING PROCESS

SEA calculated air quality effects from the proposed CN/IC Acquisition on a system- and county-wide (jurisdictional) basis using estimated emissions increases. The following sections discuss the methods applied to determine system-wide changes in air quality and the screening process SEA used to determine which jurisdictions meet or exceed the Board's thresholds and require

further analysis. Figure F-1, "Air Quality Methods and Analysis Flow Chart," displays the analysis methods used by SEA.

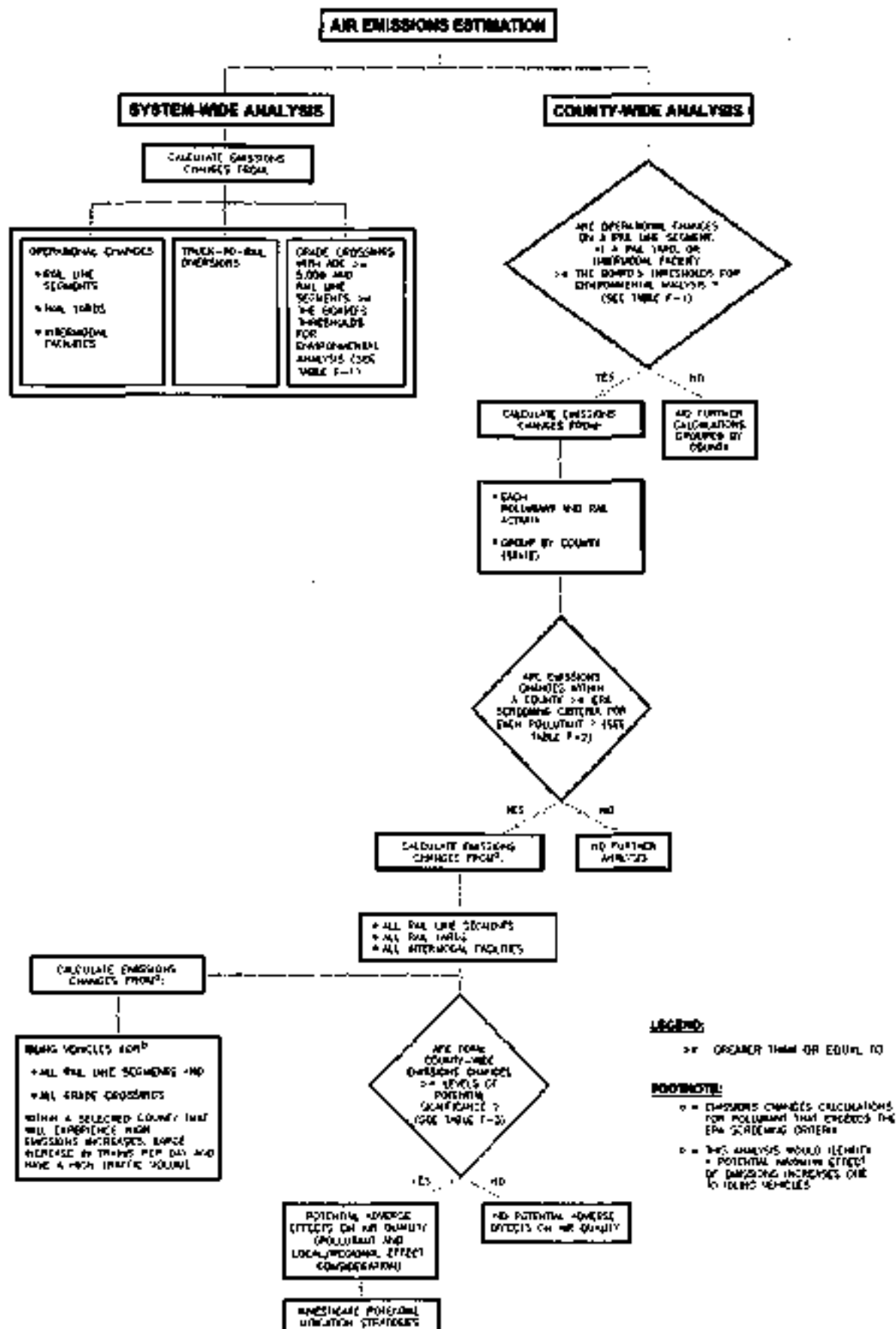
F.3.1 System-wide Analysis

SEA conducted system-wide analyses of emissions based on the following information:

- Changes in freight train activity on rail line segments.
- Changes in rail car activity at rail yards.
- Activity changes at intermodal facilities (truck-to-rail diversions).
- Changes in over-the-road (OTR) truck activity (truck-to-rail diversions).
- Numbers of idling vehicles delayed at highway/rail at-grade crossings with an average daily traffic (ADT) volume of 5,000 or more on rail line segments that meet or exceed the Board's thresholds for environmental analysis.

SEA used the sum of the emissions estimates from each of these sources to obtain annual system-wide net emissions estimates (i.e., changes in tons per year) for each criteria pollutant. Attachment F-2, "System-wide Emissions Estimates," presents the system-wide emissions estimates.

**FIGURE F-1
AIR QUALITY METHODS AND
ANALYSIS FLOW CHART**



F.3.2 County-wide Analysis

SEA compared the county-wide emissions change for each criteria pollutant, in tons per year, with the EPA screening criteria for that pollutant. Table F-2, "EPA Screening Criteria," presents the EPA air quality screening thresholds SEA used in this analysis. To determine the county-wide emissions change, SEA used the sum of the changes in emissions for each criteria pollutant for all rail activities (changes in freight traffic on rail line segments, activity changes at rail yards and intermodal facilities) that would meet or exceed the Board's thresholds for environmental analysis. Attachment F-3, "County-wide Emissions Increases for Rail Activities that Meet or Exceed the Board's Thresholds for Environmental Analysis;" Figure F-1, "Air Quality Methods and Analysis Flow Chart;" and Attachment F-15, "Emissions and Activity Increases for Rail Activities that Meet or Exceed the Board's Thresholds for Environmental Analysis," present the county-wide emissions increases SEA estimated for rail activities that meet or exceed the Board's thresholds for environmental analysis.

**TABLE F-2
EPA SCREENING CRITERIA**

Air Pollutant	Area Designation	Emission Screening Thresholds in Tons per Year (and Basis) ^a
NO _x	NO _x Attainment/Maintenance or O ₃ Marginal/Moderate NAA ^b	100 (GC, TV)
	O ₃ Serious NAA	50 (GC, TV)
	O ₃ Severe NAA	25 (GC, TV)
VOCs	O ₃ Attainment/Maintenance or O ₃ Marginal/Moderate NAA	100 (GC, TV)
	O ₃ Serious NAA	50 (GC, TV)
	O ₃ Severe NAA	25 (GC, TV)
CO	CO Attainment/Maintenance or CO Moderate NAA	100 (GC, TV)
	CO Serious NAA	50 (TV)
PM ₁₀	PM ₁₀ Attainment/Maintenance or Moderate NAA	100 (GC, TV)
	PM ₁₀ Serious NAA	70 (GC, TV)
SO ₂	SO ₂ Attainment or NAA	100 (GC, TV)
Lead	Lead Attainment or NAA	0.6 (NSR)

^a Basis for selection of most stringent emission threshold:

GC = EPA General Conformity emission threshold

TV = CAAA Title V emission threshold

NSR = EPA New Source Review emission threshold major modification

^b NAA = Nonattainment Area

EPA uses these thresholds to determine if emissions increases from stationary sources would require a Federal or state-issued permit for stationary sources. SEA used the thresholds for stationary sources as a basis for analysis because no similar thresholds exist for mobile sources of emissions (such as locomotives and trucks). After calculating Acquisition-related increases, SEA compared the increases to the thresholds (i.e., the EPA screening criteria). If the emissions change for a criteria pollutant did not exceed the EPA screening threshold, then SEA considered the effect on the county to be insignificant and did not conduct any further analysis for that criteria pollutant. Attachment F-4, "Comparison of Emissions Changes with the EPA Screening Criteria," presents a list of counties with changes in emissions exceeding the EPA screening criteria.

F.4 DATA SOURCES

SEA obtained the data used to estimate criteria air pollutant emissions changes from the Applicants' operational records and numerous government agency sources and documents. The following sections describe those sources.

F.4.1 Data Sources for Air Quality Attainment Status

SEA used the following data sources to determine the air quality attainment status of potentially affected areas:

- The Bureau of National Affairs' Environment Library on compact disc (40 CFR Part 81).
- EPA's Internet website, located at <http://www.epa.gov/oar/oaqps/greenbk>.
- Federal agencies, including EPA Regions V, VI, VII, and the Office of Mobile Sources; state environmental agencies in Illinois, Indiana, Michigan, Minnesota, Nebraska, Tennessee, and Wisconsin; and the Illinois Department of Transportation.

F.4.2 Data Sources for Emissions Screening Thresholds and Basis

SEA used the following data sources to determine appropriate emissions screening thresholds:

- EPA General Conformity, *Federal Register*, Volume 58, No. 228, Part 51, November 30, 1993.
- EPA Clean Air Act Amendments (CAAA) Title V Operating Permit Program, 40 CFR Part 70, July 21, 1992, 57 FR 32250.
- EPA New Source Review (NSR), 40 CFR Part 52.21, June 19, 1978, 43 FR 26403.
- Emissions Trends Viewer, Compact Disc, 1985-1995, Version 1.0, September 1996, EPA, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina.

F.4.3 Data Sources for Emissions for Rail Line Segments

SEA used the following sources to calculate emissions changes for trains operating on rail line segments:

- Technical Highlights, EPA, Office of Mobile Sources, EPA420-F-97-051, December 1997. SEA used this reference document to obtain 1998 locomotive fleet emissions factors for line-haul locomotives for VOCs, CO, NO_x, and PM₁₀.
- AP-42 Compilation of Air Pollutant Emissions Factors (AP-42), EPA, October 1996 edition. SEA used this reference document to obtain the emissions factor for lead.

F.4.4 Data Sources for Emissions at Rail Yards

SEA used the following sources to calculate emissions changes at rail yards:

- Technical Highlights, EPA, Office of Mobile Sources, EPA420-F-97-051, December 1997. SEA used this reference document to obtain 1998 locomotive fleet emissions factors for line-haul and switch engine locomotives for VOCs, CO, NO_x, and PM₁₀.
- AP-42 Compilation of Air Pollutant Emissions Factors (AP-42), EPA, October 1996 edition. SEA used this reference document to obtain the emissions factor for lead.

F.4.5 Data Sources for Calculating Emissions at Intermodal Facilities

SEA used the following sources to calculate emissions changes at intermodal facilities:

- EPA's MOBILE5a Mobile Source Emissions Factor Model, March 26, 1993. SEA used this model to calculate VOCs, CO, and NO_x emissions factors for OTR trucks.
- EPA's PART5 Mobile Source Emissions Factor Model, February 24, 1995. SEA used this model to calculate PM₁₀ and SO₂ emissions factors for OTR trucks.
- Nonroad Engine and Vehicle Emission Study Report, EPA-460/3-91-02, EPA, Office of Air and Radiation, Washington, D.C., November 1991. SEA used this document to obtain emissions factors for lift equipment and yard trucks.

F.5 ASSUMPTIONS, EVALUATION CRITERIA, AND ANALYSIS

SEA performed a more detailed analysis for criteria pollutants that exceeded the EPA screening criteria. (See Table F-2, "EPA Screening Criteria.") SEA considered all emissions increases and decreases resulting from the proposed CN/IC Acquisition (including emissions from Acquisition-related operational changes that would not meet or exceed the Board's thresholds for environmental analysis). Attachment F-5, "NO_x Emissions Changes from All Activities for Counties that Exceed the EPA Screening Criteria—Detailed Analysis," presents NO_x emissions changes from all activities (rail line segments, rail yards, intermodal facilities, truck-to-rail

diversions, and vehicle delays at highway/rail at-grade crossings for Will County) for counties that would exceed the EPA screening criteria. Attachment F-6, "Existing County-wide NO_x Emissions Inventory for Counties that Exceed the EPA Screening Criteria," lists the emissions source, point source, and area source as well as the total emissions inventory in tons per year.

F.5.1 Rail Line Segments

SEA conducted an analysis of the emissions changes from locomotives on rail line segments that would meet or exceed the Board's thresholds for environmental analysis. SEA used a fuel efficiency factor of 733.4 gross ton-miles (GTM) per gallon for an average diesel locomotive on the proposed CN/IC system. SEA calculated the change in fuel consumed by locomotives on each affected rail line segment by dividing the total GTM change on the rail line segment by the fuel efficiency factor for the proposed CN/IC system.

SEA estimated the annual emission changes, in tons per year, by multiplying the change in annual fuel consumption for each affected rail line segment by established emissions factors for criteria pollutants. SEA obtained the emissions factors, representative of the 1998 locomotive fleet for all U.S. railroads, from EPA's Office of Mobile Sources. SEA converted the emissions factors for line-haul locomotives to units of pounds of pollutant per 1,000 gallons of diesel fuel consumed. Table F-3, "Line-haul Locomotive Emissions Factors," presents these factors for various pollutants.

**TABLE F-3
LINE-HAUL LOCOMOTIVE EMISSIONS FACTORS**

Pollutant	Emissions Factor ^a (pounds/1,000 gallon)
VOCs ^a	21.99
CO ^a	58.64
NO _x ^b	593.59
SO ₂ ^c	55.2
PM ₁₀ ^b	14.66
Lead ^d	0.0015

^a SEA converted EPA's emissions factors to pounds per 1,000 gallons using EPA's recommended conversion factor of 20.8 horsepower-hour per gallon of fuel consumed.

^b Technical Highlights, EPA, Office of Mobile Sources, EPA 420-F-97-051, December 1997.

^c SEA calculated an emissions factor for SO₂ based on an average fuel sulfur content of 0.39 percent by weight and fuel density of 7.08 pounds per gallon.

^d SEA based lead emissions on Table 1.3-10 Emissions Factors for Metals from No. 6 Fuel Oil Combustion of AP-42 Compilation of Air Pollutant Emissions Factors, EPA, October 1996. EPA has not developed lead emissions factors for internal combustion engines.

To obtain an emissions estimate by county for rail line segments that pass through more than one county, SEA calculated the change in emissions for the entire rail line segment. SEA then multiplied the emissions estimate for the entire rail line segment by the percentage of the rail line segment length that passes through each county.

The following sample calculation for IC's rail line segment from Mount Pulaski, Illinois to Springfield, Illinois (within Sangamon County) illustrates the emissions estimation procedure for VOCs:

Annual change in fuel consumption (ΔFC):

$$14.8 \text{ miles} \times \left[\frac{3.36 \times 10^6 \text{ gross tons (change)}}{\text{year}} \right] \times \left[\frac{1 \text{ gallon}}{733.4 \text{ gross ton miles}} \right] = 6.8 \times 10^4 \frac{\Delta FC \text{ gallons}}{\text{year}}$$

Annual change in VOCs emissions:

$$\left[6.8 \times 10^4 \frac{\text{gallons}}{\text{year}} \right] \times \left[\frac{21.99 \text{ pounds (HC)}}{1,000 \text{ gallons}} \right] \times \left[\frac{1 \text{ ton}}{2,000 \text{ pounds}} \right] = 0.7 \frac{\text{tons (HC)}}{\text{year}}$$

SEA assumed the following for calculating emissions changes on rail line segments in the proposed CN/IC system:

- Fuel efficiency factor of 733.4 GTM per gallon for locomotives.
- Fuel density of 7.08 pounds per gallon.
- Fuel sulfur content of 0.39 percent by weight, based on mass balance (SEA assumed 100 percent of the sulfur content in the fuel converted to SO_2).
- Emissions factors for VOCs, CO, NO_x , and PM_{10} are representative of the 1998 locomotive fleet for U.S. railroads. SEA conservatively assumed that all particulate matter emissions represent emissions of PM_{10} .

Attachment F-7, "Emissions Changes on Rail Line Segments that Meet or Exceed the Board's Thresholds for Environmental Analysis," presents the emissions changes on rail line segments that would meet or exceed the Board's thresholds for environmental analysis.

F.5.2 Rail Yards

SEA estimated emissions changes at rail yards that meet or exceed the Board's thresholds for environmental analysis. Switch engine locomotives that perform rail car switching and line-haul locomotives that perform block swapping, the process of moving groups of cars with a common destination (called "blocks") from one train to another, emit pollutants primarily at rail yards. In analyzing the rail yards, SEA considered emissions changes from locomotives that perform rail car switching and block swapping. Attachment F-8, "Emissions Changes at Rail Yards that Meet or Exceed the Board's Thresholds for Environmental Analysis," presents the emissions changes at rail yards that meet or exceed the Board's thresholds for environmental analysis.

The following sections present SEA's methods of analysis for rail car switching and block swapping.

F.5.2.1 Rail Car Switching

SEA used the following method to calculate emissions changes from rail car switching activities:

- SEA calculated the daily switch engine operating hours by dividing the change in the number of rail cars switched per day by the system-wide average number of rail cars switched per hour of switch engine operation (for example, 19.0 rail cars switched per switch engine-hour after the proposed CN/IC Acquisition).
- SEA multiplied the daily switch engine operating hours by the annual operating days (365 days per year) to yield an estimate of annual switch engine (locomotive) operating hours.
- SEA multiplied the annual switch engine operating hours by the hourly diesel fuel consumption rate (13.8 gallons per hour after the proposed CN/IC Acquisition) to determine the change in annual diesel fuel consumption.
- SEA estimated the annual emissions changes, tons per year, by multiplying the change in the annual fuel consumption for rail car switching by the emissions factors for the criteria pollutants.

SEA obtained the emissions factors from EPA's Office of Mobile Sources. These emissions factors are representative of the 1998 locomotive fleet for U.S. railroads. SEA converted the emissions factors for switch engine locomotives to units of pounds of pollutant per 1,000 gallons of diesel fuel consumed. Table F-4, "Switch Engine Locomotive Emissions Factors," provides the switch engine locomotive emissions factors.

TABLE F-4
SWITCH ENGINE LOCOMOTIVE EMISSIONS FACTORS

Pollutant	Emissions Factor* (pounds/1,000 gallons)
VOCs ^b	46.27
CO ^c	83.84
NO _x ^c	797.18
SO ₂ ^c	55.2
PM ₁₀ ^d	20.16
Lead ^d	0.0013

* SEA converted EPA's emissions factors to pounds per 1,000 gallons using EPA's recommended conversion factor of 20.8 horsepower-hour per gallon of fuel consumed.

^b Technical Highlights, EPA, Office of Mobile Sources, EPA 420-R-97-051, December 1997.

^c SEA calculated SO₂ emissions based on a fuel sulfur content of 0.39 percent by weight and a fuel density of 7.08 pounds per gallon.

^d SEA based lead emissions on Table 1.3-10 Emissions Factors for Metals from No. 6 Fuel Oil Combustion of AP-42 Compilation of Air Pollutant Emissions Factors, EPA, October 1996. EPA has not developed lead emissions factors for internal combustion engines.

The following sample calculation for CN's Detroit, Michigan rail yard illustrates the emissions estimation procedure for NO_x from rail car switching activities:

$$\begin{aligned}
 & \left[35 \frac{\text{rail cars switched (change)}}{\text{day}} \right] \times \left[\frac{\text{switch engine hour}}{19.0 \text{ rail cars}} \right] \times \left[365 \frac{\text{days}}{\text{year}} \right] \\
 & \times \left[13.8 \frac{\text{gallons}}{\text{hour}} \right] \times \left[\frac{797.18 \text{ pounds (NO}_x\text{)}}{1,000 \text{ gallons}} \right] \times \left[\frac{1 \text{ ton}}{2,000 \text{ pounds}} \right] = \frac{3.7 \text{ tons (NO}_x\text{)}}{\text{year}}
 \end{aligned}$$

SEA used the following assumptions for calculating emissions for rail car switching:

- Fuel density of 7.08 pounds per gallon.
- Fuel sulfur content of 0.39 percent by weight. SO₂ emissions were based on mass balance (i.e., SEA assumed 100 percent of the sulfur content in the fuel converted to SO₂).
- Emissions factors for VOCs, CO, NO_x, and PM₁₀ are representative of the 1998 locomotive fleet for U.S. railroads. SEA conservatively assumed that all particulate matter emissions represented emissions of PM₁₀.

- Integrated CN/IC rail yards operate an average of 365 days per year.
- A typical switch engine locomotive on the integrated CN/IC system would consume 13.8 gallons of fuel per hour. SEA derived this estimate from the Applicants' operating records.
- A typical switch engine locomotive would switch 19.0 rail cars per switch engine hour. SEA derived this estimate from the Applicants' rail yard operating data.

F.5.2.2 Block Swapping

SEA estimated the emissions from line-haul locomotives that perform block swapping within rail yards that meet or exceed the Board's thresholds for environmental analysis. SEA identified the following: (1) specific rail line segments associated with the rail yards, (2) the change in gross tonnage hauled on the rail line segment, and (3) the length of the rail line segment within the rail yard. SEA used these estimates to calculate emissions changes from line-haul locomotives that perform block swapping using the same method identified in Section F.5.1, "Rail Line Segments." Emissions associated with block swapping at rail yards are part of the total emissions generated on rail line segments.

SEA used the following assumptions for calculating emissions for block swapping:

- Fuel efficiency factor of 733.4 gross ton-miles per gallon after the proposed CN/IC Acquisition.
- Fuel density of 7.08 pounds per gallon.
- Fuel sulfur content of 0.39 percent by weight, based on mass balance. SO_2 emissions based on mass balance (SEA assumed 100 percent of the sulfur content in the fuel converted to SO_2).
- Emissions factors for VOCs, CO, NO_x , and PM_{10} are representative of the 1998 locomotive fleet for U.S. railroads. SEA conservatively assumed that all particulate matter emissions represented emissions of PM_{10} .

F.5.3 Intermodal Facilities

SEA estimated emissions changes at intermodal facilities that meet or exceed the Board's thresholds for environmental analysis. Operational changes at intermodal facilities can result in emissions changes from the following sources:

- OTR trucks (heavy-duty diesel vehicles).
- Lift equipment.
- Yard trucks.

Switch engine locomotive activities at intermodal facilities are generally minimal. Lift equipment at intermodal facilities, rather than locomotives, generally moves freight from one train to another. Therefore, SEA did not perform emissions calculations for switch engine locomotives at intermodal facilities. Attachment F-9, "Emissions Changes at Intermodal Facilities that Meet or Exceed the Board's Thresholds for Environmental Analysis," presents the emissions changes at intermodal facilities expected to meet or exceed the Board's thresholds for environmental analysis.

OTR Trucks

SEA analyzed emissions from OTR trucks in the following manner:

- SEA multiplied the change in the number of OTR trucks per day by the average amount of time that an OTR truck spends in an intermodal facility. SEA estimated the average time for an OTR truck at an intermodal facility to be 38 minutes, based on operational data the Applicants collected from 1995 to 1998. SEA assumed that OTR truck traffic volume changes would be directly correlated to the change in the number of origin/destination lifts performed at the intermodal facility. Appendix D, "Transportation Analysis Methods and Results," presents the procedure SEA used to estimate the change in OTR trucks operating at intermodal facilities.
- SEA multiplied the daily change in OTR truck operating hours (a result of the change in truck activity) by the number of operating days per year to determine the change in annual truck operating hours.
- SEA multiplied air emissions factors for idling OTR trucks by the change in annual truck operating hours to estimate the annual change (tons per year) in emissions.

Table F-5, "Over-the-road Truck Emissions Factors," presents air pollutant emissions factors for heavy-duty OTR trucks, in grams per hour.

TABLE F-5
OVER-THE-ROAD TRUCK EMISSIONS FACTORS

Pollutant	Emissions Factor (grams/hour)
VOCs ^a	12.7
CO ^a	94.6
NO _x ^a	53.1
SO ₂ ^b	1.29
PM ₁₀ ^b	2.32
Lead ^a	Negligible

- ^a SEA calculated emissions factors from EPA's MOBILE5a (emissions factor model). SEA assumed a vehicle speed of 2.5 miles per hour for idling vehicles, pursuant to EPA guidance. SEA multiplied the resultant emissions factor (in grams of pollutant per vehicle-mile) by 2.5 miles per hour to determine emissions factors in grams per hour.
- ^b SEA calculated emissions factors from EPA's PARTS (emissions factor model). The PM₁₀ emissions factor does not incorporate fugitive emissions. SEA assumed a vehicle speed of 2.5 miles per hour for idling vehicles pursuant to EPA guidance. SEA multiplied the resultant emissions factor (in grams of pollutant per vehicle-mile) by 2.5 miles per hour to determine emissions factors in grams per hour.

The following sample calculation for VOCs emissions illustrates the method for estimating emissions for OTR truck changes at IC's Moyers/Chicago Gateway, Illinois intermodal facility:

$$\begin{aligned}
 & \left[88 \frac{\text{trucks (change)}}{\text{day}} \right] \times \left[365 \frac{\text{days}}{\text{year}} \right] \times \left[38 \frac{\text{minutes}}{\text{truck}} \right] \\
 & \times \left[\frac{1 \text{ hour}}{60 \text{ minutes}} \right] \times \left[12.7 \frac{\text{grams (HC)}}{\text{hour}} \right] \times \left[\frac{\text{pounds}}{454 \text{ grams}} \right] \\
 & \times \left[\frac{1 \text{ ton}}{2,000 \text{ pounds}} \right] = 0.28 \frac{\text{tons (HC)}}{\text{year}}
 \end{aligned}$$

SEA used the following assumptions for calculating emissions for OTR trucks at intermodal facilities:

- Each intermodal facility operates 365 days per year.
- An OTR truck spends an average of 38 minutes in an intermodal facility. SEA derived this estimate from the Applicants' intermodal facility operating records.

Lift Equipment

SEA used the following method for estimating emission changes from lift equipment:

- SEA estimated the change in the annual operating hours of lift equipment from the change in the number of primary lifts per year (by the ratio of total lifts to primary lifts and the number of total lifts per hour). SEA defined primary lifts as the sum of origin/destination lifts and switch lifts (inter-train transfers). SEA defined the total lifts as the sum of primary and secondary lifts. Secondary lifts generally involve movements of containers to or from storage areas or lifts of containers between trucks and storage areas. SEA derived the change in primary lifts from traffic studies and estimates of the number of intermodal containers and trailers that an intermodal facility would handle following the proposed CN/IC Acquisition. SEA derived the number of equipment moves per primary lift and equipment moves per hour from the Applicants' intermodal facility operating data.
- SEA multiplied the annual operating hours of lift equipment by the hourly average fuel consumption rate for lift equipment to obtain the change in annual fuel consumption.
- SEA multiplied the change in annual fuel consumption by emissions factors (in units of pounds per gallon) to determine the annual emissions changes from lift equipment. SEA converted emissions factors for lift equipment from units of grams per horsepower-hour to pounds per gallon, based on the average working equipment horsepower and the hourly average fuel consumption rate (in gallons per hour) for lift equipment. SEA derived average working equipment horsepower and the hourly average fuel consumption rate from the Applicants' intermodal facility operating data and vendor data.

Table F-6, "Lift Equipment Emissions Factors," provides emissions factors for lift equipment (expressed in grams per horsepower-hour and pounds per gallon).

**TABLE F-6
LIFT EQUIPMENT EMISSIONS FACTORS***

Pollutant	Emissions Factor (grams/horsepower-hour)	Emissions Factor (pounds/gallon)
VOCs	1.60	0.08
CO	6.06	0.31
NO _x	14.0	0.71
SO _x	0.93	0.05
PM ₁₀	1.60	0.08
Lead	Negligible	Negligible

* Emissions factors are from the *Nonroad Engine and Vehicle Emission Study*, EPA-460/3-91-02, EPA, Office of Air and Radiation, Washington, D.C., November 1991.

The following sample calculation for NO_x emissions illustrates the method for estimating emissions for lift equipment changes at IC's Moyers/Chicago Gateway, Illinois intermodal facility:

$$\left[66,795 \frac{\text{primary lifts (change)}}{\text{year}} \right] \times \left[2.26 \frac{\text{total lifts}}{\text{primary lifts}} \right] \times \left[\frac{\text{hour}}{12.6 \text{ total lifts}} \right] \\ \times \left[5.6 \frac{\text{gallons}}{\text{hour}} \right] \times \left[0.71 \frac{\text{pounds (NO}_x\text{)}}{\text{gallon}} \right] \times \left[\frac{1 \text{ ton}}{2,000 \text{ pounds}} \right] = \frac{23.8 \text{ tons (NO}_x\text{)}}{\text{year}}$$

SEA used the following assumptions for calculating emissions for lift equipment:

- The ratio of total lifts to primary lifts is 2.26.
- Lift equipment makes an average 12.6 lifts per hour.
- Average fuel consumption rate for lift equipment is 5.6 gallons per hour.
- Average working horsepower for lift equipment is 129.

Yard Trucks

SEA used emissions factors developed by EPA for nonroad vehicles to estimate emissions from yard trucks. SEA calculated emissions based on the following:

- Based on the change in the number of primary lifts per year, SEA determined the ratio of yard truck moves per primary lift and the number of yard truck moves per hour. SEA assumed that yard trucks make an average of 6.4 moves per hour and 0.95 yard truck moves per primary lift.
- SEA multiplied the change in annual yard truck hours of operation by the hourly average fuel consumption rate of the trucks to obtain the change in annual fuel consumption.
- SEA multiplied the annual change in fuel consumption for yard trucks by emissions factors (in units of pounds per gallon) to determine the estimated annual emissions changes from yard trucks. SEA converted the emissions factors from units in grams per horsepower-hour to pounds per gallon based on the average working equipment horsepower and the hourly average fuel consumption rate for yard trucks at intermodal facilities. SEA derived average working equipment horsepower and the hourly average fuel consumption rate from the Applicants' intermodal facility operating data and vendor data.

Table F-7, "Yard Truck Emissions Factors," presents emissions factors for yard trucks (expressed in grams per horsepower-hour and pounds per gallon).

TABLE F-7
YARD TRUCK EMISSIONS FACTORS*

Pollutant	Emissions Factor (grams/horsepower-hour)	Emissions Factor (pounds/gallon)
VOCs	0.86	0.04
CO	2.80	0.13
NO _x	9.60	0.45
SO _x	0.89	0.04
PM ₁₀	0.80	0.04
Lead	Negligible	Negligible

* Emissions factors are from the "Nonroad Engine and Vehicle Emission Study" Report EPA-460/3-91-02, EPA, Office of Air and Radiation, Washington, D.C., November 1991.

The following calculation for NO_x emissions illustrates the method for estimating emissions for yard truck changes at IC's Moyers/Chicago Gateway, Illinois intermodal facility:

$$\begin{aligned}
 & \left[\frac{66,795 \text{ primary lifts (change)}}{\text{year}} \right] \times \left[\frac{0.95 \text{ yard truck moves}}{\text{primary lift}} \right] \\
 & \times \left[\frac{1 \text{ hour}}{6.4 \text{ moves}} \right] \times \left[\frac{4.5 \text{ gallons}}{\text{hour}} \right] \times \\
 & \left[\frac{0.45 \text{ pounds (NO}_x\text{)}}{\text{gallon}} \right] \times \left[\frac{1 \text{ ton}}{2,000 \text{ pounds}} \right] = \frac{10.0 \text{ tons (NO}_x\text{)}}{\text{year}}
 \end{aligned}$$

SEA used the following assumptions for calculating emissions for yard trucks:

- The ratio of yard truck moves per primary lift is 0.95.
- The number of yard truck moves per hour is 6.4.
- The average fuel consumption rate for yard trucks is 4.5 gallons per hour.
- The average working horsepower for yard trucks is 95.

F.5.4 Truck-to-Rail Diversions

SEA calculated emissions changes from the diversion of freight from highway to rail, using EPA's MOBILE5a and PART5 emissions factor models. SEA estimated the emissions changes, in units of tons per year, by multiplying the annual OTR truck-miles removed from the highways by MOBILE5a emissions factors for a heavy-duty diesel vehicle. SEA used MOBILE5a to calculate emissions factors for VOCs, CO, and NO_x. SEA adjusted the MOBILE5a emissions factors (in units of grams per truck mile traveled) for a truck traveling 50 miles per hour for the appropriate load factor (gross travel weight) in brake horsepower per mile. SEA used EPA's

PART5 model to derive emissions factors for SO_2 and PM_{10} . SEA based the calculated emissions factors for OTR trucks on 1998 national fleet average data.

Table F-8, "Emissions Factors for Over-the-road Trucks (Truck-to-rail Diversions)," presents emissions factors for OTR trucks (expressed in grams per mile):

**TABLE F-8
EMISSIONS FACTORS FOR OVER-THE-ROAD TRUCKS
(TRUCK-TO-RAIL DIVERSIONS)**

Pollutant	Emissions Factor (grams/mile)
VOCs ^a	1.71
CO ^a	8.63
NO _x ^a	19.68
SO ₂ ^b	0.51
PM ₁₀ ^b	1.13
Lead ^b	Negligible

^a SEA calculated emissions factors from EPA's MOBILE5a. MOBILE5a incorporates a load factor of 2.03 break-horsepower per mile, and EPA classifies heavy-duty trucks as Class 8B vehicles. Since EPA released MOBILE5a, additional data regarding the load factor for Class 8B vehicles has been developed. (The load factor for Class 8B is 3.129 break-horsepower per mile.) As a result, SEA adjusted the emissions factors by ratioing the MOBILE5a emissions factors (e.g., $3.129/2.03 \times 12.77$ [grams of NO_x/mile] = 19.68 [grams of NO_x/mile]).

^b SEA calculated emissions factors from EPA's PART5. The PM₁₀ emissions factor incorporates fugitive emissions.

The following sample calculation illustrates the procedure for estimating emission changes for NO_x resulting from truck-to-rail diversions:

$$\frac{-1,000,000 \text{ miles}}{\text{year}} \times \frac{19.68 \text{ grams (NO}_x\text{)}}{\text{mile}} \times \frac{\text{pound}}{454 \text{ grams}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = -21.7 \frac{\text{tons (NO}_x\text{)}}{\text{year}}$$

Attachment F-10, "County-wide Emissions Decreases from Truck-to-rail Diversions for Counties with Changes in Emissions that Exceed the EPA Screening Criteria," presents county-wide emissions decreases from truck-to-rail diversions for counties with changes in emissions that would exceed the EPA screening levels.

SEA also estimated system-wide emissions decreases in units of tons per year. Attachment F-11, "System-wide Emissions Decreases from Truck-to-rail Diversions," presents system-wide emissions decreases from truck-to-rail diversions.

F.5.6 Highway/Rail At-grade Crossings

System-wide Analysis

SEA conducted a system-wide analysis of emissions from idling vehicles delayed at highway/rail at-grade crossings. SEA analyzed highway/rail at-grade crossings with an ADT volume of more than 5,000 vehicles per day and where the increase in rail traffic meets or exceeds the Board's thresholds for environmental analysis. Attachment F-12, "System-wide Emissions Increases from Vehicle Delays at Highway/Rail At-grade Crossings," presents the system-wide emissions increases from vehicle delays at highway/rail at-grade crossings where the ADT volume is more than 5,000 vehicles per day and the increase in rail traffic meets or exceeds the Board's thresholds for environmental analysis.

County-wide Analysis

SEA conducted a more detailed analysis of estimated county-wide emissions from vehicles delayed at highway/rail at-grade crossings in Will County, Illinois. SEA selected this county based on: (1) a county-by-county comparison of increased train traffic, (2) the latest available road vehicular traffic data, (3) the level of existing emissions in the county, and (4) whether the emissions increases exceeded the EPA screening criteria from activity that would meet or exceed the Board's thresholds for environmental analysis. For this detailed analysis, SEA estimated emissions increases and decreases from vehicles delayed at all highway/rail at-grade crossings on CN/IC rail line segments in Will County, Illinois. This analysis included all highway/rail at-grade crossings, including those with ADT volume less than 5,000. Attachment F-13, "Emissions Changes from Vehicle Delays at All Affected Highway/Rail At-grade Crossings in Will County, Illinois," presents the emissions changes from vehicle delays for all affected highway/rail at-grade crossings in Will County, Illinois.

Analysis Procedure

SEA used the following procedure to estimate both system- and county-wide emissions from idling vehicles at highway/rail at-grade crossings under conditions before and after the proposed CN/IC Acquisition. SEA then calculated the changes in emissions resulting from the increased number of vehicles delayed at the highway/rail at-grade crossings.

- SEA calculated the blocked crossing time per train (D_C) and crossing delay per stopped vehicle (D_A) at highway/rail at-grade crossings affected by the proposed CN/IC Acquisition. SEA also calculated the change in total number of vehicles delayed per day (T_D) as a function of blocked crossing time, ADT, and the change in the number of trains per day. Appendix D, "Transportation Analysis Methods and Results," presents the equations for D_C , D_A , and T_D .

- SEA multiplied the number of vehicles delayed (per day) by the average crossing delay (per stopped vehicle) to obtain the total daily time all vehicles would be delayed. This assumed all vehicles would have to wait at a highway/rail at-grade crossing to allow a train to pass.
- SEA multiplied the daily vehicle delay time by 365 days per year to obtain the total annual vehicle delay at a highway/rail at-grade crossing.
- SEA used the MOBILE5a (for VOCs, NO_x, and CO) and PART5 (for PM₁₀ and SO₂) emissions factor models to obtain emissions factors in units of grams per vehicle-mile, then multiplied those numbers by 2.5 miles per hour to produce an emissions factor representative of an idling vehicle in units of grams of pollutant per vehicle hour of operation. SEA conservatively incorporated all sources of VOCs emissions (such as refueling, diurnal, and hot soak emissions) in emissions factors calculations.
- SEA incorporated national average data for vehicle ages and types and for operating conditions. SEA also used national default values for the vehicle-miles traveled, vehicle mix, registration/mileage accumulation, and tampering rates. The following factors existed for these models: (1) SEA assumed that no inspection/maintenance or anti-tampering programs were in place, (2) SEA did not consider the effects of oxygenated and reformulated fuel in its analysis, and (3) SEA assumed that Reid vapor pressure was 9.0 psi and that operating modes were set at default values.
- Because all of the highway/rail at-grade crossings SEA analyzed are in Illinois, SEA used two sets of emissions factors for VOCs, NO_x, and CO that are representative of the Chicago area. One set included representative maximum/minimum winter temperatures in Chicago, and the other set included representative maximum/minimum summer temperatures in Chicago. SEA averaged the two emissions factors to produce a single emissions factor for VOCs, NO_x, and CO. Table F-9, "Composite Emissions Factors for Vehicles Delayed at Highway/Rail At-grade Crossings," lists the composite emissions factors using a pre-Acquisition train length of 4,225 feet and a post-Acquisition train length of 5,026 feet.

**TABLE F-9
COMPOSITE EMISSIONS FACTORS FOR VEHICLES
DELAYED AT HIGHWAY/RAIL AT-GRADE
CROSSINGS^a**

Pollutant	Emissions Factor (grams/hour)
VOCs ^b	43.30
CO ^b	419.28
NO _x ^c	10.23
Exhaust PM ^c	0.175
SO ₂ ^c	0.283

- ^a SEA obtained maximum/minimum winter and summer air temperatures representative of Chicago from the National Oceanic and Atmospheric Administration's "Local Climatological Data Annual Summaries for 1990, Part III - Central Region."
- ^b SEA calculated emissions factors from EPA's MOBILE5a (emissions factor model). SEA used a vehicle speed of 2.5 miles per hour for idling vehicles pursuant to EPA guidance. SEA multiplied the resultant emissions factor in grams of pollutant per vehicle per mile by 2.5 miles per hour to determine emissions factors in grams per hour. SEA conservatively incorporated all sources of VOCs emissions (such as refueling, idling, and hot soak emissions) in emissions factors calculations.
- ^c SEA calculated emissions factors from EPA's PART5 (emissions factor model). SEA used a vehicle speed of 2.5 miles per hour for idling vehicles pursuant to EPA guidance. SEA multiplied the resultant emissions factor in grams of pollutant per vehicle per mile by 2.5 miles per hour to determine emissions factors in grams per hour.

The following example estimates vehicular CO emissions from idling vehicles at a highway/rail at-grade crossing before the proposed CN/IC Acquisition, with eight trains over a 24-hour period and an ADT volume of 5,000 vehicles. Appendix D, "Transportation Analysis Methods and Results," presents the equations used in this example.

Pre-Acquisition blocked crossing time per train:

$$D_c = \frac{4,225 \text{ feet}}{30 \text{ miles per hour} \times 88} + 0.5 = 2.1 \text{ minutes}$$

For this example, SEA used the following assumptions:

- Number of lanes = 2.
- $S_c = 1,400$ vehicles per hour-lane (23.3 vehicles per minute-lane).
- $S_q = 5,000$ vehicles per day (1.7 vehicles per minute-lane).

Therefore:

$$\text{Assume: } \frac{S_c}{S_c - S_q} = \frac{23.3 \text{ vehicles/minute-lane}}{23.3 \text{ vehicles/minute-lane} - 1.7 \text{ vehicles/minute-lane}} = 1.08$$

SEA calculated crossing delay per stopped vehicle (D_A):

$$D_A = \frac{2.1 \text{ minutes} \times 1.08}{2} = 1.13 \text{ minutes}$$

SEA calculated the number of vehicles delayed per day (T_D):

$$T_D = \frac{2.1 \text{ minutes}}{1,440 \text{ minutes per day}} \times 8 \text{ trains/day} \times \frac{5,000 \text{ vehicles}}{\text{day}} \times 58.3 \frac{\text{vehicles delayed}}{\text{day}}$$

SEA calculated CO emissions from idling vehicles delayed at highway/rail at-grade crossings before the proposed CN/IC Acquisition, as follows:

$$\begin{aligned} & 58.3 \frac{\text{vehicles delayed}}{\text{day}} \times 1.13 \frac{\text{minutes of crossing delay}}{\text{stopped vehicle}} \\ & \times 365 \frac{\text{days}}{\text{year}} \times \frac{1 \text{ hour}}{60 \text{ minutes}} \times 419.28 \frac{\text{grams of CO}}{\text{vehicle-hour}} \times \frac{1 \text{ pound}}{454 \text{ grams}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} \\ & = 0.19 \frac{\text{tons (CO)}}{\text{year}} \end{aligned}$$

The following example calculation estimates vehicular CO emissions from idling vehicles at a highway/rail at-grade crossing with 16 trains over a 24-hour period and an ADT volume of 5,000 vehicles after the proposed CN/IC Acquisition. Appendix D, "Transportation Analysis Methods and Results," presents the equations used in this example calculation.

Blocked crossing time per train following the proposed CN/IC Acquisition is:

$$D_c = \frac{5,026 \text{ feet}}{30 \text{ miles per hour} \times 88} + 0.5 = 2.4 \text{ minutes}$$

$$\text{Assume: } \frac{S_c}{S_c - S_q} = \frac{23.3 \text{ vehicles/minute-lane}}{23.3 \text{ vehicles/minute-lane} - 1.7 \text{ vehicles/minute-lane}} = 1.08$$

SEA calculated crossing delay per stopped vehicle (D_A):

$$D_A = \frac{2.4 \text{ minutes} \times 1.08}{2} = 1.30 \text{ minutes}$$

SEA calculated the number of vehicles delayed per day (T_D):

$$T_D = \frac{2.4 \text{ minutes}}{1,440 \text{ minutes per day}} \times 16 \text{ trains/day} \times \frac{5,000 \text{ vehicles}}{\text{day}} = 133.3 \frac{\text{vehicles delayed}}{\text{day}}$$

SEA calculated CO emissions from idling vehicles delayed at highway/rail at-grade crossings after the proposed CN/IC Acquisition as follows:

$$\begin{aligned} & 133.3 \frac{\text{vehicles delayed}}{\text{day}} \times 1.30 \frac{\text{minutes of crossing delay}}{\text{stopped vehicle}} \\ & \times 365 \frac{\text{days}}{\text{year}} \times \frac{1 \text{ hour}}{60 \text{ minutes}} \times 419.28 \frac{\text{grams of CO}}{\text{vehicle-hour}} \times \frac{1 \text{ pound}}{454 \text{ grams}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} \\ & = 0.49 \frac{\text{tons (CO)}}{\text{year}} \end{aligned}$$

Therefore, SEA calculated the emissions change, as follows:

$$\text{Post-Acquisition CO emissions} - \text{Pre-Acquisition CO emissions}$$

= change in CO emissions resulting from vehicles delayed at highway/rail at-grade crossings

$$0.49 \frac{\text{tons (CO)}}{\text{year}} - 0.19 \frac{\text{tons (CO)}}{\text{year}} = 0.30 \frac{\text{tons (CO)}}{\text{year}}$$

Attachment F-14, "Rail Activities Increases that Meet or Exceed the Board's Thresholds for Environmental Analysis," lists the activity for rail line segments, rail yards, and intermodal facilities.

F.5.6 Construction Projects

To determine potential impacts of construction projects, SEA first identified the attainment status of the county in which each proposed construction project would occur.

SEA evaluated fugitive dust emissions by assessing the topography, soil conditions, and types of roadways (i.e., gravel, paved) used to enter the site during construction. SEA also reviewed historical information on wind speeds and precipitation patterns for the areas of the proposed construction projects to determine whether these climatic conditions would be conducive to generating fugitive dust emissions.

SEA reviewed previous studies related to the types and amounts of pollutant emissions that heavy equipment generates during rail construction projects.¹ These studies indicated that pollutants emitted during these types of construction activities have short-term impacts; therefore, they probably would not affect overall air quality and attainment status of the county. Based on these data, SEA determined that the Applicants need not perform a quantitative analysis of pollutant emissions from their construction equipment. The following sections present details of SEA's analysis of potential air quality issues for the Applicants' construction projects at Cicero, Illinois and at Jackson, Mississippi.

¹ SEA prepared Environmental Assessments for several proposed rail line connections that relate to the acquisition of Conrail by CSX and NS that evaluated effects of temporary rail line construction activities on air quality. See, for example, Section of Environmental Analysis, *Environmental Assessment, Greenwich, CSX/Conrail Rail Line Connections—Village of Greenwich, Harlan County, Ohio*, Decision No. 28331, October 7, 1997.

Cicero, Illinois. EPA currently classifies Cook County, Illinois as being in attainment with NAAQS for all criteria pollutants except ozone and PM₁₀. Industrial facilities and road vehicles are the predominant emissions sources in the vicinity of the proposed connection.

Constructing the proposed connection would result in fugitive dust emissions that could affect ambient air quality. SEA evaluated local climatic conditions that could increase fugitive dust emissions at the proposed construction site. Climatological data compiled over a 30-year period indicated that the Chicago metropolitan area experiences an average annual wind speed of 10.3 miles per hour, with prevailing winds from the southwest. The average annual precipitation is 33.34 inches.²

The State of Illinois regulates fugitive dust emissions under Chapter 111.5, Section 1009, of the Illinois Statutes. This rule requires applying control measures (i.e., the use of water or dust-suppression chemicals) to prevent fugitive dust from affecting ambient air quality during construction activities.

The combustion of diesel fuel used in construction equipment would result in increased emissions of PM₁₀, volatile organic compounds (VOCs), CO, and NO_x; however, SEA determined that these effects would be short term and would not change the Attainment status of Cook County.

SEA determined that fugitive dust emissions would increase during construction because (1) grading and relocation of soil to prepare the track bed, and (2) construction vehicles traveling to and from the site via partially paved 34th Street or unpaved 33rd Street (east of the BRC tracks). SEA also determined that the climatic effects associated with these emissions would be negligible.

Jackson, Mississippi. EPA currently classifies Hinds County, Mississippi as being in attainment with NAAQS for all criteria pollutants. Industrial facilities and road vehicles are the predominant emissions sources in the vicinity of the proposed bypass.

Constructing the proposed bypass would generate fugitive dust emissions that could affect ambient air quality. SEA evaluated local climatic conditions that could increase fugitive dust emissions at the proposed construction site. Climatological data for a 30-year period indicated that the Jackson metropolitan area experiences an average annual wind speed of 7.4 miles per hour, with prevailing winds from the south. The average annual precipitation is 52.05 inches.³

The State of Mississippi regulates fugitive dust emissions under APC-S-1 ("Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants"). This rule

² National Oceanic and Atmospheric Administration. *Local Climatological Data Annual Summaries for 1990, Part III - Central Region*, 1991.

³ National Oceanic and Atmospheric Administration. *Local Climatological Data Annual Summaries for 1990, Part II - Southern Region*, 1991.

requires applying control measures (the use of water or dust-suppression chemicals) to prevent fugitive dust from affecting ambient air quality during construction activities.

In Jackson, Mississippi, the combustion of diesel fuel used in construction equipment would result in increased emissions of PM_{10} , VOCs, CO, and NO_x ; however, SEA determined that these effects would be short term and would not change the Attainment status of Hinds County, Mississippi.

SEA determined that fugitive dust emissions would increase during construction (1) grading and relocation of soil to prepare the track bed, and (2) construction vehicles traveling to and from the construction site via an unpaved road through the Jackson Ready Mix property. SEA also determined that the climatic effects associated with these emissions would be negligible.

F.6 SEA'S CRITERIA OF SIGNIFICANCE FOR AIR QUALITY IMPACTS

SEA assessed the significance of the potential county-wide impacts based on the relative percentage change in emissions for the criteria pollutant to the total county-wide emissions inventory for that pollutant. The total county-wide emissions inventory comprises many industrial and mobile emissions sources such as industrial fuel combustion sources, automobiles, and railroad locomotives. Attachment F-6, "Existing County-wide NO_x Emissions Inventory for Counties that Exceed the EPA Screening Criteria," presents existing county-wide NO_x emissions inventories for counties exceeding the EPA screening criteria. Table F-10, "Levels of Potential Significance for Criteria Pollutant Emissions," presents the levels of potential significance SEA used. If the emissions change for a criteria pollutant exceeded the designated level of significance, then the SEA considered the emissions change to be potentially significant.

**TABLE F-10
LEVELS OF POTENTIAL SIGNIFICANCE
FOR CRITERIA POLLUTANT EMISSIONS**

County Attainment Status	Level of Significance
Nonattainment	1.0% of total emissions inventory for the county
Attainment or Maintenance (all pollutants except PM_{10})	1.6% of total emissions inventory for the county
Attainment or Maintenance for PM_{10}	1.0% of total emissions inventory for the county

For the detailed analysis at rail yards, SEA only estimated emissions changes from rail car switching. Emissions estimates from locomotives on rail line segments that pass through these rail yards include emissions changes from block swapping. (See Section F.5.2, "Rail Yards," for a discussion on rail car switching and block swapping.)

EPA classifies most nonattainment counties affected by the proposed CN/IC Acquisition as nonattainment for ozone. SEA concluded that Acquisition-related changes in railroad operations would have the greatest effect on emissions for NO_x , which is a precursor to surface level ozone.

formation. Therefore, SEA selected ozone as the basis for determining the level of significance threshold for attainment and maintenance areas for criteria pollutants other than PM_{10} .

EPA developed the Prevention of Significant Deterioration (PSD) regulations to allow controlled industrial growth within an air quality attainment area. Therefore, SEA established the levels of potential significance for attainment or maintenance areas based on the PSD (i.e., attainment area) significant emission rates.

SEA established the 1.6 percent level of significance for attainment or maintenance areas (except PM_{10} attainment areas) based on the following approach:

Nonattainment county significance threshold = 1% of existing emissions inventory for a given county/pollutant

Attainment county significance threshold = $\frac{40 \text{ tons/year}}{25 \text{ tons/year}} \times 1\%$ of existing emissions inventory for a given county/pollutant
 = 1.6% of existing emissions inventory for a given county/pollutant

where:

40 tons/year = PSD significant emission rate for ozone
 25 tons/year = Nonattainment area significant emission rate for ozone

SEA followed a similar approach for PM_{10} because PM_{10} , along with NO_x emissions, is the main pollutant of interest from the combustion of diesel fuel in locomotives. SEA established the 1.0 percent level of significance for PM_{10} attainment or maintenance areas based on the following approach:

Nonattainment county significance threshold = 1% of existing emissions inventory for a given county/pollutant

Attainment county significance threshold = $\frac{15 \text{ tons/year}}{15 \text{ tons/year}} \times 1\%$ of existing emissions inventory for a given county/pollutant
 = 1.0% of existing emissions inventory for a given county/pollutant

where:

15 tons/year = PSD significant emission rate for PM_{10}
 15 tons/year = Nonattainment area significant emission rate for PM_{10}

Attachment F-15, "Air Quality Exceedances and Emissions Inventory by County," presents the exceedances of the NAAQS and the total existing emissions inventory for the criteria pollutants for each county.

F.7 DETAILS OF AIR QUALITY EMISSIONS REGULATIONS

In its analysis of air quality effects, SEA considered EPA's New Emissions Standards for Locomotives and Locomotive Engines, and EPA's changes in NAAQS.

F.7.1 New Emissions Standards for Locomotives and Locomotive Engines

On April 16, 1998, EPA issued its final rule establishing standards for locomotives and locomotive engines (40 CFR Parts 85, 89, and 92). This rule will take effect in the year 2000 and will ultimately result in more than a 60 percent reduction in oxides of nitrogen (NO_x) emissions from locomotives. In the past, EPA has not regulated these locomotive emissions. Railroads will achieve these reductions by employing new or remanufactured locomotives equipped with emissions control systems (e.g., locomotives equipped with a retrofitting kit to control NO_x emissions).

In addition to these new NO_x standards, EPA established new locomotive emissions standards for hydrocarbons (HC), carbon monoxide (CO), PM, and smoke. This national program to control locomotive emissions will result in health and environmental benefits. This program will also help states comply with new NAAQS for ozone and PM.

EPA proposed to adopt the new emissions standards in three phases known as: (1) Tier 0—emissions standards that will be applicable to locomotives manufactured before 2002 and to certain model year remanufactured locomotives; (2) Tier 1—emissions standards that apply to locomotives manufactured between 2002 and December 31, 2004; and (3) Tier 2—emissions standards that apply to locomotives manufactured on or after January 1, 2005. These standards are increasingly stringent.

In this Draft EA, SEA estimated the changes in emissions from locomotives on their rail line segments using uncontrolled emissions factors that were representative of the 1998 locomotive operating fleet. The emissions standards in the final rule will take effect in the year 2000; therefore, the Applicants' NO_x emissions will be lower than the emissions estimates provided in this analysis when the Applicants comply with these new standards. SEA did not apply emissions factors representative of EPA's final rule for locomotive emissions standards because the Applicants have not yet modified the current fleet of locomotives to emit lower levels of NO_x . Based on this information, SEA concludes that the new emissions standards regulations will ultimately lead to a decrease of locomotive emissions and thus will benefit ambient air quality.

F.7.2 New National Ambient Air Quality Standards

SEA considered changes in EPA's new, more stringent NAAQS. In these new NAAQS, which became effective on September 16, 1997, EPA:

- Created a new standard for particulate matter with a diameter less than 2.5 microns ($\text{PM}_{2.5}$).

- Maintained the existing annual standard of 50 micrograms per cubic meter for particulate matter with a diameter less than 10 microns (PM_{10}) but adjusted the PM_{10} 24-hour standard of 150 micrograms per cubic meter by changing the form of the standard.
- Created a new standard for ozone with a diameter less than 2.5 microns ($PM_{2.5}$).

Table F-11, "New $PM_{2.5}$ and Ozone Primary National Ambient Air Quality Standards," presents the new $PM_{2.5}$ and ozone NAAQS. EPA estimates that some counties currently in attainment will become nonattainment areas as a result of these new NAAQS. However, for $PM_{2.5}$, EPA believes that presently not enough monitoring data are available to accurately project which counties would change attainment status. EPA is currently setting up a nation-wide $PM_{2.5}$ monitoring network. According to EPA, the $PM_{2.5}$ monitoring data will not be available for a few years.

EPA currently has sufficient data to determine which counties will likely become nonattainment based on the new 8-hour ozone standard. SEA reviewed EPA's list of counties⁴ and the CN/IC Operating Plan and determined which counties would require additional analyses if sufficient data were available. SEA's analysis of these changes in the NAAQS is presented in Chapter 4, "Environmental Consequences—Operational Effects."

**TABLE F-11
NEW $PM_{2.5}$ AND OZONE PRIMARY NATIONAL
AMBIENT AIR QUALITY STANDARDS^a**

$PM_{2.5}$		Ozone
Annual ^b	24-hour ^c	
15 $\mu\text{g}/\text{m}^3$	65 $\mu\text{g}/\text{m}^3$	0.08 ppm ^d

^a Data source: 40 CFR Part 50.

^b EPA based this $PM_{2.5}$ standard in units of micrograms per cubic meter on the 3-year average of annual arithmetic $PM_{2.5}$ concentrations from single or multiple community-oriented monitors.

^c EPA based this $PM_{2.5}$ standard in units of micrograms per cubic meter on the 3-year average of the 98th percentile of 24-hour $PM_{2.5}$ concentrations at each population-oriented monitor within an area.

^d EPA based this O_3 standard in units of parts per million on the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration measured at each monitor within an area.

^a Data Source: <https://134.67.104.12/html/ozpnrh/8-hour.htm>

**ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY***

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
ALABAMA						
Mobile County	A	A	A	A	A	A
ILLINOIS						
Alexander County	A	A	A	A	A	A
Boone County	A	A	A	A	A	A
Champaign County	A	A	A	A	A	A
Clay County	A	A	A	A	A	A
Coles County	A	A	A	A	A	A
Cook County	A	A	NA-Sev	Part-NA-Mod	A	NA
Cumberland County	A	A	A	A	A	A
De Kalb County	A	A	A	A	A	A
De Witt County	A	A	A	A	A	A
Douglas County	A	A	A	A	A	A
Du Page County	A	A	NA-Sev	A	A	NA
Effingham County	A	A	A	A	A	A
Fayette County	A	A	A	A	A	A
Ford County	A	A	A	A	A	A
Franklin County	A	A	A	A	A	A
Iroquois County	A	A	A	A	A	A
Jackson County	A	A	A	A	A	A
Jasper County	A	A	A	A	A	A
Jefferson County	A	A	A	A	A	A
Jo Daviess County	A	A	A	A	A	A
Johnson County	A	A	A	A	A	A
Kane County	A	A	A	A	A	A

ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY*

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
Kankakee County	A	A	A	A	A	A
Logan County	A	A	A	A	A	A
Macon County	A	A	A	A	A	A
Marion County	A	A	A	A	A	A
Massac County	A	A	A	A	A	A
McLean County	A	A	A	A	A	A
Montgomery County	A	A	A	A	A	A
Moultrie County	A	A	A	A	A	A
Peoria County	Part-Maint	A	A	A	A	Maint
Perry County	A	A	A	A	A	A
Pope County	A	A	A	A	A	A
Polaski County	A	A	A	A	A	A
Randolph County	A	A	A	A	A	A
Saline County	A	A	A	A	A	A
Sangamon County	A	A	A	A	A	A
Shelby County	A	A	A	A	A	A
St. Clair County	A	A	NA-Mod	A	A	NA
Stephenson County	A	A	A	A	A	A
Tazewell County	Part-Maint	A	A	A	A	A ^b
Union County	A	A	A	A	A	A
Washington County	A	A	A	A	A	A
Will County	A	A	NA-Sev	A	A	NA
Williamson County	A	A	A	A	A	A

**ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY²**

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
Winnebago County	A	A	A	A	A	A
INDIANA						
La Porte County	Maint	A	A	A	A	Maint
Lake County	Part-NA	Part-NA	NA-Sev	Part-NA-Mod	A	NA
Porter County	A	A	NA-Sev	A	A	NA
St. Joseph County	A	A	Maint-Mar	A	A	Maint
IOWA						
Black Hawk County	A	A	A	A	A	A
Brenner County	A	A	A	A	A	A
Buchanan County	A	A	A	A	A	A
Buena Vista County	A	A	A	A	A	A
Burlington County	A	A	A	A	A	A
Callison County	A	A	A	A	A	A
Cherokee County	A	A	A	A	A	A
Chickasaw County	A	A	A	A	A	A
Crawford County	A	A	A	A	A	A
Delaware County	A	A	A	A	A	A
Dubuque County	A	A	A	A	A	A
Floyd County	A	A	A	A	A	A
Franklin County	A	A	A	A	A	A
Hamilton County	A	A	A	A	A	A
Hardin County	A	A	A	A	A	A
Harrison County	A	A	A	A	A	A
Ida County	A	A	A	A	A	A

ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY*

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
Linn County	A	A	A	A	A	A
Mitchell County	A	A	A	A	A	A
Plymouth County	A	A	A	A	A	A
Pocahontas County	A	A	A	A	A	A
Pottawattamie County	A	A	A	A	A	A
Sac County	A	A	A	A	A	A
Webster County	A	A	A	A	A	A
Woodbury County	A	A	A	A	A	A
KENTUCKY						
Ballard County	A	A	A	A	A	A
Carlisle County	A	A	A	A	A	A
Fulton County	A	A	A	A	A	A
Graves County	A	A	A	A	A	A
Hickman County	A	A	A	A	A	A
McCracken County	A	A	Part-Maint	A	A	Maint
LOUISIANA						
Ascension Parish	A	A	NA-Ser	A	A	NA
East Baton Rouge Parish	A	A	NA-Ser	A	A	NA
East Feliciana Parish	A	A	A	A	A	A
Iberville Parish	A	A	NA-Ser	A	A	NA
Jefferson Parish	A	A	A	A	A	A
Livingston Parish	A	A	NA-Ser	A	A	NA
Orleans Parish	A	A	Maint-Trans	A	A	Maint

ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY^a

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
St. Charles Parish	A	A	Maint- Trans	A	A	Maint
St. James Parish	A	A	Maint	A	A	Maint
St. John the Baptist Parish	A	A	A	A	A	A
Tangipahoa Parish	A	A	A	A	A	A
Washington Parish	A	A	A	A	A	A
West Feliciana Parish	A	A	A	A	A	A
MICHIGAN						
Calhoun County	A	A	A	A	A	A
Cass County	A	A	A	A	A	A
Eaton County	A	A	A	A	A	A
Genesee County	A	A	NA-Trans	A	A	NA
Ingham County	A	A	A	A	A	A
Kalamazoo County	A	A	A	A	A	A
Lapeer County	A	A	A	A	A	A
Macomb County	A	Part-NA	Maint-Mod	A	A	A ^b
Monroe County	A	A	Maint-Mod	A	A	A ^b
Oakland County	A	Part-NA	Maint-Mod	A	A	NA
Shiawassee County	A	A	A	A	A	A
St. Clair County	A	A	Maint-Mod	A	A	Maint
St. Joseph County	A	A	A	A	A	A
Wayne County	A	Part-NA	Maint-Mod	A	A	NA
MINNESOTA						
Carlton County	A	A	A	A	A	A
Freeborn County	A	A	A	A	A	A

ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY*

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
Koochiching County	A	A	A	A	A	A
Lake of the Woods	A	A	A	A	A	A
Mower County	A	A	A	A	A	A
Roseau County	A	A	A	A	A	A
St. Louis County	A	Part-Maint	A	A	A	Maint
MISSISSIPPI						
Adams County	A	A	A	A	A	A
Carroll County	A	A	A	A	A	A
Coshoma County	A	A	A	A	A	A
Copiah County	A	A	A	A	A	A
Covington County	A	A	A	A	A	A
De Soto County	A	A	A	A	A	A
Forrest County	A	A	A	A	A	A
Franklin County	A	A	A	A	A	A
George County	A	A	A	A	A	A
Greene County	A	A	A	A	A	A
Grenada County	A	A	A	A	A	A
Hinds County	A	A	A	A	A	A
Holmes County	A	A	A	A	A	A
Jones County	A	A	A	A	A	A
Lawrence County	A	A	A	A	A	A
Leflore County	A	A	A	A	A	A
Lincoln County	A	A	A	A	A	A
Madison County	A	A	A	A	A	A
Marion County	A	A	A	A	A	A

**ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY***

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
Montgomery County	A	A	A	A	A	A
Parola County	A	A	A	A	A	A
Perry County	A	A	A	A	A	A
Pike County	A	A	A	A	A	A
Quinn County	A	A	A	A	A	A
Rankin County	A	A	A	A	A	A
Simpson County	A	A	A	A	A	A
Smith County	A	A	A	A	A	A
Tallahatchie County	A	A	A	A	A	A
Tate County	A	A	A	A	A	A
Tunica County	A	A	A	A	A	A
Yalobusha County	A	A	A	A	A	A
Yazoo County	A	A	A	A	A	A
NEBRASKA						
Douglas County	A	A	A	A	Part-NA	NA
OHIO						
Lucas County	NA	A	A	A	A	NA
TENNESSEE						
Dyer County	A	A	A	A	A	A
Lauderdale County	A	A	A	A	A	A
Obion County	A	A	A	A	A	A
Shelby County	A	Part-Mainr	Mainr-Mar	A	Part-NA	Mainr*
Tipton County	A	A	A	A	A	A

**ATTACHMENT F-1
AIR QUALITY ATTAINMENT STATUS BY COUNTY***

Location	Pollutants					Summary County Status
	SO ₂	CO	O ₃	PM ₁₀	Lead	
WISCONSIN						
Douglas County	A	A	A	A	A	A

* All of these counties are in attainment status for NO_x.

Key:

A	■	Attainment, Unclassifiable/Attainment; Cannot be Classified; Cannot be Classified or Better than National Standards; No Standards or Not Designated
Maint	■	Maintenance
Mar	■	Marginal
Mod	■	Moderate
NA	=	Nonattainment
Part	=	Part of County
Ser	■	Serious
Sev	■	Severe
Smal	■	Sub-Marginal
Trans	=	Transitional

**ATTACHMENT F-2
SYSTEM-WIDE EMISSIONS ESTIMATES**

Emissions Source	Emissions Change (tons/year)					
	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
Rail Line Segments Activity ^a	21.3	56.7	576.4	33.4	14.2	0.001
Truck-to-rail Diversions (Over-the-road Truck Activity) ^b	-57.4	-289.6	-660.4	-17.1	-37.9	0
Rail Car Activity at Rail Yards ^c	0	0	0	0	0	0
Intermodal Facilities Activity ^d	3.4	13.6	30.8	2.2	3.2	0
Highway/Rail At-grade Crossings ^e	0.7	6.4	0.2	0.004	0.003	0
Total (tons/year)	-32.0	-312.8	-53.0	38.5	-20.6	0.001

^a SEA based this analysis on additional post-Acquisition rail traffic resulting from truck-to-rail diversions. SEA assumed 1:1 ratio of rail-to-rail diversions (i.e., excluded decreased ton-miles on other railroads and the subsequent ton-miles increases on CN/IC integrated rail line segments).

^b SEA based this analysis on the Applicant's traffic study of truck-miles saved.

^c SEA does not anticipate system-wide emissions changes because decreases in rail car activity at other railroads' rail yards would offset rail car activity increases at CN/IC rail yards.

^d SEA based this analysis on the portion of intermodal freight diverted from truck-to-rail (42.3 percent of the intermodal freight diversion).

^e Highway/rail at-grade crossings with an ADT volume of 5,000 or greater on rail line segments that would meet or exceed the Board's thresholds for environmental analysis.

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ATTACHMENT P-3
COUNTY-WIDE EMISSIONS INCREASES FOR RAIL ACTIVITIES
THAT MEET OR EXCEED THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

EMISSIONS ESTIMATE						(ton/day/yr)					
Emission Source Name	Segment ID	Emission Source Type	County	State	Attainment Status	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
SANGAMON COUNTY, IL											
GIBSON CITY IL	215	Rail Line Segment	Champaign	IL	A	0.01	0.02	0.2	0.02	0.01	2.3E-07
Total County-wide emissions for Sangamon County											
COOK COUNTY, IL											
BROOKPORT IL	100	Rail Line Segment	Cook	IL	NA	0.4	1.3	11.4	1.1	0.3	2.9E-03
BROOKPORT IL	102	Rail Line Segment	Cook	IL	NA	0.1	0.3	3.0	0.3	0.1	6.0E-04
HAWTHORNE YD IL	104	Rail Line Segment	Cook	IL	NA	0.8	2.1	21.3	2.0	0.5	5.4E-05
HARVEY IL	173	Rail Line Segment	Cook	IL	NA	3.1	2.8	26.9	2.7	0.7	7.3E-03
HOMERWOOD IL	165	Rail Line Segment	Cook	IL	NA	1.1	1.0	30.0	2.8	0.3	7.6E-03
MATTESON JEFF IL	187	Rail Line Segment	Cook	IL	NA	0.6	1.6	16.1	1.5	0.4	4.1E-03
MATTESON JEFF IL	187	Rail Line Segment	Cook	IL	NA	-0.004	-0.01	-0.1	-0.004	-0.002	-1.2E-07
HAWTHORNE IL	--	Rail Yard	Cook	IL	NA	1.2	2.3	20.7	1.4	0.5	3.0E-05
MAYERSVILLE IL	--	Intermodal Facility	Cook	IL	NA						0
GATEWAY IL	--	Intermodal Facility	Cook	IL	NA	3.9	15.3	35.0	2.5	1.6	3.2E-04
Total County-wide emissions for Cook County											
DE WITT COUNTY, IL											
GIBSON CITY IL	215	Rail Line Segment	De Witt	IL	A	0.20	0.8	7.7	0.7	0.2	1.9E-05
FULLERTON IL	217	Rail Line Segment	De Witt	IL	A	0.30	1.0	10.3	1.0	0.3	2.6E-05
CLINTON IL	225	Rail Line Segment	De Witt	IL	A	0.37	1.0	10.0	0.9	0.3	2.4E-05
Total County-wide emissions for De Witt County											
JEFFERSON COUNTY, IL											
GIBSON CITY IL	210	Rail Line Segment	Ford	IL	A	0.6	3.65	16.7	1.53	0.4	4.2E-03
GIBSON CITY IL	213	Rail Line Segment	Ford	IL	A	0.3	0.51	5.2	0.48	0.1	1.3E-03
Total County-wide emissions for Jefferson County											
LOGAN COUNTY, IL											
GIBSON CITY IL	210	Rail Line Segment	Logan	IL	A	0.3	0.8	8.2	0.8	0.2	2.1E-05
Total County-wide emissions for Logan County											
MACLEOD COUNTY, IL											
CLINTON IL	225	Rail Line Segment	Logan	IL	A	0.3	0.7	7.5	0.7	0.2	1.0E-03
MOUNT PULASKI IL	229	Rail Line Segment	Logan	IL	A	0.4	1.4	11.3	1.0	0.3	3.0E-03
Total County-wide emissions for Macleod County											
SANGAMON COUNTY, IL											
GIBSON CITY IL	215	Rail Line Segment	Macleod	IL	A	0.3	0.9	9.3	0.9	0.2	2.9E-05
Total County-wide emissions for Sangamon County											
SPRINGFIELD COUNTY, IL											
MOUNT PULASKI IL	231	Rail Line Segment	Springfield	IL	A	0.7	2.0	20.2	1.9	0.5	5.1E-05
Total County-wide emissions for Springfield County											
WILL COUNTY, IL											
MATTESON JEFF IL	187	Rail Line Segment	Will	IL	NA	2.1	11.0	111.5	10.3	2.7	2.0E-04
Total County-wide emissions for Will County											
ST. CLAIR COUNTY, MI											
PORT HURON MI	--	Rail Yard	St. Clair	MI	NA	0.1	0.1	1.4	0.1	0.03	3.3E-06
Total County-wide emissions for St. Clair County											

ATTACHMENT F-3
COUNTY-WIDE EMISSIONS INCREASES FOR RAIL ACTIVITIES
THAT MEET OR EXCEED THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

Emission Source Name	Segment ID	Emission Source Type	County	State	Attainment Status	EMISSIONS ESTIMATE (tons/year)					
						VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
WAYNE COUNTY, MI											
DETROIT/DETROIT E. MI	"	Unit Yard	Wayne	MI	NA	0.2	0.3	2.7	0.7	0.1	4.4E-06
DETROIT/DETROIT W. MI	"	Unit Yard	Wayne	MI	NA	0.03	0.03	0.3	0.02	0.01	3.1E-07
Total County-wide emissions for Wayne County						0.2	0.3	3.0	0.7	0.1	3.7E-06

A - Ambleron

MA - Macomb

MI - Macomb

MI - Macomb

Wayne, Edison, and Port Huron yard emissions changes are shown only for rail car switching and block reworking activities.

Newhome and Markham yard emissions changes are shown only for rail car switching (emissions due to the block reworking are included in rail line segment emissions estimates).

ATTACHMENT F-4

COMPARISON OF EMISSIONS CHANGES WITH THE EPA SCREENING CRITERIA

(COUNTIES WITH CHANGES IN RAIL ACTIVITIES THAT MEET OR EXCEED THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS)

EMISSIONS ESTIMATE											
Municipality											
Emission Source Name	Segment ID	Emission Source Type	County	Date	Attainment Status	VOC's	CO	NO _x	SO ₂	PM ₁₀	Lead
CHASIPAN COUNTY, IL											
GILSON CITY IL	215	Rail Line Segment	Champaign	IL	A	0.01	0.02	0.2	0.02	0.01	5.3E-07
Total County-wide emissions for Champaign County						0.01	0.02	0.2	0.02	0.01	5.3E-07
EPA Screening Thresholds						100	100	100	100	100	0.6
Thresholds Exceeded?						NO	NO	NO	NO	NO	NO
COOK COUNTY, IL											
BRIDGEPORT IL	160	Rail Line Segment	Cook	IL	NA	0.4	1.1	11.6	1.1	0.3	2.9E-05
BRIDGEPORT IL	102	Rail Line Segment	Cook	IL	NA	0.1	0.3	2.6	0.3	0.1	6.1E-06
HAWTHORNE YD IL	104	Rail Line Segment	Cook	IL	NA	0.8	7.1	21.3	2.0	0.5	5.4E-05
HARVY IL	173	Rail Line Segment	Cook	IL	NA	1.4	3.8	28.9	2.7	0.7	7.3E-05
HOLMWOOD IL	165	Rail Line Segment	Cook	IL	NA	1.1	3.0	20.0	2.2	0.3	7.6E-05
MATTESON YD IL	167	Rail Line Segment	Cook	IL	NA	0.6	1.6	16.1	1.5	0.4	4.1E-05
MAITESHORE IL	-	Rail Yard	Cook	IL	NA	0.004	0.01	0.1	0.004	0.003	3.5E-07
HAWTHORNE IL	-	Rail Yard	Cook	IL	NA	1.2	2.2	20.7	1.4	0.3	3.9E-05
SNYDER/CHICAGO	-	Intermodal Facility	Cook	IL	NA	3.8	13.3	35.0	2.4	3.6	0
Total County-wide emissions for Cook County						9.2	28.4	100.3	14.2	9.3	2.2E-04
EPA Screening Thresholds						25	100	34	100	28	0.6
Thresholds Exceeded?						NO	NO	YES	NO	NO	NO
DE WITT COUNTY, IL											
GILSON CITY IL	213	Rail Line Segment	De Witt	IL	A	0.26	0.4	3.3	0.7	0.2	1.9E-05
CLANTON IL	214	Rail Line Segment	De Witt	IL	A	0.36	1.0	10.3	1.0	0.3	2.1E-05
CLANTON IL	225	Rail Line Segment	De Witt	IL	A	0.27	1.0	10.0	0.9	0.3	2.6E-05
Total County-wide emissions for De Witt County						1.00	2.8	23.0	2.6	0.7	7.1E-05
EPA Screening Thresholds						100	100	100	100	100	0.6
Thresholds Exceeded?						NO	NO	NO	NO	NO	NO
DEWITT COUNTY, IL											
GILMAN IL	210	Rail Line Segment	De Witt	IL	A	0.6	1.0	10.3	1.55	0.4	4.2E-05
GILSON CITY IL	213	Rail Line Segment	De Witt	IL	A	0.2	0.31	5.2	0.48	0.1	1.3E-05
Total County-wide emissions for De Witt County						0.8	1.46	15.0	2.03	0.5	5.5E-05
EPA Screening Thresholds						100	100	100	100	100	0.6
Thresholds Exceeded?						NO	NO	NO	NO	NO	NO
MCQUINN COUNTY, IL											
GILMAN IL	210	Rail Line Segment	McQuinn	IL	A	0.3	0.8	4.2	0.3	0.2	2.1E-05
Total County-wide emissions for McQuinn County						0.3	0.8	4.2	0.3	0.2	2.1E-05
EPA Screening Thresholds						100	100	100	100	100	0.6
Thresholds Exceeded?						NO	NO	NO	NO	NO	NO
LOGAN COUNTY, IL											
CLANTON IL	225	Rail Line Segment	Logan	IL	A	0.3	0.7	3.5	0.3	0.1	1.9E-05
MCQUINN IL	230	Rail Line Segment	Logan	IL	A	0.4	1.1	11.3	1.0	0.3	2.9E-05
Total County-wide emissions for Logan County						0.7	1.8	14.8	1.2	0.2	4.7E-05
EPA Screening Thresholds						100	100	100	100	100	0.6
Thresholds Exceeded?						NO	NO	NO	NO	NO	NO

ATTACHMENT F-4
COMPARISON OF EMISSIONS CHANGES WITH THE EPA SCREENING CRITERIA
(COUNTIES WITH CHANGES IN RAIL ACTIVITIES THAT MEET OR EXCEED THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS)

EMISSIONS ESTIMATE											
						(t/year/year)					
Emulsion Source Name	Segment ID	Emulsion Source Type	County	State	Abatement Status	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
MOBILE COUNTY, IL											
EMERSON CITY IL	215	Rail Line Segment	McLeans	IL	A	0.3	0.3	0.3	0.3	0.3	2.4E-05
					Total County-wide	0.3	0.3	0.3	0.3	0.3	2.4E-05
					EPA Screening Threshold	100	100	100	100	100	0.6
					Thresholds Exceeded:	NO	NO	NO	NO	NO	NO
SANGAMON COUNTY, IL											
MOUNT PILGRIM IL	230	Rail Line Segment	Springfield	IL	A	0.7	0.7	0.7	0.7	0.7	5.0E-05
					Total County-wide	0.7	0.7	0.7	0.7	0.7	5.0E-05
					EPA Screening Threshold	100	100	100	100	100	0.6
					Thresholds Exceeded:	NO	NO	NO	NO	NO	NO
ST. CLAIR COUNTY, IL											
MAITTESON (E) IL	187	Rail Line Segment	York	IL	A	4.1	1.0	11.5	0.4	2.7	1.8E-04
					Total County-wide	4.1	1.0	11.5	0.4	2.7	1.8E-04
					EPA Screening Threshold	100	100	100	100	100	0.6
					Thresholds Exceeded:	NO	NO	YES	NO	NO	NO
ST. CLAIR COUNTY, MI											
PORT HUDON MI	-	Rail Yard	St. Clair	MI	A	0.1	0.1	1.4	0.1	0.03	1.4E-06
					Total County-wide	0.1	0.1	1.4	0.1	0.03	1.4E-06
					EPA Screening Threshold	100	100	100	100	100	0.6
					Thresholds Exceeded:	NO	NO	NO	NO	NO	NO
WAYNE COUNTY, MI											
DETROIT DETROIT E MI	-	Rail Yard	Wayne	MI	A	0.2	0.3	2.3	0.3	0.3	4.4E-06
EDISON MICHIGAN MI	-	Rail Yard	Wayne	MI	A	0.02	0.03	0.3	0.02	0.01	4.1E-07
					Total County-wide	0.2	0.3	2.3	0.3	0.3	4.4E-06
					EPA Screening Threshold	100	100	100	100	100	0.6
					Thresholds Exceeded:	NO	NO	NO	NO	NO	NO

A - Available

N/A - Not Available

MI - Michigan

Detraile, Edison and Port Huron yard emissions changes are shown for rail car pooling with block shipping activities.

Wayne and Macomb yard emissions changes are shown only for rail car pooling activities due to the block shipping emissions estimates.

ATTACHMENT F-5

NO_x EMISSIONS CHANGES FROM ALL ACTIVITIES FOR COUNTIES THAT EXCEED THE EPA SCREENING CRITERIA DETAILED ANALYSIS (COOK AND WILL COUNTIES)

Total NO _x Emissions Inventory in Will County, Illinois ^a (tons/year)	NO _x Level of Significance (1% of total emissions inventory for the county) (tons/year)
57,329	573
Emission Source Name	NO _x Emissions Estimate (tons/year)
Rail Line Segments	111.5
Rail Yards ^b	0.0
Intermodal Facilities ^c	0.0
Truck-to-Rail Diversions	-1.9
Highway/Rail At-grade Crossings	0.0
TOTAL	109.6

ATTACHMENT F-6

NO_x EMISSIONS CHANGES FROM ALL ACTIVITIES FOR COUNTIES THAT EXCEED THE EPA SCREENING CRITERIA DETAILED ANALYSIS (COOK AND WILL COUNTIES)

Total NO _x Emissions Inventory in Cook County, Illinois ^a (tons/year)	Level of Significance (1% of total NO _x emissions inventory for the county) (tons/year)
209,606	2,096
Emission Source Name	NO _x Emissions Estimate (tons/year)
Rail Line Segments	184.4
Rail Yards ^b	1.8
Intermodal Facilities	1.2
Truck-to-Rail Diversions	-1.1
TOTAL	186.4

^a Based on Emissions Trends Viewer, Compact Disk, 1985-1995, Version 1.0, September 1996, EPA (1995 emissions data).

^b No CNIC rail yards or intermodal facilities exist in Will County, Illinois.

^c Based on activities at all yards and intermodals in Cook County, including facilities which do not exceed the Board's thresholds for analysis (including Broadview, Glen, Clearing, Hawthorne, and Markham Yards).

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ATTACHMENT F-4

EXISTING COUNTY-WIDE NO_x EMISSIONS INVENTORY FOR COUNTIES THAT EXCEED THE BPA SCREENING CRITERIA*

Emissions Source Description	Point Source NO _x Emissions (tons/year)	Area Source NO _x Emissions (tons/year)	Total NO _x Emissions Inventory (tons/year)
Cook County, Illinois			
Coal	13,596.7	0.0	13,596.7
Oil	0.0	0.0	0.0
Gas	344.3	0.0	344.3
Other	0.0	0.0	0.0
Internal Combustion	2.3	0.0	2.3
Coal	2,383.8	168.6	2,552.3
Oil	1,918.5	0.0	1,918.5
Gas	10,204.1	10,381.2	20,585.3
Other	7.1	0.0	7.1
Internal Combustion	143.3	0.0	143.3
Commercial/Institutional Coal	0.0	176.5	176.5
Commercial/Institutional Oil	251.0	395.1	646.1
Commercial/Institutional Gas	432.2	1,276.7	1,708.9
Misc. Fuel Comb. (Exempt)	0.0	0.0	0.0
Residential Wood	0.0	4.4	4.4
Residential Other	0.0	12,693.6	12,693.6
Organic Chemicals	0.0	0.0	0.0
Inorganic Chemicals	0.0	0.0	0.0
Polymers & Resins	0.0	0.0	0.0
Agrochemical Chemicals	0.0	0.0	0.0
Paints, Varnishes, Lacquers, Enamels	0.0	0.0	0.0
Pharmaceuticals	0.0	0.0	0.0
Other Chemicals	2.1	0.0	2.1
Non-Ferrous Metals Processing	12.6	0.0	12.6
Ferrous Metals Processing	2,588.6	0.0	2,588.6
Metal Processing NEC	0.0	0.0	0.0
Oil & Gas Production	0.0	0.0	0.0
Petroleum Refineries & Related	0.0	0.0	0.0
Asphalt Manufacturing	0.0	0.0	0.0
Agrochemicals, Food, & Kindred	0.0	0.0	0.0
Textiles, Leather, & Apparel	0.0	0.0	0.0
Wood, Pulp & Paper, & Publishing	0.0	0.0	0.0
Rubber & Miscellaneous Plastics	0.0	0.0	0.0
Metal Products	467.3	0.0	467.3
Machinery Products	29.6	0.0	29.6
Electronic Equipment	0.0	0.0	0.0
Transportation Equipment	0.0	0.0	0.0
Construction	0.0	0.0	0.0
Miscellaneous Industrial Processes	0.0	43.8	43.8
Deposition	0.0	0.0	0.0
Graphic Arts	161.7	0.0	161.7
Dry Cleaning	0.0	0.0	0.0
Surface Coating	18.6	0.0	18.6
Other Industrial	0.0	0.0	0.0
Nonindustrial	0.0	0.0	0.0
Solvent Utilization NEC	0.0	0.0	0.0
Bulk Terminals & Plants	0.0	0.0	0.0
Petroleum & Petroleum Products	0.0	0.0	0.0
Petroleum & Petroleum Products	0.0	0.0	0.0
Service Stations: Stage I	0.0	0.0	0.0
Service Stations: Stage II	0.0	0.0	0.0
Service Stations: Breathing &	0.0	0.0	0.0
Organic Chemical Storage	0.0	0.0	0.0
Organic Chemical Transport	0.0	0.0	0.0
Inorganic Chemical Storage	0.0	0.0	0.0
Inorganic Chemical Transport	0.0	0.0	0.0
Bulk Materials Storage	0.0	0.0	0.0
Bulk Materials Transport	0.0	0.0	0.0
Incineration	576.1	93.3	669.4
Open Burning	0.0	16.3	16.3
POTW	0.0	0.0	0.0
Industrial Waste Water	0.0	0.0	0.0
TSDF	0.0	0.0	0.0

ATTACHMENT F-6

EXISTING COUNTY-WIDE NO_x EMISSIONS INVENTORY FOR COUNTIES THAT EXCEED THE EPA SCREENING CRITERIA*

Emissions Source Description	Point Source NO _x Emissions (tons/year)	Area Source NO _x Emissions (tons/year)	Total NO _x Emissions Inventory (tons/year)
Landfills	0.0	0.0	0.0
Other	0.0	0.0	0.0
Light-Duty Gas Vehicles &	0.0	54,851.0	54,851.0
Light-Duty Gas Trucks	0.0	21,303.6	21,303.6
Heavy-Duty Gas Vehicles	0.0	3,709.1	3,709.1
Offsets	0.0	20,632.5	20,632.5
Non-Road Gasoline	0.0	1,333.1	1,333.1
Non-Road Diesel	0.0	16,761.3	16,761.3
Aircraft	0.0	5,007.5	5,007.5
Marine Vessels	0.0	104.2	104.2
Railroads	0.0	22,427.6	22,427.6
Biogenic	0.0	0.0	0.0
Geogenic	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0
Agriculture & Forestry	0.0	0.0	0.0
Other Combustion	0.0	152.2	152.2
Catastrophic/Accidental Releases	0.0	0.0	0.0
Repair Shops	0.0	0.0	0.0
Health Services	0.0	0.0	0.0
Cooling Towers	0.0	0.0	0.0
Fugitive Dust	0.0	0.0	0.0
TOTAL (COOK COUNTY)	33,369.9	172,235.9	205,605.8
Will County, Illinois			
Coal	32,027.0	0.0	32,027.0
Oil	66.2	0.0	66.2
Gas	159.7	0.0	159.7
Other	0.0	0.0	0.0
Internal Combustion	138.7	0.0	138.7
Coal	648.0	0.0	648.0
Oil	1,189.6	0.0	1,189.6
Gas	5,941.8	494.0	6,435.8
Other	0.0	0.0	0.0
Internal Combustion	0.0	0.0	0.0
Commercial/Institutional Coal	0.0	5.1	5.1
Commercial/Institutional Oil	7.1	11.2	18.3
Commercial/Institutional Gas	111.2	247.6	358.8
Misc. Fuel Comb. (Exempt)	0.0	0.0	0.0
Residential Wood	0.0	3.0	3.0
Residential Other	0.0	725.6	725.6
Organic Chemicals	0.0	0.0	0.0
Inorganic Chemicals	11.1	0.0	11.1
Polymers & Resins	0.0	0.0	0.0
Agricultural Chemicals	0.0	0.0	0.0
Paints, Varnishes, Lacquers, Enamels	0.0	0.0	0.0
Pharmaceuticals	0.0	0.0	0.0
Other Chemicals	1,111.8	0.0	1,111.8
Non-Ferrous Metals Processing	0.0	0.0	0.0
Ferrous Metals Processing	0.0	0.0	0.0
Metals Processing NEC	0.0	0.0	0.0
Oil & Gas Production	0.0	0.0	0.0
Petroleum Refineries & Related	1,277.7	0.0	1,277.7
Asphalt Manufacturing	0.0	0.0	0.0
Agriculture, Food, & Kindred	0.0	0.0	0.0
Textiles, Leather, & Apparel	0.0	0.0	0.0
Wood, Pulp & Paper, & Publishing	0.0	0.0	0.0
Rubber & Miscellaneous Plastic	0.0	0.0	0.0
Mineral Products	64.0	0.0	64.0
Machinery Products	0.0	0.0	0.0
Electronic Equipment	0.0	0.0	0.0
Transportation Equipment	0.0	0.0	0.0
Construction	0.0	0.0	0.0
Miscellaneous Industrial Processes	0.0	72.9	72.9

ATTACHMENT F-4

EXISTING COUNTY-WIDE NO_x EMISSIONS INVENTORY FOR COUNTIES THAT EXCEED THE EPA SCREENING CRITERIA*

Emissions Source Description	Point Source NO _x Emissions (tons/year)	Area Source NO _x Emissions (tons/year)	Total NO _x Emissions Inventory (tons/year)
Depotizing	0.0	0.0	0.0
Graphic Arts	0.0	0.0	0.0
Dry Cleaning	0.0	0.0	0.0
Surface Coating	0.0	0.0	0.0
Other Industrial	0.0	0.0	0.0
Nonferrous	0.0	0.0	0.0
Solvent Utilization NEC	0.0	0.0	0.0
Bulk Terminals & Plants	0.0	0.0	0.0
Petroleum & Petroleum Product	0.0	0.0	0.0
Petroleum & Petroleum Product	0.0	0.0	0.0
Service Stations: Stage I	0.0	0.0	0.0
Service Stations: Stage II	0.0	0.0	0.0
Service Stations: Breathing &	0.0	0.0	0.0
Organic Chemical Storage	0.0	0.0	0.0
Organic Chemical Transport	0.0	0.0	0.0
Inorganic Chemical Storage	0.0	0.0	0.0
Inorganic Chemical Transport	0.0	0.0	0.0
Bulk Materials Storage	0.0	0.0	0.0
Bulk Materials Transport	0.0	0.0	0.0
Incineration	33.0	8.3	41.3
Open Burning	0.0	64.4	64.4
POTW	0.0	0.0	0.0
Industrial Waste Water	0.0	0.0	0.0
TSDP	0.0	0.0	0.0
Landfills	0.0	0.0	0.0
Other	0.0	0.0	0.0
Light-Duty Gas Vehicles &	0.0	4,761.9	4,761.9
Light-Duty Gas Trucks	0.0	2,094.5	2,094.5
Heavy-Duty Gas Vehicles	0.0	413.0	413.0
Diesels	0.0	2,364.8	2,364.8
Non-Road Gasoline	0.0	170.6	170.6
Non-Road Diesel	0.0	1,517.1	1,517.1
Aircraft	0.0	17.0	17.0
Marine Vessels	0.0	104.2	104.2
Railroads	0.0	1,411.1	1,411.1
Biogenic	0.0	0.0	0.0
Geogenic	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0
Agriculture & Forestry	0.0	0.0	0.0
Other Combustion	0.0	7.9	7.9
Catastrophic/Accidental Releases	0.0	0.0	0.0
Repair Shops	0.0	0.0	0.0
Health Services	0.0	0.0	0.0
Cooling Towers	0.0	0.0	0.0
Facility Dust	0.0	0.0	0.0
TOTAL (WILL COUNTY)	42,783.9	14,545.2	57,329.1

* Emissions for Cook and Will Counties, based on the Emissions Trade Viewer, compact disk - 1981-1995 (1995 emissions data).
Version 1.0, September 1994, EPA, Office of Air Quality Planning and Standards, Research Triangle Park, N.C.

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ATTACHMENT F-7

EMISSIONS CHANGES ON RAIL LINE SEGMENTS THAT MEET OR EXCEED THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

Segment ID	Segment Origin	Segment Destination	Rail	Segment Distance (mi)	Difference in Tons/Day	Difference in Tons/Day	% Gross Tons-Miles Change	Increase in Annual GTM	County Name	Distance in the County (miles)	Air Quality Class	EMISSIONS ESTIMATE ^a (tons/year)					
												CO	NO _x	SO ₂	Pb	PM ₁₀	Lead
100	BROADVIEW IL	BROOKLYN XING IL	IC	2.0	-0.4	20,422	53%	28,540,923	Cook	3.8	NA	0.4	1.1	11.6	1.1	0.3	2.9E-05
102	BROOKLYN XING	HAWTHORNE YD IL	IC	0.7	2.4	24,740	64%	6,412,926	Cook	0.7	NA	0.1	0.3	2.6	0.3	0.1	6.6E-06
104	HAWTHORNE YD IL	BROADVIEW IL	IC	3.5	2.4	26,369	107%	52,454,533	Cook	5.5	NA	0.8	2.1	21.3	2.0	0.5	5.4E-05
175	HARVEY IL	HOMERWOOD IL	IC	3.5	7.5	55,797	82%	71,280,923	Cook	3.5	NA	1.1	2.2	28.9	2.7	0.7	7.3E-05
185	HOMERWOOD IL	MATTESON (EIE) IL	IC	5.2	5.1	38,912	40%	73,854,976	Cook	5.2	NA	1.1	3.0	30.0	2.8	0.7	7.6E-05
187	MATTESON (EIE) IL	KANKAKEE IL	IC	26.0	7.1	58,408	76%	274,587,699	Will	12.9	NA	5.1	11.0	111.5	10.3	2.7	2.3E-04
187	MATTESON (EIE) IL	KANKAKEE IL	IC	26.0	7.1	58,408	76%	252,842,391	Kankakee	11.9	A	-	-	-	-	-	-
187	MATTESON (EIE) IL	KANKAKEE IL	IC	26.0	7.1	58,408	76%	39,633,191	Cook	1.9	NA	0.6	1.6	16.1	1.5	0.4	4.1E-05
210	GILMAN IL	GIBSON CITY IL	IC	29.1	1.4	5,787	316%	20,235,403	Illinois	9.6	A	0.3	0.8	8.2	0.8	0.2	2.1E-05
210	GILMAN IL	GIBSON CITY IL	IC	28.1	1.4	5,787	316%	41,231,218	Food	19.3	A	0.6	1.63	16.7	1.55	0.4	4.2E-05
215	GIBSON CITY IL	FULLERTON IL	IC	26.2	1.4	5,787	336%	23,002,457	McLean	10.9	A	0.3	0.9	9.3	0.9	0.2	2.4E-05
215	GIBSON CITY IL	FULLERTON IL	IC	26.2	1.4	5,787	336%	12,821,388	Food	5.1	A	0.2	0.51	5.2	0.48	0.1	1.3E-05
215	GIBSON CITY IL	FULLERTON IL	IC	26.2	1.4	5,787	336%	18,946,927	De Wain	9.0	A	0.28	0.8	7.7	0.7	0.2	1.9E-06
215	GIBSON CITY IL	FULLERTON IL	IC	26.2	1.4	5,787	336%	570,329	Chicago	0.3	A	0.01	0.02	0.2	0.02	0.01	5.8E-07
217	FULLERTON IL	CLINTON IL	IC	12	1.4	5,787	336%	25,347,060	De Wain	12.0	A	0.38	1.0	10.3	1.0	0.3	2.6E-05
235	CLINTON IL	MOUNT PULASKI IL	IC	20.0	1.4	5,787	336%	18,376,619	Logan	8.7	A	0.3	0.7	7.5	0.7	0.2	1.9E-06
235	CLINTON IL	MOUNT PULASKI IL	IC	20.4	1.4	5,787	336%	24,713,384	De Wain	11.7	A	0.37	1.0	10.0	0.9	0.2	2.5E-05
250	MOUNT PULASKI IL	SPRINGFIELD IL	IC	23.1	1.4	9,201	346%	49,203,802	Sangamon	14.8	A	0.7	2.0	20.2	1.9	0.5	5.1E-06
250	MOUNT PULASKI IL	SPRINGFIELD IL	IC	23.1	1.4	9,201	346%	27,874,430	Logan	8.3	A	0.4	1.1	11.3	1.0	0.3	2.9E-05

^a All segments are IC segments.

^b Emissions changes for segment 187 in Kankakee County are not presented because rail activity increases on segment 187 do not exceed the Board's thresholds for environmental analysis for an attainment county.

Emission factors are as follows (in pounds per 1,000 gallons):

VOCC = 21.99

CO = 58.64

NO_x = 593.59

SO₂ = 55.2

PM₁₀ = 14.66

Lead = 0.0015

CNOC fuel efficiency factor (in gross ton-miles) = 733.4

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ATTACHMENT F-8
EMISSIONS CHANGES AT RAIL YARDS THAT MEET OR EXCEED THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSES

Railroad	Yard Name	Base			Merged		
		Cars Switched/Day	Cars Block Swapped/Day	Total Cars Handled/Day	Cars Switched/Day	Cars Swapped/Day	Total Cars Handled/Day
CN (GTW)	Detroit/Detroit E. MI	82	0	82	137	16	153
CN (GTW)	Edison (Trenton) MI	3	0	3	11	0	11
IC	Hawthorne IL	34	6	39	33	30	64
IC	Markham IL	556	33	609	752	100	853
CN (GTW)	Port Huron MI	8	0	8	8	16	24
Difference				Percentage Change			
Railroad	Yard Name	Cars Switched/Day	Cars Block Swapped/Day	Total Cars Handled/Day	% Yard Switched	% Yard Swapped	% Total Yard Activity
CN (GTW)	Detroit/Detroit E. MI	35	16	51	42.1%	100%	61%
CN (GTW)	Edison (Trenton) MI	3	0	3	31.3%	0.00%	31%
IC	Hawthorne IL	-1	25	24	-1.88%	452.70%	62%
IC	Markham IL	196	47	243	35.34%	88.70%	40%
CN (GTW)	Port Huron MI	0	16	16	0.00%	100%	18%
Railroad	Yard Name	County	State	Attainment Status	Segments Passing through Yard	Daily Difference in tons	Yard Distance (miles)
CN (GTW)	Detroit/Detroit E. MI	Wayne	MI	NA	1130	-7,928	0.8
CN (GTW)	Edison (Trenton) MI	Wayne	MI	NA	1158	479	0.6
IC	Hawthorne IL	Cook	IL	NA	HM	26,369	0.5
IC	Markham IL	Cook	IL	NA	175	55,797	3.0
CN (GTW)	Port Huron MI	St. Clair	MI	NA	1000	7,235	1.1
EMISSIONS ESTIMATES - RAIL CAR SWITCHING (tons/year)							
Railroad	Yard Name	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
CN (GTW)	Detroit/Detroit E. MI	0.2	0.40	3.7	0.3	0.1	6.9E-06
CN (GTW)	Edison (Trenton) MI	0.02	0.03	0.3	0.02	0.01	5.0E-07
IC	Hawthorne IL	41.074	0.01	41.1	41.004	41.002	1.28E-07
IC	Markham IL	1.2	2.2	20.7	1.4	0.3	3.9E-03
CN (GTW)	Port Huron MI	0	0	0	0	0	0
EMISSIONS ESTIMATES - BLOCK SWAPPING (tons/year)							
Railroad	Yard Name	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
CN (GTW)	Detroit/Detroit E. MI	41.04	0.1	1.0	41.09	41.02	2.5E-06
CN (GTW)	Edison (Trenton) MI	0.001	0.004	0.04	0.004	0.001	3.1E-07
IC	Hawthorne IL	0.1	0.2	2.1	0.2	0.1	5.4E-06
IC	Markham IL	0.9	2.4	24.5	2.1	0.6	6.2E-03
CN (GTW)	Port Huron MI	0.05	0.1	1.4	0.1	0.03	3.5E-06
EMISSIONS ESTIMATES - RAIL CAR SWITCHING AND BLOCK SWAPPING (tons/year)							
Railroad	Yard Name	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
CN (GTW)	Detroit/Detroit E. MI	0.2	0.1	2.7	0.2	0.1	4.4E-06
CN (GTW)	Edison (Trenton) MI	0.02	0.03	0.3	0.02	0.01	8.1E-07
IC	Hawthorne IL	0.1	0.2	2.1	0.2	0.1	5.2E-06
IC	Markham IL	2.1	4.6	43.3	3.7	1.1	1.0E-04
CN (GTW)	Port Huron MI	0.1	0.1	1.4	0.1	0.03	3.5E-06

Emission factors for rail car switching are as follows (pounds per gallon): VOCs- 46.37; CO- 83.64; NO_x- 797.18; SO₂- 55.2; PM₁₀- 20.16; Lead- 0.0015

Rail cars switched per switch engine-hour - 19.0

Average operating days per year - 365

Switch engine locomotive fuel consumption (gallons per hour) - 13.5

Emission factors for block swapping are as follows (pounds per 1,000 gallons): VOCs- 21.99; CO- 58.64; NO_x- 595.59; SO₂- 55.2; PM₁₀- 14.66; Lead- 0.0015

CN/C I fuel efficiency factor (gross ton-miles per gallon) - 733.4

NA - nonattainment

M - maintenance

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ATTACHMENT F-9
EMISSIONS CHANGES AT INTERMODAL FACILITIES THAT MEET OR EXCEED THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSES

MetraChicago Gateway, IL						
EMISSIONS ESTIMATE (tons/year)	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
OTR TRUCKS	0.3	2.1	1.2	0.03	0.1	0
LIFT EQUIPMENT	2.3	10.3	23.9	1.6	2.7	0
YARD TRUCKS	0.9	1.9	10	0.9	0.8	0
TOTAL	3.5	14.3	35	2.5	3.6	0

For OTR Trucks:

Polhemus with respective OTR truck emission factor (grams per hour): VOCs - 12.3; CO - 94.60; NO_x - 53.1; SO₂ - 1.29; PM₁₀ - 2.32; Lead - 0

Average operating days per year - 365

Average time OTR truck is in intermodal facility (minutes) - 38.0

For LLE Equipment:

Polhemus with respective lift equipment emission factor (pounds per gallon): VOCs - 0.08; CO - 0.31; NO_x - 0.71; SO₂ - 0.05; PM₁₀ - 0.08; Lead - 0

Average working horsepower - 129

Total lift/primary lift ratio - 2.26

Total lifts per hour - 12.6

Average fuel consumption rate (gallons per hour) - 5.6

For Yard Trucks:

Polhemus with respective yard truck emission factor (pounds per gallon): VOCs - 0.04; CO - 0.13; NO_x - 0.43; SO₂ - 0.04; PM₁₀ - 0.04; Lead - 0

Average working horsepower - 95

Yard truck move/primary lift ratio - 0.95

Yard truck moves per hour - 6.4

Average fuel consumption rate (gallons per hour) - 4.5

NA - 40 horsepower

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ATTACHMENT F-10
COUNTY-WIDE EMISSIONS DECREASES FROM
TRUCK-TO-RAIL DIVERSIONS
FOR COUNTIES WITH CHANGES IN EMISSIONS THAT EXCEED THE EPA SCREENING CRITERIA

EMISSIONS ESTIMATE - TRUCK-TO-RAIL DIVERSIONS (tons/year)								
County	State	Miles Diverted	VOCs	CO	NO _x	SO ₂	PM ₁₀	Lead
Cook	IL	-50,557	-0.1	-0.3	-1.1	-0.03	-0.1	0
Will	IL	-87,249	-0.2	-0.8	-1.9	-0.05	-0.1	0

Emission factors are as follows (in grams per mile):

VOCs = 1.71

CO = 8.63

NO_x = 19.68

SO₂ = 0.51

PM₁₀ = 1.13

Lead = 0

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ATTACHMENT F-11
SYSTEM-WIDE EMISSIONS DECREASES FROM
TRUCK-TO-RAIL DIVERSIONS

Highway Miles Diverted (million miles/yr)	EMISSIONS ESTIMATE - TRUCK-TO-RAIL DIVERSIONS (tons/year)				
	VOCs	CO	NO _x	SO ₂	PM ₁₀ Lead
-30.47	-57.4	-289.6	-660.4	-17.1	-37.9 0

Emission factors are as follows (in grams per mile):

VOCs = 1.71
CO = 8.63
NO_x = 19.68
SO₂ = 0.51
PM₁₀ = 1.13
Lead = 0

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ATTACHMENT F-12
SYSTEM-WIDE EMISSIONS INCREASES FROM VEHICLE DELAYS AT HIGHWAY/RAIL AT-GRADE CROSSINGS

Segment Number	County	Crossing Number	City	Street Name	Number of Roadway Lanes	ADT	Train Speed (miles per hour)
All at-grade crossings with ADT less than 1000							
100	COOK	21502V	CHICAGO	MILWAUKEE ST	4	21,400	30
104	COOK	21502M	BERWYN	MADISON AVE/18th	4	29,400	30
104	COOK	21503H	RIVERSIDE	WATKINS ST/14th	4	14,500	30
104	COOK	21503L	RIVERSIDE	WESLEYAN AVE/27th	4	15,900	30
104	COOK	21503T	RIVERSIDE	WESLEYAN RD/2nd St	6	31,200	30
104	COOK	21503A	RIVERSIDE	GOULDEN-1ST AVE	4	34,000	30
104	COOK	21503G	BROADVIEW	17TH HERMAN AVE	4	11,200	30
107	WILL	21506V	UNIVERSITY PARK	STUBBINS ROAD	2	2,800	60
107	WILL	21502JN	MANTENO	THIRD ST.	2	5,300	60
107	WILL	21502C	MANTENO	WYVISON ST.	2	5,400	60
107	WILL	21502S	BRADLEY	NORTH ST.	4	9,500	60
225	DE WITT	31503J	CLINTON	US ROUTE 51	4	6,200	40
230	SANDIA MOUNTAIN	31504V	SPRINGFIELD	N. GRAND	2	12,300	30

ATTACHMENT F-12 **SYSTEM-WIDE EMISSIONS INCREASES FROM VEHICLE DELAYS AT HIGHWAY/RAIL AT-GRADE CROSSINGS**

Segment Number	Pre-Acquisition ^a					Post-Acquisition ^b					Change in Emissions				
	VOCs (ton/year)	ED (ton/year)	NO _x (ton/year)	SO ₂ (ton/year)	PM ₁₀ (ton/year)	Trucks per Day	VOCs (ton/year)	ED (ton/year)	NO _x (ton/year)	SO ₂ (ton/year)	PM ₁₀ (ton/year)	Trucks per Day	VOCs (ton/year)	CO (ton/year)	NO _x (ton/year)
Highway/rail at-grade crossings with AEDT greater than 5000															
100	0.3	2.9	0.063	0.0	0.0011	9.3	0.5	4.5	0.1	0.0021	0.0017	12.1	0.3	1.8	0.045
101	0.1	1.1	0.027	0.0	0.0005	4.0	0.3	1.9	0.0	0.0013	0.0008	9.8	0.1	1.9	0.021
104	0.0	0.3	0.012	0.0	0.0002	4.6	0.1	0.9	0.0	0.0006	0.0004	9.8	0.0	0.1	0.009
104	0.1	0.3	0.012	0.0	0.0002	4.6	0.1	0.9	0.0	0.0006	0.0004	9.8	0.0	0.1	0.009
104	0.1	1.2	0.029	0.0	0.0005	4.6	0.2	2.1	0.1	0.0014	0.0009	9.8	0.1	0.5	0.012
104	0.1	1.3	0.032	0.0	0.0005	4.6	0.2	2.3	0.1	0.0016	0.0010	9.8	0.1	0.7	0.015
104	0.0	0.4	0.010	0.0	0.0002	4.6	0.3	0.7	0.0	0.0015	0.0010	9.8	0.0	0.3	0.007
107	0.0	0.2	0.003	0.0	0.0001	12.9	0.0	0.4	0.0	0.0002	0.0002	20.0	0.0	0.2	0.004
107	0.0	0.1	0.003	0.0	0.0001	12.9	0.0	0.3	0.0	0.0002	0.0001	20.0	0.0	0.1	0.002
107	0.0	0.1	0.003	0.0	0.0001	12.9	0.0	0.3	0.0	0.0002	0.0001	20.0	0.0	0.1	0.002
223	0.0	0.0	0.001	0.0	0.0000	1.3	0.0	0.1	0.0	0.00005	0.00003	3.1	0.0	0.0	0.000
239	0.0	0.1	0.012	0.0	0.0000	2.3	0.0	0.2	0.0	0.0001	0.0001	3.1	0.0	0.1	0.002
TOTAL	0.9	5.8	0.2	0.0	0.002	66	1.5	14.9	0.4	0.004	0.004	66	0.7	6.4	0.2

^a Pre-Acquisition train length = 4,223 feet.
^b Post-Acquisition train length is 5,005 feet.
 Emission factors are as follows (in grams per hour):
 VOCs = 41.3
 CO = 410.28
 NO_x = 10.27
 SO₂ = 12.83
 PM₁₀ = 0.175

ATTACHMENT A-13
EMISSIONS CHANGES FROM VEHICLE DELAYS AT ALL AFFECTED HIGHWAY/RAIL AT-GRADE CROSSINGS IN WILL COUNTY, ILLINOIS

Segment Highway	County	Crossing Number	CNO	Street Name	Number of Buses per Hour	AET	Trucks per Hour
Highway/Rail at-grade crossings in Will County, Illinois							
187	WILL	24001A	PEOTONE	NORTH PEOTONE RD	2	15	40
187	WILL	24011U	PEOTONE	HARLEM AVE	2	15	40
187	WILL	25011B	PEOTONE	CLAWFORD ST	2	1100	60
187	WILL	24011P	PEOTONE	MAIN ST	2	1200	60
187	WILL	24011W	PEOTONE	COOKING ST	2	400	60
187	WILL	21011K	PEOTONE	WILMINGTON PEOTON	2	1500	60
187	WILL	24011S	PEOTONE	KENNEDY	2	600	60
100	WILL	210744H	LOCKPORT	ROCKFORD ROAD	2	1000	60
180	WILL	240745S	LOCKPORT	2ND ST. EXTENDED	2	50	60
180	WILL	240746L	LOCKPORT	5TH STREET	2	600	60
180	WILL	240747A	LOCKPORT	9TH STREET	2	1400	60
180	WILL	240748N	LOCKPORT	11TH STREET	2	150	60
180	WILL	240749V	LOCKPORT	13TH STREET	2	200	60
180	WILL	240750C	LOCKPORT	15TH STREET	2	2000	60
181	WILL	240751N	LOCKPORT	17TH STREET	2	4500	60
187	WILL	240752V	LOCKPORT	TURNER ROAD	2	1600	60
187	WILL	240753P	UNIVERSITY PARK	DELLER ROAD	2	300	60

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

* PMT - Available from 1990 to 1995

ATTACHMENT F-14
RAIL ACTIVITIES INCREASES THAT MEET OR EXCEED THE BOARD'S
THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

ATTACHMENT F-14
TABLE 1
RAIL LINE SEGMENTS THAT MEET OR EXCEED
THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

Segment Number	Segment		Railroad	Segment Length in County (miles)	Change in the Number of Trains/Day	Percent Increase in GTM	Increase in Annual GTM
	To	From					
Champaign County, IL							
215	Gibson City, IL	Fullerton, IL	IC	0.3	1.4	336	570,309
Cook County, IL							
100	Bridgeport, IL	BRC-CCP Xing, IL	IC	3.8	-0.4	53	28,548,935
102	BRC-CCP Xing, IL	Hawthorne Yard, IL	IC	0.7	2.4	64	6,412,926
104	Hawthorne Yard, IL	Broadview, IL	IC	5.5	2.4	107	52,454,533
175	Harvey, IL	Homewood, IL	IC	3.5	7.5	82	71,280,923
185	Homewood, IL	Matteson (EJE), IL	IC	5.2	5.1	49	73,854,976
187	Matteson (EJE), IL	Kankakee, IL	IC	1.9	7.1	76	39,633,191
De Witt County, IL							
215	Gibson City, IL	Fullerton, IL	IC	9.0	1.4	336	18,946,927
217	Fullerton, IL	Clinton, IL	IC	12.0	1.4	336	25,347,060
225	Clinton, IL	Mount Pulaski, IL	IC	11.7	1.4	336	24,713,384

ATTACHMENT F-14
TABLE 1
RAIL LINE SEGMENTS THAT MEET OR EXCEED
THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

Segment Number	Segment		Railroad	Segment Length in County (miles)	Change in the Number of Trains/Day	Percent Increase in GTM	Increase in Annual GTM
	To	From					
Ford County, IL							
210	Gilman, IL	Gibson City, IL	IC	19.5	1.4	336	41,231,218
215	Gibson City, IL	Fullerton, IL	IC	6.1	1.4	336	12,821,388
Iroquois County, IL							
210	Gilman, IL	Gibson City, IL	IC	9.6	1.4	336	20,235,403
Logan County, IL							
225	Clinton, IL	Mount Pulaski, IL	IC	8.7	1.4	336	18,376,619
230	Mount Pulaski, IL	Springfield, IL	IC	8.3	1.4	346	27,874,430
McLean County, IL							
215	Gibson City, IL	Fullerton, IL	IC	10.9	1.4	336	23,002,457
Sangamon County, IL							
230	Mount Pulaski, IL	Springfield, IL	IC	14.8	1.4	346	49,703,802
Will County, IL							
187	Matteson (EJE), IL	Kankakee, IL	IC	12.9	7.1	76	274,387,690

ATTACHMENT F-14
TABLE 2
RAIL YARDS THAT MEET OR EXCEED
THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

Yard Name	Railroad	Percent Increase in Total Yard Activity	Change in Rail Cars Handled per Day
Cook County, IL			
Hawthorne, IL	IC	62	24
Markham, IL	IC	40	243
St. Clair County, MI			
Port Huron, MI	CN (GTW)	189	16
Wayne County, MI			
Detroit, MI	CN (GTW)	61	51
Edison, MI	CN (GTW)	31	3

ATTACHMENT F-14
TABLE 3
INTERMODAL FACILITIES THAT MEET OR EXCEED
THE BOARD'S THRESHOLDS FOR ENVIRONMENTAL ANALYSIS

Intermodal Facility Name	Railroad	Daily Increase in OTR Trucks	Change in Primary Lifts per Year
Cook County, IL			
Moyers/Chicago Gateway, IL	IC	88	66,795

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ATTACHMENT F-15
AIR QUALITY EXCEEDANCES AND EMISSIONS INVENTORY BY COUNTY

ATTACHMENT F-15
TABLE 1
EXISTING EMISSIONS INVENTORY

Total Emissions Inventory by County*	Estimated Emissions in Tons/Year				
	VOCs	CO	NO _x	SO ₂	PM ₁₀
Illinois					
Champaign	13,027	57,711	10,309	2,212	27,874
Cook	305,408	1,014,172	205,606	53,803	315,494
De Witt	1,352	6,511	1,074	43	8,014
Ford	3,363	5,334	917	37	10,426
Iroquois	2,671	13,196	2,158	97	23,123
Logan	2,535	11,867	2,229	5,970	13,054
McLean	8,944	44,035	6,813	282	29,639
Sangamon	11,720	60,489	20,289	38,547	27,667
Will	47,577	104,241	57,329	94,224	41,994
Michigan					
St. Clair	14,104	47,611	101,908	73,077	13,062
Wayne	152,774	644,458	124,884	63,633	99,861

* The Applicants summed all emissions for counties in Illinois and Michigan, based on the Emissions Trends Viewer, compact disk, 1985-1995, Version 1.0, September 1996, EPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC. The Applicants based this emissions inventory on 1995 data, the most recent available data. EPA emissions inventory does not provide data on lead emissions.

ATTACHMENT F-15
TABLE 2
ANNUAL NUMBER OF EXCEEDANCES OF THE NAAQS
CHAMPAIGN COUNTY, ILLINOIS

Monitoring Year	Number of Exceedances of NAAQS for Criteria Pollutants					
	O ₃ ^a	CO	NO _x	SO ₂ ^b	PM ₁₀ ^c	Lead
1993	0	N/A ^c	N/A	0	0	N/A
1994	0	N/A	N/A	0	0	N/A
1995	0	N/A	N/A	0	0	N/A
1996	0	N/A	N/A	0	0	N/A
1997	0	N/A	N/A	0	0	N/A

^a The Applicants based these ozone (O₃) results on data from two EPA monitoring stations.

^b The Applicants based these results on data from one EPA monitoring station.

^c N/A - Monitoring data are not available for this pollutant.

Source: Internet website: <http://www.epa.gov/airsweb>

ATTACHMENT F-15
TABLE 3
ANNUAL NUMBER OF EXCEEDANCES OF THE NAAQS
COOK COUNTY, ILLINOIS

Monitoring Year	Number of Exceedances of NAAQS for Criteria Pollutants					
	O ₃ ^a	CO ^b	NO _x ^c	SO ₂ ^d	PM ₁₀ ^e	Lead ^f
1993	0	0	0	0	1	0
1994	1	1	0	0	0	0
1995	12	0	0	0	0	0
1996	4	0	0	0	0	0
1997	1	0	0	0	0	0

^a The Applicants based these ozone (O₃) results on data from 15 EPA monitoring stations.

^b The Applicants based these results on data from nine EPA monitoring stations.

^c The Applicants based these results on data from 12 EPA monitoring stations.

^d The Applicants based these results on data from 11 EPA monitoring stations.

^e The Applicants based these results on data from 21 monitoring stations.

^f The Applicants based these results on data from 15 monitoring stations.

Source: Internet website: <http://www.epa.gov/airsweb>

ATTACHMENT F-15
TABLE 4
ANNUAL NUMBER OF EXCEEDANCES OF THE NAAQS
SANGAMON COUNTY, ILLINOIS

Monitoring Year	Number of Exceedances of NAAQS for Criteria Pollutants					
	O ₃ ^a	CO ^b	NO _x	SO ₂ ^c	PM ₁₀ ^b	Lead
1993	0	0	N/A ^c	0	0	N/A
1994	0	0	N/A	0	0	N/A
1995	0	0	N/A	0	0	N/A
1996	0	0	N/A	0	0	N/A
1997	0	0	N/A	0	0	N/A

^a The Applicants based these ozone (O₃) results on data from one monitoring station.

^b The Applicants based these results on data from two monitoring stations.

^c N/A - Monitoring data not available for this pollutant.

Source: Internet website: <http://www.epa.gov/airsweb>

ATTACHMENT F-15
TABLE 5
ANNUAL NUMBER OF EXCEEDANCES OF THE NAAQS
WILL COUNTY, ILLINOIS

Monitoring Year	Number of Exceedances of NAAQS for Criteria Pollutants					
	O ₃ ^a	CO ^b	NO _x ^b	SO ₂ ^b	PM ₁₀ ^b	Lead ^b
1993	0	0	0	0	0	0
1994	1	0	0	0	0	0
1995	0	0	0	0	0	0
1996	0	0	0	0	0	0
1997	0	0	0	0	0	0

^a The Applicants based these ozone (O₃) results on data from three monitoring stations.

^b The Applicants based these results on data from one monitoring station.

Source: Internet website: <http://www.epa.gov/airsweb>

ATTACHMENT F-15
TABLE 6
ANNUAL NUMBER OF EXCEEDANCES OF THE NAAQS
ST. CLAIR COUNTY, MICHIGAN

Monitoring Year	Number of Exceedances of NAAQS for Criteria Pollutants					
	O ₃ ^a	CO	NO _x	SO ₂ ^b	PM ₁₀ ^c	Lead
1993	1	N/A ^c	N/A	0	N/A	N/A
1994	3	N/A	N/A	0	N/A	N/A
1995	3	N/A	N/A	0	N/A	N/A
1996	1	N/A	N/A	0	N/A	N/A
1997	0	N/A	N/A	0	N/A	N/A

^a The Applicants based these ozone (O₃) results on data from two monitoring stations.

^b The Applicants based these results on data from one monitoring station.

^c N/A - Monitoring data not available for this pollutant.

Source: Internet website: <http://www.epa.gov/airweb>

ATTACHMENT F-15
TABLE 7
ANNUAL NUMBER OF EXCEEDANCES OF THE NAAQS
WAYNE COUNTY, MICHIGAN

Monitoring Year	Number of Exceedances of NAAQS for Criteria Pollutants					
	O ₃ ^a	CO ^b	NO _x ^c	SO ₂ ^d	PM ₁₀ ^e	Lead ^f
1993	0	0	0	0	0	0
1994	3	2	0	0	0	0
1995	1	0	0	0	2	0
1996	0	0	0	0	1	0
1997	0	0	0	0	0	0

^a The Applicants based these ozone (O₃) results on data from five EPA monitoring stations.

^b The Applicants based these results on data from seven EPA monitoring stations.

^c The Applicants based these results on data from three EPA monitoring stations.

^d The Applicants based these results on data from ten EPA monitoring stations.

^e The Applicants based these results on data from six EPA monitoring stations.

^f The Applicants based these results on data from nine EPA monitoring stations.

Source: Internet website: <http://www.epa.gov/airsweb>

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**APPENDIX G
NOISE ANALYSIS METHODS
AND RESULTS**

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APPENDIX G

NOISE ANALYSIS METHODS AND RESULTS

The Surface Transportation Board (Board), Section of Environmental Analysis (SEA) evaluated the potential effects of the proposed CN/IC Acquisition on noise. Potential noise impacts could occur at any location where the Applicants' integrated operations would result in either a significant increase in existing rail activities or new noise-producing activities. Appendix G presents SEA's methods for evaluating the potential noise effects of the proposed Canadian National Railway Company/Illinois Central Corporation (CN/IC) Acquisition.

G.1 DEFINITION OF RAILROAD NOISE

In its noise evaluation, SEA considered the principal sources of rail line noise, wayside noise, and horn noise. Wayside train noise refers collectively to all train-related operational noise adjacent to the right-of-way, excluding warning horn noise. Wayside noise results from steel train wheels contacting steel rails and from locomotive exhaust and engine noise. The amount of noise created by the locomotive, exhaust, and engine noise is dependent on the throttle setting. Horn noise occurs in the vicinity of highway/rail at-grade crossings. Railroad Operating Rules require that engineers use locomotive horns at highway/rail at-grade crossings and for signaling movements of trains on the mainline and in yards to warn motorists, pedestrians, and railroad employees of approaching trains.

Potential sources of noise associated with rail yards and intermodal facilities include locomotives, freight handling equipment, rail cars, trucks, train horns (used to warn railroad employees of movements), and braking devices, known as retarders.

G.2 APPLICABLE REGULATIONS AND GUIDANCE

The Board's environmental regulations at 49 CFR [Code of Federal Regulations] 1105.7e(6) require analysis of potential noise impacts in those areas that would meet or exceed the Board's thresholds for environmental analysis as a result of the proposed CN/IC Acquisition. SEA's methods for evaluating potential noise impacts focus on locations where the Applicants' integrated activities would exceed the Board's thresholds. Table G-1, "Thresholds for Noise Impact Assessment," summarizes the Board's thresholds for environmental analysis of noise impacts.

**TABLE G-1
THRESHOLDS FOR NOISE IMPACT ASSESSMENT**

Rail Line Segment	Rail traffic increase of 100%, as measured by gross ton-miles annually, or an increase of at least 8 trains per day
Rail Yard	100% increase (measured by carload activity)
Intermodal Facility	Increase in truck traffic greater than 10% of Average Annual Daily Traffic or 50 trucks per day.

G.3 SCREENING PROCESS

The Board's regulations require noise impact analysis to determine if the proposed Acquisition would result in either of the following conditions:

1. An increase in community noise exposure as measured by day-night equivalent sound level (L_{dn}) of 3 A-weighted decibels (dBA) or more.
2. An increase to an L_{dn} noise level of 65 dBA or greater.

If the estimated noise increase at a location exceeds these criteria, the regulations require SEA to estimate the number of the affected noise-sensitive receptors (i.e., schools, libraries, residences, retirement communities, and nursing homes).

The unit dBA is a measure of noise level used to compare noise from various sources. A-weighting approximates the manner in which the human ear responds to sounds. L_{dn} is a measure of noise over a 24-hour period. The value of L_{dn} represents the energy average of the A-weighted sound level over a 24-hour period. L_{dn} includes an adjustment factor for noise between 10 p.m. and 7 a.m. to account for the greater sensitivity of most people to nighttime noise. The effect of the nighttime adjustment is that one nighttime event, such as a train passby between 10 p.m. and 7 a.m., is equivalent to ten similar events during the daytime.

In general, an increase in L_{dn} of 3 dBA requires one of the following: (1) a 100 percent increase in rail traffic, (2) a substantial change in operating conditions or equipment, or (3) a shift of daytime operations to the nighttime hours. Because of the weighting factor applied to nighttime noise, nighttime noise often dominates L_{dn} . Assuming a typical separation distance of 100 feet from the rail line to residences, an L_{dn} level of 65 dBA from rail operations usually requires four or more trains per day. Near a highway/rail at-grade crossing, where the engineers sound the train horns at full volume, four trains per day can generate an L_{dn} level greater than 65 dBA at distances up to 250 feet from the tracks.

G.4 DATA SOURCES

SEA used data from the following sources to conduct the noise analysis:

- Information about existing and proposed operations and proposed construction activities, as described in the Applicants' Operating Plan.
- U.S. Geological Survey (USGS) maps.
- Aerial photographs.
- Noise models.
- Noise measurements the Applicants conducted at highway/rail at-grade crossings in preparing their Preliminary Draft Environmental Assessment (PDEA).
- Information from site visits regarding ambient noise levels, land use, operating procedures, and buildings that may act as partial noise barriers.
- Federal Highway Traffic Noise Prediction Model.
- U.S. Environmental Protection Agency (EPA) rail noise reports.

G.5 APPROACH AND NOISE PROJECTION MODELS

G.5.1 Noise Assessment Approach

Following is an outline of SEA's approach for the assessment of potential noise impacts.

- Review available information and identify potential noise impacts. SEA compiled information on those rail line segments and facilities where the most extensive changes in activities would occur. This information involved rail operations at the facilities and the experience of the facilities with community noise problems. SEA also reviewed USGS maps and aerial photographs to identify noise-sensitive receptors.
- Measure existing noise levels. Attachment G-1, "Train Noise Measurements," summarizes the noise measurements the Applicants performed for this assessment in preparing their PDEA.
- Develop noise models. SEA defined models for estimating noise for each of the following potentially significant noise sources: (1) freight and passenger train operations on mainline sections of track; (2) audible warning signals at highway/rail at-grade crossings; (3) for trains traversing short radius curves, squeal noise which primarily occurs at connections between intersecting rail lines; (4) locomotive movements in rail yards; (5) idling locomotives on stationary trains; and (6) cranes lifting equipment on and off intermodal rail cars. SEA based the models on available data from previous rail projects and the literature.

- **Estimate existing and future noise exposure.** SEA used the following information to estimate the noise exposure in terms of L_{dn} : (1) the locations of noise sources, (2) distances and propagation paths to noise-sensitive receptors, and (3) existing and future operations on rail line segments and at rail yards and intermodal facilities.

Because noise from rail operations may cause localized impacts, SEA considered the following factors in conducting a detailed assessment of noise impacts: (1) the location of the noise sources in relation to receptors, (2) the specific equipment used at the facility, (3) the number of daytime and nighttime operations, (4) the operating modes of the equipment, and (5) any acoustical shielding between receptors and noise sources. To determine potential noise impacts, SEA either drew noise contours on aerial photographs or USGS maps or grouped clusters of residences or other noise-sensitive receptors for a single noise projection. SEA followed this procedure instead of performing noise projections for each noise-sensitive receptor. Using this procedure, SEA estimated the total number of noise-sensitive receptors where the proposed consolidation of CN and IC operations would likely increase noise exposure to potentially significant levels.

SEA determined that identifying noise-sensitive receptors within the L_{dn} 65 dBA noise contours, under both existing conditions and projected conditions, is sufficient to meet the Board's thresholds for environmental analysis. Accurate identification of noise effects associated with an increase of 3 dBA for areas exposed to less than a 65 dBA L_{dn} is not practical. Determining the areas that would experience a 3 dBA increase in noise level resulting from an increase in the number of trains is a function of the level of other noise sources in the area. Making a reasonably accurate estimate of non-train noise would require detailed information about ambient noise level variations over a wide area. In addition, Federal agencies, such as the Federal Aviation Administration and Department of Housing and Urban Development, do not consider noise effects to be adverse in areas where the L_{dn} is lower than 65 decibels.¹ Therefore, SEA concluded that counting the number of noise-sensitive receptors within the 65 dBA L_{dn} noise contours would be sufficient to satisfy the requirements of the Board's noise regulations.²

G.5.1.1 Rail Line Segments

SEA estimated the number of noise-sensitive receptors within the existing and projected L_{dn} 65 dBA contours by:

- Reviewing the results of site investigations that the Applicants' noise consultants performed to identify noise-sensitive receptors and observe the railroads' operating procedures.

¹ Surface Transportation Board, Section of Environmental Analysis. *Proposed Conrail Acquisition, Draft Environmental Impact Statement*, December 1997.

² Surface Transportation Board, Section of Environmental Analysis. *Proposed Conrail Acquisition, Final Environmental Impact Statement*, May 1998.

- Calculating the distances to L_{dn} 65 dBA based on projected train operations for both mainline sections and highway/rail at-grade crossing zones.
- Using the calculated distances to L_{dn} 65 dBA to develop contours drawn onto USGS topographical maps. SEA made adjustments to the contours to account for the effects of acoustic shielding by intervening buildings. SEA based these adjustments on the approach often used for highway noise projections; Table G-2, "Adjustments for Acoustical Shielding by Rows of Buildings," provides the acoustical shielding adjustments.

**TABLE G-2
ADJUSTMENTS FOR ACOUSTICAL SHIELDING
BY ROWS OF BUILDINGS ***

Percent of Row Occupied by Buildings	Attenuation		
	First Row	Subsequent Rows	Maximum
Less than 40%	0 dB	0 dB	0 dB
40 to 65%	3 dB	1.5 dB	10 dB
65 to 90%	5 dB	1.5 dB	10 dB
Greater than 90%	Analyze by using standard barrier attenuation models		

* Source: U.S. Department of Transportation, Federal Highway Administration. *Federal Highway Traffic Noise Prediction Model*, FHWA-RD-77-108, by T.M. Barry and J.A. Reagan, December 1978.

G.5.1.2 Rail Yards and Intermodal Facilities

The Applicants' rail yards and intermodal facilities generate noise from the following sources: (1) locomotives that move rail cars, (2) retarders, (3) cranes or lift equipment used to load and unload flat cars, and (4) trucks entering and exiting the facility. SEA estimated the change in noise exposure that these activities would cause by using the following relationship:

$$\text{Change in } L_{dn} = 10 \log (\text{future volume of activity/existing volume of activity})$$

SEA used this approximation to identify the facilities that have the potential to cause significant noise impacts. For most rail yards and intermodal facilities, SEA's projected increases in noise exposure were modest, indicating that increased noise impacts would not be likely except in localized areas.

SEA used the following general approach to evaluate potential noise impacts for rail yards and intermodal facilities where the projected activities exceed the Board's thresholds for environmental analysis of noise impacts:

- Determine whether any noise-sensitive receptors are near the installation through a review of aerial photographs, maps, and site visits. Many of the Applicants' facilities located in industrial areas have no noise-sensitive receptors nearby.

- Estimate the existing and future L_{dn} levels for any noise-sensitive receptors near the facility.
- Estimate the number of noise-sensitive receptors within the L_{dn} 65 dBA contours for both existing and projected post-Acquisition volumes of activity. SEA developed the estimate by using USGS maps and aerial photographs and by reviewing information from the site visits.

G.5.1.3 New Connections

Construction Activities. The Applicants propose construction of a rail line connection at Cicero, Illinois and a bypass at Jackson, Mississippi. While the construction of these connections could cause some increase in noise exposure at nearby noise-sensitive receptors, any noise impacts would occur for a limited duration. Construction noise generally does not create any permanent noise increase. In addition, noise-producing activities would be limited to daytime hours. For these reasons, SEA did not conduct quantitative noise analyses for the construction of rail line connections. Specific noise analysis information on the construction projects at each location follows.

Cicero, Illinois. At Cicero, the Applicants would build the proposed rail line connection in a predominantly industrial section of Cicero, Illinois. The nearest residential areas are approximately ¼ mile northeast and northwest of the proposed connection site, and both are well beyond the 65-dBA noise contour. The areas south, east, and west of the proposed site are industrial. A drive-in movie theater is directly north of the IC rail lines and within the 65-dBA noise contour; however, hills 30 to 40 feet high on the north, south, and east sides of the theater provide a buffer from train noise.

Noise sources from trains operating on the connection tracks would include: locomotive engine and exhaust noise, rolling noise from the steel wheels of the locomotives and rail cars on the steel rails, and squeal noise caused by steel wheels negotiating tight radius curves. SEA also concludes that the hills surrounding the drive-in theater, located within 500 feet of the proposed connection, would continue to provide a buffer from noise from trains on the proposed connection.

Jackson, Mississippi. At Jackson, the Applicants would build the proposed bypass in a mixed industrial section of Jackson adjacent to Jackson Yard. The nearest residential areas are approximately 800 feet to the west of the proposed construction site, well beyond the 65-dBA noise contour. The areas to the north of the proposed site contain shops and other facilities associated with the rail yard; the rail yard itself continues south of the proposed bypass; the area to the east of the proposed site is industrial.

Existing train traffic, including through trains on the main line and activities such as switching within the yard, produces the existing noise in the area of the proposed bypass.

Noise sources from trains operating on the bypass tracks would include: locomotive engine and exhaust noise, rolling noise from steel wheels of the locomotives and rail cars on the steel rails, and squeal noise caused by the steel wheels negotiating tight radius curves.

Train Operations. SEA developed specific noise projections only for the proposed rail line connections that would be in close proximity to residential or other noise-sensitive receptors. SEA estimated existing noise exposure based on the average existing rail traffic on the connecting mainlines. Their projections of future noise exposure included noise from trains on the mainlines and noise from trains that likely will use the connecting track.

G.5.2 Noise Projection Models

This section describes the noise models SEA used for this project. All of the models described in this section are common acoustic models defined in acoustics literature. Each model estimates noise from a specific source (e.g., freight cars) based on a reference noise level that SEA derived from measurement data or from data available in the literature. Sections G.5.1 and G.5.2 describe the noise models for the following: (1) through trains, (2) highway/rail at-grade crossings (including both train horns and active warning devices at the highway/rail at-grade crossings), (3) idling trains, and (4) rail yards.

G.5.2.1 Rail Line Segments

The "Through Trains" section discusses the models SEA used for estimating wheel/rail and locomotive engine noise; the "Highway/Rail At-grade Crossings" section discusses the model that SEA followed for horns at highway/rail at-grade crossings. State regulations and railroad Operating Rules often require that train horns be sounded prior to all highway/rail at-grade crossings. SEA used a separate model for the horn noise because the horns are much louder than the normal locomotive and wheel/rail noise.

Through Trains. The main sources of noise from through trains include the following: (1) steel wheels of the locomotives and rail cars rolling on steel rails (referred to as wheel/rail noise); (2) locomotive engine, exhaust, and fan noise; and (3) train horns at highway/rail at-grade crossings. Wheel/rail noise is the dominant noise source from freight cars. The noise is dependent on train speed, with noise level approximately proportional to $30 \times \log(\text{speed})$. The noise levels can increase by as much as 15 dBA when wheels or rails are in poor condition.

The main components of locomotive noise include the exhaust of the diesel engines, cooling fans, general engine noise, and wheel/rail interaction. Noise associated with engine exhaust and cooling fans usually dominates; this noise is dependent on the throttle setting (most locomotives have eight throttle settings), not on locomotive speed.

Tests have shown locomotive noise to change by about 2 dBA for each one-step change in throttle setting. As the engineer moves the locomotive throttle from notch one to notch eight, noise levels increase by an average of 16 dBA. Because locomotive engineers constantly adjust throttle setting as necessary, only rough estimates of throttle settings are usually available for

noise projections. SEA assumed a base throttle position of six unless it obtained more specific information.

The noise models compute Maximum Sound Level (L_{max}), Sound Exposure Level (SEL), L_{day} , and other noise measures for varying distances from the track, train speeds, and schedules. The model uses the Average L_{req} for rail cars. (See Table 3, "Average Levels of Train Noise," of Attachment G-1, "Train Noise Measurements.") The standard approach to projecting freight car noise is to model freight cars as moving, incoherent, dipole line sources.³ The basic equations SEA used are as follows:

$$L_{max} = K_L + 10\log[\alpha + 0.5 \sin(2\alpha)] - 10\log(y) - 10\log(s/s_{ref}) - c_g - c_s \quad (1)$$

$$K_L = L_{max,ref} - 10\log[\alpha_{ref} + 0.5 \sin(2\alpha_{ref})] - 10\log(y_{ref}) \quad (2)$$

$$SEL = L_{max} + 10\log(len/c_s) - 10\log[2\alpha + \sin(2\alpha)] + 3.3 \quad (3)$$

SEA used the following equations to model locomotives as moving monopole point sources:

$$L_{max} = K_L + 10\log(2\alpha) - 10\log(y) + 10\log(s/s_{ref}) - c_g - c_s - c_s \quad (4)$$

$$K_L = L_{max,ref} - 10\log(2\alpha_{ref}/y_{ref}) \quad (5)$$

$$SEL = L_{max} + 10\log(len/c_s) - 10\log(2\alpha) + 3.3 \quad (6)$$

The parameters in the above equation are:

y	=	Observer perpendicular distance from track centerline, feet.
y_{ref}	=	Reference observer distance from track centerline, feet.
len	=	Train length, feet.
len_{ref}	=	Reference train length, feet.
α	=	$\tan^{-1}(len/2y)$.
α_{ref}	=	$\tan^{-1}(len_{ref}/2y_{ref})$.
s	=	Train speed, miles per hour.
s_{ref}	=	Reference train speed, miles per hour.
L_{max}	=	Maximum sound level during train passby, dBA.
$L_{max,ref}$	=	Maximum sound level during train passby for reference conditions, dBA.
c_g	=	Excess ground attenuation, dBA.
c_s	=	Excess shielding attenuation, dBA (see Table G-2).

The "standard train" for this analysis was:

³ U.S. Department of Transportation, Federal Transit Administration. *Transit Noise and Vibration Impact Assessment*, DOT-T-95-16, April 1995.

- Base case/existing conditions: 2.2 locomotives and 4,080 feet of rail cars for a total train length of 4,243 feet.
- Integrated rail line after proposed CN/IC Acquisition: 2.2 locomotives and 4,880 feet of rail cars for a total train length of 5,043 feet.

Attachment G-1, "Train Noise Measurements," summarizes the measurement data SEA used to derive the train noise reference values. Figure G-1, "Typical L_{dn} vs. Distance for Rail Line Segments (away from highway/rail at-grade crossings)," shows the L_{dn} levels as a function of distance from the track centerline for different numbers of trains (5,043 feet long) per day traveling at a train speed of 40 miles per hour. As an initial screening of noise effects, SEA assumed that trains would be equally likely to pass any hour of the day; therefore, an average of 9 out of 24 trains would pass during the nighttime hours. Following the initial screening, the Applicants developed more detailed noise projections for line segments where the Board's criteria for determining adverse noise effects was exceeded. The more detailed projections incorporate the scheduled times for the trains and trackage rights trains into the calculation of L_{dn} . The number of trains during nighttime hours is important because in the calculation of L_{dn} , one nighttime train is equivalent to 10 daytime trains. Assuming there would be no trains in the nighttime hours would reduce the projected L_{dn} levels by more than 6 dBA. In addition, Figure G-1 does not include excess attenuation from acoustic shielding. At distances beyond approximately 100 feet, often obstructions such as buildings or terrain act as a partial acoustic shield, causing attenuation of 5 to 10 dBA. Table G-3, "Distances from Track Centerline to L_{dn} of 65 dBA for Through Trains," presents the approximate distances from the track centerline to L_{dn} of 65 dBA as a function of the number of trains per day.

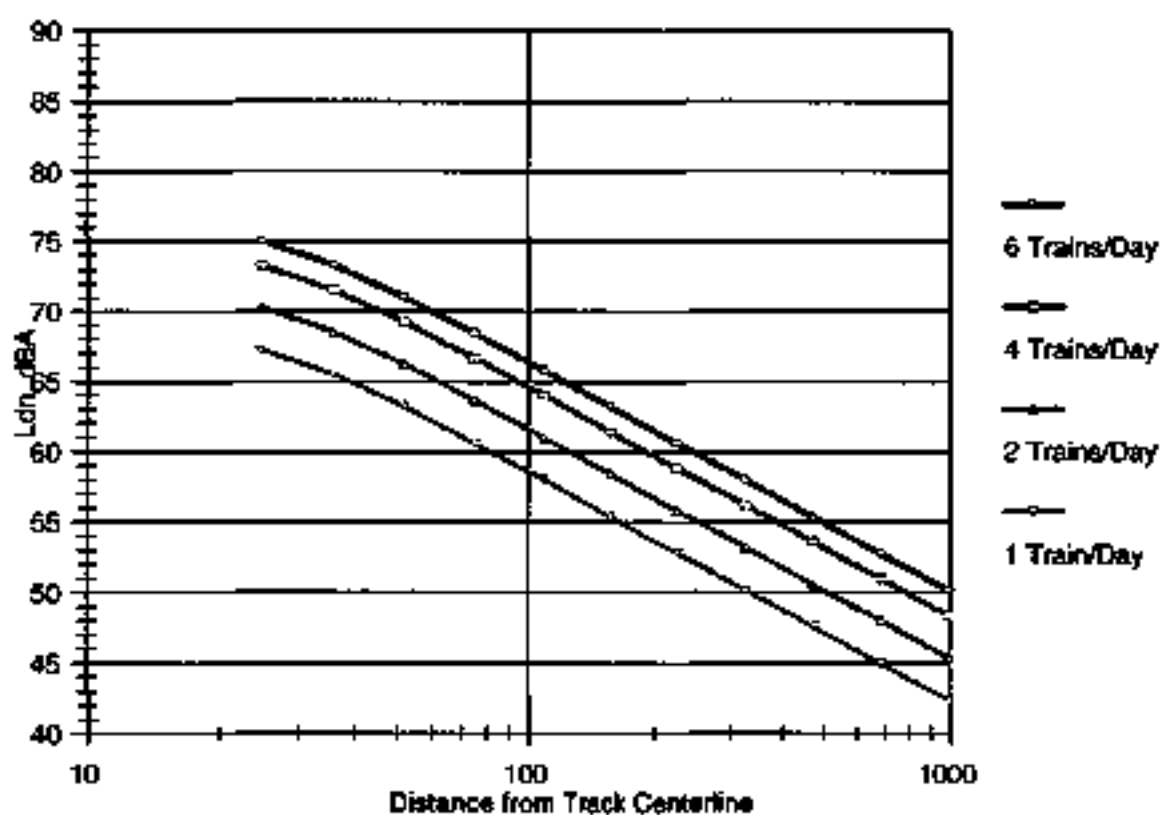


Figure G-1
Typical L_{dn} vs. Distance for Rail Line Segments
(away from highway/rail at-grade crossings)

TABLE G-3
DISTANCES FROM TRACK CENTERLINE TO L_{dn} OF
65 dBA FOR THROUGH TRAINS

Average Number of Trains per Day	Distance to $L_{dn} = 65$ dBA (feet)
1	40
2	60
4	90
6	120

This distance applies to a 5,043-foot-long train (2.2 locomotives), traveling at a speed of 40 miles per hour. Distances are rounded to the nearest 10 feet.

Because the reference quantities SEA used in Equations (1) through (6) are based on numerous measurements of train noise, the curves in Figure G-1 and the distances presented in Table G-3 represent typical field conditions. However, a number of factors can cause higher levels of L_{dn} . These factors include the following: (1) a concentration of trains during the nighttime hours, (2) locomotives operating at throttle settings higher than six, (3) wheel or rail conditions being worse than normal, or (4) train horns being sounded on a regular basis.

Highway/Rail At-grade Crossings. Before approaching most highway/rail at-grade crossings, freight trains are required to sound their horns. The exact manner in which engineers sound the horns varies, depending on local and state ordinances. Train horns typically dominate noise exposure near any highway/rail at-grade crossing. Additional noise sources associated with highway/rail at-grade crossings include the grade crossing bells that start sounding just before the gates are lowered, as well as the idling traffic that must wait at the crossing. The idling traffic noise is usually insignificant compared to the horn noise.

The key parameters needed to project noise exposure from horns are the: (1) horn sound level, (2) duration of the horn noise, (3) distance of the receiver from the tracks, and (4) number of trains during the daytime and nighttime hours. Federal Railroad Administration (FRA) Regulation 229.129, "Audible Warning Device," requires all lead locomotives to have an audible warning device that produces a minimum sound level of 96 dBA at a distance 100 feet in front of the locomotive. Most freight train audible warning devices are air horns. Adjusting the air pressure or adjusting the size of the metering orifice can regulate the maximum sound level of the air horns. Maximum sound levels are typically 105 to 110 dBA at 100 feet in front of the trains, well above the 96 dBA required by the regulations.

SEA used the energy average train horn SEL to develop the noise projection model for highway/rail at-grade crossings. The average train horn SEL was 110 dBA normalized to a distance of 100 feet from the track centerline. The assumptions that SEA used included the following: (1) all the trains in one direction sounded their horns, (2) train speed was approximately 40 miles per hour, (3) the maximum horn sound level was 105 to 110 dBA at a distance of 100 feet in front of the train, and (4) the horn noise SEL attenuated at a rate of

4.5 decibels for each doubling of distance. Figure G-2, "Typical L_{dn} vs. Distance Near Highway/Rail At-grade Crossings," shows the noise exposure near highway/rail at-grade crossings as a function of distance from the tracks for different numbers of trains per day. As discussed previously, for the initial screening, SEA assumed train passbys to be equally likely during the daytime and nighttime hours. Following the initial screening, SEA developed more detailed noise projections for highway/rail at-grade crossings where the Board's criteria for determining adverse noise effects was exceeded. The more detailed projections incorporate the schedule times for the trains and trackage rights trains into the calculation of L_{dn} . Table G-4, "Distances from Track Centerline to L_{dn} of 65 dBA for Highway/Rail At-grade Crossings," presents a comparison of the approximate distances from the track centerline to the L_{dn} 65 dBA contour with and without horns.

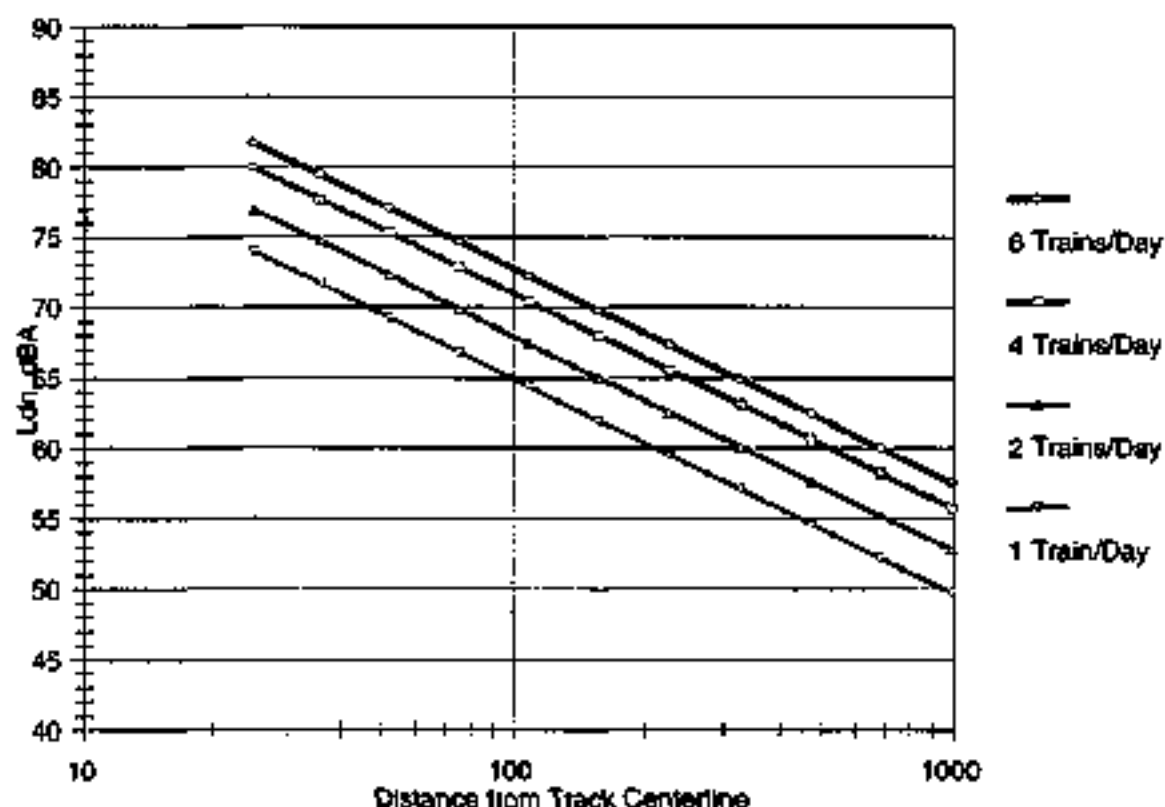


Figure G-2
Typical L_{dn} vs. Distance Near Highway/Rail At-grade Crossings

TABLE G-4
DISTANCES FROM TRACK CENTERLINE TO L_{eq} OF
65 dBA FOR HIGHWAY/RAIL AT-GRADE CROSSINGS

Average Number of Trains per Day	Distance to $L_{eq} = 65$ dBA* (ft)	
	Without Horns	With Horns
1	40	100
2	60	160
4	90	250
6	120	320

* This distance applies to train speeds of 40 miles per hour.
 Distances are rounded to the nearest 10 feet.

These numbers illustrate the importance of train horn noise in SEA's evaluation of potential noise impacts from line-haul freight trains. Because railroad Operating Rules and most states require that train horns be sounded starting ¼ mile before a highway/rail at-grade crossing, approximately ½ mile of track is affected at every crossing. Table G-4 shows that the total area exposed to L_{eq} noise levels that exceeded 65 dBA is much greater near highway/rail at-grade crossings where horns are sounded.

Attachment G-2, "Noise Assessment Summaries," presents descriptions of noise-sensitive receptors, community characteristics, and the number of pre- and post-Acquisition receptors that lie within the 65 dBA L_{eq} contour for the rail line segments SEA analyzed. Attachment G-2 also presents figures showing each highway/rail at-grade crossing along those rail line segments.

G.5.2.2 Rail Yards and Intermodal Facilities

EPA studied noise from rail yards extensively in the 1970s as part of its efforts to develop noise emission regulations for interstate rail carriers. EPA published the results and models developed in these studies in a background document in 1979.⁴ SEA based its projections of rail yard noise on these models and considered the following yard noise sources:

- Inbound/Outbound Road-Haul and Local Train Operations.
- Switch Engine Operations.
- Car Impacts.
- Idling Locomotives.
- Intermodal Yard Equipment.
- Trucks Operating Within Intermodal Facilities.

⁴ U.S. Environmental Protection Agency. *Background Document for Final Interstate Rail Carrier Noise Emission Regulation: Source Standards*, EPA 550/9-79-21, December 1979.

The three general equations used to calculate L_{dn} at a given location are as follows:

$$L_{dn} = SEL + 10 \log_{10}(N_d + 10N_n) - 49.4 - 10 \log_{10}(D/100)^2 - k(D-100) \quad (7)$$

$$L_{dn} = L_{max} + 10 \log_{10}(NH_d + 10NH_n) - 13.8 - 20 \log_{10}(D/100) - k(D-100) \quad (8)$$

$$L_{dn} = L_{max} + 10 \log_{10}(NH_d + 10NH_n) - 13.8 - 20 \log_{10}(D/100) - k(D-100) + 8 \log_{10}(1.33N_l) + 10 \log_{10}(NR) \quad (9)$$

where:

SEL	=	Source Sound Exposure Level at 100 feet, dBA
N_d	=	Number of daytime noise events (7 a.m. to 10 p.m.)
N_n	=	Number of nighttime noise events (10 p.m. to 7 a.m.)
n	=	1 for moving sources
n	=	2 for stationary sources
D	=	Distance from noise source, feet
k	=	Combined air/ground sound absorption coefficient, dBA/ft
L_{max}	=	Average maximum source noise level, dBA
NH_d	=	Number of hours of source operation during the daytime (7 a.m. to 10 p.m.)
NH_n	=	Number of hours of source operation during the nighttime (10 p.m. to 7 a.m.)
N_l	=	Number of noise sources per row
NR	=	Number of rows of noise sources

Equation (7) applies to moving or stationary transient point sources. Equation (8) applies to stationary steady-state point sources. Equation (9) is a truncated line source model applicable for groups of stationary point sources. Table G-5, "Modeling Parameters for Rail Yard Noise Projections," presents a listing of the appropriate equations and input parameters for each of the sources of rail yard noise. The following subsections describe other modeling assumptions SEA used for each of these sources.

TABLE G-5
MODELING PARAMETERS FOR RAIL YARD NOISE PROJECTIONS

Noise Source		Eqn. No.	Noise Level (dBA)		Basic Activity Level Parameters	n	k (dBA/h)	Source Grouping	
			SEL	L _{max}				NI	NR
Train Operations		7	95	78	Number of Trains/Day	1	0.0020	N/A	N/A
Flat Yard		7	98	83	Number of Cars Classified/Day	1	0.0010	N/A	N/A
Car Impacts		7	94	99	Number of Cars Classified/Day	2	0.0050	N/A	N/A
Idling Equipment	Locomotives	9	N/A	67	Number of Hours of Operation/Day	N/A	0.0025	2	3
Intermodal Yard Equipment	Cranes	8	N/A	81	Number of Hours of Operation/Day	N/A	0.0025	N/A	N/A
	Trailer-mounted Refrig. Units		N/A	67			0.0035		

Inbound/Outbound Road-haul and Local Train Operations. SEA modeled inbound/outbound road-haul and local train operations as moving-point sources at a speed of about 5 miles per hour, dominated locomotive engine noise. SEA's model included the following assumptions: (1) one engine-powered local train, (2) three engines-powered road-haul trains, and (3) uniformly distributed arrival and departure schedules over daytime and nighttime periods. Thus, SEA calculated the number of daytime (N_d) and nighttime (N_n) noise events used in Equation (7), as follows:

$$\begin{aligned}
 N_d &= (15/24)[(3 \times \text{No. of Road-haul Trains/Day}) + \text{No. of Local Trains/Day}] \\
 N_n &= (9/24)[(3 \times \text{No. of Road-haul Trains/Day}) + \text{No. of Local Trains/Night}]
 \end{aligned}$$

For modeling purposes, SEA assumed that CN/IC split train operations between two locations, with inbound road-haul trains in the receiving area of the yard and outbound road-haul trains and local trains in the departure area.

Switch Engine Operations. SEA modeled switch engine operations as moving-point sources that operate in the receiving and departure yards at a speed of about 4 miles per hour, with operations uniformly distributed over the daytime and nighttime periods. For switch engine operations in flat yards, SEA assumed that CN/IC would split operations between two locations, one in the receiving yard and one in the departure yard. In addition, SEA assumed that CN/IC would handle five cars per switch engine and that there would be two passbys per operation in flat yards. Thus, SEA calculated N_d and N_n as follows:

$$\begin{aligned}
 N_d &= (15/24) \times (2/C) \times (\text{No. of Cars Classified/Day}) \\
 N_n &= (9/24) \times (2/C) \times (\text{No. of Cars Classified/Night})
 \end{aligned}$$

where:

C = Number of cars per switch operation.

G.5.2.3 Car Impacts

Freight cars are dynamically coupled by allowing one rail car to impact another rail car at a speed of approximately 2 miles per hour. SEA modeled the impacts between the rail cars as stationary-point sources, grouped at two locations in the classification area of the yard. SEA assumed that the total number of car impacts would be equal to about one-half of the number of cars classified per day and that CN/IC would distribute the car handling uniformly over the daytime and nighttime periods. Thus, SEA calculated N_d and N_n as follows:

$$\begin{aligned}N_d &= (15/24) \times (0.5) \times (\text{No. of Cars Classified/Day}) \\N_n &= (9/24) \times (0.5) \times (\text{No. of Cars Classified/Night})\end{aligned}$$

Idling Locomotives. SEA modeled idling locomotives located in the classification area of the yard as a truncated line source. Therefore, SEA calculated L_{dn} using Equation (9) based on the hours of daytime (NH_d) and nighttime (NH_n) idling operation, assuming a typical arrangement of these noise sources.

Intermodal Yard Equipment. The dominant noise sources at an intermodal facility include cranes and trailer-mounted refrigeration units. SEA modeled these sources as stationary-point sources located in the intermodal yard area. Table G-5, "Modeling Parameters for Rail Yard Noise Projections," lists the source noise levels based on the Applicants' file data. SEA calculated L_{dn} using Equation (7), based on the number of units and the number of hours of daytime and nighttime operation. SEA calculated the values of NH_d and NH_n as follows:

$$\begin{aligned}NH_d &= (\text{No. of units}) \times (\text{No. of hours of operation during the day}) \\NH_n &= (\text{No. of units}) \times (\text{No. of hours of operation at night})\end{aligned}$$

ATTACHMENT G-1 TRAIN NOISE MEASUREMENTS

The Applicants' noise consultant measured train noise at four highway/rail at-grade crossings, selected based on the following criteria:

1. Noise measurements had to be possible at distances of 50 feet and 660 feet (1/8 mile) from the highway/rail at-grade crossings. It was preferable, but not a requirement, to have a suitable measurement site at a distance of 1/4 mile before the highway/rail at-grade crossing.
2. Locations for the measurement microphones, at distances of 50 or 100 feet from the centerline of the mainline track, had to be feasible with no obstructions between the microphones and the tracks. Although a measurement distance of 100 feet was preferable, the only suitable measurement positions were at 50 feet at three of the four sites.
3. The site had to be reasonably free of large buildings or other reflecting surfaces that could affect the noise measurement results.
4. Within 1 to 3 miles of the highway/rail at-grade crossing, there had to be a suitable site away from any other highway/rail at-grade crossings to make line segment measurements without the effect of locomotive horn noise.

Table 1, "Train Noise Measurement Sites," includes descriptions of the measurement sites and the microphone positions at each site.

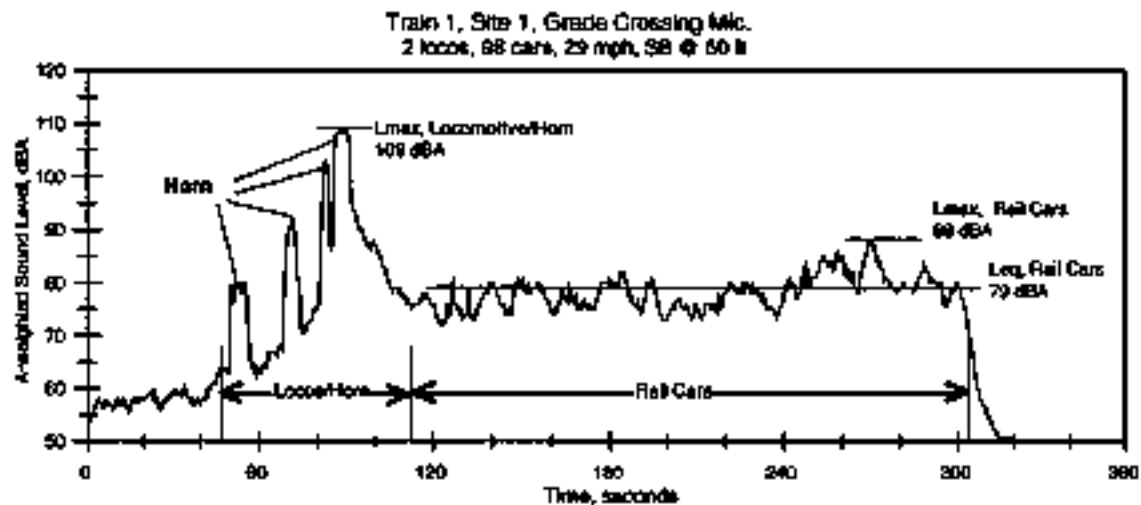
The Applicants' noise consultant placed automatic noise monitors at perpendicular distances of 50 to 100 feet from the mainline track centerline. The consultant performed all of the measurements by using Larson Davis Model LD870 noise monitors. The monitors operated for approximately 24 hours at each site. The consultant obtained the following measurements and recordings during the daylight hours: (1) video and audio recordings of each train passby at the highway/rail at-grade crossing, (2) counts of the number of locomotives and rail cars, and (3) train speed using a radar speed gun.

The Applicants' noise consultant separated each time-history trace into locomotive horn noise and rail car noise. The consultant calculated the following: (1) SEL and L_{max} for the locomotive horn noise, and (2) L_{eq} and L_{max} for the railcar noise. Figure 1, "Example Freight Train Time History," illustrates the sound level variation as a typical train passes; and Table 2, "Train Noise Measurement Data," lists the results. The time-history trace in Figure 1 clearly shows the four parts of the horn sequence with the final sounding of the horn ending as the lead locomotive reaches the grade crossing. Figure 1 also shows the Applicants' division of the time-history trace into two parts: (1) locomotive and horn noise, and (2) rail car noise. The final horn blast raised the maximum sound level to 109 dBA. The maximum sound level from the rail cars was 88 dBA.

ATTACHMENT G-1
TABLE 1
TRAIN NOISE MEASUREMENT SITES

Site No.	Railroad	Description	No. of Trains (total/observed)*		Avg. Speed (mph)		Microphone Locations		
			Freight	Pass	Freight	Pass	Mic #	Dist. to Track	Position
1	IC	Dralle Road, north of Morley, IL	12/3	3/1	44	55	1	50 ft	50 ft N of Dralle Rd.
							2	50 ft	680 ft N of Dralle Rd.
							3	50 ft	1,360 ft N of Dralle Rd.
							4	50 ft	Away from any at-grade crossing
2	IC	Road 3200N, south of Chebanse, IL	17/3	3/1	49	70	1	50 ft	50 ft N of Rd. 3200N
							2	50 ft	660 ft N of Rd. 3200N
							3	50 ft	1,335 ft N of Rd. 3200N
							4	50 ft	Away from any at-grade crossing
3	CN	Kennedy Avenue, Highland, IN	15/2	0	46	—	1	100 ft	50 ft E of Kennedy Rd.
							2	100 ft	660 ft E of Kennedy Rd.
							3	—	not used
							4	90 ft	Away from any at-grade crossing
4	CN	Cransstown Highway, Cransstown, IN	25/5	0	51	—	1	50 ft	100 ft W of Cransstown Rd.
							2	50 ft	660 ft W of Cransstown Rd.
							3	—	not used
							4	50 ft	Away from any at-grade crossing

* Refers to the total number of train passes during the measurements versus the field crew's observation of the trains during the daylight hours.



Attachment G-1
Figure 1
Example Freight Train Time History

ATTACHMENT G-1
TABLE 2
TRAIN NOISE MEASUREMENT DATA

Site	Train No.	Number		Train Type	Before/After Xing	Speed (mph)	Dist. from Track CL'	Mic. #	Measured Levels			
		Locn	Rail Cars						Locs		Rail Cars	
									L _{max}	SEL	L _{max}	L _{eq}
Site 1: Illinois Central and Amtrak	1	2	12R	Manifest Freight	B	29	50	1	109	115.9	88	79.3
							50	3	102	106.9	86	77.8
							50	4	94	102.0	89	80.8
	2	3	35	7 Auto Racks 2R TOFC*	B	63	50	1	104	106.9	87	82.6
							50	2	104	107.5	88	82.8
							50	3	100	103.6	86	81.5
	3	2	75	75 Hopper Cars	B	25	50	4	97	100.6	86	82.3
							50	1	104	110.7	83	78.9
							50	7	103	107.2	84	76.2
	4	N/A	N/A	Freight	A	42	50	3	103	107.7	83	74.9
							50	4	95	100.2	85	77.4
							50	1	101	103.9	89	83.6
	5	N/A	N/A	Freight	B	51	50	2	89	93.3	88	83.1
							50	3	88	94.3	87	81.9
							50	4	91	96.7	89	84.3
	6	N/A	N/A	Freight	B	42	50	1	112	112.3	92	87.2
							50	2	112	114.6	96	87.4
							50	3	106	107.3	92	86.2
	7	N/A	N/A	Freight	B	42	50	4	95	99.0	93	87.2
							50	1	105	108.3	92	85.0
							50	2	104	109.0	94	85.5
	8	N/A	N/A	Freight	A	34	50	3	101	105.1	88	82.0
							50	4	93	102.4	91	85.9
							50	1	100	104.0	88	81.6
	9	N/A	N/A	Freight	B	48	50	2	88	95.5	88	80.8
							50	3	90	94.0	87	79.9
							50	4	91	97.0	88	81.3
	10	N/A	N/A	Freight	B	42	50	1	114	116.4	88	83.3
							50	2	97	101.4	89	82.1
							50	3	108	110.3	88	82.1
	11	N/A	N/A	Freight	A	54	50	4	93	99.9	89	83.6
							50	1	106	105.6	98	89.6
							50	2	89	94.0	90	89.6
	12	N/A	N/A	Freight	A	41	50	3	91	90.9	95	88.6
							50	4	97	100.3	97	89.7
							50	1	104	108.9	88	83.5
	13	1	4	Amtrak	B	78	50	2	107	101.4	88	82.2
							50	3	100	105.2	87	81.3
							50	4	100	105.1	90	83.4
	14	N/A	N/A	Freight	A	54	50	1	93	94.7	96	85.1
							50	2	87	90.2	92	83.2
							50	3	91	96.2	91	82.7
	15	N/A	N/A	Freight	A	41	50	4	92	97.9	91	83.6
							50	1	96	96.5	89	82.0
							50	2	89	94.9	91	81.9
	16	N/A	N/A	Freight	A	41	50	3	89	94.5	89	81.1
							50	4	89	95.0	90	82.1
							50	1	109	110.0	—	—
	17	1	4	Amtrak	B	78	50	2	109	107.5	94	89.6
							50	3	109	108.7	—	—
							50	4	93	96.1	—	—

ATTACHMENT G-1
TABLE 2
TRAIN NOISE MEASUREMENT DATA

Site	Train No.	Number		Train Type	Before/After Xing	Speed (mph)	Dist. from Track CL'	Mic. #	Measured Levels			
		Loces	Rail Cars						Loces		Rail Cars	
									L _{max}	SEL	L _{min}	L _{eq}
Site 1: Illinois Central and Amtrak (conv.)	14	N/A	N/A	Amtrak	A	55	50	1	94	96.4	95	86.0
							50	2	98	101.1	—	—
							50	3	96	96.9	97	88.1
							50	4	96	100.5	—	—
	15	N/A	N/A	Amtrak	B	74	50	1	110	110.0	95	86.0
							50	2	110	111.0	95	89.3
							50	3	109	110.5	93	88.5
							50	4	91	96.1	93	87.5
Site 2: Illinois Central and Amtrak	2	2	64	Manifest Freight	B	51	50	1	105	107.7	94	88.7
							50	2	104	103.8	98	87.9
							50	3	107	109.4	97	87.3
							50	4	95	92.2	97	88.2
	3	1	13	Work train	B	54	50	1	101	101.8	93	86.5
							50	2	97	97.9	93	89.5
							50	3	96	99.5	92	82.4
							50	4	95	96.7	89	84.4
	4	3	68	1 Rm Car 6 Auto Rack 61 TOFC*	B	61	50	1	105	108.1	92	85.1
							50	2	103	107.2	90	82.1
							50	3	102	104.6	91	81.4
							50	4	97	101.6	89	82.8
	5	N/A	N/A	Freight	A	55	50	1	111	111.3	95	88.5
							50	2	90	95.3	93	85.7
							50	3	89	95.1	93	85.0
							50	4	90	95.5	94	86.2
	6	N/A	N/A	Freight	A	23	50	1	106	107.0	95	89.3
							50	2	93	98.1	94	86.5
							50	3	93	98.1	94	86.4
							50	4	94	99.3	94	87.8
	7	N/A	N/A	Freight	A	57	50	1	105	108.0	97	93.2
							50	2	94	98.7	95	88.3
							50	3	94	98.7	95	87.5
							50	4	95	99.0	95	88.8
	8	N/A	N/A	Freight	B	56	50	1	112	113.2	97	90.6
							50	2	109	109.6	95	87.1
							50	3	88	92.4	93	88.4
							50	4	84	89.9	93	86.8
	9	N/A	N/A	Freight	B	38	50	1	104	105.3	98	92.1
							50	2	102	104.6	97	88.9
							50	3	102	104.6	97	88.3
							50	4	94	101.4	98	90.3
	10	N/A	N/A	Freight	A	43	50	1	98	102.4	100	90.5
							50	2	96	99.6	98	87.9
							50	3	96	99.6	98	88.2
							50	4	97	101.9	98	89.6
	11	N/A	N/A	Freight	A	10	50	1	98	104.5	84	76.5
							50	2	87	95.0	82	73.4
							50	3	87	95.0	82	73.9
							50	4	81	90.1	81	74.1
	12	N/A	N/A	Freight	B	65	50	1	103	105.6	99	91.1
							50	2	98	102.8	97	87.8
							50	3	99	101.7	97	87.7
							50	4	98	102.5	98	89.4

ATTACHMENT G-1
TABLE 2
TRAIN NOISE MEASUREMENT DATA

Site	Train No.	Number		Train Type	Before/After Xing	Speed (mph)	Dist. from Track CL*	Mile. #	Measured Levels			
		Locos	Rail Cars						Locos		Rail Cars	
									L _{max}	SEL	L _{min}	L _{eq}
Site 2: Illinois Central and Amtrak (cont)	13	N/O	N/O	Freight	A	61	90	1	100	105.6	95	88.0
							90	2	98	101.4	93	83.7
							90	3	98	101.7	92	83.8
							90	4	99	103.8	93	84.7
	14	N/O	N/O	Freight	A	57	90	1	102	102.5	94	87.1
							90	2	93	96.7	93	83.2
							90	3	94	97.2	91	87.2
							90	4	94	99.1	92	85.6
	15	N/O	N/O	Freight	B	41	90	1	100	103.4	94	86.1
							90	2	99	101.8	92	83.9
							90	3	95	100.4	92	83.9
							90	4	95	101.2	92	85.4
	16	N/O	N/O	Freight	A	38	90	1	104	106.8	90	82.4
							90	2	95	99.5	89	79.0
							90	3	95	100.0	87	79.2
							90	4	96	101.2	87	79.7
	17	N/O	N/O	Freight	A	43	90	1	97	102.3	98	88.2
							90	2	95	100.8	97	85.6
							90	3	96	100.6	97	85.6
							90	4	97	102.5	97	86.7
	18	1	4	Amtrak	B	78	90	1	110	110.3	83	74.3
							90	2	110	110.7	98	83.8
							90	3	94	98.3	84	77.2
							90	4	93	98.4	79	74.1
	19	N/O	N/O	Amtrak	A	57	90	1	97	98.6	94	87.6
							90	2	92	93.8	95	84.9
							90	3	93	97.9	—	—
							90	4	92	97.3	—	—
	20	N/O	N/O	Amtrak	B	75	90	1	111	110.2	92	88.5
							90	2	105	109.7	100	87.1
							90	3	105	102.8	100	89.1
							90	4	90	95.9	88	81.9
Site 3: Canadian National	1	2	25	28 Auto Racks, 2 Box Cars	B	47	100	1	109	110.0	80	74.7
							100	2	110	110.9	81	73.7
	2	2	105	Manifest Freight	A	50	100	1	104	103.3	88	83.1
							100	2	88	94.9	89	84.3
							90	4	89	97.6	89	85.3
	3	N/O	N/O	Freight	A	59	100	1	96	98.9	89	83.7
							100	2	89	94.4	90	83.6
							90	4	90	95.6	90	84.4
	4	N/O	N/O	Freight	A	33	100	1	97	103.8	85	77.5
							100	2	93	102.2	87	78.6
							90	4	94	102.6	87	79.3
	5	N/O	N/O	Freight	A	33	100	1	98	100.4	82	75.1
							100	2	81	89.7	83	75.8
							90	4	87	93.8	84	78.2
	6	N/O	N/O	Freight	A	25	100	1	102	110.4	76	68.2
							100	2	83	76.0	76	69.4
							90	4	78	87.8	76	67.1
	7	N/O	N/O	Freight	A	48	100	1	100	102.2	84	78.6
							100	2	83	93.6	86	78.6
							90	4	91	96.0	88	81.3

ATTACHMENT G-1
TABLE 2
TRAIN NOISE MEASUREMENT DATA

Site	Train No.	Number		Train Type	Before/After King	Speed (mph)	Dist. from Track CL ¹	Mic. #	Measured Levels			
		Locos	Rail Cars						Locos		Rail Cars	
									L _{max}	SEL	L _{max}	L _{eq}
Site 3: Canadian National (cont'd)	8	N/O	N/O	Freight	B	41	100	1	103	106.3	81	72.8
							100	2	98	104.7	80	73.0
							90	4	94	101.0	84	78.2
	9	N/O	N/O	Freight	B	40	100	1	110	114.1	85	75.1
							100	2	108	109.4	84	75.3
							90	4	92	99.5	88	80.2
	10	N/O	N/O	Freight	B	47	100	1	109	115.1	83	76.9
							100	2	105	109.3	82	77.3
							90	4	92	97.2	87	82.6
	11	N/O	N/O	Freight	B	40	100	1	112	116.3	81	71.8
							100	2	105	108.1	80	71.2
							90	4	91	97.2	83	77.6
	12	N/O	N/O	Freight	A	49	100	1	104	104.2	90	83.8
							100	2	90	95.8	91	85.6
							90	4	92	97.2	93	88.6
	13	N/O	N/O	Freight	A	55	100	1	104	107.3	87	81.7
							100	2	87	94.9	88	82.7
							90	4	94	98.0	93	89.7
	14	N/O	N/O	Freight	B	46	100	1	110	112.0	87	80.5
							100	2	99	112.8	84	80.1
							90	4	88	96.9	86	82.4
	15	N/O	N/O	Freight	B	40	100	1	102	107.6	80	72.8
							100	2	99	104.3	80	72.6
							90	4	92	99.8	82	76.9
Site 4: Canadian National	1	2	76	Manifest Freight	A	54	50	1	101	104.2	94	80.3
							50	2	93	96.8	92	88.2
	2	4	31	Manifest Freight	A	51	50	1	109	111.5	91	87.0
							50	2	91	96.3	89	85.2
	3	2	76	Manifest Freight	B	55	50	1	108	109.9	95	88.8
							50	2	103	104.0	94	88.0
							50	4	96	100.8	94	88.8
	4	3	52	Manifest Freight	A	54	50	1	107	106.5	93	87.1
							50	2	99	103.9	93	85.8
							50	4	98	103.6	89	83.3
	5	2	74	Auto-Racks	B	58	50	1	110	113.2	90	81.8
							50	2	110	110.7	90	80.9
							50	4	94	89.3	89	81.0
	6	N/O	N/O	Freight	B	43	50	1	112	112.7	94	84.6
							50	2	111	108.8	94	84.2
							50	4	91	97.1	89	78.2
	7	N/O	N/O	Freight	B	50	50	1	109	111.4	90	85.6
							50	2	97	101.7	92	84.8
							50	4	93	94.0	92	86.6
	8	N/O	N/O	Freight	B	48	50	1	112	114.3	93	83.8
							50	2	111	110.5	91	84.6
							50	4	93	98.7	94	80.9
	9	N/O	N/O	Freight	A	44	50	1	103	105.5	90	87.5
							50	2	93	97.9	89	85.4
							50	4	98	104.3	88	83.3
	10	N/O	N/O	Freight	B	43	50	1	111	111.1	85	78.2
							50	2	102	101.0	84	76.1
							50	4	93	98.5	83	77.2

ATTACHMENT G-1
TABLE 2
TRAIN NOISE MEASUREMENT DATA

Site	Train No.	Number		Train Type	Before/After Xing	Speed (mph)	Dist. from Track CL ^a	Mic. #	Measured Levels			
		Locos	Rail Cars						Locos		Rail Cars	
									L _{max}	SEL	L _{max}	L _{eq}
Site 4: Canadian National (cont'd)	11	N/O	N/O	Freight	B	60	50	1	117	117.2	94	84.3
							50	2	108	106.9	93	83.1
							50	4	96	101.4	94	84.1
	12	N/O	N/O	Freight	B	56	50	1	121	118.8	93	84.8
							50	2	118	116.5	91	83.5
							50	4	89	95.0	93	84.2
	13	N/O	N/O	Freight	B	48	50	1	108	110.0	88	81.6
							50	2	98	102.0	87	80.0
							50	4	98	103.7	86	81.7
	14	N/O	N/O	Freight	A	50	50	1	98	102.5	91	88.0
							50	2	93	99.9	90	84.6
							50	4	94	100.5	88	85.1
	15	N/O	N/O	Freight	A	52	50	1	100	103.3	94	89.8
							50	2	94	99.2	92	81.6
							50	4	93	101.0	91	86.6
	16	N/O	N/O	Freight	A	53	50	1	93	101.9	94	90.6
							50	2	93	98.2	92	85.9
							50	4	95	101.9	91	87.9
	17	N/O	N/O	Freight	A	53	50	1	96	102.4	92	88.3
							50	2	93	99.7	90	85.1
							50	4	95	100.8	89	85.1
	18	N/O	N/O	Freight	B	51	50	1	99	100.6	93	86.3
							50	2	105	107.0	91	85.1
							50	4	91	97.9	93	87.8
	19	N/O	N/O	Freight	A	52	50	1	104	105.5	90	87.0
							50	2	101	96.1	89	83.8
							50	4	97	103.1	88	84.0
	20	N/O	N/O	Freight	B	52	50	1	103	102.2	92	86.4
							50	2	94	94.6	89	83.5
							50	4	87	91.6	91	86.9
	21	N/O	N/O	Freight	B	51	50	1	113	113.6	92	87.3
							50	2	106	105.3	91	85.8
							50	4	91	96.4	93	88.0
	22	N/O	N/O	Freight	B	54	50	1	117	117.1	96	78.0
							50	2	116	113.9	94	83.5
							50	4	96	99.7	96	86.1
	23	N/O	N/O	Freight	A	48	50	1	98	100.9	93	88.7
							50	2	90	95.8	91	85.9
							50	4	92	98.5	89	85.3
	24	N/O	N/O	Freight	B	48	50	1	106	109.5	93	86.5
							50	2	106	108.4	91	85.1
							50	4	98	105.2	93	87.0
	25	N/O	N/O	Freight	B	42	50	1	114	115.3	94	83.7
							50	2	108	108.2	94	82.2
							50	4	94	100.3	90	82.5

a CL = center line

b TOFC = trailer on flat car

N/O Not observed; noise levels measured with automatic noise monitor.

The Applicants' noise consultant used the measurement data in Table 2 to normalize the noise data to a distance of 100 feet from the track centerline and train speeds of 40 mph using the following equations:

Locomotives:

$$\text{Normalized SEL} = \text{Measured SEL} + 15 \log (d/100)$$

$$\text{Normalized } L_{\max} = \text{Measured } L_{\max} + 15 \log (d/100)$$

Rail cars:

$$\text{Normalized } L_{eq} = \text{Measured } L_{eq} + 15 \log (d/100) - 30 \log (s/40)$$

$$\text{Normalized } L_{\max} = \text{Measured } L_{\max} + 15 \log (d/100) - 30 \log (s/40)$$

where:

- d = Distance of the microphone from the centerline of the nearest track in feet.
 s = Train speed in miles per hour.

The multiplier of 15 on the distance adjustment term accounts for both line source spreading and ground effects.

Table 2, "Train Noise Measurement Data," indicates whether each measurement was before or after the trains passed through the highway/rail at-grade crossings (denoted by "B" and "A"). In this context, "before" refers to trains approaching the highway/rail at-grade crossing from the side on which the microphones were placed; "after" refers to trains approaching from the opposite side. Measurements at microphone positions 1, 2, and 3 (50, 660, and 1320 feet before the highway/rail at-grade crossing) include the horns.

Table 3, "Average Levels of Train Noise," presents the average levels of train noise SEA used in the noise models. The horn noise is the average of the results of microphones 1 and 2 for trains approaching the highway/rail at-grade crossing. SEA did not include the measurements at Site 2 in the average because the horn noise was generally several decibels lower than at the other sites.

ATTACHMENT G-1
TABLE 3
AVERAGE LEVELS OF TRAIN NOISE

Source	Average Level
Horns at Highway/Rail At-grade Crossings	SEL = 110.1 dBA
Locomotives without horns, assuming an average of 1.2 locomotives per train	SEL = 96 dBA
Rail cars	L_{eq} = 82.1 dBA

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**ATTACHMENT G-2
NOISE ASSESSMENT SUMMARIES**

Tables 1 through 5 describe noise-sensitive receptors, community characteristics, and the number of pre- and post-Acquisition receptors that lie within the 65 dBA L_{dn} contour for the rail line segments the Applicants analyzed.¹ This summary is based on the initial noise analysis that did not include the effects of time of day of train activity or the presence of Norfolk Southern trains.

¹ Note that the Hawthorne Yard, Illinois-to-Broadview, Illinois segment is not included. That segment would not experience a 3 dBA or greater increase in post-Acquisition conditions.

ATTACHMENT G-2

TABLE 1

NOISE ASSESSMENT SUMMARY: SPRINGFIELD, IL-TO-MOUNT PULASKI, IL
RAIL LINE SEGMENT

Community	Description	Highway/Rail At-grade Crossings	Number of Noise-Sensitive Receptors within L_{50} 65 dBA Contour					
			Pre-Acquisition			Post-Acquisition		
			Residences	Schools	Churches	Residences	Schools	Churches
Springfield	This rail line segment originates in western Springfield, Illinois and heads in a northeastern direction through the Grandview section of Springfield to State Route 54. The land use in this area is primarily residential and partly commercial.	2	31	0	0	89	0	0
Spaulding	An unincorporated town consisting mainly of scattered, single-family residences.	3	8	0	0	30	0	0
Corland	A small farming community located north and east of Spaulding, Illinois. The land use adjacent to the tracks passing through the southeastern part of the town is primarily commercial, including a grain elevator and other related buildings (with some residential buildings located beyond the commercial buildings).	2	8	0	0	11	0	0
Lake Fork	A very small farming community similar in layout to Corland, Illinois. Near the tracks are a few commercial buildings, some single-family residences, two churches, and one school.	1	3	0	0	9	1	0
Mount Pulaski	Mount Pulaski, Illinois is the final town located on this rail line segment, which ends at the IC rail line in the southwestern part of town. No highway/rail at-grade crossings are on this section of the track, and the only noise-sensitive receptors are scattered single-family residences that are far enough back from the tracks to be outside the 65 dBA L_{50} contour for both the pre- and post-acquisition conditions.	0	0	0	0	0	0	0
TOTAL		8	53	0	0	139	1	0

ATTACHMENT G-2
TABLE 2
NOISE ASSESSMENT SUMMARY: MOUNT PULASKI, IL-TO-CLINTON, IL
RAIL LINE SEGMENT

	Description	Highway/Rail At-grade Crossings	Number of Noise-Sensitive Receptors within L ₅₀ 65-45A Contour					
			Pre-Acquisition			Post-Acquisition		
			Residences	Schools	Churches	Residences	Schools	Churches
Community Mount Pulaski	This rail line segment originates in southwestern Mount Pulaski, Illinois at the IC branch junction. The tracks run northeasterly through the southern part of the town. The land use adjacent to the tracks is mostly commercial with some single-family residences located northwest of the tracks.	1	8	0	0	25	0	0
Chestnut	A small farming community located primarily to the north and west of the tracks. The land use adjacent to the tracks is mainly commercial (i.e., a grain elevator and some small businesses), with some single-family residences located to the northwest beyond the commercial buildings.	2	3	0	0	7	0	0
Kenney	The tracks run southwest to northeast through the town, and they cross the Illinois Terminal line in the southern part of the town. Land use in the southwestern and central sections of the town is mainly commercial and primarily residential (mostly single-family houses) in the northeastern part of the town.	2	13	0	0	25	0	0
Clinton	The tracks enter Clinton, Illinois from the southwest, and this rail line segment terminates at the connection with the north-south Illinois Central line in the center of Clinton, Illinois. The land use adjacent to the tracks is primarily residential, except for the last five or six blocks that include the commercial downtown area.	7	52	0	0	93	0	0
TOTAL		12	76	0	0	150	0	0

ATTACHMENT G-2
TABLE 3
NOISE ASSESSMENT SUMMARY: CLINTON, IL-TO-FULLERTON, IL
RAIL LINE SEGMENT

	Description	Highway/Rail At-grade Crossings	Number of Noise-Sensitive Receptors within L_{50} 65-dBA Contour					
			Pre-Acquisition			Post-Acquisition		
			Residences	Schools	Churches	Residences	Schools	Churches
Community Clinton	This rail line segment runs east past a number of residential buildings situated on both sides of the tracks.	2	18	0	0	21	0	0
De Witt	The tracks pass through the extreme northern part of De Witt along State Route 34. Only a few commercial buildings and a couple of single-family residences are clustered around the single highway/trail at-grade crossing in this town.	1	0	0	0	2	0	0
Fullerton	This very small community contains a few commercial and residential buildings.	1	1	0	0	1	0	0
TOTAL		4	19	0	0	34	0	0

ATTACHMENT G-2
TABLE 4
NOISE ASSESSMENT SUMMARY: FULLERTON, IL-TO-GIBSON CITY, IL
RAIL LINE SEGMENT

	Description	Highway/Rail At-grade Crossings	Number of Noise-Sensitive Receptors within L ₅₀ 65- dB(A) Contour					
			Pre-Acquisition			Post-Acquisition		
			Residences	Schools	Churches	Residences	Schools	Churches
Community Farmer City	The tracks run through the extreme northern side of Farmer City, Illinois; only a few residences are in this part of the town. Most of the land use in this town is commercial; the fair grounds are on the southeastern side of the tracks.	2	3	0	0	6	0	0
Bellflower	The tracks pass through the southeastern part of Bellflower. A number of commercial buildings are along the tracks, including a grain elevator and some stores. Single-family residences are on both sides of the tracks. In addition, one school and one church are near the tracks.	2	0	0	0	9	0	0
Gibson City	The tracks run through the southwestern part of the town to the Norfolk Southern rail connection. This part of Gibson City, Illinois is mainly commercial.	1	0	0	0	0	0	0
TOTAL		5	3	0	0	15	0	0

ATTACHMENT G-2
TABLE 5
NOISE ASSESSMENT SUMMARY: GIBSON CITY, IL-TO-GILMAN, IL
RAIL LINE SEGMENT

Community	Description	Highway/Rail At-grade Crossings	Number of Noise-Sensitive Receptors within L_{50} 65-dBA Contour					
			Pre-Acquisition			Post-Acquisition		
			Residences	Schools	Churches	Residences	Schools	Churches
Gibson City	The land use along the first part of this rail line segment is mainly commercial, but a number of residences are in the northeastern part of Gibson City, Illinois. Three churches are on this rail line segment in this part of Gibson City although none are within the 65 dBA L_{50} contour for either the pre-acquisition or post-acquisition train volumes.	3	5	0	0	23	0	0
Melvin	The tracks pass through the southeastern part of Melvin, Illinois; two churches are near the tracks. Most of the buildings in the center of Melvin near the tracks are commercial, but some residences are farther away from the tracks.	3	3	0	0	13	0	0
Roberts	A number of commercial buildings are near the tracks in Roberts, Illinois with residential buildings behind them. Three churches are near the tracks in Roberts.	3	10	0	0	14	0	0
Thawville	Thawville, Illinois is a small farming community with a few commercial buildings in the southwestern part of town; a number of residences are on both sides of the tracks. Three churches and one school are near the tracks.	2	2	0	0	16	0	0
Gilman	The rail line segment ends at the connection with the north-south IC rail line in southern Gilman, Illinois. A few residences are north of the tracks, just before the connection.		0	0	0	0	0	0
TOTAL		13	20	0	0	66	0	0

APPENDIX H
CULTURAL RESOURCES ANALYSIS
METHODS AND RESULTS

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APPENDIX H

CULTURAL RESOURCES ANALYSIS METHODS AND RESULTS

The Surface and Transportation Board (Board), Section of Environmental Analysis (SEA) evaluated the potential effects on cultural resources associated with the construction and operation of a proposed rail line connection in Cicero, Illinois and a proposed bypass in Jackson, Mississippi.

Appendix H discusses SEA's methods for identification of and analysis of effects on significant cultural resources associated with the proposed construction projects. For the purposes of this document, a cultural resource is any prehistoric or historic archeological site, or any aboveground resource more than 50 years of age, for which information was gathered to evaluate its significance. A significant cultural resource (historic property) is defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) (36 CFR 800.4).

H.1 OVERVIEW

The following sections describe SEA's methods of identifying and evaluating potential effects on cultural resources, including: (1) a discussion of applicable regulations for analysis of effects, (2) the threshold screening process, (3) sources and types of data collected, (4) the criteria used to determine the significance of the cultural resources, and (5) the criteria used to determine potential effects on significant cultural resources resulting from the proposed CN/IC Acquisition.

H.2 APPLICABLE REGULATIONS AND GUIDANCE

SEA reviewed a number of regulations and guidelines for evaluating potential effects on cultural resources during the course of the proposed construction projects, including the following:

- The National Environmental Policy Act of 1969 (NEPA), which requires Federal agencies to integrate the NEPA process with other environmental laws.
- The Board regulations under 49 CFR 1105.8(d), which requires SEA to submit a Historic Report when an action will result in the "lease, transfer, or sale of a railroad's line, sites, or structures." The purpose of the Historic Report is to provide the Board with the necessary information to consult with appropriate agencies as required by the National Historic Preservation Act of 1966 (NHPA).

- Section 106 of the NHPA, which requires the appropriate Federal agency to consider the effect on historic properties in any Federal action (16 U.S.C. 470f).

The Advisory Council on Historic Preservation (ACHP) developed guidelines for implementing the Section 106 (36 CFR Part 800) process. These guidelines contain the following sequence of actions that SEA has followed in consultation with the appropriate State Historic Preservation Office (SHPO):

- Determine the area of potential effects.
- Identify historic properties.
- Evaluate the significance of cultural resources by applying the eligibility criteria set forth in the NRHP (36 CFR 60.4).
- Assess potential effects by applying ACHP criteria of effect and adverse effect (36 CFR 800.9).
- Develop avoidance and mitigation measures, if necessary.
- Document the process and afford ACHP with an opportunity to comment.

H.3 THRESHOLD SCREENING PROCESS

To identify historic properties, SEA first identified an area of potential effects through a refined threshold screening process. SEA refined this initial screening, based on Board standards, to include only those proposed activities that could reasonably affect historic properties. SEA considered any proposed construction of new rail lines or facilities that might reasonably affect historic and cultural resources. However, SEA did not consider proposed traffic changes for rail line segments, rail yards, or intermodal facilities because any effect on historic and cultural resources would be insignificant. In addition, because the Board has limited jurisdiction over proposed CN/IC Acquisition-related activities, it may only impose mitigating conditions on abandonments and new constructions. For these reasons, SEA confined its assessment to the proposed construction projects in Cicero, Illinois and Jackson, Mississippi.

ACHP defines the area of potential effects as the "geographic area or areas within which an undertaking may cause changes in the character or use of historic properties" [36 CFR 800.2(c)]. SEA did not specify a quantifiable measurement for the areas of potential effect at the proposed Cicero and Jackson sites because this area would vary according to the nature of each site-specific action. Instead, SEA used the following guidelines to determine whether the proposed construction projects had the potential to affect historic properties:

- Construction of proposed rail line connections that would result in the physical destruction (including intentional demolition to clear a construction site), damage, or alteration of a historic property.

- Construction that would damage archeological resources if it extended into previously undisturbed areas.
- Construction that would change the location of the tracks away from an existing association with a historic property and thereby cause the isolation from or alteration of the character of the property's setting or indirectly lead to its neglect.
- Construction that would bring railroad operations closer to a sensitive historic property and thereby introduce visual, audible, or atmospheric elements that are out of character with the property or would alter its setting.

For the purposes of the proposed action, SEA determined that the area of potential effects for archeological resources would be the area potentially disturbed by construction and operational activities related to the proposed construction projects. For historic structures, SEA determined the area of potential effects would include any area potentially disturbed by construction activities and the buildings or structures within 500 feet of the proposed construction site. If a historic property was within the area of potential effects, SEA conducted further analysis.

SEA limited its assessment of the effects on historic properties to the areas required to construct the proposed rail line connections and bypass. SEA did not consider the potential system-wide effects of the proposed traffic changes on cultural resources because the conclusions of previous studies have indicated that these changes generally have little effect on historic and cultural resources.¹ This is because increased traffic is limited to moving and handling additional rail cars on the existing trackage. It typically does not have the potential to affect cultural resources because such railroad traffic has long been part of the historic setting and its increase would not require any ground disturbance or physically alter existing facilities.

H.4 DATA SOURCES

SEA used data from several sources during its review of the proposed sites. These sources included the *Historic Report*² prepared by the Applicants; local histories and related documents; Sanborn maps; and historic valuation maps provided by the Applicants, local governments, and the appropriate SHPOs; and literature on the history of the CN and IC rail systems. Based on the information gathered, SEA prepared a report of findings, submitted this report to SHPO for review, and requested concurrence with its findings.

¹ Surface Transportation Board, Section of Environmental Analysis. *Final Environmental Impact Statement, CSX Corporation and CSX Transportation, Inc., Norfolk Southern Corporation and Norfolk Southern Railway Company—Control and Operating Leases/Agreements—Conrail Inc. and Consolidated Rail Corporation*, STB Finance Docket No. 33388, May 1998.

² Surface Transportation Board, Section of Environmental Analysis. *Historic Report for Properties Within the Area of Potential Effect, Cicero, Illinois*, prepared by Dantes & Moore, September 4, 1998. Surface Transportation Board, Section of Environmental Analysis. *Historic Report for Properties Within the Area of Potential Effects for the Rail Line Bypass at Jackson, Mississippi*, prepared by Dantes & Moore, September 4, 1998.

H.5 ASSUMPTIONS, EVALUATION CRITERIA, AND ANALYSIS

SEA identified historic and archeological resources potentially affected by the proposed construction projects with the aid of site visits conducted by the Applicants' qualified archeologists and historians. SEA then evaluated whether these resources met NRHP criteria for eligibility under 36 CFR 60.4. SEA submitted the Applicants' findings to the appropriate SHPO for review and concurrence.

H.5.1 Archeological Resources

SEA reviewed the data from various sources, including SHPOs, Internet sites, and information obtained from their field investigations, to determine whether any archeological sites were within the proposed construction projects' areas of potential effects. SEA also assessed the likelihood of encountering previously unknown archeological resources of significance.

H.5.2 Historic Resources

SEA reviewed reports of the records maintained by the SHPO, the Applicants, and local governments to identify historic structures within the area of potential effects for the proposed construction projects. SEA then reviewed reports of field investigations at the proposed sites to assess the condition of any existing structures and to identify any previously undocumented structures (i.e., that are more than 50 years old). For each undocumented historic structure, SEA reviewed information on the date of construction, structure type and integrity, and other features necessary to evaluate its significance. SEA also reviewed an external investigation of previously documented structures to determine whether any modifications may have affected their structural integrity.

H.5.3 Determination of Significance

SEA reviewed the *Historic Report*, which included the following information in accordance with Board regulations under 49 CFR 1105.8(d):

- A U.S. Geological Survey (USGS) topographic map and site map showing the location of the proposed construction projects and the approximate dimensions of railroad structures that are at least 50 years old and are part of the proposed construction projects.
- A written description of the right-of-way and the topography and urban and/or rural characteristics of the surrounding area.
- Photographs of railroad structures on the property that are at least 50 years old; photographs of the immediately surrounding area.
- The date(s) of construction of the structure(s) and the date(s) and extent of any major alterations, to extent of available information.

- A brief narrative history of the Applicants' operations in the area, including an explanation of what, if any, changes are contemplated as a result of the proposed construction projects.
- A brief summary of documents in the Applicants' possession (i.e., engineering drawings) that might be useful in documenting a structure that is found to be historic.
- An opinion (based on readily available information in SEA's possession) as to whether the site and/or structures meet the criteria for listing on the NRHP (36 CFR 60.4), and whether a likelihood of archeological resources or any other previously unknown historic properties exists in the proposed project area and the basis for these opinions (including any consultations with the SHPO, local historical societies, or universities).
- A description (based on readily available information in SEA's possession) of any known prior subsurface ground disturbance or fill, environmental conditions (naturally occurring or man-made) that might affect the archeological recovery of resources (such as swampy conditions or the presence of toxic wastes), and the surrounding terrain.

SEA evaluated the potential significance of historic properties (based on their age, type, uniqueness, context in local and national history, and other factors) in accordance with NRHP criteria presented in 36 CFR 60.4. SEA based its evaluation of NRHP eligibility on the information contained in the *Historic Report* and submitted the findings to the SHPO for review and concurrence.

H.5.4 Determination of Effect

Using the "Criteria of Effect and Adverse Effect" developed by ACHP (36 CFR 800.9), SEA evaluated whether the proposed construction projects would result in an effect on historic properties, if any were identified within the area of potential effects. These criteria provide the basis for determining an action's potential effect on historic properties. In accordance with 36 CFR 800.9, an action has an effect on a historic property when it "may alter characteristics of the property that may qualify the property for inclusion in the National Register." This effect is considered to be adverse if it "may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association."

ACHP's regulations include limitations and conditions relevant to the determination of certain adverse effects that may result from the proposed construction activities. Under 36 CFR 800.9(c), if a historic property "is of value only for its potential contribution to archeological, historical, or architectural research, and when such value can be substantially preserved through the conduct of appropriate research, and such research is conducted in accordance with applicable professional standards and guidelines," then the effects of an action that "would otherwise be found to be adverse may be considered as being not adverse."

SEA applied these criteria of effect and adverse effect to determine the types of potential effects resulting from the proposed action. When SEA identified an effect, they determined whether the

effect would be adverse by applying the ACHP Criteria of Adverse Effect. Under these criteria, the proposed constructions could cause the following three types of adverse effects:

- Construction or operation of rail line connections resulting in the "physical destruction, damage, or alteration" of a historic property [36 CFR 800.9(b)(1)]; construction extending into previously undisturbed areas that could also damage archeological resources.
- Construction bringing railroad operations closer to a sensitive historic property, potentially introducing "visual, audible, or atmospheric elements that are out of character with the property or its setting" [36 CFR 800.9(b)(3)].
- A historic property is acquired outside the existing railroad ownership, thereby resulting in a "transfer, lease, or sale" [36 CFR 800.9(b)(5)].

H.5.5 Analysis Results

SEA limited its assessment to the two proposed construction projects at Cicero, Illinois and Jackson, Mississippi. The following discussion presents details of SEA's cultural resources analysis at these locations.

Cicero, Illinois. An industrial section of Cicero, Illinois, bounded to the north and east by existing rail lines, is the site of the proposed rail line connection. The Applicants would construct the approximately 1,000-foot-long connection in the southwest quadrant of the existing IC/BRC intersection. The Applicants would acquire two properties (the Melrose and Estes properties) and demolish five existing buildings on these properties to construct the proposed connection.

SEA identified the area of potential effects for archeological resources and historic structures at or near the area of the proposed rail line connection in accordance with ACHP regulations.³ In preparing their PDEA, the Applicants conducted a field investigation to identify archeological resources and historic structures. Because the Applicants were unable to enter the Melrose or Estes properties, their field study was limited to observations from the IC, BRC, and IC spur rights-of-way and from along 34th Street. The Applicants also used aerial photographs and Sanborn fire insurance maps to determine the relative age of the structures on these properties.

SEA's preliminary evaluation of the area of potential effect determined that the proposed construction site contains no archeological resources. Extensive development of the site area has occurred since the 1950s, and the vast majority of the project area is paved; the unpaved areas are immediately adjacent to railroad tracks. SEA determined that the development of this area indicates massive disturbance, including alteration of the landscape by construction and filling in

³ SEA considered the area of potential effect for archeological sites to be that area potentially disturbed as a result of construction activities. The area of potential effect for historic structures is that area potentially disturbed by construction activities, as well as the buildings or structures in close proximity to the proposed construction site.

and/or removing natural soils. The day-to-day use of the area by industrial businesses and railroads also leaves a significant mark on the landscape. SEA concludes that any archeological sites that might remain after such activities would already be compromised to such a degree that they would have lost all integrity and would provide no information valuable to the archeological record.

SEA reviewed the structures within the area of potential effect, using tax records and aerial photographs to identify the age of the buildings. SEA examined a 1949 aerial photograph of the Cicero area, which showed no buildings within the area of potential effect. A 1951 aerial photograph shows one building on the Estes property and no buildings on the Melrose property. SEA was unable to determine whether the building shown in the 1951 photograph was: (1) one of the five buildings that would be demolished during construction of the proposed connection, or (2) a building that was later demolished and replaced by one of the current buildings.

SEA examined a 1958 aerial photograph and identified three buildings (two terminals and a garage/shed) on the Estes property. Only the garage is at the same location as an existing building. SEA examined a 1988 aerial photograph, which shows the two terminal buildings on the Estes property as connected, forming one long terminal. SEA concludes that this modification would compromise the structural integrity, and therefore any historic significance, of the two terminal buildings. SEA also identified three buildings on the Melrose property in the 1958 aerial photograph and determined that only one of those buildings is at the same location as an existing building.

SEA also determined that none of the five buildings that would be demolished meet the 50-year age requirement for listing on the NRHP. While the building forming the west side of the Estes terminal is potentially between 47 and 49 years old, SEA found no evidence to indicate that this building has any of the attributes that would deem it eligible for listing on the NRHP. Furthermore, the alteration of the Estes terminal building compromised its structural integrity, thereby eliminating that building from further consideration for listing in the NRHP. SEA concludes that none of the five buildings appear to meet NRHP criteria for evaluation and recommend no further assessment of these buildings.

Jackson, Mississippi. The proposed bypass would extend north and south beneath the Woodrow Wilson Avenue overpass in an industrial section of Jackson, Mississippi. The IC rail lines (north of the overpass) occupy the land adjacent to the east side of the proposed bypass. Commercial buildings occupy Jackson Yard (east of Mill Street), with residential areas located farther to the east. Industry (Jackson Ready Mix) occupies the area west of the proposed bypass. The Jackson Ready Mix property extends approximately 1,300 feet north and 1,200 feet south of the Woodrow Wilson Avenue overpass. Residential areas lie to the west and south of Jackson Ready Mix.

SEA identified the area of potential effect for archeological resources and historic structures at or near the area of the proposed bypass, in accordance with ACHP regulations. In preparing their PDEA, the Applicants conducted a field investigation of the area of the proposed bypass, visually assessing and photographing structures in the area. Although the Applicants were unable to enter

the 630-foot by 20-foot strip of private property that they would acquire to build a portion of the proposed bypass, the Applicants were able to observe this property during their walking reconnaissance of the right-of-way. The Applicants also used aerial photographs and Sanborn fire insurance maps to determine the relative age of the structures in the vicinity of the proposed bypass.

SEA's preliminary evaluation of the area of potential effect focused on those archeological sites that may exist within the private property because it is undeveloped and could have potential for prehistoric archeological sites. However, the Applicants did observe heavy disturbance of this area. According to information obtained from Sanborn maps, the private property had occupants for more than 50 years. Based on the current condition of the land, SEA believes that the occupants likely graded and leveled the land and used it extensively for storage and dumping, thereby indicating massive disturbance. SEA did not evaluate the potential for archeological sites within the right-of-way because constructing the rail yard and the day-to-day rail operations have caused heavy disturbance to the area.

SEA reviewed the structures within the area of potential effect by evaluating businesses and residences west of Jackson Yard and the Jackson Ready Mix property.

SEA determined that because the Jackson Ready Mix property has always been adjacent to the rail yard, constructing a bypass 10 feet closer to the property would not alter any of the criteria that would make it eligible for listing on the NRHP. SEA applied the same rationale to residences and businesses adjacent to the rail yard. SEA further determined that the Jackson Ready Mix property would act as a buffer between the residences and businesses within the area of potential effect, further reducing the potential for any construction effects to those structures.

Based on the analysis presented above, SEA determined that the potential for prehistoric archeological sites within the area of potential effect is extremely low and that the NRHP eligibility criteria of structures within the area of potential effect would not be compromised. Therefore, SEA does not anticipate that the proposed project would adversely affect any historic properties. SEA will request SHPO's concurrence with this conclusion.

H.3.6 Mitigation Strategies

If an adverse effect on a historic property was found, SEA notified the ACHP and consulted with the SHPO to seek ways to avoid or reduce the effects on the historic property.

APPENDIX I
HAZARDOUS MATERIALS SPILL SITES AND
HAZARDOUS WASTE SITES
ANALYSIS METHODS AND RESULTS

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APPENDIX I

HAZARDOUS MATERIALS SPILL SITES AND HAZARDOUS WASTE SITES ANALYSIS METHODS AND RESULTS

The Surface Transportation Board's (Board), Section of Environmental Analysis (SEA) evaluated the potential effects of disturbance to hazardous materials spill sites and hazardous waste sites as they relate to construction and operation of the proposed rail line connection at Cicero, Illinois and the proposed bypass at Jackson, Mississippi. Appendix I discusses SEA's methods for evaluating the potential effects of disturbance to hazardous materials spill sites and hazardous waste sites during construction and operation of the proposed construction projects.

I.1 OVERVIEW

The following discussion of the methods SEA used to determine these potential effects includes: (1) a discussion of applicable regulations; (2) the threshold screening process; (3) sources and types of data collected; and (4) the criteria used to assess the significance, if any, of disturbance to hazardous materials spill sites and hazardous waste sites resulting from the proposed construction projects.

I.2 APPLICABLE REGULATIONS AND GUIDANCE

SEA evaluated the potential effects to hazardous materials spill sites and hazardous waste sites in accordance with regulations established by the Board, the U.S. Environmental Protection Agency (EPA), state agencies, and local emergency planning committees. The applicable regulations include the following:

- Board regulations at 49 CFR 1105.7(e)(7), which require the Applicants to identify the location of "any known hazardous waste site or sites where there have been known hazardous materials spills on the right-of-way." The Board regulations also require the Applicants to identify the types of hazardous materials involved.
- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (40 CFR 300), which establishes an information system that contains data on potentially hazardous waste sites that states, municipalities, private companies, and individuals have reported to EPA. EPA investigates these sites for placement on the National Priorities List (NPL) for priority cleanup under Superfund (40 CFR 300.425).
- The Resource Conservation and Recovery Act of 1976 (RCRA) (40 CFR 264), which requires EPA to identify and list facilities that generate, transport, store, treat, or dispose of hazardous waste.

I.3 SCREENING PROCESS

SEA identified areas of potential concern through a screening process that limited its assessment of the effects on hazardous materials spill sites and hazardous waste sites to the proposed construction projects. SEA concluded that construction and operation of the proposed new rail lines could disturb any hazardous materials spill sites or hazardous waste sites that are within 500 feet of the rights-of-way of the proposed construction sites. SEA based its corridor of evaluation on previous studies, which have shown that neither construction activities nor railroad operations are likely to disturb sites located more than 500 feet from the rail line.¹

SEA did not consider the potential effects on hazardous materials spill sites and hazardous waste sites from operational changes on rail line segments and at rail yards and intermodal facilities. SEA made this determination after reviewing previous studies that concluded that operational changes (i.e., increases or decreases in the number of trains on a rail line segment and increases or decreases in activity at a rail yard or intermodal facility) typically have little direct effect on hazardous waste sites.² SEA assessed the potential effects of hazardous materials transport that would result from system-wide operational changes on rail line segments and at rail yards (see Appendix C, "Safety Analysis Methods and Results"). Section 4.2, "Hazardous Materials Transport Safety," presents the system-wide effects of the proposed CN/IC Acquisition on hazardous materials transport.

I.4 DATA SOURCES

SEA used a variety of data sources to identify the locations of hazardous materials spill sites, hazardous waste sites, reported releases, and other environmental incidents or concerns. The following sections describe the research SEA conducted to find and verify those locations.

I.4.1 Site Visits

SEA reviewed the Preliminary Draft Environmental Assessment (PDEA) that the Applicants had prepared and submitted to the Board. In preparing their PDEA, the Applicants conducted field visits to visually survey the sites of the proposed construction projects and the surrounding area. They conducted a walking reconnaissance of the rights-of-way of the proposed connection by walking along the IC rail lines, the IC spur, BRC rail lines, and 34th Street. Although they were unable to enter the properties they plan to acquire, they were able to observe most site conditions from the rail lines or street. During the reconnaissance, the Applicants documented, mapped, and photographed any signs of hazardous materials spills such as soil staining, the presence of aboveground storage tanks (ASTs) and underground storage tanks (USTs), and the presence of

¹ Surface Transportation Board, Proposed Conrail Acquisition, Finance Docket No. 33388, 1998.

² Environmental assessments prepared for several proposed rail line connections relating to the acquisition of Conrail by CSX and NS determined that hazardous materials or waste sites were unlikely to affect rail line segments, rail yards, or intermodal facilities. See, for example: Section of Environmental Analysis, *Environmental Assessment, Greenwich, CSX/Conrail Rail Line Connections—Village of Greenwich, Huron County, Ohio*, Decision No. 28331, October 7, 1997.

hazardous waste storage or dumping areas. SEA reviewed the site visit method and documentation and concurred with the Applicants' findings.

1.4.2 Environmental Database Search

To supplement the Applicants' observations, SEA reviewed Federal Railroad Administration (FRA) databases to determine whether any hazardous materials spills had occurred along the existing CN and IC rail lines within 500 feet of the proposed construction projects.³ SEA also reviewed a compilation of database searches conducted by Environmental Data Resources, Inc. (EDR).⁴ The database search radius extended at least 1 mile from the sites of the proposed construction projects. SEA centered each search radius on the address of a property to be acquired because those addresses provided a search mechanism for the databases. Although the location of the properties to be acquired varied from project to project, the 1-mile search radius ensured that SEA could evaluate hazardous materials spills or hazardous waste sites within at least 500 feet of any part of the proposed construction projects.

During the database searches, SEA identified ten hazardous materials spills at the Jackson Yard, as shown in Table I-1, "Hazardous Materials Spill Incidents Reported at the Jackson Yard, Jackson, Mississippi."

**TABLE I-1
HAZARDOUS MATERIALS SPILL INCIDENTS REPORTED
AT THE JACKSON YARD, JACKSON, MISSISSIPPI**

Carrier	Date of Incident	Cause of Release	Substance Released	Amount of Substance Released (est.)	Decontamination/Cleanup Activities
Illinois Central	5/3/98	Human error—car not secured properly at time of loading	Petroleum distillates N.O.S.	1 gal.	None.
Illinois Central	4/24/98	Human error—car not secured properly at time of loading	Methanol	1 gal.	None.
Illinois Central	3/14/96	Human error—overfilling	Hydrochloric acid	3 gal.	Local environmental company responded to clean up small spill.

³ Federal Railroad Administration. Railroad Accident/Incident Database, 1993 through 1997.

⁴ Environmental Data Resources, Inc. *Illinois Central Railroad, Cicero Avenue/34th Street, Cicero, IL*, EDR: Southport, CT, Inquiry Number 0258127.1r, May 27, 1998; *Environmental Data Resources, Inc. Jackson Ready Mix, 103 West Woodrow Wilson, Jackson, MS*, EDR: Southport, CT, Inquiry Number 0279567.1r, August 4, 1998.

TABLE I-1
HAZARDOUS MATERIALS SPILL INCIDENTS REPORTED
AT THE JACKSON YARD, JACKSON, MISSISSIPPI

Carrier	Date of Incident	Cause of Release	Substance Released	Amount of Substance Released (est.)	Decontamination/Cleanup Activities
Illinois Central	7/21/95	Packaging failure	Hydrochloric acid	100 gal.	Fire department used water to hold down vapors. Small amount spilled in yard. Neutralized by time applied by local environmental control company. Cleanup completed 7/21/95.
Illinois Central	1/31/95	Human error—car not secured properly at time of loading	Hydrogen chloride	1 gal.	None.
Illinois Central	11/10/94	Packaging failure	Hydrochloric acid	Fumes, not measured	None.
Illinois Central	7/21/94	Derailement	Xylene and ethyl benzene	5 to 10 gal.	Notified emergency authorities and Chemtrak. Approximately \$200 cleanup cost. Cleanup activities not specified.
Illinois Central	6/27/94	Packaging failure	Sodium hydroxide	N/A	None.
Illinois Central	4/24/94	Human error—overfilling	Anhydrous ammonia	35 lbs	None.
Illinois Central	3/21/94	Packaging failure	Sodium hydroxide	½ gal.	None.

Source: Federal Railroad Administration, Railroad Accidents/Incidents Database, 1993 through 1997.

* Information in table taken directly from the Federal Railroad Administration, Railroad Accidents/Incidents Database

Key:

N/A = Not Applicable

The Federal databases SEA reviewed included the following:

- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). CERCLIS contains data on potentially hazardous waste sites that states, municipalities, private companies, and individuals have reported to EPA, pursuant to Section 103 of CERCLA. CERCLIS includes sites that EPA has placed on the NPL and sites that EPA has studied for possible inclusion on the NPL.

- Emergency Response Notification System (ERNS). ERNS records and stores information on reported releases of oil and hazardous substances.
- National Priorities List (NPL). The NPL, a subset of CERCLIS, identifies more than 1,200 sites for priority cleanup under the Superfund program.
- Resource Conservation and Recovery Information System (RCRIS). RCRIS includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste, as defined by Resource Conservation and Recovery Act (RCRA).
- Hazardous Materials Information Reporting System (HMIRS). HMIRS includes hazardous materials spill incidents reported to the U.S. Department of Transportation (DOT).
- No Further Remedial Action Planned (NFRAP). NFRAP is an EPA database containing sites deleted from CERCLIS because EPA planned no further remedial action. NFRAP lists sites (1) with no detected contamination, (2) where prompt removal of contamination nullifies the need for the site's listing on the NPL, or (3) the contamination is not serious enough to require Superfund action or NPL consideration.
- Area Radon Information. EPA developed the National Radon Database to provide residential radon data from a study it conducted from 1986 to 1992.
- U.S. Geological Survey (USGS) Water Wells. USGS maintains this database containing descriptive information on sites where USGS collects (or has collected) data on surface water or groundwater.
- Oil, gas pipeline, and electrical transmission line data. EDR extracted these data from 1994 USGS 1:100,000 scale maps.
- 100- and 500-year flood zone data. EDR collected these data from the Federal Emergency Management Agency (FEMA).
- World earthquake epicenters (of Richter Scale 5 or greater). EDR obtained these data from the Department of Commerce, National Oceanic and Atmospheric Administration.
- Sensitive Receptors. This pinpoints locations of sensitive human receptors (including schools, hospitals, day care centers, and nursing homes) from USGS topographic maps and visual surveys during field visits.
- Orphan/Unmappable Sites. This database contains any sites for which the Federal databases did not provide information sufficient to map the location.

In addition to the above Federal databases, the EDR search included the following State of Illinois and State of Mississippi databases:

- **Solid Waste Landfill Inventory.** This is an inventory of active and inactive solid waste disposal sites, based on state, local government, and historical archive data.
- **Underground Storage Tanks (USTs).** USTs are registered with the state and regulated under Subtitle I of RCRA.
- **Leaking Underground Storage Tank Sites (LUSTs).** This database contains state records of reported leaking USTs.
- **State Hazardous Waste Sites (SHWS).** This is a state's CERCLIS-equivalent list containing priority sites planned for cleanup using state funds and sites where potentially responsible parties will pay for the cleanup.
- **County Well Data for Cook County.** Data obtained from the Illinois State Geological Survey.
- **Illinois Private Well Database and Public, Industrial, Commercial Survey (PICS).** Data obtained from the Illinois State Water Survey.
- **Mississippi Water Wells.** Data obtained from the Mississippi State Water Survey.
- **Illinois State Geological Survey Water Wells.** Data obtained from the Illinois State Geological Survey.
- **National Pollutant Discharge Elimination System (NPDES) Facilities.** This is a list of industrial and municipal NPDES facilities.

As discussed above, SEA reviewed the EDR database reports to identify known hazardous materials spill sites, hazardous waste sites, or related environmental concerns within 500 feet of the proposed construction projects. Table I-2, "Summary of Sites Identified in the Database Report," summarizes the results of the EDR search.

**TABLE I-2
SUMMARY OF SITES IDENTIFIED IN THE DATABASE REPORT**

Site Type	Site Name/Address	Distance (feet) and Direction from Project Area ¹
Cicero, Illinois		
LUST	Estes Express Lines (shown in database as Jones Trucking, a former occupant) 3311 South Cicero Avenue	Less than 660, west
RCRIS	Brightly Galvanized Products 3330 South Cicero Avenue	Less than 660, west

TABLE I-2
SUMMARY OF SITES IDENTIFIED IN THE DATABASE REPORT

Site Type	Site Name/Address	Distance (feet) and Direction from Project Area ^a
LUST/UST	Turks Motor Express 3333 South Cicero Avenue	Less than 660, west
Jackson, Mississippi		
UST/ LUST	Jackson Ready Mix Concrete 103 West Woodrow Wilson Boulevard	Less than 660, west
LUST	Mississippi Department of Transportation 2567 North West Street	Less than 660, north

- ^a The database results are reported in increments of less than ¼ mile, ¼ to ½ mile, and 1 mile. As a result, any hazardous waste sites less than ¼ mile may be within a 500-foot radius of the proposed rail line connections.

1.5 ANALYSIS

The following sections describe SEA's analysis of the effects of the proposed construction on hazardous materials spill sites and hazardous waste sites.

1.5.1 Data Review

SEA reviewed the results of the database searches discussed previously. In addition, it reviewed USGS topographic maps⁵ and aerial photographs⁶ to assess the following:

- Characteristics of each site and surrounding area.
- Existence and characteristics of surface water, including wetlands.
- Flow direction of groundwater—SEA estimated this by identifying surface water resources and estimating the potential slope based on topographic features.
- Sensitive human and ecological receptors (schools, hospitals, wetlands, streams).
- AST farms.

⁵ U.S. Geological Survey. 7.5 Minute Map, Englewood, Illinois, 1993; U.S. Geological Survey. 7.5 Minute Map, Jackson, Mississippi, 1980.

⁶ Northern Illinois Planning Commission, aerial photograph of Cicero, Illinois, 1995; City of Jackson, Planning Department, aerial photograph of Jackson, Mississippi, 1995.

SEA reviewed the HMIRS database (focusing on the rail line segments adjacent to the proposed construction projects) to analyze the frequency, nature, and cause of hazardous materials spills (including ozone-depleting substances) that have occurred within the past 5 years.

SEA contacted relevant state and local agencies with jurisdiction over the proposed rail line connection and rail yard bypass to obtain the following information:

- Reported sites of hazardous materials releases, spills, other incidents, and pollution complaints.
- Remediated sites.
- Location and characteristics of ASTs or USTs.
- Facilities that use or store large quantities of hazardous materials.
- Community response plans developed to respond to releases of hazardous materials or hazardous waste-related incidents.

1.5.2 Environmental Site Assessments

SEA reviewed the preliminary findings of Phase I and Phase II Environmental Site Assessments (ESAs) conducted for the proposed rail line connection site at Cicero, Illinois.^{7,8} These ESAs provided the following information: (1) identified hazardous waste sites at or near the proposed rail line connections; (2) identified areas of potential concern within the proposed construction sites, including sites with soil staining, ASTs, USTs, or improper management of hazardous materials or wastes; (3) presented results from soil and groundwater sampling at the proposed construction sites; and (4) made recommendations for remedial action. Table I-3, "Summary of Areas of Potential Environmental Concern at Proposed Rail Line Connection Site Cicero, Illinois," presents the findings of these ESAs. (Figures I-1, "Areas of Environmental Concern Melrose Property, Cicero, Illinois," and I-2, "Areas of Environmental Concern Estes Property, Cicero, Illinois," show the locations of the areas of potential environmental concern at the Melrose Transport Systems and Estes Express Lines properties, respectively.) Tables I-4, "Results of Soil and Water Sampling at Melrose Property and IC Spur Right-of-Way Proposed Rail Line Connection Site in Cicero, Illinois," and I-5a and 5b, "Results of Soil and Water Sampling at Estes Property Proposed Rail Line Connection Site in Cicero, Illinois," summarize the results of soil and water sampling conducted at the Melrose and Estes properties, which SEA reviewed and approved.

⁷ Golder Associates, Inc. Phase I Environmental Site Assessment, Phase II Environmental Site Assessment, Preliminary draft report, August 1998.

⁸ Phase I and Phase II Environmental Site Assessments have not been conducted for the proposed construction project at Jackson Yard in Jackson, Mississippi.

TABLE I-3
SUMMARY OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AT
PROPOSED RAIL LINE CONNECTION SITE
CICERO, ILLINOIS

Area of Potential Environmental Concern	Work Completed to Date	Water Table	Observations	Potential for Off-site Effects
Metrol Transport Systems Property and MC Spur Right-of-Way				
APEC #1 Former gasoline under oil USTs located in central area of property. Area located near proposed rail line.	4 soil borings. - Soil and water samples collected. 1 permanent well installed.	Gradient appears to be toward the southwest.	- USTs reportedly removed in late 1980s. - No information available to date. - Dispenser pump foundation remains. - Petroleum residuals observed near UST area in subsurface soil and water samples. - Fill sand extends to approximately 11 feet below ground. Soil Data - No compounds in soil above EPA criteria. - Low levels of BTEX and vinyl chloride present. Water Data - Vinyl chloride (130 ug/L) detected above EPA criteria. - Cis-1,2-DCE, TCE, BTEX, and PNAs detected at low concentrations.	- Petroleum impacts from USTs not likely to impact adjacent properties. - Chlorinated VOCs present throughout site.
APEC #2 Pump and scrap storage along eastern property boundary. Area located near proposed rail line.	2 soil borings. - Soil and water samples collected. 1 permanent well installed.	Gradient appears to be toward the southwest.	- Area used to store reusable parts, old truck fuel tanks, tires, oil pans, and various scrap parts. Soil Data - No compounds in soil above EPA criteria. - Concentrations of other related compounds (vinyl chloride, PCE, TCE, DCE isomers) detected below criteria. BTEX and PNAs detected below criteria. Water Data - Lead (130 ug/L) detected above EPA criteria. - Vinyl chloride, cis-1,2-DCE, PCE, BTEX detected at low concentrations.	Impacts may exist on adjacent BRC right-of-way.
APEC #3 Diesel AST near maintenance shop. Area located near proposed rail line.	1 soil boring. - Soil and water samples collected. 1 permanent well installed.	None	- Tank approximately 8,000 gallons in capacity. - Spilling observed on pavement below dispenser pump. Soil Data - Several PNAs detected below EPA criteria.	Low potential for impact to adjacent properties.

TABLE F-3
SUMMARY OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AT
PROPOSED RAIL LINE CONNECTION SITE
CICERO, ILLINOIS

Area of Potential Environmental Concern	Work Completed to Date	Water Table	Observations	Potential for Off-site Effects
APEC #4 UST on adjacent property.	1 boring. - Soil and water samples collected.	Gradient appears to be toward the southwest.	- Active diesel UST present approximately 100 feet south of the southern property boundary. Age, construction, and capacity unknown. - Soil Data - TCE detected below IEPA criteria. - Water Data - Vinyl chloride and cis-1,2-DCE detected below IEPA criteria.	Source of vinyl chloride unknown. May be present off site.
APEC #3 Historic diesel spill from train derailment. Area located near proposed rail line.	1 boring. - Soil only collected from 1-2 feet below ground.	None	- Train derailment reportedly occurred at the IC and BRC Intersection 1-2 years ago, spilling an unknown amount of fuel. According to a Milwaukee representative, the area was "cleaned up" by the railroad. No releases were reported from freight cars. - Soil Data - Soil did not appear significantly affected; numerous PNA compounds were detected, one of which exceeded IEPA criteria.	Source of effect not the current property owner.

TABLE I-3
SUMMARY OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AT
PROPOSED RAIL LINE CONNECTION SITE
CICERO, ILLINOIS

Areas of Potential Environmental Concern	Work Completed to Date	Water Table	Observations	Potential for Off-site Effects
Essex Express Lines Property				
APEC #1 Maintenance shop area. Two former diesel USTs, surface staining, drum storage. Area located near proposed rail line.	6 soil borings. - Soil and water samples collected. 2 permanent wells installed.	- Water present in most borings. - Where water is present, gradient appears to be toward the southeast.	- Two former diesel USTs (one 8,000 gallon; one 10,000 gallon) removed in early 1990s. A Closure Report received by Golder after field activities conducted. No evidence observed of the former 10,000-gallon UST during the site work. No sampling conducted to date in relation to this UST. - Fill and vent pipes still exist in-grade for the 8,000-gallon UST. Tank enclosure is backfilled with crushed limestone to an assumed depth of 10-11 feet below ground. Evidence of petroleum impact observed adjacent to the 8,000-gallon UST in soil borings. Some amount free phase product identified in soil approximately 5 feet from former UST area; heavy slicken observed on water. Evidence of impact decreased in a boring situated 20 feet from location of the observed free product. Contractor records do not indicate the amount of soil removed or its ultimate disposal site. - Surface melting on asphalt and gravel due to discharge from the shop floor drain observed. Numerous empty drums (oils, anti-freeze) piled along east property boundary adjacent to RC spur right-of-way. No significant staining observed near drums. Soil Data - Various PNAs detected in soil above EPA criteria near former 8,000-gallon UST, with the maximum concentrations reaching 20 mg/kg. - Lead detected above EPA criteria at levels reaching 680 mg/kg near drum storage area. - Low levels of BTEX detected in surrounding soils. Water Data - Moderate levels of PNAs (max. 30 µg/L) and lead (max. 33 µg/L) detected in water above EPA criteria. - BTEX not encountered.	Effects may exist on adjacent RC spur right-of-way and Mettrose property. Potential is low for other properties.

TABLE I-3
SUMMARY OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AT
PROPOSED RAIL LINE CONNECTION SITE
CICERO, ILLINOIS

Area of Potential Environmental Concern	Work Completed to Date	Water Table	Observations	Potential for Off-site Effects
APEC #2 Former heating oil UST along southeast side of terminal building.	2 borings with soil sampling. 1 boring produced water.	Water pressure in one boring. Gradient likely influenced by tank area backfill.	- A 1,000-gallon heating oil UST was removed in 1990. Vent pipe present. Tank excavation area covered by asphalt. Evidence of petroleum residuals observed within 5 feet of tank area. Minor amount of free phase product identified in soil; sheen observed on water. Impact appeared to decrease in boring situated 10 feet from excavation. Soil Data - Low levels of PNAs (1 to 2 mg/kg) detected above IEPA criteria. BTEX detected below IEPA criteria. Water Data - PNAs (max. 10 µg/L) and lead (max. 48 µg/L) detected above IEPA criteria. - BTEX not encountered.	Low potential for impact to adjacent properties.
APEC #3 Former heating oil UST along southwest side of terminal building.	No sampling conducted to date.	N/A	- A former 1,000-gallon heating oil UST removed in 1990. A Closure Report was received by Golder after field activities. No evidence observed of the former 1,000-gallon UST during the site work. No sampling conducted to date in relation to this UST. - According to removal records, no release of petroleum reported in relation to this UST.	If present, a low potential exists for effect to adjacent properties.

TABLE I-3
SUMMARY OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AT
PROPOSED RAIL LINE CONNECTION SITE
CICERO, ILLINOIS

Area of Potential Environmental Concern	Work Completed to Date	Water Table	Observations	Potential for Off-site Effects
APEC #4 Former diesel UST located in northwest corner of property.	5 soil borings. - Soil and water samples collected.	Groundwater appears to be somewhat stagnant.	- A 10,000-gallon diesel UST removed in 1990. Dispenser pump foundation remains. Although removal records indicate a release reported in this area, no significant impacts to soil and groundwater observed. Fill materials extend to approximately 11 feet below ground. Soil Data - PNAs and benzene detected in soil below IEPA criteria. Water Data - Flow PNA compounds detected in winter above IEPA criteria adjacent to MC right-of-way. - Benzene detected below criteria.	High potential for off-site impact to north and west adjacent properties.

Key:

APEC = Area of potential environmental concern
 AST = Aboveground storage tank
 BRC = Bell Railway Company of Chicago
 BTEX = Benzene, toluene, ethylbenzene, and xylenes
 DCE = Dichloroethylene
 IEPA = Illinois Environmental Protection Agency
 MC = Illinois Central Corporation
 µg/L = Micrograms per liter
 mg/kg = Milligrams per kilogram
 PCE = Tetrachloroethylene
 PNA = Polynuclear aromatics
 TCE = Trichloroethylene
 UST = Underground storage tank
 VOCs = Volatile organic compounds

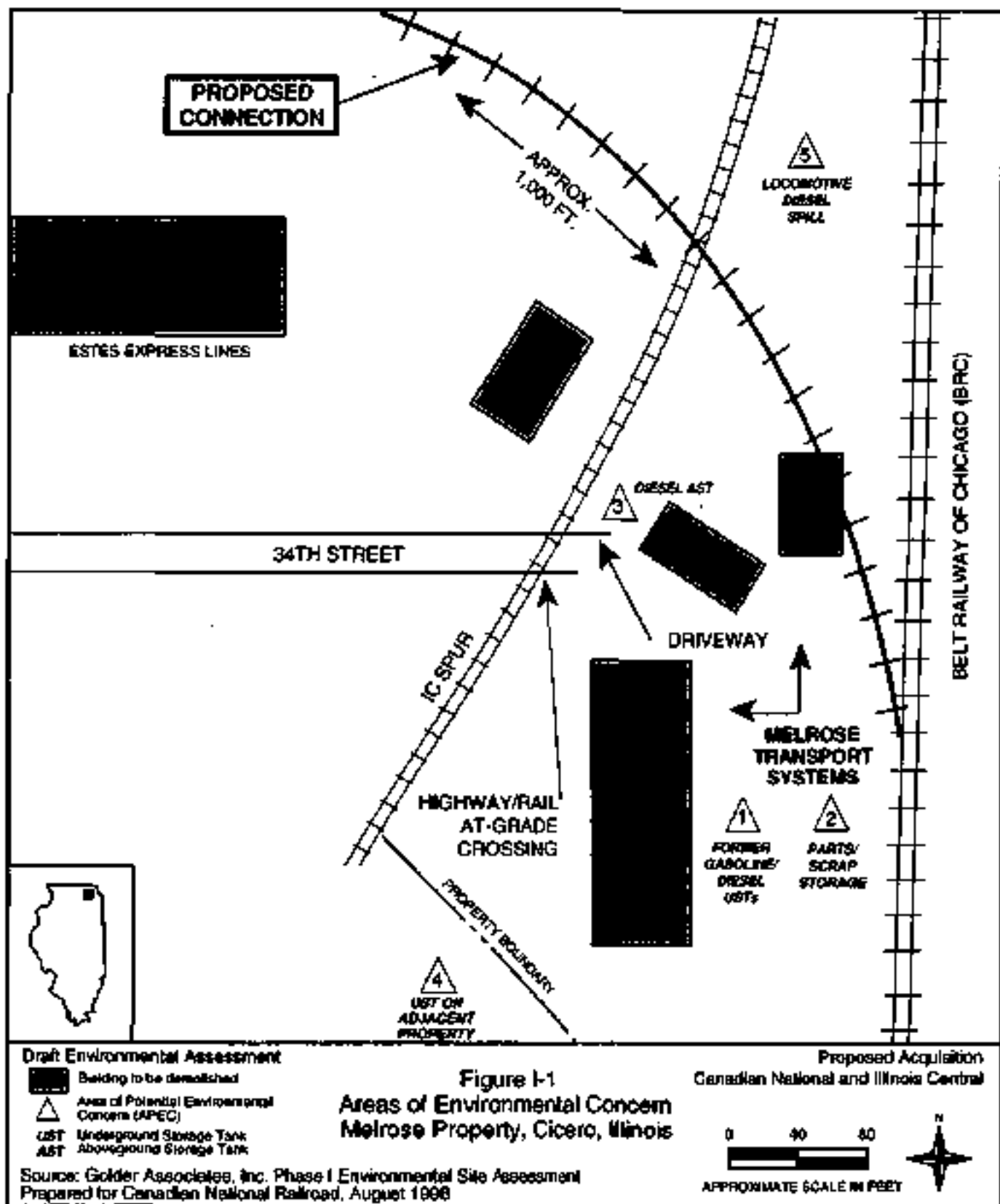


TABLE I-4
RESULTS OF SOIL AND WATER SAMPLING AT MELROSE PROPERTY AND IC SPUR RIGHT-OF-WAY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1			APEC 2		APEC 3	APEC 4	APEC 5	APEC 6
		SB1	SB2	SB3	SB4	SB7	SB5	SB6	SB8	SB9
		VOC Sample Results								
Chloroethene • Soil (mg/kg) • Water (µg/L)	— —	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
Vinyl chloride • Soil (mg/kg) • Water (µg/L)	3 10	< <	< 130	< 2.3	0.64 4.0	< <	< N/A	< <	N/A N/A	< N/A
Chloroethane • Soil (mg/kg) • Water (µg/L)	— —	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
1,1-Dichloroethane • Soil (mg/kg) • Water (µg/L)	18,000 35	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
Methylene chloride • Soil (mg/kg) • Water (µg/L)	760 50	< <	< <	< <	1.3 <	< <	< N/A	< <	N/A N/A	< N/A
trans-1,2-dichloroethane • Soil (mg/kg) • Water (µg/L)	41,000 500	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
1,1-Dichloroethane • Soil (mg/kg) • Water (µg/L)	200,000 3,500	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
cis-1,2-dichloroethane • Soil (mg/kg) • Water (µg/L)	20,000 200	< <	< 5.4	< 2.8	9.9 <	< <	< N/A	< <	N/A N/A	< N/A

TABLE I-4
RESULTS OF SOIL AND WATER SAMPLING AT MELROSE PROPERTY AND IC SPUR RIGHT-OF-WAY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1			APEC 2		APEC 3	APEC 4	APEC 5	APEC 6
		SB1	SB2	SB3	SB4	SB7	SB5	SB6	SB8	SS1
Chloroform • Soil (mg/kg) • Water (µg/L)	940 1	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
1,1,1-Trichloroethane • Soil (mg/kg) • Water (µg/L)	— 1,000	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
1,2-Dichloromethane • Soil (mg/kg) • Water (µg/L)	63 25	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
Carbon tetrachloride • Soil (mg/kg) • Water (µg/L)	44 25	< <	< <	< <	< <	< <	< N/A	< <	N/A N/A	< N/A
Benzene • Soil (mg/kg) • Water (µg/L)	200 25	< <	0.14 6.1	0.15 15	< 0.3	< 1.2	< N/A	< <	N/A N/A	< N/A
Trichloroethene • Soil (mg/kg) • Water (µg/L)	520 25	< <	< <	< 1.1	0.99 <	< <	< N/A	0.20 <	N/A N/A	< N/A
Toluene • Soil (mg/kg) • Water (µg/L)	410,000 2,500	< 1.3	< 2.3	< 1.5	< 1.2	< 1.2	< N/A	< <	N/A N/A	< N/A
Tetrachloroethene • Soil (mg/kg) • Water (µg/L)	110 25	< <	< <	< <	2.5 0.8	< <	< N/A	< <	N/A N/A	< N/A
Ethyl benzene • Soil (mg/kg) • Water (µg/L)	200,000 1,000	< <	3.3 1.2	0.42 2.1	< <	< <	0.08 N/A	< <	N/A N/A	< N/A

TABLE L-4
RESULTS OF SOIL AND WATER SAMPLING AT MELROSE PROPERTY AND IC SPUR RIGHT-OF-WAY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1			APEC 2		APEC 3	APEC 4	APEC 5	APEC 6
		SB1	SB2	SB3	SB4	SB7	SB5	SB6	SB8	SB9
Xylenes, total • Soil (mg/kg) • Water (µg/L)	1,000,000 10,000	< 1.1	< 6.6	< 3.9	< 1.9	< 0.8	< N/A	< N/A	N/A N/A	< N/A
Metals Sample Results										
Arsenic • Soil (mg/kg) • Water (µg/L)	7.2+ 200	8.2 3.7	3.3 0.6	4.4 6.8	99 10	13 1.8	1.4 N/A	6.3 13	3.5 N/A	N/A N/A
Cadmium • Soil (mg/kg) • Water (µg/L)	2,000 50	1.1 0.26	0.23 0.08	0.31 0.32	3.4 1.3	1.9 0.29	7.8 N/A	0.20 N/A	0.11 N/A	N/A N/A
Selenium • Soil (mg/kg) • Water (µg/L)	10,000 50	7 1	< 1	< 2	4.4 1	< 1	< N/A	< 2	< N/A	N/A N/A
Silver • Soil (mg/kg) • Water (µg/L)	10,000 50	< N/A	< 0.05	< N/A	< N/A	< N/A	< N/A	< N/A	0.45 N/A	N/A N/A
Barium • Soil (mg/kg) • Water (µg/L)	140,000 2,000	140 170	22 41	56 74	170 250	440 290	460 N/A	55 92	49 N/A	N/A N/A
Chromium • Soil (mg/kg) • Water (µg/L)	10,000 1,000	22 13	8.7 9	10 10	21 10	14 7	9 N/A	17 10	10 N/A	N/A N/A

TABLE I-4
RESULTS OF SOIL AND WATER SAMPLING AT MELROSE PROPERTY AND IC SPUR RIGHT-OF-WAY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1			APEC 2		APEC 3	APEC 4	APEC 5	APEC 6
		SB1	SB2	SB3	SB4	SB7	SB5	SB6	SB8	SS1
Copper • Soil (mg/kg) • Water (µg/L)	82,000 650	43 <	10 <	20 <	66 <	48 <	51 N/A	26 <	27 N/A	N/A N/A
Zinc • Soil (mg/kg) • Water (µg/L)	610,000 10,000	250 620	190 <	99 <	380 220	240 <	970 N/A	72 <	110 N/A	N/A N/A
Lead • Soil (mg/kg) • Water (µg/L)	400 100	100 36	35 <	120 25	160 110	150 <	80 N/A	18 <	79 N/A	N/A N/A
PNA Sample Results										
Naphthalene • Soil (mg/kg) • Water (µg/L)	82,000 39	0.04 <	29 7.5	0.90 19	0.23 <	0.46 <	< N/A	< <	0.59 N/A	< N/A
Acetophenylene • Soil (mg/kg) • Water (µg/L)	— —	< <	< <	< <	< <	< <	< N/A	< <	< N/A	< N/A
Acenaphthene • Soil (mg/kg) • Water (µg/L)	120,000 2,000	< <	< <	13 2.3	0.37 2.8	< <	< N/A	< <	0.20 N/A	< N/A
Fluorene • Soil (mg/kg) • Water (µg/L)	82,000 1,400	< <	21 3.2	0.50 2.3	< <	0.08 <	< N/A	< <	0.21 N/A	< N/A
Phenanthrene • Soil (mg/kg) • Water (µg/L)	— —	0.22 <	52 9.5	1.5 2.4	0.92 <	1.5 <	0.84 N/A	0.05 <	2.6 N/A	5.3 N/A

TABLE C-4
RESULTS OF SOIL AND WATER SAMPLING AT MELROSE PROPERTY AND IC SPUR RIGHT-OF-WAY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1			APEC 2		APEC 3	APEC 4	APEC 5	APEC 6
		SB1	SB2	SB3	SB4	SB7	SB5	SB6	SB8	SB9
Anthracene • Soil (mg/kg) • Water (µg/L)	610,000 10,500	0.03 <	2.6 <	0.21 <	< <	0.13 <	< N/A	< <	0.5 N/A	1.3 N/A
Fluoranthene • Soil (mg/kg) • Water (µg/L)	82,000 1,400	0.23 <	1.4 <	1.2 <	< <	0.55 <	1.3 N/A	0.02 <	4.6 N/A	13 N/A
Pyrene • Soil (mg/kg) • Water (µg/L)	61,000 1,050	0.21 <	2.8 <	1.2 <	< <	0.53 <	1.9 N/A	0.03 <	4.3 N/A	12 N/A
Benzo(a)anthracene • Soil (mg/kg) • Water (µg/L)	B 0.65	0.12 <	< <	0.57 <	< <	0.43 <	0.91 N/A	< <	3.0 N/A	8.2 N/A
Chrysene • Soil (mg/kg) • Water (µg/L)	780 7.5	0.16 <	0.36 <	0.36 <	< <	0.43 <	0.90 N/A	< <	3.8 N/A	9.1 N/A
Benzo(b)fluoranthene • Soil (mg/kg) • Water (µg/L)	8 0.90	0.13 <	< <	0.47 <	< <	0.47 <	0.83 N/A	< <	4.3 N/A	9.5 N/A
Benzo(k)fluoranthene • Soil (mg/kg) • Water (µg/L)	78 0.85	0.12 <	< <	0.34 <	< <	0.26 <	0.65 N/A	< <	3.8 N/A	9.3 N/A
Benzo(a)pyrene • Soil (mg/kg) • Water (µg/L)	0.8 2.00	0.14 <	< <	0.48 <	< <	0.45 <	0.80 N/A	< <	4.9 N/A	11 N/A
Indeno(1,2,3-cd)pyrene • Soil (mg/kg) • Water (µg/L)	8 2.15	< <	< <	0.29 <	< <	0.40 <	< N/A	< <	5.4 N/A	8.9 N/A

TABLE I-4
RESULTS OF SOIL AND WATER SAMPLING AT MELROSE PROPERTY AND IC SPUR RIGHT-OF-WAY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1			APEC 2		APEC 3	APEC 4	APEC 5	APEC 6
		SB1	SB2	SB3	SB4	SB7	SB5	SB6	SB8	SB1
Dibenz(a,h)anthracene										
• Soil (mg/kg)	0.8	<	<	<	<	0.08	<	<	<	<
• Water (µg/L)	1.5	<	<	<	<	<	N/A	<	N/A	N/A
Benzol(ghi)perylene										
• Soil (mg/kg)	—	<	<	0.30	<	0.35	<	<	6.2	10
• Water (µg/L)	—	<	<	<	<	<	N/A	<	N/A	N/A

• All samples analyzed using USEPA Method 8260.

• Tier 1 Soil Remediation Objectives for Industrial/Commercial Properties, State of Illinois, Title 35; Environmental Protection, Part 742, Appendix B, Table B.

• All samples analyzed using USEPA Method 600/7000 Series.

• Tier 1 Groundwater Remediation Objectives for the Groundwater Component of Groundwater Ingestion Route, State of Illinois, Title 35; Environmental Protection, Part 742, Appendix B, Table E.

Key:

APEC = area of potential environmental concern.
 IEPA = Illinois Environmental Protection Agency.
 N/A = not applicable.
 SB = soil boring.
 SS = soil sample.
 VOC = volatile organic compounds.
 < = less than detectable limits.

TABLE 1-5a
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1							APEC 2		
		SB1	SB2	SB3	SB4	SB5	SB6	12-in. well	SB 7	SB 8	12-in. well
		VOC Sample Results									
Chloroethane • Soil (mg/kg) • Water (µg/L)	— —	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
Vinyl chloride • Soil (mg/kg) • Water (µg/L)	3 10	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
Chloroethane • Soil (mg/kg) • Water (µg/L)	— —	< N/A	< <	< <	< N/A	< <	< N/A	< <	< <	< N/A	< <
1,1-Dichloroethane • Soil (mg/kg) • Water (µg/L)	18,000 35	< N/A	< <	< <	< N/A	< <	< N/A	N/A <	< <	< N/A	N/A <
Methylene chloride • Soil (mg/kg) • Water (µg/L)	760 50	< N/A	< <	< <	< N/A	< <	< N/A	N/A <	< <	< N/A	N/A <
trans-1,2-dichloroethene • Soil (mg/kg) • Water (µg/L)	41,000 500	< N/A	< <	< <	< N/A	< <	< N/A	N/A <	< <	< N/A	N/A <
1,1-Dichloroethane • Soil (mg/kg) • Water (µg/L)	200,000 3,500	< N/A	< <	< <	< N/A	< <	< N/A	N/A <	< <	< N/A	N/A <
cis-1,2-dichloroethane • Soil (mg/kg) • Water (µg/L)	20,000 200	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <

TABLE I-5a
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1							APEC 2		
		SB1	SB2	SB3	SB4	SB5	SB6	12-in. well	SB 7	SB 8	12-in. well
Chloroform • Soil (mg/kg) • Water (µg/L)	940 1	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
1,1,1-Trichloroethane • Soil (mg/kg) • Water (µg/L)	— 1,000	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
1,2-Dichloroethane • Soil (mg/kg) • Water (µg/L)	63 25	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
Carbon tetrachloride • Soil (mg/kg) • Water (µg/L)	44 25	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
Benzene • Soil (mg/kg) • Water (µg/L)	200 25	< N/A	< <	< <	0.48 N/A	0.30 <	N/A <	N/A 0.8	0.025 <	< N/A	N/A <
Trichloroethene • Soil (mg/kg) • Water (µg/L)	520 25	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
Toluene • Soil (mg/kg) • Water (µg/L)	410,000 2,500	< N/A	< <	< <	0.12 N/A	0.058 <	N/A <	N/A <	< <	< N/A	N/A <
Tetrachloroethene • Soil (mg/kg) • Water (µg/L)	110 25	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	< <	< N/A	N/A <
Ethyl benzene • Soil (mg/kg) • Water (µg/L)	200,000 1,000	< N/A	< <	< <	< N/A	< <	N/A <	N/A <	0.032 <	< N/A	N/A <

TABLE I-5a
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	DEPA Remediation Objectives (for Industrial/ Commercial Properties)	APEC 1						APEC 2			
		SB1	SB2	SB3	SB4	SB5	SB6	12-in. well	SB 7	SB 8	12-in. well
Xylenes, total • Soil (mg/kg) • Water (µg/L)	1,000,000 10,000	< N/A	< <	< <	0.12 N/A	< <	N/A <	N/A <	0.19 <	< N/A	N/A <
Metals Sample Results											
Arsenic • Soil (mg/kg) ^a • Water (µg/L) ^a	7.2+ 200	10 N/A	10 15	7.3 6.5	6.6 N/A	6.4 7.7	N/A 1	N/A 0.01	9.7 2.6	7.90 N/A	N/A N/A
Cadmium • Soil (mg/kg) • Water (µg/L)	2,000 50	2.1 N/A	0.99 0.22	5.5 0.62	0.5 N/A	0.56 0.19	N/A 0.05	N/A <	0.77 0.26	0.6 N/A	N/A N/A
Selenium • Soil (mg/kg) • Water (µg/L)	10,000 50	< N/A	< 1	1.1 1	< N/A	< 2	N/A 1	N/A <	< <	< N/A	N/A N/A
Silver • Soil (mg/kg) • Water (µg/L)	10,000 50	0.4 N/A	0.19 <	1.8 <	0.07 N/A	0.08 <	N/A <	N/A <	0.5 <	0.1 N/A	N/A N/A
Barium • Soil (mg/kg) • Water (µg/L)	140,000 2,000	170 N/A	100 230	400 110	76 N/A	38 210	N/A 350	N/A 0.29	97 130	180 N/A	N/A N/A
Chromium • Soil (mg/kg) • Water (µg/L)	10,000 1,000	25 N/A	17 7	53 7	77 N/A	54 6	N/A 10	N/A <	33 11	21 N/A	N/A N/A
Copper • Soil (mg/kg) • Water (µg/L)	82,000 650	1500 N/A	120 <	120 <	49 N/A	54 <	N/A <	N/A <	490 17	66 N/A	N/A N/A

TABLE I-5a
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1						APEC 2			
		SB1	SB2	SB3	SB4	SB5	SB6	12-in. well	SB 7	SB 8	12-in. well
Zinc • Soil (mg/kg) • Water (µg/L)	610,000 10,000	1000 N/A	260 120	400 <	130 N/A	140 <	N/A 620	N/A 0.22	290 80	130 N/A	N/A N/A
Lead • Soil (mg/kg) • Water (µg/L)	400 100	580 N/A	290 7.6	680 8.1	120 N/A	130 <	N/A 33	N/A <	130 48	120 N/A	N/A N/A
PNA Sample Results*											
Naphthalene • Soil (mg/kg) • Water (µg/L)	82,000 30	2 N/A	< 0.23	0.3 <	< N/A	0.39 N/A	N/A 2.1	N/A <	1.5 <	0.18 N/A	N/A <
Acenaphthylene • Soil (mg/kg) • Water (µg/L)	— —	0.13 N/A	< <	< <	< N/A	< N/A	N/A <	N/A <	< <	< N/A	N/A <
Acenaphthene • Soil (mg/kg) • Water (µg/L)	120,000 2,100	0.09 N/A	< 0.27	< <	< N/A	2.1 N/A	N/A 1.2	N/A <	8.2 <	0.45 N/A	N/A <
Fluorene • Soil (mg/kg) • Water (µg/L)	82,000 1,400	2.3 N/A	< 0.32	< <	< N/A	1.9 N/A	N/A 7.3	N/A <	12 <	0.81 N/A	N/A <
Phenanthrene • Soil (mg/kg) • Water (µg/L)	— —	13 N/A	< 2.4	0.47 0.3	1.5 N/A	3.9 N/A	N/A 9.6	N/A <	7 190	2.7 N/A	N/A <
Anthracene • Soil (mg/kg) • Water (µg/L)	610,000 10,500	2.4 N/A	< 0.23	< <	0.52 N/A	1.7 N/A	N/A 4.5	N/A <	3.4 49	0.33 N/A	N/A <

TABLE E-5a
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1						APEC 3		
		SB1	SB3	SB4	SB5	SB6	12-in. well	SB7	SB8	12-in. well
Fluoranthene • Soil (mg/kg) • Water (µg/L)	82,000 1,400	1.4 N/A	< <	3.9 N/A	1.4 N/A	N/A 27	N/A 3.4	3.3 30	2 N/A	N/A <
Pyrene • Soil (mg/kg) • Water (µg/L)	61,000 1,050	1.2 N/A	< 0.27	8.5 N/A	21 N/A	N/A 26	N/A 2.9	3.4 35	1.7 N/A	N/A <
Benzol(a)anthracene • Soil (mg/kg) • Water (µg/L)	8 0.65	6.3 N/A	< 0.32	4 N/A	9.4 N/A	N/A 9.9	N/A 1.7	1.5 11	1.1 N/A	N/A <
Chrysene • Soil (mg/kg) • Water (µg/L)	780 7.5	6.3 N/A	< 2.4	4.8 N/A	11 N/A	N/A 11	N/A 2.1	2.6 12	1.2 N/A	N/A <
Benzol(b)fluoranthene • Soil (mg/kg) • Water (µg/L)	8 0.90	7.3 N/A	< 0.52	4.2 N/A	9.1 N/A	N/A 9.1	N/A 2.5	1.8 2.9	1.3 N/A	N/A <
Benzol(k)fluoranthene • Soil (mg/kg) • Water (µg/L)	78 0.85	3.4 N/A	< 1.2	2.5 N/A	5.9 N/A	N/A 7.5	N/A 1.9	0.78 5.5	0.92 N/A	N/A <
Benzol(a)pyrene • Soil (mg/kg) • Water (µg/L)	0.8 2.00	5.7 N/A	< 1.3	3.4 N/A	9.8 N/A	N/A 8.4	N/A 2.1	1.3 9.3	1.2 N/A	N/A <
Indeno(1,2,3-cd)pyrene • Soil (mg/kg) • Water (µg/L)	8 2.15	3.4 N/A	< <	2.6 N/A	4.5 N/A	N/A <	N/A 1.3	< <	0.95 N/A	N/A <
Dibenzol(a,h)anthracene • Soil (mg/kg) • Water (µg/L)	4.8 1.5	0.86 N/A	< <	0.11 N/A	< N/A	N/A <	N/A <	< <	0.33 N/A	N/A <

TABLE I-5a
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 1						APEC 2		
		SB1	SB2	SB3	SB4	SB5	SB6	12-in. well	SB 7	12-in. well
Benzodibenzoperylene • Soil (mg/kg) • Water (mg/L)	— —	3.1 N/A	< <	< <	2.9 N/A	4.6 N/A	N/A <	N/A 1.4	0.4 <	N/A <

• All samples analyzed using USEPA Method 8260.

• Tier 1 Soil Remediation Objectives for Industrial/Commercial Properties, State of Illinois, Title 35: Environmental Protection, Part 742, Appendix B, Table B.

• All samples analyzed using EPA Method 600/7000 Series.

• Tier 1 Groundwater Remediation Objectives for the Groundwater Component of Groundwater Ingestion Route, State of Illinois, Title 35: Environmental Protection, Part 742, Appendix B, Table E.

Key:

APEC	=	area of potential environmental concern.
IEPA	=	Illinois Environmental Protection Agency.
mg/L	=	micrograms per liter.
mg/kg	=	milligrams per kilogram.
N/A	=	not applicable.
PNA	=	polynuclear aromatics.
SB	=	soil boring.
VOC	=	volatile organic compounds.
<	=	less than detectable limits.

TABLE I-5b
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 3						APEC 4
		SB 12	SB 14	SB 15	SB 16	SB 17	SB 18, well	SB 13
VOC Sample Results								
Chloroethane • Soil (mg/kg) • Water (µg/L)	— —	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Vinyl chloride • Soil (mg/kg) • Water (µg/L)	3 10	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Chloroethane • Soil (mg/kg) • Water (µg/L)	— —	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
1,1-Dichloroethane • Soil (mg/kg) • Water (µg/L)	18,000 35	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Methylene chloride • Soil (mg/kg) • Water (µg/L)	760 50	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
trans-1,2-dichloroethane • Soil (mg/kg) • Water (µg/L)	41,000 500	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
1,1-Dichloroethane • Soil (mg/kg) • Water (µg/L)	200,000 3,500	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
cis-1,2-dichloroethane • Soil (mg/kg) • Water (µg/L)	20,000 200	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A

TABLE E-5b
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	EPA Remediation Objectives for Industrial/ Commercial Properties	APEC 3					APEC 4	
		SB 12	SB 14	SB 15	SB 16	SB 17	12-in. well	SB 13
Chloroform • Soil (mg/kg) • Water (µg/L)	940 1	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
1,1,1-Trichloroethane • Soil (mg/kg) • Water (µg/L)	— 1,000	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
1,2-Dichloroethane • Soil (mg/kg) • Water (µg/L)	63 25	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Carbon tetrachloride • Soil (mg/kg) • Water (µg/L)	44 25	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Benzene • Soil (mg/kg) • Water (µg/L)	200 25	0.048 N/A	< 1.4	< <	N/A <	< N/A	N/A <	< N/A
Trichloroethene • Soil (mg/kg) • Water (µg/L)	520 25	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Toluene • Soil (mg/kg) • Water (µg/L)	410,000 2,500	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Tetrachloroethene • Soil (mg/kg) • Water (µg/L)	110 25	< N/A	< <	< <	N/A <	< N/A	N/A <	< N/A
Ethyl benzene • Soil (mg/kg) • Water (µg/L)	300,000 1,000	< N/A	< <	< <	N/A <	< <	N/A <	< N/A

TABLE I-5b
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	EPA Remediation Objectives for Industrial/ Commercial Properties	APEC 3						APEC 4	
		SB 12	SB 14	SB 15	SB 16	SB 17	12-in. well		
Xylenes, total • Soil (mg/kg) • Water (µg/L)	1,000,000 10,000	< N/A	< <	< <	N/A <	< <	N/A <	< N/A	
Metals Sample Results									
Arsenic • Soil (mg/kg) • Water (µg/L)	1.2* 200	2.7 N/A	3.0 0.0046	71.7 0.007	N/A 0.008	1.1 N/A	N/A 0.0021	9.8 N/A	
Cadmium • Soil (mg/kg) • Water (µg/L)	2,000 50	0.6 N/A	0.22 <	0.18 0.24	N/A 0.056	0.15 N/A	N/A <	0.25 N/A	
Selenium • Soil (mg/kg) • Water (µg/L)	10,000 50	< N/A	< <	< 0.003	N/A <	< N/A	N/A <	< N/A	
Silver • Soil (mg/kg) • Water (µg/L)	10,000 50	0.1 N/A	< <	< <	N/A <	< N/A	N/A <	0.05 <	
Barium • Soil (mg/kg) • Water (µg/L)	140,000 2,000	180 n/a	80 0.12	57 0.24	n/a 0.056	16 n/a	n/a 0.082	53 n/a	
Chromium • Soil (mg/kg) • Water (µg/L)	10,000 1,000	21 N/A	16 <	19 <	N/A <	3.5 N/A	N/A <	17 N/A	
Copper • Soil (mg/kg) • Water (µg/L)	82,000 650	56 N/A	24 0.008	30 0.013	N/A 0.011	6.2 N/A	N/A <	38 N/A	

TABLE E-5b
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	EPA Remediation Objectives for Industrial/ Commercial Properties	APEC 3					APEC 4	
		SB 12	SB 14	SB 15	SB 16	SB 17	12-in. well	SB 13
Zinc								
• Soil (mg/kg)	610,000	170	49	52	N/A	38	N/A	92
• Water (µg/L)	10,000	N/A	0.10	0.30	<	N/A	<	N/A
Lead								
• Soil (mg/kg)	400	120	19	17	N/A	46	N/A	33
• Water (µg/L)	100	N/A	0.007	<	0.003	N/A	0.0057	N/A
PNA Sample Results*								
Napthalene								
• Soil (mg/kg)	82,000	0.10	<	<	N/A	0.05	N/A	<
• Water (µg/L)	39	N/A	<	<	<	N/A	<	N/A
Acenaphthylene								
• Soil (mg/kg)	—	0.13	<	<	<	<	N/A	<
• Water (µg/L)	—	N/A	<	<	N/A	N/A	<	N/A
Acenaphthylene								
• Soil (mg/kg)	120,000	0.09	<	<	<	2.1	N/A	<
• Water (µg/L)	2,100	N/A	0.27	<	N/A	N/A	1.2	N/A
Fluorene								
• Soil (mg/kg)	82,000	2.8	<	<	<	1.9	N/A	<
• Water (µg/L)	1,400	N/A	0.32	<	N/A	N/A	7.3	N/A
Phenanthrene								
• Soil (mg/kg)	—	13	<	0.47	1.5	3.9	N/A	0.23
• Water (µg/L)	—	N/A	2.4	0.8	N/A	N/A	9.6	N/A
Anthracene								
• Soil (mg/kg)	610,000	0.18	<	<	N/A	0.2	N/A	0.04
• Water (µg/L)	10,500	N/A	<	<	2.6	N/A	<	N/A

TABLE I-5b
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	DEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 3						APEC 4
		SB 12	SB 14	SB 15	SB 16	SB 17	12-in. well	SB 13
Fluorene • Soil (mg/kg) • Water (µg/L)	82,000 1,400	1.2 N/A	< <	< 0.7	N/A 10.0	0.6 N/A	N/A <	0.26 N/A
Pyrene • Soil (mg/kg) • Water (µg/L)	61,000 1,050	1.1 N/A	< <	< <	N/A 7.5	0.48 N/A	N/A 0.7	0.24 N/A
Benzo(a)anthracene • Soil (mg/kg) • Water (µg/L)	8 0.65	0.59 N/A	0.04 <	0.04 <	N/A 3.5	0.27 N/A	N/A <	0.15 N/A
Chrysene • Soil (mg/kg) • Water (µg/L)	780 7.5	0.68 N/A	0.03 <	0.04 <	N/A 3.7	0.30 N/A	N/A <	0.18 N/A
Benzo(b)fluoranthene • Soil (mg/kg) • Water (µg/L)	8 0.90	0.35 N/A	< <	< <	N/A 4.0	0.14 N/A	N/A <	0.14 N/A
Benzo(k)fluoranthene • Soil (mg/kg) • Water (µg/L)	78 0.85	0.59 N/A	< <	< <	N/A 3.2	0.22 N/A	N/A <	0.12 N/A
Benzo(a)pyrene • Soil (mg/kg) • Water (µg/L)	0.8 2.00	0.54 N/A	< <	< <	N/A 3.4	0.20 N/A	N/A <	0.15 N/A
Indeno(1,2,3-cd)pyrene • Soil (mg/kg) • Water (µg/L)	8 2.15	0.29 N/A	< <	< <	N/A 1.9	0.08 N/A	N/A <	< N/A

TABLE 1-5b
RESULTS OF SOIL AND WATER SAMPLING AT ESTES PROPERTY
PROPOSED RAIL LINE CONNECTION SITE IN CICERO, ILLINOIS

PARAMETER	IEPA Remediation Objectives for Industrial/ Commercial Properties	APEC 3					APEC 4
		SB 12	SB 14	SB 15	SB 16	SB 17	
Dibenz(a,b)anthracene • Soil (mg/kg) • Water (µg/L)	0.8 1.3	< N/A	< <	< <	N/A <	< N/A	< N/A
Benzo(a)pyrene • Soil (mg/kg) • Water (µg/L)	— —	0.30 N/A	< <	< <	N/A 1.6	0.12 N/A	< N/A

* All samples analyzed using EPA Method 8260.

b Tier I Soil Remediation Objectives for Industrial/Commercial Properties, State of Illinois, Title 35; Environmental Protection, Part 742, Appendix B, Table B.

c All samples analyzed using EPA Method 600/7000 Series.

d Tier I Groundwater Remediation Objectives for the Groundwater Component of Groundwater Ingestion Route, State of Illinois, Title 35; Environmental Protection, Part 742, Appendix B, Table E.

Key:

- APEC = area of potential environmental concern.
- IEPA = Illinois Environmental Protection Agency.
- µg/L = micrograms per liter.
- mg/kg = milligrams per kilogram.
- N/A = not applicable.
- PNAs = polynuclear aromatics.
- SB = soil boring.
- VOCs = volatile organic compounds.
- < = less than detectable limits.

1.5.3 Existing Conditions

Cicero, Illinois

The Applicants had identified solid waste storage areas located on the north side of both the Melrose and Estes properties during their site visit. The Phase I ESA considered these solid waste storage areas as areas of potential environmental concern areas and noted that they contained the following: trash, wood and metal scraps, old fuel tanks, and empty metal drums that the owners placed on exposed soil. Because minor soil stains were visible, the Phase II ESA addressed subsurface conditions in several of these areas on the Melrose and Estes properties. However, the Phase II ESA did not include geophysical analysis to determine whether other subsurface features exist on the property (e.g., USTs).

SEA reviewed the results of soil samples taken during the Phase II ESA. These samples contained contaminants associated with petroleum products (i.e., volatile organic chemicals, polynuclear aromatic hydrocarbons, and lead) in amounts slightly above cleanup objective levels established under CERCLA. Based on the state cleanup requirements and the existing quality of the local groundwater, SEA determined that the contaminants could be managed in place because of geologic and hydrogeologic conditions that exist at the site.⁹ A primary reason for this conclusion was that IEPA considers area groundwater as Class II Groundwater (i.e., a non-potable groundwater source). Therefore, the aquifer would not be a source of drinking water that could be affected by any soil contaminants that might leach into the groundwater.

SEA determined that the contaminant levels were low enough that disturbance of these soils during construction of the proposed connection would unlikely present a risk to the health and safety of construction workers. "Hazardous Materials and Waste Sites Analysis Methods and Results," Tables I-4, "Results of Soil and Water Sampling at Melrose Property and IC Spur Right-of-Way Proposed Rail Line Connection Site in Cicero, Illinois," I-5a, "Results of Soil and Water Sampling at Estes Property Proposed Rail Line Connection Site in Cicero, Illinois," and I-5b, "Results of Soil and Water Sampling at Estes Property Proposed Rail Line Connection Site in Cicero, Illinois."

Jackson, Mississippi

SEA reviewed information from government environmental databases to identify potential environmental concerns (i.e., hazardous materials spills and waste sites) within the area of the proposed bypass. SEA's review revealed the following two properties of environmental concern that were within 500 feet of the proposed bypass:¹⁰

⁹ Andrew Lewis, Oolder Associates, Inc. Telephone communication, July 8, 1998.

¹⁰ Environmental Data Resources, Inc. Jackson Ready Mix, 103 West Woodrow Wilson Avenue, Jackson, MS. Southport, CT, Inquiry Number 0279567.1r, August 4, 1998.

- Jackson Ready Mix Concrete, 103 West Woodrow Wilson Boulevard, Jackson, Mississippi. The database shows this site to contain a LUST. In preparing their PDEA, the Applicants contacted the Mississippi Department of Environmental Quality (MDEQ), whose records indicated permanent closure of the LUST. MDEQ issued a "No Further Action" letter for the site on January 21, 1991.¹¹
- Mississippi Department of Transportation, 2567 North West Street, Jackson, Mississippi. The database shows this site to contain a LUST. MDEQ records indicated permanent closure of the LUST. MDEQ issued a "No Further Action" letter for the site on June 20, 1994.¹²

As previously stated, SEA reviewed information from the FRA database to determine whether hazardous materials spills had occurred along the existing IC rail line within 500 feet of the proposed bypass. SEA identified ten hazardous materials spills during its review of the database. (Refer to Table I-1, "Hazardous Materials Spill Incidents Reported at the Jackson Yard, Jackson, Mississippi.") Because the FRA database did not provide information about the specific location of these spills, SEA was unable to determine whether any of the spills occurred within 500 feet of the proposed construction site. Information from Hinds County Emergency Management noted that the local fire department had responded to four hazardous material spills between 1994 and 1997, which confirmed information that SEA identified in the FRA database.

1.6 CRITERIA OF SIGNIFICANCE

SEA evaluated the potential effects of the proposed construction projects on hazardous materials spill sites and hazardous waste sites within 500 feet of the proposed construction activity.¹³ SEA did not evaluate the potential effects of hazardous materials spills and waste sites that resulted from operational changes because such changes would not alter the physical environment. SEA considered the effects of construction activities on hazard materials spill sites and hazardous waste sites to be significant if one of the following conditions would occur:

- The construction activities would create a threat to human health or the environment by disturbing sites containing hazardous materials.

¹¹ Phillips, Donna, of Underground Storage Tank Division, Mississippi Department of Environmental Quality. Telephone communication with Kim Farley, Dunes & Moore, August 21, 1998.

¹² *Ibid.*

¹³ Environmental assessments prepared for several proposed rail line connections relating to the acquisition of Conrail by CSX and NS evaluated effects of hazardous materials and waste sites within 500 feet of the proposed rail line connections. For example, see: Section of Environmental Analysis. *Environmental Assessment, Greenwich, CSX/Conrail Rail Line Connections—Village of Greenwich, Huron County, Ohio*, Decision No. 2833, October 7, 1997.

- The construction activities would disturb sites where other parties had contained contaminants in place to reduce the possibility of threats to human health or the environment (e.g., covered contaminants with a clay, soil, or asphalt cap).

I.7 ANALYSIS RESULTS

SEA reviewed information obtained from environmental and railroad databases, the Phase I and Phase II ESAs, and site visits to identify sites containing hazardous wastes or materials that construction of the proposed connection could affect.

I.7.1 Cicero, Illinois

SEA reviewed information pertaining to five USTs located on the Estes property until removal in 1990. SEA evaluated the results of soil samples taken during the Phase II ESA and determined that: (1) existing contaminant levels in the soil were sufficiently low to manage soils in place, and (2) existing contaminant levels would unlikely present a risk to workers during construction of the proposed connection. Based on the results of the soil samples, IEPA records, and recommendations of the Phase II ESA, SEA determined that existing contaminants could be managed in place as they are unlikely to present a risk to workers during construction. SEA further concludes that it was unlikely that any USTs remain on the Estes property.

SEA evaluated potential hazardous sites at the Melrose property to determine any possible effect by the proposed construction activities. According to the Phase I ESA, two USTs were removed from the property in the late 1980s, although IEPA has no records relating to either the existence or removal of these USTs.

SEA identified an area of potential concern on the Melrose property that contained one AST diesel fuel AST and three inactive ASTs. The Applicants would remove these ASTs prior to construction activities. Soil samples taken from the AST area during the Phase II ESA indicated trace amounts of contaminants. SEA concurred with the recommendations of the Phase II ESA to manage the contaminants in place and determined that the contaminants would not likely pose a risk to construction workers building the proposed connection. Due to the eventual removal of the ASTs and the low level of soil contamination, SEA believes that the AST site would require no further action prior to the proposed construction activities.

The Applicants reported observing solid waste storage areas on the north side of both the Estes and Melrose properties. Based on the findings of the Phase I ESA and soil samples taken during the Phase II ESA, SEA concludes that the materials stored on these sites (wood and metal scraps, trash, and empty metal drums) do not appear to be contaminating the surrounding environment. The Applicants would remove these materials prior to construction, thereby eliminating any opportunity for contamination to occur from these sources.

SEA evaluated information pertaining to Turks Motor Express and Brightly Galvanized Products—two off-site properties identified in the environmental databases as located within 500 feet of the proposed construction site. Turks Motor Express was identified as a LUST site

contaminated with diesel fuel and waste oils. IEPA records indicate that three USTs were removed from the site on September 26, 1997, as well as contaminated soils surrounding the UST basin.¹⁴ Water samples indicated no apparent groundwater contamination. According to IEPA correspondence to Turks Motor Express dated August 12, 1998, the site must undergo further remediation before IEPA will grant closure.¹⁵

Brightly Galvanized Products is a RCRA large-quantity generator.¹⁶ SEA reviewed information from IEPA records regarding the type and quantity of RCRA-listed wastes generated. Brightly Galvanized Products generates spent pickle liquor from its metal galvanizing process. Envirote Corporation in Harvey, Illinois transports this waste off site following on-site storage for less than 90 days.¹⁷

SEA determined that the proposed construction activities would not disturb hazardous materials at the Turks and Brightly Galvanized Products properties.

1.7.2 Jackson, Mississippi

SEA evaluated Jackson Ready Mix and Mississippi Department of Transportation (MDOT) Products—two off-site properties identified in the environmental database search as located within 500 feet of the proposed construction site. The database reported both sites to contain LUSTs. SEA reviewed records from MDEQ, which indicated permanent closure of the LUST on the Jackson Ready Mix site in 1991 and closure of the LUST on the MDOT site in 1994. MDEQ required no further action on either site.

SEA evaluated the potential impacts the proposed construction activities could cause to the closed LUST at the Jackson Ready Mix site. The Applicants have an existing agreement with Jackson Ready Mix that allows them to enter Jackson Yard from the west via the Jackson Ready Mix property. The Applicants expect that construction vehicles would cross the Jackson Ready Mix property to construct the proposed bypass. However, SEA determined that it was unlikely that the closed LUST would be affected because construction activities would not require excavation and most construction activities would not take place on this property.

SEA believed that proposed construction activities would not disturb hazardous materials at the MDOT property. SEA determined that construction would not affect this site because

¹⁴ OSC Environmental Laboratories, Inc. *20-Day Certification, 45-Day Report and Corrective Action Completion Report: Turks Motor Express, Inc.*, IEPA No. 971827, November 11, 1997.

¹⁵ Illinois Environmental Protection Agency. Letter from Clifford L. Wheeler to Turks Motor Express/R.R.S. Management, Re: LPC #0310515305, August 12, 1998.

¹⁶ A RCRA large-quantity generator is defined as a generator of more than 1,000 pounds per month of a RCRA-listed hazardous waste.

¹⁷ Illinois Environmental Protection Agency. *1996 Hazardous Waste Report: Brightly Galvanized Products*, AILED/0310515010, March 1997.

construction would not take place on this property and construction vehicles would not need to cross this property to enter the construction area.

1.8 CONCLUSIONS

SEA concludes that the Applicants' proposed construction projects at Cicero, Illinois and Jackson, Mississippi would not result in significant adverse effects on hazardous materials spill sites or hazardous waste sites if the Applicants follow construction Best Management Practices. Therefore, SEA recommends that the Board require the Applicants to follow the construction Best Management Practices described in Chapter 8, "SEA's Preliminary Recommended Environmental Mitigation."

APPENDIX J
NATURAL RESOURCES ANALYSIS
METHODS AND RESULTS

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APPENDIX J

NATURAL RESOURCES ANALYSIS METHODS AND RESULTS

The Surface Transportation Board's (Board), Section of Environmental Analysis (SEA) evaluated the potential effects on natural resources related to the construction and operation of a new rail line connection at Cicero, Illinois and a new bypass at Jackson, Mississippi. Appendix J discusses SEA's evaluation of potential effects on natural resources resulting from the proposed construction projects. SEA's methods for evaluating potential effects on natural resources focus on the following areas:

- Water resources and wetlands.
- Biological resources, including Federally listed threatened and endangered species; protected wildlife habitats and migration corridors; wildlife refuges and sanctuaries; national, state and/or local parks or forests; and protected unique or critical habitats.

J.1 OVERVIEW

The following sections describe SEA's methods to identify and evaluate potential effects on natural resources. The discussion includes the following:

- Applicable regulations.
- Threshold screening process.
- Sources and types of data collected.
- Criteria used to determine the significance of potential impacts.

J.2 APPLICABLE REGULATIONS AND GUIDANCE

SEA reviewed the potential effects on natural resources of the proposed construction projects in accordance with Federal regulations and guidelines. These regulations include the following: (1) the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321-4347); (2) the Board's regulations at 49 CFR 1105; and (3) guidelines published by the Council on Environmental Quality (CEQ) (40 CFR 1500).

SEA analyzed the potential effects of the proposed construction projects to ensure compliance with other Federal laws regarding the following specific natural resources:

- Discharges into "Waters of the U.S." (including wetlands), regulated by Sections 401, 402, and 404 of the Clean Water Act of 1977, as amended by the Water Quality Control Act of 1987 (P.L. 100-4); National Pollutant Discharge Elimination System (NPDES)

(33 U.S.C. 1342 *et seq.*); and Executive Order 11990, "Protection of Wetlands" (42 FR 26961, May 1977).

- Construction Activities in "Navigable Waters," regulated by Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- Activities Affecting Federally Listed Threatened and Endangered Plant and Animal Species, regulated by the Endangered Species Act of 1973 (16 U.S.C. 1531-1544); Fish and Wildlife Conservation Act of 1956 and 1980; Fish and Wildlife Coordination Act of 1934, amended 1946, 1958, and 1977 (16 U.S.C. 661-667e); and Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1401, *et seq.*).
- Activities Located in Floodplains, regulated by Executive Order 11988, "Floodplain Management" (May 1977).

J.3 SCREENING PROCESS

SEA determined that operational changes (i.e., increases or decreases in traffic on existing rail line segments and increases or decreases in activity at rail yards and intermodal facilities) have little direct effect on water resources, wetlands, and biological resources. SEA did not evaluate the potential effects to these resources caused by proposed construction projects entirely within rail yards because SEA determined that these areas have been heavily disturbed by many years of railroad use. Therefore, SEA focused its analysis of potential natural resource effects on activities relating to the proposed construction projects at Cicero, Illinois and Jackson, Mississippi. Specifically, SEA analyzed potential effects to water resources, wetlands, and biological resources in the vicinity of the proposed construction projects.

J.4 DATA SOURCES

SEA evaluated data from the following sources in its review of potential effects on natural resources related to the proposed construction:

- U.S. Geological Survey (USGS) topographic maps.
- U.S. Fish and Wildlife Service (FWS) National Wetlands Inventory maps.
- Illinois Department of Natural Resources (IDNR).
- Mississippi Department of Environmental Quality (MDEQ).
- Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP).
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps.
- Aerial photographs.

- Natural Resources Conservation Service (NRCS) Soil Surveys and applicable lists of hydric soils.
- Internet databases and other pertinent on-line information.
- Field investigations of the proposed construction sites and surrounding areas.
- Agency consultation.

J.5 ANALYSIS

The following sections discuss the assumptions, evaluation criteria, and analysis SEA followed to evaluate potential effects on natural resources as a result of the proposed construction projects. The discussions are separated into two categories: water resources and wetlands and biological resources.

J.5.1 Water Resources and Wetlands

SEA gathered information about existing water resources and wetlands at or near the proposed construction sites to analyze potential effects on these natural resources. The sections below discuss SEA's review of maps, field investigations, permit requirements, and evaluation of potential effects.

J.5.1.1 Map Review and Analysis

SEA referred to published maps and charts that identify natural resources at or near the proposed construction sites. SEA reviewed USGS topographic maps to locate any surface waters, including intermittent and perennial streams, ponds, and rivers. SEA also examined National Wetland Inventory maps to determine the potential presence of any wetlands at or near the proposed sites. To verify the information provided by the wetlands maps, SEA reviewed NRCS county soil surveys to obtain soil classifications. SEA then consulted hydric soils lists to determine the presence of hydric soils, an indicator of the presence of wetlands.

SEA also reviewed Flood Insurance Rate Maps of the project areas to determine whether the proposed construction occurs within a 100-year floodplain. Because construction activities within a floodplain could potentially affect water quality and flooding characteristics at or near the proposed sites, SEA evaluated construction effects, as required by Sections 401, 402, and 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

J.5.1.2 Field Review

To prepare their Preliminary Draft Environmental Assessment (PDEA), the Applicants visited the proposed construction sites to:

- Observe the natural environment.
- Determine the potential effects of the proposed construction on water resources and wetlands.
- Conduct a survey of existing natural resources.

During each site investigation, the Applicants conducted a walking site reconnaissance, completed data summaries on identified natural resources, mapped the resources, and photographed the site. Table J-1, "Vegetation Identified at Proposed Construction Sites," lists the vegetation the Applicants identified during their field investigations of the proposed construction sites. SEA reviewed the Applicants site visit method and documentation and concurred with the Applicants' findings.

**TABLE J-1
VEGETATION IDENTIFIED AT PROPOSED CONSTRUCTION SITES**

Cicero, Illinois	
<u>Trees</u> American Elm (<i>Ulmus americana</i>) Box Elder (<i>Acer negundo</i>) Common Buckthorn (<i>Rhamnus cathartica</i>) Chicory (<i>Cichorium intybus</i>) Cottonwood (<i>Populus deltoides</i>) Honey Locust (<i>Gleditsia triacanthos</i>) Red Mulberry (<i>Morus rubra</i>) Sandbar Willow (<i>Salix exigua</i>) Siberian Elm (<i>Ulmus pumila</i>) Slippery Elm (<i>Ulmus rubra</i>) Smooth Sumac (<i>Rhus glabra</i>)	<u>Herbaceous</u> Aster (<i>Aster spp.</i>) Bouncing Bet (<i>Saponaria officinalis</i>) Broadleaf Cattail (<i>Typha latifolia</i>) Canada Goldenrod (<i>Solidago canadensis</i>) Canadian Thistle (<i>Cirsium arvense</i>) Catnip (<i>Nepeta cataria</i>) Common Mullen (<i>Verbascum thapsus</i>) Common Horsetail (<i>Equisetum arvense</i>) Common Milkweed (<i>Asclepias syriaca</i>) Common Strawberry (<i>Fragaria virginiana</i>) Daisy Fleabane (<i>Erigeron annuus</i>) Dogbane (<i>Apocynum cannabinum</i>) Evening Primrose (<i>Oenothera biennis</i>) Jerusalem Artichoke (<i>Helianthus tuberosus</i>) Narrow Leaf Cattail (<i>Typha angustifolia</i>) Nodding Thistle (<i>Carduus nutans</i>) Queen Anne's Lace (<i>Daucus carota</i>) Small White Morning Glory (<i>Ipomoea lacunosa</i>) Spider Wort (<i>Tradescantia virginiana</i>) Tall Goldenrod (<i>Solidago altissima</i>) White Sweet Clover (<i>Melilotus alba</i>)
<u>Grasses</u> Bristly Foxtail (<i>Setaria verticillata</i>) Canada Wild Rye (<i>Elymus canadensis</i>) Giant Foxtail (<i>Setaria faberii</i>) Kentucky Bluegrass (<i>Poa pratensis</i>) Quack Grass (<i>Agropyron repens</i>) Red Top Grass (<i>Agrostis alba</i>)	
<u>Vines</u> Virginia Creeper (<i>Parthenocissus quinquefolia</i>) Wild Grape (<i>Vitis riparia</i>)	

TABLE J-1
VEGETATION IDENTIFIED AT PROPOSED CONSTRUCTION SITES

Jackson, Mississippi	
Vegetation observed on right-of-way: <u>Grasses</u> Crab Grass (<i>Digitaria sanguinalis</i>) Giant Foxtail (<i>Setaria faberii</i>) Goose Grass (<i>Elyusine indica</i>) <u>Herbaceous</u> Crown Vetch (<i>Coronilla varia</i>)	Vegetation observed on property to be acquired: <u>Trees</u> American Elm (<i>Ulmus americana</i>) Sycamore (<i>Platanus occidentalis</i>) <u>Grasses</u> Crab Grass (<i>Digitaria sanguinalis</i>) Goose Grass (<i>Elyusine indica</i>) Indian Grass (<i>Sorghastrum nutans</i>) <u>Herbaceous</u> Common Ragweed (<i>Ambrosia artemisiifolia</i>) Common Morning Glory (<i>Ipomoea purpurea</i>) Goldenrod (<i>Solidago spp.</i>)

J.5.1.3 Permits

SEA determined the need for permits based on the Applicants' field investigations conducted to identify potential effects to water resources and wetlands and permit requirements of Sections 401, 402, and 404 of the Clean Water Act. SEA based the proposed projects' need for permits upon consultation with state and local water management agencies to determine the requirements for compliance and permit issuance.

J.5.1.4 Evaluation of Effects

SEA completed an initial evaluation of the effects of the proposed construction projects on water resources and wetlands during each site visit. At the time of each visit, SEA assessed the planned construction activities in relation to the water resources and wetlands present at or near the site. SEA considered the proposed construction activities and determined whether any of the following potential effects on water resources and wetlands would occur:

- Alteration of stream embankments with riprap, concrete, and/or other stabilization measures.
- Temporary or permanent loss of surface water area associated with the incidental deposition of fill.
- Downstream sediment deposition or water turbidity caused by fill activities, dredging, and/or soil erosion from upland construction sites.
- Direct or indirect destruction and/or degradation of aquatic, wetland, and riparian vegetation and/or habitat.

- Degradation of water quality through chemical or petroleum spills or sediment loading.
- Alteration of water flow that could increase the uprooting or destruction of vegetation, bank erosion or flooding, or affect fish and wildlife habitats.

SEA determined that the following potential effects from proposed construction activities on water resources and wetlands could be significant:

- The removal, alteration, or filling of wetlands or other waterbodies.
- Effects on wetlands in known habitats for threatened or endangered species.
- Effects on identified drinking water sources.
- Effects on floodplains that significantly alter the flooding patterns within (and adjacent to) the site of the proposed construction.

J.5.2 Biological Resources

SEA gathered information regarding existing biological resources at or near the proposed connections to analyze potential effects on these resources. Biological resources include the following:

- Federally listed threatened and endangered species.
- Protected wildlife habitats and migration corridors.
- Wildlife refuges and sanctuaries.
- National, state, and/or local parks or forests.
- Protected unique or critical habitats.

SEA conducted its analysis through: (1) the collection and review of data, (2) field investigations, (3) consultation with government agencies, and (4) the evaluation of effects. The following sections discuss these analytical methods.

J.5.2.1 Data Collection and Review

SEA obtained relevant data from a variety of sources to analyze the potential effects of the proposed construction projects on biological resources. SEA consulted with appropriate Federal and state agencies (i.e., FWS, IDNR, MDWFP) and sought comments from them. SEA used this information to identify the following: threatened or endangered species, protected wildlife habitats and migration corridors, wildlife refuges and sanctuaries, and unique or critical habitats that could be affected by the proposed construction projects. SEA searched the Internet for biological resource listings, including databases of threatened and endangered species developed by Federal and state agencies. To prepare for field identification of plant and animal species, SEA reviewed descriptions and photographs of the identified species. SEA also reviewed USGS topographic maps and contacted local parks departments to determine the location of national,

state, and/or local parks and forests within 2 miles of the proposed construction projects. Table J-2, "Parks and Forests Within Two Miles of the Proposed Construction Projects," lists the parks and forests identified by SEA.

**TABLE J-2
PARKS AND FORESTS WITHIN TWO MILES OF THE PROPOSED
CONSTRUCTION PROJECTS**

Park Name (Location)	Total Acres	Type of Facility	Type of Ownership	Distance from Site (miles)
Cicero, Illinois				
Piotrowski Park (31 st and Keeler)	22.93	Playground, pool, community center	Chicago Park District	0.5 - NE
Shedd Park (23 rd and Lawndale)	1.3	Picnic, playground	Chicago Park District	1.75 - NE
Franklin Park (14 th and Kolin)	8.47	Picnic, playground	Chicago Park District	2.0 - NE
Leclaire Park (44 th and Leclaire)	12.44	Picnic, playground, pool, community center	Chicago Park District	1.4 - SW
Vicron Park (49 th and Leclaire)	12.15	Picnic, playground, basketball	Chicago Park District	2.0 - SW
Archer Park (Kilbourn and 30 th)	13.22	Picnic, playground, basketball	Chicago Park District	2.0 - SE
Morton Park (23 rd and Cermak)	0.88	Picnic, playground	Clyde Park District - Cicero	1.25 - NW
Park Home Park (51 st and 18 th)	0.37	Picnic, playground	Clyde Park District - Cicero	1.75 - NW
Warren Clyde Park (56 th and 16 th)	0.29	Picnic, playground	Clyde Park District - Cicero	2.0 - NW
Kolar Park (36 th and Austin)	0.39	Picnic, playground	Clyde Park District - Cicero	1.75 - SW
Hawthorne Park (29 th and Laramie)	4.0	Picnic, playground, basketball, pool	Hawthorne Park District - Cicero	1.0 - NW
Hawthorne Sports Complex (31 st and Central)	4.5	Playground, pool, basketball, baseball	Hawthorne Park District - Cicero	1.0 - W
Drexel Park (34 th and 55 th)	2.5	Picnic, playground	Hawthorne Park District - Cicero	1.2 - W

TABLE J-2
PARKS AND FORESTS WITHIN TWO MILES OF THE PROPOSED
CONSTRUCTION PROJECTS

Park Name (Location)	Total Acres	Type of Facility	Type of Ownership	Distance from Site (miles)
Jackson, Mississippi				
Aaron Henry Park (2811 Center St.)	6.2	Picnic, playground, basketball	City	1.7 - NW
Belhaven Park (923 Belhaven St.)	1.0	Picnic	City	0.8 - SE
Belhaven Heights Park (Monroe St.)	3.9	Undeveloped	City	1.5 - SE
Bethlehem Park (920 Blair St.)	3.9	Playground, basketball	City	0.6 - SE
High Street Park (125 High St.)	0.3	Playground, basketball	City	1.5 - SE
Jackson Zoological Park & Livingston Park (2918 W. Capitol St.)	99.5	Zoo, miniature railroad, picnic, playground	City	2.0 - SW
Jaycee Park (1420 Bailey Ave.)	0.5	Picnic, playground, basketball	City	0.7 - SW
Lakeland Park (1300 Lakeland Drive)	15.1	Picnic, baseball	City	2.0 - NE
Laurel Park (Laurel St.)	10.7	Picnic, playground	City	1.4 - SE
Midtown Park (1030 N. Mill St.)	2.0	Picnic, playground, walking/exercise trail	City	0.8 - SE
Polkdenver Park (800 W. Capitol St.)	6.2	Pavilion, picnic	City	1.6 - SW
R. Jess Brown Park (502 W. Capitol St.)	4.9	Pavilion, picnic, basketball	City	1.6 - SW
St. Paul's Park (1091 Plymouth Ave.)	2.9	Picnic, playground, basketball	City	1.1 - NW
Smith Park (302 Amite St.)	2.4	Picnic, amphitheater	City	1.8 - SE
Virden Addition Park (3157 Edwards Ave.)	2.9	Picnic, pavilion, basketball, gymnasium	City	1.2 - NW
Wightman Park (1700 Wightman St.)	0.9	Playground, basketball	City	0.3 - SE

J.5.2.2 Field Review

To prepare their PDEA, the Applicants visited the project sites to observe the natural environment, list existing biological resources, and determine the potential effects of the proposed construction projects on such resources. During these site investigations, the Applicants conducted a walking site reconnaissance, completed data summaries on identified natural resources, mapped the resources, and photographed the site. SEA reviewed the Applicants' site visit methods and documentation and concurred with the Applicants' findings.

J.5.2.3 Evaluation of Effects

SEA conducted an initial evaluation of the effects of the proposed construction projects on biological resources based on the Applicants' site visits. SEA assessed the planned activities in relation to the biological resources present at or near the sites and used the following criteria to determine the effect on biological resources:

- Loss or degradation of protected plant or wildlife communities.
- Disturbance of nesting, breeding, or foraging areas for protected wildlife.
- Loss or degradation of areas designated by regulatory or review agencies as critical habitats.
- Loss or degradation of wildlife sanctuaries; refuges; or national, state, and local parks or forests.
- Alteration of wildlife movement or migration corridors.

SEA determined that the following potential effects on biological resources, depending on their extent, could be classified as significant:

- Adverse effects on critical habitats for Federally listed threatened or endangered species.
- Loss or degradation of wildlife sanctuaries, refuges, national parks, or national forests that significantly alters the function or accessibility of those resources.
- Disruption of wildlife movements or migratory corridors that significantly alters regional population numbers or diversity.

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APPENDIX K
LAND USE ANALYSIS METHODS AND RESULTS

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APPENDIX K

LAND USE ANALYSIS METHODS AND RESULTS

The Surface Transportation Board (Board), Section of Environmental Analysis (SEA) evaluated the potential effects on land use relating to the construction and operation of the proposed rail line connection in Cicero, Illinois and the proposed bypass in Jackson, Mississippi. Appendix K discusses the methods SEA used for analysis of land use effects relating to the proposed construction projects.

K.1 OVERVIEW

The following sections discuss the process by which SEA identified and evaluated potential effects on land use. This discussion includes the following: (1) applicable Federal and state regulations; (2) the threshold screening process; (3) sources and types of data collected; (4) the analysis; and (5) the criteria used to determine the significance, if any, of effects to land use resulting from the proposed construction projects.

K.2 REGULATIONS AND GUIDANCE FOR IMPACT ANALYSIS

SEA analyzed the potential land use effects of the proposed new rail line connections. Pursuant to the Board's rule in 49 CFR 1105.7(e)(3) and regulations under the National Environmental Policy Act (NEPA) at 40 CFR 1502.16(c), SEA assessed each site for the following issues:

- Consistency of the proposed action with land use plans in effect.
- Effect of the proposed action on prime farmland.
- Consistency of the proposed action with existing Coastal Zone Management plans (49 CFR 1105.9).
- Effect of the proposed action on Native American reservations and lands.

K.3 SCREENING PROCESS

SEA identified areas of potential effect through a screening process that limited assessment of the land use effects. SEA excluded potential effects on land use from operational changes on rail line segments, at rail yards, and at intermodal facilities because all of these facilities are already in place. Because the proposed projects involve the construction of new rail lines, SEA studied potential land use issues related to those activities.

K.4 DATA SOURCES

SEA used the following sources of data in its review of the proposed construction projects:

- U.S. Geological Survey (USGS) topographic maps.
- Zoning maps.
- Plat maps.
- Aerial photographs.
- Geographic Information System (GIS) mapping.
- Consultation with local and county planning offices.
- Review of the Natural Resources Conservation Service (NRCS) database of prime farmlands.
- Review of the Bureau of Indian Affairs' Internet database concerning the locations of Native American reservations and lands in the vicinity of the proposed construction sites.
- Land use data, as needed, from state and local planning agencies.
- The Applicants' field investigations of the proposed construction sites and surrounding areas, which they prepared for their Preliminary Draft Environmental Assessment (PDEA).

K.5 ANALYSIS METHODS

SEA gathered information from the data sources listed above regarding existing land use, land use plans, prime farmland, coastal zones, and Native American reservations and lands. In June and August 1998, the Applicants also conducted field investigations of the proposed construction sites to identify existing land uses. SEA reviewed the Applicants' site visit methods and documentation and concurred with the Applicants' findings.

The following sections describe the methods SEA used to assess the effects of proposed rail line connections on existing and proposed land uses, prime farmland, coastal zone management areas, and Native American reservations and lands.

K.5.1 Consistency with Land Use Plans

SEA used available land use data and findings of field investigations to prepare descriptions of existing land use in the area of the proposed construction sites. SEA reviewed the local land use plan to determine whether the proposed action was consistent with the plan. SEA determined that an effect to land use would occur if the proposed action was inconsistent with the local land use plans.

K.5.2 Prime Farmland

SEA reviewed USGS topographic maps, zoning maps, NRCS soil surveys, and information contained in the NRCS database of prime farmlands to determine whether prime farmlands exist in the vicinity of the proposed construction projects.

K.5.3 Coastal Zones

SEA used the available data to determine whether the activities at the proposed sites would adversely affect land within the state Coastal Zone Management Area. Methods included consultation with the state agency with jurisdiction over coastal zone management to determine whether the proposed construction projects occur on land within a state coastal zone. SEA would prepare a consistency certification and provide it to the state agency (in accordance with 15 CFR 930.57 and 930.58) along with the following information:

- Detailed descriptions of the proposed activity and its associated facilities sufficient to permit an assessment of their probable coastal zone effects.
- Any information required by the state (pursuant to 15 CFR 930.56).
- A brief assessment relating the probable coastal zone effects of the proposed action to the relevant elements of the management program.
- A brief set of findings, derived from the assessment, that showed the proposed activity and its effects (e.g., air, water, hazardous materials, wetlands) to be consistent with the provisions of the management program [pursuant to 15 CFR 930.58(a)(4)]. The state must approve the consistency certification.

If the state did not list the activity associated with each proposed action as subject to review in the Coastal Zone Management Plan, SEA would provide notice of the proposal to the state coastal zone manager.

K.5.4 Native American Lands

SEA evaluated the proposed construction sites to determine whether the proposed action would occur on Native American lands. SEA reviewed information contained in the Bureau of Indian Affairs' Internet database regarding the presence of Native American lands within the project areas.

K.6 LAND USE SIGNIFICANCE CRITERIA

SEA based the criteria for determining adverse effects in accordance with the Board's rule in 49 CFR 1105.7(e)(3) and NEPA regulations under 40 CFR 1502.16(c). SEA used the following criteria to determine when a land use effect would be significant:

- Consistency with Land Use Plans. If the proposed connection would substantially alter the character and use of land adjoining the proposed sites, such action would be inconsistent with local land use plans.
- Prime Farmland. The effect to prime farmland would be such as to remove a substantial portion of farmland in the county, as defined by local land use planning authorities, from actual or potential production.
- Consistency with Coastal Zone Management. If the proposed connection would occur in a coastal zone, such action would be inconsistent with the requirements of the state agency with jurisdiction over coastal zone management.
- Native American Reservations and Lands. The proposed action would occur on Native American reservations or lands and would be inconsistent with Native American tribal land use plans, policies, and controls.

K.7 LAND USE ANALYSIS DETAILS FOR CONSTRUCTION PROJECTS

This section presents details regarding SEA's land use analysis at the Applicants' construction projects at Cicero, Illinois and Jackson, Mississippi.

K.7.1 Cicero, Illinois

Existing Conditions. In Cicero, the IC and BRC rail lines intersect. The Applicants propose to construct a new connection between these two lines. The area near the intersection is largely industrial and commercial. Two transport companies, Melrose Transport Systems and Estes Express Lines, currently occupy the site of the proposed connection. Another transport company (Mares Service) and a business (Bel-Air Drive-In) are within 500 feet of the proposed connection. The Melrose and Estes properties that the Applicants will acquire are industrial properties. Several other businesses located along 34th Street are within 1,000 feet of the proposed connection. Utility lines (located in the vicinity of the proposed connection) run along the north side of 34th Street, which is adjacent to the IC and BRC rail lines and the IC rail spur.

The topography of the proposed site is relatively flat. However, a drive-in movie theater, located north of the IC line, contains numerous man-made hills. The hills separate the property from the IC and BRC railroad tracks that run along its east and south borders, respectively.

Consistency with Local Land Use Plans. The Town of Cicero Planning Department provided information on local planning and zoning requirements. Although Cicero has no land use plan, the zoning map indicated that the area adjacent to the IC-BRC intersection is zoned for general manufacturing (M-3).

Prime Farmlands and Coastal Zones. SEA reviewed information from a national database of prime farmlands, which the Natural Resources Conservation Service (NRCS) maintains, and determined that no prime farmland soils are in the vicinity of the proposed connection.¹ NRCS soil surveys classify the soils in the vicinity of the proposed connection as Urban Land.²

Any proposed project that might affect land or water uses within a coastal zone designated in accordance with the Coastal Zone Management Act (16 U.S.C. 1451 *et seq.*) must be consistent with the state's Coastal Zone Management Plan. Illinois does not have a Federally recognized Coastal Zone Management program.³

Native American Lands. The land required for the proposed connection is not within Native American reservations or tribal lands. According to the Bureau of Indian Affairs, no Federally recognized Native American tribes or reservations are in Illinois.⁴

K.7.2 Jackson, Mississippi

Existing Conditions. Jackson Yard is in an industrial area of Jackson, Mississippi. Jackson Yard is the rail car interchange point for two IC north-south rail lines. The Applicants propose to construct a bypass near the north end of Jackson Yard. The Woodrow Wilson Avenue overpass would cross the proposed bypass. The site topography is relatively flat.

SEA identified ten businesses within 500 feet of the proposed bypass, eight of which appear on the east side of Jackson Yard and Mill Street. Two businesses are on the west side of Jackson Yard and would be adjacent to the proposed bypass. SEA determined that utility lines in the vicinity of the proposed bypass primarily run parallel to the traffic on the east and west sides.

¹ Natural Resources Conservation Service: Internet site (www.nrcs.usda.gov).

² Natural Resources Conservation Service. *Soil Survey of DuPage and Parts of Cook Counties, Illinois*, 1976.

³ Illinois State Geological Survey. Springfield, Illinois. Telephone conversation with Michael Chvostowski, July 13, 1998.

⁴ Bureau of Indian Affairs: Internet site (www.doi.gov/bureau-indian-affairs.html).

Consistency with Local Land Use Plans. SEA reviewed information on local planning and zoning requirements from the City of Jackson Planning Department. The local zoning map revealed that the City had zoned a small parcel of land, required for construction of the bypass, for heavy industrial uses (I-2). The City zoned the areas within 500 feet of the proposed bypass for limited industrial/light manufacturing (I-1) (east of Jackson Yard)⁵ and high-density/multi-family residences (R-4) (west of the proposed bypass). The Jackson Ready Mix facility lies between the proposed rail bypass and the nearest boundary residential area. In addition, Content Street further separates these residences from the Jackson Ready Mix facility.

Prime Farmlands and Coastal Zones. SEA reviewed information from the national database of prime farmlands, maintained by the NRCS and determined that no prime farmland soils exist in the vicinity of the proposed bypass.⁶ NRCS classified the soils in the vicinity of the proposed bypass as part of the Loring-Urban land complex.⁷

Any proposed project that might affect land or water uses within a coastal zone designated in accordance with the Coastal Zone Management Act (16 U.S.C. 1451 *et seq.*) must be consistent with the state's Coastal Zone Management Plan. Mississippi has a Federally recognized Coastal Zone Management program and regulates coastal areas under the Mississippi Coastal Wetlands Protection Law.⁸ The proposed construction site is not within a Coastal Zone Management Area.

Native American Lands. The land required for the proposed bypass is not within Native American reservations or tribal lands. According to the Bureau of Indian Affairs, only one Federally recognized Native American tribe—Mississippi Band of Choctaw Indians—exists in Mississippi. However, tribal land is in Neshoba County, approximately 60 miles north of Jackson.⁹

Property Requirements. As part of the proposed construction project at Cicero, the Applicants would acquire approximately 9 acres of industrial property, which is currently zoned for general manufacturing. In constructing the proposed connection, the Applicants would remove five existing buildings located on the property. SEA determined that the proposed construction project is not within a designated Coastal Zone Management area and that no prime farmland soils, Native American reservations, or tribal lands are in the area of proposed construction activities.

As part of the proposed construction at Jackson, the Applicants would acquire approximately 0.3 acres of private property. The Applicants would construct a small portion of the proposed bypass

⁵ City of Jackson, Mississippi. Official Zoning Map, Revised 1997.

⁶ Natural Resources Conservation Service: Internet site (www.nrcs.usda.gov).

⁷ Natural Resources Conservation Service. *Soil Survey of Hinds County, Mississippi*, 1976.

⁸ Mississippi Code Annotated 49-27-1 *et seq.*

⁹ Bureau of Indian Affairs: Internet site (www.doi.gov/bureau-indian-affairs.html).

on the acquired property, which is currently zoned for heavy industry, and build the remainder of the bypass within the existing right-of-way.

In addition, SEA determined that the proposed construction project is not within a designated Coastal Zone Management area and that no prime farmland soils, Native American reservations, or tribal lands are in the area of proposed construction activities.

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APPENDIX L

ENVIRONMENTAL JUSTICE ANALYSIS METHODS AND RESULTS

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APPENDIX L

ENVIRONMENTAL JUSTICE ANALYSIS METHODS AND RESULTS

Appendix L supplements the description, contained in Chapter 4, "Environmental Consequences—Operational Changes," Section 4.13, "Environmental Justice," of the method and data the Surface Transportation Board (Board), Section of Environmental Analysis (SEA) used in its evaluation of potential environmental justice impacts of the proposed Canadian National Railroad (CN)/Illinois Central Railroad (IC) Acquisition.

L.1 METHOD

To conduct its evaluation, SEA considered potential disproportionate high and adverse effects on low-income and minority populations. SEA's methods were verified and concurred with the study conclusions regarding the potential effect of the proposed CN/IC Acquisition on minority and low-income populations. This section provides a detailed discussion of the method SEA used to evaluate potential environmental justice impacts of the proposed CN/IC Acquisition.

L.1.1 Basis

To evaluate potential environmental justice impacts, SEA used a method that is based on the one SEA employed in the recent Conrail Acquisition.¹ To develop its method for environmental justice evaluation of the Conrail Acquisition, SEA examined relevant documents from other Federal agencies, including the following:

- Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," February 11, 1994, 59 Federal Register at 7630.
- U.S. Department of Transportation's Order "To Address Environmental Justice in Minority Populations and Low-Income Populations," February 3, 1997.
- U.S. Environmental Protection Agency, "Interim Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses, Office of Federal Activities," September 30, 1997.

¹ Surface Transportation Board, Conrail Acquisition, Final Environmental Impact Statement, Appendix M, "Cumulative Impacts Methods and Analysis," 1998, provides a complete description of the methods used in environmental justice evaluation of the Conrail Acquisition.

- Council on Environmental Quality, "Environmental Justice: Guidance Under the National Environmental Policy Act," Executive Office of the President, December 1997.
- U.S. Environmental Protection Agency, "Interim Guidance for Investigating Title VI Administrative Complaints Challenging Permits," February 1998.

L.1.2 Summary Description

SEA used the following six-step method to evaluate potential environmental justice impacts of the proposed CN/IC Acquisition:

Step 1. Identify potential effects. SEA examined a broad range of potential environmental and human health effects that could result from the proposed CN/IC Acquisition, including effects on safety, traffic, air quality, noise, cultural resources, hazardous waste sites and hazardous materials transport, natural resources, and land use/socioeconomics.

Step 2. Determine whether these potential effects could occur in areas with minority or low-income populations.

Step 3. Assess whether these potential effects on minority and low-income populations could be high and adverse.

Step 4. Determine whether potentially high and adverse effects could disproportionately affect minority or low-income populations in the absence of mitigation measures. SEA defined effects to be disproportionate if the effects are predominately borne, more severe or greater in magnitude in areas with environmental justice populations than in other areas.

Step 5. Conduct extended outreach to environmental justice populations that could experience potential high and adverse effects.

Step 6. Evaluate mitigation measures.

The remainder of this section describes each of these steps in detail.

L.1.3 Step 1. Identify potential effects.

SEA examined a broad range of potential effects that could result from the proposed CN/IC Acquisition, including effects on safety, traffic, air quality, noise, cultural resources, hazardous waste sites and hazardous materials transport, natural resources, and land use. These effects might result from four activity types related to the proposed Acquisition.

- Increases and decreases in rail traffic.
- Construction of new rail line connections and other facilities.

- Changes in rail activity at intermodal facilities and primary access routes to these facilities.
- Changes in activities at rail yards.

SEA identified those activities that could meet or exceed the Board's thresholds for environmental analysis. Chapter 4, "Environmental Consequences—Operational Changes," describes SEA's methods for evaluating types and significance of potential impacts that could occur if SEA approved the proposed CN/IC Acquisition and includes the results of these evaluations. The results formed the basis for SEA's environmental justice evaluation.

L.1.4 Step 2. Determine whether these potential effects could occur in areas with minority or low-income populations.

To make this determination, SEA identified the geographic areas over which potential effects could occur and the demographic characteristics of populations in each area. SEA defined the areas of potential effect around relevant rail lines and facilities based on the change in rail activity and the nature of the potential impact. (See Table L-1, "Areas of Potential Effect.")

**TABLE L-1
AREAS OF POTENTIAL EFFECT**

Rail Activity	Area of Potential Effect
Rail line segments: Increase of up to 8 trains per day. ² New Key Route or New Major Key Route, irrespective of changes in train frequency.	400 feet on both sides of the rail line segment. 1,500 feet on both sides of the rail line segment.
Constructions: New Key Route or Major Key Route, irrespective of changes in train frequency. All other new constructions.	1,500 feet on both sides of the rail line segment. 400 feet on both sides of the rail line segment.
All intermodal facilities.	One mile from the center of the facility, <i>and</i> 400 feet on both sides of major truck access routes to the nearest interstate highway.
All rail yards.	One mile from the center of the yard.

² Under the Applicants' proposed Operating Plan, no rail line segment would see an increase in activity of eight trains per day or more.

SEA used uniform distances in its definition of potentially affected areas to facilitate data gathering and statistical evaluation of potential environmental justice impacts across the proposed CN/IC system. SEA based the areas of potential effect shown in Table L-1, "Areas of Potential Effect," for rail line segments and constructions on its evaluation of environmental justice impacts of the recent Conrail Acquisition.³

SEA determined the appropriate area of potential effect for each rail line segment or facility where changes in activity would exceed any of the Board's thresholds for analysis of potential effects. SEA examined the demographic characteristics of areas of potential effect at the Census block group level using data provided by the U.S. Bureau of the Census from the 1990 U.S. Census. The Census block group is the smallest geographic unit for which the U.S. Census provides information on racial background, ethnic heritage, and household income used in environmental justice evaluation. Census block groups generally contain between 250 and 550 housing units, with the ideal size being 400 housing units.

SEA then gathered Census information on each block group area of potential effect.⁴ Data gathered on each block group area of potential effect include the following:

- Total population.
- Percent of population of minority status. SEA defined a "minority" person to be someone who is Black (Non-Hispanic), Hispanic, Asian American, American Indian, or Alaskan Native.

³ Conrail Acquisition Draft Environmental Impact Statement (DEIS), p. 3-50; Conrail Acquisition Final Environmental Impact Statement (FEIS), p. M-5. "SEA defined the area of potential effect corridor as the maximum area potentially exposed to the Board's noise threshold [for analysis] of 65 dBA. SEA chose the 65 dBA threshold because it offered a practical, uniform approach to identifying the communities which would experience the most significant noise impacts and also encompassed areas that could be expected to experience other localized effects such as traffic congestion, grade crossing delays, visual intrusion, pedestrian and safety effects, and construction impacts associated with the proposed Acquisition." (Conrail Acquisition DEIS, p. K-5.) SEA made adjustments to widen the area of potential effect for analysis in the case of populations adjacent to potential hazardous materials transportation impacts. SEA adopted the area of potential effect sizes shown in Table L-1 for intermodal facilities and rail yards, i.e., 1 mile from the center of the facility, which are different from those used in the Conrail Analysis (1,500 feet from the perimeter) because this method covered approximately the same area, because this method avoids complexities in defining perimeter boundaries, and because the method was adequate to ensure analysis of and extended outreach to environmental justice populations potentially affected by activities at these facilities. SEA also determined based on further analysis that, since no potential significant effects were identified at rail yards or facilities, there was no need to resort to the method of identifying populations based on perimeter boundaries used in the Conrail analysis.

⁴ The boundaries of an area of potential effect created as described above will not generally correspond with the boundaries of Census block groups. Where part of a Census block group is included in the area, SEA treated that part as a separate Census block group. Data for the Census block group were scaled in proportion to the share of the geographic area of the Census block group contained within the area of potential effect.

- Percent of population of low-income status. SEA defined a "low-income" person as one whose household income is below U.S. Department of Health and Human Services poverty guidelines.⁵
- Percent of population of minority status in the entire county in which the Census block group area of potential effect is located.
- Percent of population of low-income status in the entire county in which the Census block group area of potential effect is located.

SEA then determined whether the population residing within each individual area of potential effect constituted an "environmental justice population." SEA defined an environmental justice population to be one that meets any of the following criteria:

- At least one-half of the population is of minority status.
- At least one-half of the population is of low-income status.
- The percentage of the population of minority status is at least 10 percentage points higher than for the entire county in which the population is located.
- The percentage of the population of low-income status is at least 10 percentage points higher than for the entire county in which the population is located.⁶

Although Native Americans were included in SEA's definition of minority and were therefore included in the environmental justice analysis, SEA also conducted analysis to identify any potential significant impacts that could occur on Native American lands. This analysis is discussed in Chapter 5, "Environmental Consequences—Construction Projects," Section 5.9, "Land Use—Construction Projects." (Note: SEA identified no Native American lands in its land use analysis).

L.1.5 Step 3. Assess whether potential effects on minority and low-income populations could be high and adverse.

SEA determined that a "high and adverse effect" would include only a significant human health or environmental effect. SEA used the criteria of significance described in Chapter 4, "Environmental Consequences—Operational Changes." SEA evaluated all potential environmental effects on all environmental justice populations. SEA only identified potential significant impacts on these populations from proposed changes in hazardous materials transport.

⁵ Poverty thresholds vary by family size. In 1989 the poverty income threshold was \$12,674 for a family of four. SEA used 1989 data, the most recent year for which actual population counts, rather than statistical estimates, are available. The U.S. Bureau of the Census will issue new data following the 2000 census.

⁶ This definition is identical to the one SEA used in its evaluation of the Conrail Acquisition. (See Conrail Acquisition DEIS, p. 3-50.)

The Board's thresholds for analysis of and criteria of significance for potential hazardous materials transport impacts are identified in Section 4.2, "Hazardous Materials Transport Safety." (SEA also examined the potential environmental justice impacts of all proposed constructions. These are discussed in Chapter 5, "Environmental Consequences—Construction Projects," Section 5.8, "Environmental Justice—Proposed Construction.")

L.1.6 Step 4. Determine whether potentially high and adverse effects could disproportionately affect minority or low-income populations in the absence of mitigation measures.

SEA defined effects to be "disproportionate" if the effects would be predominantly borne, more severe or greater in magnitude in areas with environmental justice populations than in other areas. SEA created a ranking system to categorize potential hazardous materials transport impacts in each Census block group area of potential effect within the proposed CN/IC system. Each potential pre-mitigation impact in each area of potential effect received an Environmental Resource Score (ERS) of zero to six. SEA assigned ERSs for potential impacts without consideration of the benefits of mitigation measures proposed to address those impacts.

For potential hazardous materials transport impacts on rail line segments, SEA defined the ERS to be the average of the following components: (1) total hazardous materials transport post-Acquisition, (2) change in hazardous materials transport pre- to post-Acquisition, and (3) change in Key Route designation pre- to post-Acquisition. (See Table L-2, "Environmental Resource Score For Hazardous Materials Transport.")

**TABLE L-2
ENVIRONMENTAL RESOURCE SCORE FOR
HAZARDOUS MATERIALS TRANSPORT**

Post-Acquisition Hazardous Materials Carloads per Year	Score	Increase In Hazardous Materials Carloads per Year Pre- to Post- Acquisition	Score	Change In Key Route Designation Pre- to Post-Acquisition	Score
0-5,000	0	0-1,000	0	No increase in hazardous materials traffic	0
5,001-10,000	1	1,001-8,000	1	Increase in hazardous materials traffic but no change in Key Route designation	1
10,001-20,000	2	8,001-15,000	2		
20,001-35,000	3	15,001-22,000	3	New Key Route	4
35,001-50,000	4	22,001-29,000	4		
50,001-65,000	5	29,001-36,000	5	New Major Key Route	6
65,001+	6	36,001+	6		

For the purpose of statistical analysis, SEA divided areas of potential effect into those where potential pre-mitigation impacts received an ERS of 3.5 or more and those where potential pre-mitigation impacts received an ERS of less than 3.5.

SEA also calculated a Multiple Resource Score (MRS) for each Census block group area of potential effect. An area of potential effect's MRS equals the sum of the squares of its individual Environmental Resource Scores. The formula follows.

$$MRS = (ERS_{\text{hazardous materials transport}})^2$$

SEA used the MRS to select those states in which to conduct state-level and regional-level statistical analysis to determine whether potential high and adverse impacts could be borne disproportionately by environmental justice populations within an individual state or region.⁷

SEA used statistical methods at the system-wide, state and regional levels to identify whether potential high and adverse environmental impacts could be disproportionately borne by environmental justice populations relative to other populations in the absence of mitigation. The first statistical test used by SEA is the chi-squared test.⁸ Statistical analyses typically use this procedure to determine whether the probabilities associated with one variable are related to those associated with another (e.g., to determine whether the probability a household would own a telephone is independent of the probability that the household would own an automobile). In the environmental justice evaluation of the proposed CN/IC Acquisition, the question is whether the probability that an area of potential effect would experience an ERS of 3.5 or more (without mitigation) is independent of the probability that the population of the area of potential effect is an environmental justice population.

The chi-squared test yields a number between zero and 100 percent. This number represents a level of confidence that the probability that an area of potential effect would experience an ERS of 3.5 or more and the probability that its population is an environmental justice population are not independent. SEA concluded that the variables are not independent where the data support a 50 percent confidence level. By comparison, scholarly statistical analyses typically avoid conclusions where the data support a confidence level of less than 90 percent. SEA used a lower statistical threshold of 50 percent to ensure that it identified all potential disproportionate impacts.

The results of the chi-squared test determine whether there is statistical independence between the environmental justice population variable and the Environmental Resource Score for any given potential impact. A second statistical test—the ratio of means test—indicates the direction of the statistical pattern. A means ratio that is greater than one (along with a chi-squared result greater than 50 percent) indicates that environmental justice populations would be more likely to see potential high and adverse impacts than other populations. A means ratio that is less than or equal to one, irrespective of the chi-squared result, indicates that environmental justice populations would not be more likely to see potential high and adverse impacts than other populations.

⁷ This MRS methodology parallels the methodology used by SEA in its evaluation of the environmental justice impacts of the Conrail Acquisition. The MRS permits SEA to evaluate together all the potential high and adverse impacts of a proposed action in a geographic area. SEA identified potentially high and adverse impacts in only one resource category, hazardous materials transportation.

⁸ For a complete discussion, see Morris Hamburg, *Statistical Analysis for Decision Making*, 4th edition, HBJ Publishers, 1987, p. 324.

SEA performed these statistical tests using system-wide data from Census block group areas of potential effect for potential noise and hazardous materials transport impacts. In addition to the system-wide analysis, SEA conducted statistical analysis to identify any potential for disproportionate impacts within individual states. To identify those states where such analysis was warranted, SEA calculated Multiple Resource Scores (MRS) for each area of potential effect. An area of potential effect's Multiple Resource Score equals the sum of the squares of its individual impact Environmental Resource Scores for all potential high and adverse impacts.

SEA determined that state-level and regional-level statistical analysis was warranted in those states where the MRS for any area of potential effect exceeded a value of 24. SEA chose this number to include:

- Any state with at least one area of potential effect that could experience a potential impact with an ERS of at least 5 (and thus an MRS of at least five squared, or 25).
- Any state with at least one area of potential effect that could experience more than one ERS equal to or greater than 3.5 (and thus an MRS of at least 3.5 squared times two, or 24.5).⁹

Where SEA identified an area of potential effect with an MRS above 24, SEA used state and regional-level statistical methods to determine whether the proposed CN/IC Acquisition would disproportionately distribute high and adverse impacts to environmental justice populations. The statistical methods used for state- and regional-level analysis are identical to those used for system-wide analysis, except that they included only data from the relevant state or region of a state.

L.1.7 Step 5. Conduct extended outreach to environmental justice populations that could experience potential high and adverse environmental effects.

SEA conducted additional outreach activities in those locations that could experience potential significant environmental justice impacts as a result of the proposed CN/IC Acquisition. SEA determined these locations through steps one and two of the environmental justice evaluation. If SEA determined potential significant effects, SEA also used the analysis it conducted in Step 3 to identify locations. Chapter 2, "Public Participation Overview," describes SEA's general outreach effort and additional outreach to communities that could experience potential environmental justice impacts.

L.1.8 Step 6. Evaluate mitigation measures.

SEA determined whether mitigation measures identified for other human health or environmental issues, such as those for noise, are sufficient to eliminate or mitigate potential disproportionately high and adverse impacts on minority and low-income populations. Chapter 4, "Environmental

⁹ SEA identified no area of potential effect that could experience more than one potentially high and adverse impact.

Consequences—Operational Changes," discusses these measures. Where SEA determined that measures identified for other issues would not be sufficient to eliminate or mitigate potential disproportionately high and adverse impacts on minority and low-income populations, SEA evaluated additional mitigation. SEA also considered the appropriateness of modifying mitigation measures identified for other issues to meet the specific needs of a disproportionately affected minority or low-income population. In either case, SEA also considered whether any additional recommended mitigation would be reasonable and feasible to implement.

L.2 RESULTS

This section provides base data used in SEA's environmental justice evaluation. Attachment L-1, "Data on Potentially Affected Populations Used in SEA's Environmental Justice Evaluation," provides detailed demographic and income information for each Census block group area of potential effect examined by SEA, including the following: (1) geographic location (county), (2) nearby rail line segment or facility identifying information, (3) potential impact, (4) total population, (5) minority share of the population, (6) low-income share of the population, (7) minority share of the population of the entire county in which the area of potential effect is located, (8) low-income share of the population of the entire county in which the area of potential effect is located, (9) Environmental Resource Score for each potential impact analyzed by SEA, and (10) Multiple Resource Score. This section also describes the details of SEA's analysis of its environmental justice evaluation of the Applicants' proposed construction projects at Cicero, Illinois, and Jackson, Mississippi.

L.2.1 Cicero, Illinois

SEA examined a broad range of potential effects that could result from construction of the proposed connection at Cicero, Illinois, including effects on safety, traffic, air quality, noise, cultural resources, hazardous waste sites and hazardous materials transport, natural resources, and land use.

To determine whether these potential effects could occur in areas with minority or low-income populations, SEA identified the Area of Potential Effect (i.e., the geographic area over which the potential effects could occur) and the demographic characteristics of populations rather than area. The Area of Potential Effects includes all areas within 400 feet from the center of the construction activity. SEA collected U.S. Census demographic information at the Census block group level.

SEA identified eight Census block group areas within the area of potential effect. Table L-3, "Demographic Characteristics of Area of Potential Effects By Block Group Proposed Construction at Cicero, Illinois," provides information on the demographic composition of each area of potential effect.

TABLE L-3
DEMOGRAPHIC CHARACTERISTICS OF AREA OF POTENTIAL EFFECTS
BY BLOCK GROUP
PROPOSED CONSTRUCTION AT CICERO, ILLINOIS

Census Block Groups	Total Population within Areas of Potential Effect	Minority Share of the Population of the Areas of Potential Effect (%)	Low-Income Share of the Population of the Areas of Potential Effect (%)	Minority Share of County Population (%)	Low-Income Share of County Population (%)
1	40	3	2	43	14
2	397	0	2		
3	3	0	0		
4	98	24	0		
5	585	20	2		
6	1,117	28	4		
7	688	22	1		
8	144	24	0		

L.2.2 Jackson, Mississippi

SEA examined a broad range of potential effects that could result from the proposed bypass construction at Jackson, Mississippi, including effects on safety, hazardous materials spill sites and hazardous waste sites, traffic, natural resources, air quality, noise, land use, and cultural resources.

To determine whether these potential effects could occur in areas with minority or low-income populations, SEA identified the area of potential effect and the demographic characteristics of populations within this area. SEA gathered U.S. Census demographic information at the Census block group level and identified five Census block group areas within the area of potential effect of the proposed bypass. Table L-4, "Demographic Characteristics of Areas of Potential Effect and Comparison Population Proposed Construction at Jackson, Mississippi," provides information on the demographic composition of each Census block within the area of potential effects.

TABLE L-4
DEMOGRAPHIC CHARACTERISTICS OF AREAS OF
POTENTIAL EFFECT AND COMPARISON POPULATION
PROPOSED CONSTRUCTION AT JACKSON, MISSISSIPPI

Census Block Groups	Total Population within Areas of Potential Effect	Minority Share of the Population of the Areas of Potential Effect (%)	Low-income Share of the Population of the Areas of Potential Effect (%)	Minority Share of County Population (%)	Low-income Share of County Population (%)
1	12	26	13	52	21
2	29	100	58		
3	16	100	4		
4	231	99	61		
5	10	67	34		

Analysis Results

In its analysis, SEA determined that because there were no significant environmental effects in either of these project areas, there would be no potential for environmental justice effects resulting from construction projects.

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ATTACHMENT L-1
DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cook	IL	Matteson to Kankakee	Hazardous materials transport	170318300022	63	23%	4%	43%	14%	5.00	25.00
Cook	IL	Matteson to Kankakee	Hazardous materials transport	170318302012	39	24%	0%	43%	14%	5.00	25.00
Cook	IL	Matteson to Kankakee	Hazardous materials transport	170318302013	295	32%	3%	43%	14%	5.00	25.00
Cook	IL	Matteson to Kankakee	Hazardous materials transport	170318302014	598	28%	4%	43%	14%	5.00	25.00
Cook	IL	Matteson to Kankakee	Hazardous materials transport	170318302021	2	20%	2%	43%	14%	5.00	25.00
Kankakee	IL	Matteson to Kankakee	Hazardous materials transport	170910102002	50	0%	3%	17%	13%	5.00	25.00
Kankakee	IL	Matteson to Kankakee	Hazardous materials transport	170910102003	229	0%	6%	17%	13%	5.00	25.00
Kankakee	IL	Matteson to Kankakee	Hazardous materials transport	170910102005	94	1%	10%	17%	13%	5.00	25.00
Kankakee	IL	Matteson to Kankakee	Hazardous materials transport	170910102006	128	0%	7%	17%	13%	5.00	25.00
Kankakee	IL	Matteson to Kankakee	Hazardous materials transport	170910106001	338	5%	2%	17%	13%	5.00	25.00
Kankakee	IL	Matteson to Kankakee	Hazardous materials transport	170910106003	34	0%	10%	17%	13%	5.00	25.00

ATTACHMENT L-1

DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100004	29	0%	4%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100001	7	7%	3%	17%	13%	3.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100002	35	2%	6%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100003	180	1%	12%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100001	63	100%	58%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100002	22	95%	43%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100003	73	5%	25%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100004	14	22%	33%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100002	170	4%	15%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100001	167	2%	10%	17%	13%	5.00	25.00
Kankakee	IL	Matheson to Kankakee	Hazardous materials transport	170910100004	299	0%	11%	17%	13%	5.00	25.00

ATTACHMENT L-1
DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Will	IL	Manitowish to Kankakee	Hazardous materials transport	171978836028	73	5%	6%	17%	6%	5.00	25.00
Will	IL	Manitowish to Kankakee	Hazardous materials transport	171978836029	196	85%	10%	17%	6%	5.00	25.00
Will	IL	Manitowish to Kankakee	Hazardous materials transport	171978839011	11	6%	2%	17%	6%	5.00	25.00
Will	IL	Manitowish to Kankakee	Hazardous materials transport	171978839012	153	3%	0%	17%	6%	5.00	25.00
Will	IL	Manitowish to Kankakee	Hazardous materials transport	171978839013	156	1%	3%	17%	6%	5.00	25.00
Will	IL	Manitowish to Kankakee	Hazardous materials transport	171978839014	5	0%	2%	17%	6%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910116001	6	100%	58%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910116002	70	90%	43%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910116003	39	97%	54%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910117003	13	5%	25%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910117004	198	22%	33%	17%	13%	5.00	25.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910121004	0	1%	3%	17%	13%	5.00	23.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910122003	253	14%	21%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910123004	84	53%	45%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910123001	73	69%	54%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910123002	243	21%	23%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910123003	154	54%	27%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910124001	49	7%	5%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910125001	161	25%	18%	17%	13%	5.00	23.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910125002	19	8%	24%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910126003	2	5%	2%	17%	13%	5.00	25.00
Kankakee	IL	Kankakee to Ohio	Hazardous materials transport	170910126005	1	17%	19%	17%	13%	5.00	23.00

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502001	3	4%	6%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502002	16	0%	3%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502003	265	2%	9%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502004	5	3%	1%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502005	4	4%	1%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502006	5	0%	6%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502007	11	1%	6%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502008	11	5%	4%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502009	4	2%	9%	2%	9%	5.00	25.00
Ingham	IL	Ohio to Gilman	Hazardous materials transport	170759502010	9	3%	15%	2%	9%	5.00	25.00
Kankakee	IL	Ohio to Gilman	Hazardous materials transport	170810125002	4	8%	24%	17%	13%	5.00	25.00

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GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Kankakee	IL	Otto to Gilman	Hazardous materials transport	170910126004	14	6%	4%	17%	13%	5.00	25.00
Kankakee	IL	Otto to Gilman	Hazardous materials transport	170910126005	13	17%	19%	17%	13%	5.00	25.00
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190001001	13	45%	42%	16%	16%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190002001	104	98%	46%	16%	18%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190002002	105	90%	72%	16%	18%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190002004	21	92%	37%	16%	18%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190002005	47	100%	4%	16%	18%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190007001	46	65%	23%	16%	18%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190007002	92	84%	32%	16%	18%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190007005	221	36%	29%	16%	18%	4.33	18.78
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190008001	1	0%	23%	16%	18%	4.33	18.78

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Champaign	IL	Oilman to Champaign	Hazardous materials transport	170190008009	25	31%	14%	16%	13%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	170190003004	3	35%	57%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	170190010003	79	16%	6%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	1701900101007	157	14%	10%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	1701900101008	58	14%	0%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	1701900101009	24	20%	13%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	1701900102011	87	2%	1%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	1701900103021	112	16%	15%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	170190003009	180	21%	5%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	1701900104004	11	13%	22%	16%	18%	4.33	18.78
Champaign	IL	Oilman to Champaign	Hazardous materials transport	1701900104005	299	6%	9%	16%	18%	4.33	18.78

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190104007	21	10%	22%	16%	18%	4.33	18.75
Champaign	IL	Gilman to Champaign	Hazardous materials transport	170190104021	26	4%	26%	16%	18%	4.33	18.75
Ford	IL	Gilman to Champaign	Hazardous materials transport	170539617003	16	0%	13%	1%	9%	4.33	18.75
Ford	IL	Gilman to Champaign	Hazardous materials transport	170539617004	5	0%	0%	1%	9%	4.33	18.75
Ford	IL	Gilman to Champaign	Hazardous materials transport	170539618001	18	3%	14%	1%	9%	4.33	18.75
Ford	IL	Gilman to Champaign	Hazardous materials transport	170539618002	133	0%	10%	1%	9%	4.33	18.75
Ford	IL	Gilman to Champaign	Hazardous materials transport	170539618003	189	9%	4%	1%	9%	4.33	18.75
Ford	IL	Gilman to Champaign	Hazardous materials transport	170539618004	68	1%	7%	1%	9%	4.33	18.75
Ingham	IL	Gilman to Champaign	Hazardous materials transport	170759506001	0	5%	4%	2%	9%	4.33	18.75
Ingham	IL	Gilman to Champaign	Hazardous materials transport	170759506002	5	2%	9%	2%	9%	4.33	18.75
Ingham	IL	Gilman to Champaign	Hazardous materials transport	170759506003	6	7%	15%	2%	9%	4.33	18.75

ATTACHMENT L-1
DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Affinity Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score	
Jackson	IL	Garman to Champaign	Hazardous materials transport	170759408004	118	25%	8%	2%	9%	4.33	18.78	
Jackson	IL	Gilman to Champaign	Hazardous materials transport	170759507001	4	5%	7%	2%	9%	4.33	18.78	
Jackson	IL	Gilman to Champaign	Hazardous materials transport	170759507002	9	0%	6%	2%	9%	4.33	18.78	
Jackson	IL	Gilman to Champaign	Hazardous materials transport	170759507003	13	0%	7%	2%	9%	4.33	18.78	
Jackson	IL	Gilman to Champaign	Hazardous materials transport	170759507004	23	5%	5%	2%	9%	4.33	18.78	
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190001001	24	45%	42%	16%	18%	5.00	25.00	
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190001002	18	12%	47%	16%	18%	5.00	25.00	
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190001003	13	21%	0%	16%	18%	5.00	25.00	
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190001004	26	14%	42%	16%	18%	5.00	25.00	
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190001005	32	13%	9%	16%	18%	5.00	25.00	
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190002004	104	92%	37%	16%	18%	5.00	25.00	

ATTACHMENT L-1
DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190002005	10	100%	4%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190003003	310	19%	75%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190003004	192	27%	63%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190004003	372	14%	66%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190005002	128	22%	21%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190005003	71	9%	25%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190007002	10	84%	32%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190007001	439	8%	3%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190008002	117	7%	5%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190008001	517	27%	0%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190009003	132	21%	21%	16%	18%	5.00	25.00

ATTACHMENT L-1
DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190014009	35	15%	41%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190109003	39	7%	8%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190109004	46	0%	6%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190109005	42	1%	4%	16%	18%	5.00	25.00
Champaign	IL	Champaign to Mattoon	Hazardous materials transport	170190109006	24	0%	3%	16%	18%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290001001	54	0%	10%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290001002	5	0%	11%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290002001	3	0%	18%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290002002	3	0%	15%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290003001	73	0%	13%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290004001	7	2%	51%	4%	20%	5.00	25.00

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290004002	225	3%	11%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290004003	6	2%	22%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290011001	133	1%	15%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290012002	301	4%	20%	4%	20%	5.00	25.00
Coles	IL	Champaign to Mattoon	Hazardous materials transport	170290012005	7	5%	6%	4%	20%	5.00	25.00
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419521004	14	0%	8%	2%	10%	5.00	25.00
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419522001	254	0%	24%	2%	10%	5.00	25.00
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419522002	138	0%	5%	2%	10%	5.00	25.00
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419522003	113	0%	8%	2%	10%	5.00	25.00
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419522004	90	3%	7%	2%	10%	5.00	25.00
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419524001	9	0%	4%	2%	10%	5.00	25.00

ATTACHMENT 1-1

DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419224003	34	3%	6%	2%	10%	3.90	25.00
Douglas	IL	Champaign to Mattoon	Hazardous materials transport	170419224004	26	11%	14%	2%	10%	5.00	25.00
Coles	IL	Mattoon to Effingham	Hazardous materials transport	170290002003	30	0%	21%	4%	20%	4.33	18.78
Coles	IL	Mattoon to Effingham	Hazardous materials transport	170290002004	13	3%	8%	4%	20%	4.33	18.78
Coles	IL	Mattoon to Effingham	Hazardous materials transport	1702900011001	69	1%	15%	4%	20%	4.33	18.78
Coles	IL	Mattoon to Effingham	Hazardous materials transport	1702900011004	157	1%	15%	4%	20%	4.33	18.78
Coles	IL	Mattoon to Effingham	Hazardous materials transport	1702900012005	88	5%	6%	4%	20%	4.33	18.78
Chamberland	IL	Mattoon to Effingham	Hazardous materials transport	170359726001	54	0%	13%	0%	12%	4.33	18.78
Chamberland	IL	Mattoon to Effingham	Hazardous materials transport	170359726002	18	0%	7%	0%	12%	4.33	18.78
Chamberland	IL	Mattoon to Effingham	Hazardous materials transport	170359726003	41	3%	15%	0%	12%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499501001	166	2%	7%	1%	9%	4.33	18.78

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301002	93	3%	10%	1%	9%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301003	97	2%	11%	1%	9%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301004	165	0%	10%	1%	9%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301004	44	1%	7%	1%	9%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301001	146	0%	0%	1%	9%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301001	4	0%	16%	1%	9%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301003	28	3%	18%	1%	9%	4.33	18.78
Effingham	IL	Mattoon to Effingham	Hazardous materials transport	170499301004	22	0%	8%	1%	9%	4.33	18.78
Shelby	IL	Mattoon to Effingham	Hazardous materials transport	171739301004	18	1%	10%	0%	10%	4.33	18.78
Clay	IL	Edgewood to Centralia	Hazardous materials transport	170239301004	4	1%	17%	1%	17%	4.33	18.78
Effingham	IL	Edgewood to Centralia	Hazardous materials transport	170499301004	4	2%	17%	1%	9%	4.33	18.78

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiplic Resource Score
Grundy	IL	Edgewood to Centralia	Hazardous materials transport	170519511004	47	0%	16%	4%	13%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219516001	7	3%	13%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219516002	85	1%	20%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219516003	37	5%	15%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219517001	4	0%	13%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219518003	61	0%	19%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219519004	7	0%	13%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219519002	81	0%	16%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219519003	15	4%	8%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219520002	116	39%	36%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219520003	54	11%	10%	5%	16%	4.33	18.78

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219527001	11	1%	24%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219527002	143	2%	19%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219527003	144	4%	29%	5%	16%	4.33	18.78
Marion	IL	Edgewood to Centralia	Hazardous materials transport	171219527004	110	46%	33%	5%	16%	4.33	18.78
Marion	IL	Centralia to Rendleham	Hazardous materials transport	171219525001	193	6%	21%	5%	16%	4.00	16.00
Marion	IL	Centralia to Rendleham	Hazardous materials transport	171219525002	112	10%	34%	5%	16%	4.00	16.00
Marion	IL	Centralia to Rendleham	Hazardous materials transport	171219525003	127	3%	13%	5%	16%	4.00	16.00
Marion	IL	Centralia to Rendleham	Hazardous materials transport	171219525004	24	3%	44%	5%	16%	4.00	16.00
Marion	IL	Centralia to Rendleham	Hazardous materials transport	171219526003	127	11%	10%	5%	16%	4.00	16.00
Marion	IL	Centralia to Rendleham	Hazardous materials transport	171219526004	27	0%	8%	5%	16%	4.00	16.00
Perry	IL	Centralia to Rendleham	Hazardous materials transport	171450301004	4	0%	15%	3%	16%	4.00	16.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Perry	IL	Centralia to Rendakline	Hazardous materials transport	1714503010005	2	4%	3%		16%	4.00	16.00
Washington	IL	Centralia to Rendakline	Hazardous materials transport	1718993010004	95	2%	12%	1%	9%	4.00	16.00
Washington	IL	Centralia to Rendakline	Hazardous materials transport	1718993010003	12	1%	14%	1%	9%	4.00	16.00
Washington	IL	Centralia to Rendakline	Hazardous materials transport	1718993010005	6	0%	16%	1%	9%	4.00	16.00
Washington	IL	Centralia to Rendakline	Hazardous materials transport	1718993010001	38	1%	13%	1%	9%	4.00	16.00
Washington	IL	Centralia to Rendakline	Hazardous materials transport	1718993010002	24	4%	3%	1%	9%	4.00	16.00
Perry	IL	Rendakline to Du Quoin	Hazardous materials transport	1714503010004	18	0%	15%	3%	16%	4.00	16.00
Perry	IL	Rendakline to Du Quoin	Hazardous materials transport	1714503010005	4	4%	8%	1%	16%	4.00	16.00
Perry	IL	Rendakline to Du Quoin	Hazardous materials transport	1714503010006	9	0%	23%	3%	16%	4.00	16.00
Perry	IL	Rendakline to Du Quoin	Hazardous materials transport	1714503010001	29	12%	30%	3%	16%	4.00	16.00
Perry	IL	Rendakline to Du Quoin	Hazardous materials transport	1714503010003	106	10%	35%	3%	16%	4.00	16.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Perry	IL	Resulamine to Du Quoin	Hazardous materials transport	171450306001	7	8%	10%	3%	16%	4.00	16.00
Perry	IL	Resulamine to Du Quoin	Hazardous materials transport	171450306001	28	3%	13%	3%	16%	4.00	16.00
Jackson	IL	Du Quoin to Carbondale	Hazardous materials transport	170770102001	19	0%	4%	16%	31%	3.33	11.11
Jackson	IL	Du Quoin to Carbondale	Hazardous materials transport	170770102002	29	5%	12%	16%	31%	3.33	11.11
Jackson	IL	Du Quoin to Carbondale	Hazardous materials transport	170770102003	47	1%	14%	16%	31%	3.33	11.11
Jackson	IL	Du Quoin to Carbondale	Hazardous materials transport	170770102003	6	12%	21%	16%	31%	3.33	11.11
Jackson	IL	Du Quoin to Carbondale	Hazardous materials transport	170770102001	8	12%	13%	16%	31%	3.33	11.11
Jackson	IL	Du Quoin to Carbondale	Hazardous materials transport	170770102002	33	9%	35%	16%	31%	3.33	11.11
Perry	IL	Du Quoin to Carbondale	Hazardous materials transport	171450306002	29	26%	17%	3%	16%	3.33	11.11
Perry	IL	Du Quoin to Carbondale	Hazardous materials transport	171450306003	304	10%	33%	3%	16%	3.33	11.11
Perry	IL	Du Quoin to Carbondale	Hazardous materials transport	171450306003	33	0%	2%	3%	16%	3.33	11.11

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Perry	IL	Du Quoin to Carbondale	Hazardous materials transport	171450306003	96	1%	17%	3%	16%	3.33	11.11
Perry	IL	Du Quoin to Carbondale	Hazardous materials transport	171450306005	109	4%	28%	3%	16%	3.33	11.11
Alexander	IL	Carbondale to Cairo	Hazardous materials transport	170039578001	17	45%	38%	34%	32%	3.67	13.44
Alexander	IL	Carbondale to Cairo	Hazardous materials transport	170039578002	14	69%	60%	34%	32%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770109001	0	12%	21%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770109002	44	31%	39%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770109004	109	36%	29%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770109005	32	8%	31%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770109006	23	11%	50%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770109007	32	99%	36%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770109003	116	95%	66%	16%	31%	3.67	13.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770110002	81	15%	58%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770111003	43	34%	66%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770111004	342	31%	71%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770112001	137	63%	82%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770112002	91	41%	64%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770113001	125	23%	44%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770113002	1068	24%	58%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770115002	121	16%	35%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770115003	30	7%	15%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770116001	13	14%	8%	16%	31%	3.67	13.44
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770116002	10	0%	14%	16%	31%	3.67	13.44

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Physical Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Jackson	IL	Carbondale to Cairo	Hazardous materials transport	170770115003	25	3%	12%	16%	31%	3.67	13.44
Pulaski	IL	Carbondale to Cairo	Hazardous materials transport	171539711001	22	41%	25%	33%	30%	3.67	13.44
Pulaski	IL	Carbondale to Cairo	Hazardous materials transport	171539711002	19	52%	32%	33%	30%	3.67	13.44
Pulaski	IL	Carbondale to Cairo	Hazardous materials transport	171539711003	23	29%	13%	33%	30%	3.67	13.44
Pulaski	IL	Carbondale to Cairo	Hazardous materials transport	171539711004	25	39%	41%	33%	30%	3.67	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819501002	25	0%	28%	2%	18%	3.67	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819501003	11	0%	14%	2%	18%	3.67	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819501004	38	5%	9%	2%	18%	3.67	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819502001	26	3%	15%	2%	18%	3.67	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819503001	22	0%	21%	2%	18%	3.67	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819503002	289	3%	16%	2%	18%	3.67	13.44

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819503003	27	1%	22%	2%	18%	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819504001	2	0%	20%	2%	18%	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819504003	47	2%	26%	2%	18%	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819504004	209	8%	11%	2%	18%	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819505001	16	6%	7%	2%	18%	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819505003	14	1%	27%	2%	18%	13.44
Union	IL	Carbondale to Cairo	Hazardous materials transport	171819505004	52	3%	11%	2%	18%	13.44
Alexander	IL	Cairo to Fulton	Hazardous materials transport	170039578001	0	46%	30%	34%	32%	13.44
Alexander	IL	Cairo to Fulton	Hazardous materials transport	170039578002	173	69%	60%	34%	32%	13.44
Alexander	IL	Cairo to Fulton	Hazardous materials transport	170039578004	1	12%	10%	34%	32%	13.44
Belland	KY	Cairo to Padon	Hazardous materials transport	210079502002	5	1%	11%	4%	19%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Ballard	KY	Cairo to Fulton	Hazardous materials transport	210079503002	12	3%	24%	4%	19%	0.00	0.00
Ballard	KY	Cairo to Fulton	Hazardous materials transport	210079503003	39	0%	20%	4%	19%	0.00	0.00
Carlisle	KY	Cairo to Fulton	Hazardous materials transport	210399602001	16	5%	17%	1%	18%	0.00	0.00
Carlisle	KY	Cairo to Fulton	Hazardous materials transport	210399602002	17	0%	20%	1%	18%	0.00	0.00
Carlisle	KY	Cairo to Fulton	Hazardous materials transport	210399603001	0	0%	21%	1%	18%	0.00	0.00
Carlisle	KY	Cairo to Fulton	Hazardous materials transport	210399603002	30	2%	19%	1%	18%	0.00	0.00
Fulton	KY	Cairo to Fulton	Hazardous materials transport	210759801001	12	0%	17%	20%	31%	0.00	0.00
Fulton	KY	Cairo to Fulton	Hazardous materials transport	210759801002	8	6%	22%	20%	31%	0.00	0.00
Fulton	KY	Cairo to Fulton	Hazardous materials transport	210759801003	10	1%	23%	20%	31%	0.00	0.00
Fulton	KY	Cairo to Fulton	Hazardous materials transport	210759801005	4	61%	64%	20%	31%	0.00	0.00
Madison	KY	Cairo to Fulton	Hazardous materials transport	211059701001	0	14%	17%	11%	20%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score	
Hickman	KY	Cairo to Fulton	Hazardous materials transport	211059701002	27	28%	29%	11%	20%	0.00	0.00	
Hickman	KY	Cairo to Fulton	Hazardous materials transport	211059701003	22	4%	27%	11%	20%	0.00	0.00	
Hickman	KY	Cairo to Fulton	Hazardous materials transport	211059702004	2	13%	15%	11%	20%	0.00	0.00	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251423009	156	16%	25%	11%	6%	2.33	5.44	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251424004	30	89%	38%	11%	6%	2.33	5.44	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251424005	75	100%	84%	11%	6%	2.33	5.44	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251424006	145	89%	24%	11%	6%	2.33	5.44	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251424007	23	97%	21%	11%	6%	2.33	5.44	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251425001	3	95%	82%	11%	6%	2.33	5.44	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251427001	28	85%	53%	11%	6%	2.33	5.44	
Oakland	MI	Detroit Intermodal to Mt Jct.	Hazardous materials transport	261251427002	94	100%	47%	11%	6%	2.33	5.44	

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251427003	334	90%	10%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251501001	130	18%	3%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251503001	239	8%	1%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251504004	67	20%	1%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251505003	73	17%	1%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251505004	130	8%	4%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251505005	41	0%	0%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251521001	257	14%	4%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251525002	318	0%	3%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251525003	239	4%	5%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mail Jct.	Hazardous materials transport	261251525007	109	6%	0%	11%	6%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251529001	266	0%	4%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251730006	83	9%	14%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251730017	14	13%	31%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251730038	171	8%	15%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251731001	173	8%	9%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251731002	124	3%	14%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251731003	125	2%	9%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251735001	44	10%	18%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251735002	130	4%	17%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251736006	3	12%	29%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Jct.	Hazardous materials transport	261251830007	93	2%	6%	11%	6%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251830008	180	0%	1%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251832002	23	6%	4%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251832003	297	5%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251833003	176	6%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251833006	124	1%	4%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251834003	167	0%	0%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251834006	26	1%	3%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251836007	353	3%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251837003	128	0%	25%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251837007	366	11%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mal Jct.	Hazardous materials transport	261251837008	15	6%	2%	11%	6%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251240006	182	0%	3%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251240007	47	19%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251240008	212	0%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251241002	223	0%	5%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251241003	263	0%	19%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251241004	97	6%	6%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251241005	35	3%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251244007	5	6%	19%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251244008	137	1%	8%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251245004	1	4%	4%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to Mid Act	Hazardous materials transport	261251245003	38	3%	3%	11%	6%	2.33	5.44

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GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	Detroit Intermodal to MtJ Jet.	Hazardous materials transport	261251845006	268	4%	8%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to MtJ Jet.	Hazardous materials transport	261251846003	384	2%	7%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to MtJ Jet.	Hazardous materials transport	261251846004	103	20%	0%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to MtJ Jet.	Hazardous materials transport	261251870000	225	10%	5%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to MtJ Jet.	Hazardous materials transport	261251870002	42	2%	8%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to MtJ Jet.	Hazardous materials transport	261251977003	26	0%	2%	11%	6%	2.33	5.44
Oakland	MI	Detroit Intermodal to MtJ Jet.	Hazardous materials transport	261251977009	1	25%	0%	11%	0%	2.33	5.44
Oakland	MI	MtJ Jet. To Pontiac	Hazardous materials transport	261251410034	103	44%	46%	11%	6%	2.33	5.44
Oakland	MI	MtJ Jet. To Pontiac	Hazardous materials transport	261251417002	7	37%	45%	11%	6%	2.33	5.44
Oakland	MI	MtJ Jet. To Pontiac	Hazardous materials transport	261251421002	152	54%	47%	11%	0%	2.33	5.44
Oakland	MI	MtJ Jet. To Pontiac	Hazardous materials transport	261251421003	41	37%	23%	11%	6%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Proposed Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiplic Resource Score
Oakland	MI	Mid Pt. To Pontiac	Hazardous materials transport	2612514220007	54	67%	59%	11%	6%	2.33	5.44
Oakland	MI	Mid Pt. To Pontiac	Hazardous materials transport	2612514240006	10	89%	24%	11%	6%	2.33	5.44
Oakland	MI	Mid Pt. To Pontiac	Hazardous materials transport	2612514240007	146	97%	21%	11%	6%	2.33	5.44
Oakland	MI	Mid Pt. To Pontiac	Hazardous materials transport	2612514250004	41	95%	82%	11%	6%	2.33	5.44
Oakland	MI	Mid Pt. To Pontiac	Hazardous materials transport	2612514270001	12	85%	33%	11%	6%	2.33	5.44
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	2612514160004	65	44%	56%	11%	6%	2.33	5.44
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	2612514170002	128	37%	45%	11%	6%	2.33	5.44
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	2612514170003	50	31%	40%	11%	6%	2.33	5.44
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	2612514180002	239	21%	19%	11%	6%	2.33	5.44
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	2612514190001	222	33%	0%	11%	6%	2.33	5.44
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	2612514210004	188	39%	36%	11%	6%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	261251421002	99	54%	47%	11%	6%	5.44
Oakland	MI	Pontiac to West Pontiac	Hazardous materials transport	261251445003	7	18%	6%	11%	6%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490128004	46	5%	11%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490130001	43	3%	3%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490131003	128	8%	9%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490131004	367	3%	8%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490131005	9	0%	3%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490131007	45	10%	4%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490132011	92	3%	8%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490132012	127	0%	12%	23%	17%	5.44
Genesee	MI	West Pontiac to Durand	Hazardous materials transport	260490132021	270	1%	5%	23%	17%	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Genesee	MI	West Pontiac to Dorned	Hazardous materials transport	260490152034	216	4%	9%	23%	17%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	261251261004	0	14%	7%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	261251261003	37	5%	1%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	2612512615005	78	8%	8%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	2612512615006	116	0%	15%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	2612512615007	217	4%	6%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	261251261007	36	0%	1%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	261251261008	42	2%	8%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	261251261002	4	1%	3%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	261251261003	91	0%	8%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Dorned	Hazardous materials transport	261251261004	114	5%	3%	11%	6%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group (asterisk)	Total Population	Minority Share of the County Population	Low-Income Share of the County Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiplicative Resource Score
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251273001	69	7%	0%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251273002	2	0%	5%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251419002	3	21%	19%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251419003	37	33%	0%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251441001	230	5%	4%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251441004	175	18%	7%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251442001	0	0%	1%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251442004	416	10%	7%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251444001	76	8%	6%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251444002	117	3%	6%	11%	6%	2.33	5.44
Oakland	MI	West Pointe to Durrant	Hazardous materials transport	261251445001	2	7%	8%	11%	6%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	West Pontiac to Darnold	Hazardous materials transport	261251445002	136	6%	1%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Darnold	Hazardous materials transport	261251445003	61	14%	6%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Darnold	Hazardous materials transport	261251445002	71	7%	2%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Darnold	Hazardous materials transport	261251445003	176	0%	1%	11%	6%	2.33	5.44
Oakland	MI	West Pontiac to Darnold	Hazardous materials transport	261251445004	94	23%	16%	11%	4%	2.33	5.44
Oakland	MI	West Pontiac to Darnold	Hazardous materials transport	261251445005	87	0%	6%	11%	6%	2.33	5.44
Shelby	MI	West Pontiac to Darnold	Hazardous materials transport	261590319004	24	0%	2%	2%	11%	2.33	5.44
Shelby	MI	West Pontiac to Darnold	Hazardous materials transport	261590319002	243	0%	13%	2%	11%	2.33	5.44
Shelby	MI	West Pontiac to Darnold	Hazardous materials transport	261250319003	21	8%	9%	2%	11%	2.33	5.44

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Intermodal facilities											
Mobile	AL	Mobile	Hazardous materials transport	010970001001	156	100%	0%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970001002	304	76%	0%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002001	92	80%	45%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002002	1297	63%	12%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002003	0	16%	45%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002004	0	54%	0%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002005	13	27%	77%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002006	0	60%	49%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002007	22	100%	86%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970002008	422	71%	51%	33%	22%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Mobile	AL	Mobile	Hazardous materials transport	010970004001	711	94%	88%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004011	119	100%	77%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004012	102	100%	82%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004013	13	100%	80%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004014	0	100%	64%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004016	211	100%	67%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004021	340	100%	91%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004022	92	100%	83%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970004023	107	100%	86%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970012031	59	26%	100%	33%	22%	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970012032	182	0%	0%	33%	22%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Mobile	AL	Mobile	Hazardous materials transport	0109700120039	119	0%	0%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	0109700120042	30	66%	35%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	0109700120049	454	100%	0%	33%	22%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503010002	878	4%	17%	3%	10%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503010005	417	0%	22%	3%	10%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503020001	984	2%	11%	3%	10%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503020002	581	0%	16%	3%	10%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503030003	142	1%	12%	3%	10%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503030001	762	6%	9%	3%	10%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503030002	640	1%	5%	3%	10%	0.00	0.00
Pontchartraine	LA	Council Bluffs	Hazardous materials transport	1915503060011	518	0%	8%	3%	10%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550306013	637	4%	2%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550306014	702	1%	9%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550306021	617	17%	23%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550306022	81	10%	21%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550306023	430	8%	15%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550306024	686	8%	19%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550307001	364	0%	21%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550307002	54	5%	18%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550307003	630	0%	21%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550307004	404	7%	43%	3%	10%	0.00	0.00
Pontiac/Milanville	LA	Council Bluffs	Hazardous materials transport	191550307005	2	22%	43%	3%	10%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	Site ID	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Portauwauville	IA	Council Bluffs	Hazardous materials transport	191550309004	347	8%	38%	3%	10%	0.00
Portauwauville	IA	Council Bluffs	Hazardous materials transport	191550309002	767	3%	14%	3%	10%	0.00
Portauwauville	IA	Council Bluffs	Hazardous materials transport	191550310004	692	3%	8%	3%	10%	0.00
Portauwauville	IA	Council Bluffs	Hazardous materials transport	191550318003	552	6%	5%	3%	10%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870000002	340	3%	0%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004001	0	3%	8%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004003	357	3%	18%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870005003	333	10%	0%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870000004	767	6%	15%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004002	523	6%	26%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870000003	0	3%	13%	3%	12%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Hazardous Materials Transport	Multiple Resource Score
Webster	IA	Foot Dodge	Hazardous materials transport	191870005001	0	0%	0%	3%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870007001	313	1%	21%	3%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870007002	637	7%	41%	1%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870007003	1437	0%	63%	3%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870006001	599	8%	3%	3%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870006002	2	12%	22%	1%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870007004	291	19%	33%	3%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870005004	1084	7%	26%	1%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870009003	157	3%	17%	3%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870006004	217	12%	14%	3%	12%	0.00	0.00	0.00
Webster	IA	Foot Dodge	Hazardous materials transport	191870006003	279	4%	14%	3%	12%	0.00	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Webster	IA	Fort Dodge	Hazardous materials transport	191870008000	16	97%	44%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191871005005	11	4%	11%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191871005004	1471	2%	9%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191871005002	32	2%	23%	3%	12%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318272002	541	97%	31%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318271001	485	88%	24%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318271002	498	82%	22%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318271003	439	90%	23%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318272002	48	48%	7%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318272003	304	99%	18%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318272004	323	100%	33%	43%	14%	0.00	0.00

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GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182720015	626	24%	15%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182730001	703	43%	37%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182730002	1798	95%	31%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182730003	1656	94%	41%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182740004	935	94%	24%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182740002	1114	94%	33%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182740003	206	97%	8%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182740004	186	100%	11%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182740005	132	95%	44%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182750001	72	32%	6%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	1703182750002	108	64%	16%	43%	14%	0.00	0.00

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GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Populated	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cook	IL	Chicago Gateway	Hazardous materials transport	170318275003	433	71%	9%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318275004	1966	65%	19%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318275005	2137	97%	30%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318276001	900	100%	24%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318276002	543	99%	8%	43%	14%	0.00	0.00
Cook	IL	Chicago Gateway	Hazardous materials transport	170318276003	0	100%	20%	43%	14%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220510266004	564	4%	19%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2205102663001	257	6%	14%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2205102666001	418	19%	30%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2205102664112	122	13%	17%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220510267001	150	21%	16%	67%	31%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiplicative Resource Score
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220510268001	32	69%	32%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220510269001	40	88%	61%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710067002	664	90%	76%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710096001	88	43%	22%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710096002	255	55%	13%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710099003	193	80%	39%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710092001	251	73%	44%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710097002	512	79%	35%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710097003	566	59%	26%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710099001	212	10%	37%	67%	31%	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710099002	538	14%	11%	67%	31%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Indicated Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207100990003	413	41%	20%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207100990004	403	37%	23%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207100990005	262	14%	16%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000004	694	22%	25%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000002	4	58%	43%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000003	374	4%	14%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000001	424	46%	54%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000001	385	51%	24%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000002	711	64%	24%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000003	203	54%	25%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2207101000004	206	61%	34%	67%	31%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710106002	251	80%	38%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710106003	457	43%	27%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710107004	796	4%	11%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710107002	540	61%	79%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710107003	7	68%	17%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710107004	587	22%	70%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710108001	264	7%	0%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710108002	529	40%	14%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710108003	457	15%	12%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710109003	609	23%	14%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	220710109004	58	7%	9%	67%	31%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2281710114001	588	26%	13%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2281710114002	606	1%	19%	67%	31%	0.00	0.00
Orleans	LA	New Orleans Intermodal	Hazardous materials transport	2281710116001	630	19%	13%	67%	31%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251730005	1007	0%	19%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251730008	1097	9%	15%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251730002	598	8%	6%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251730002	257	5%	7%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251731006	275	0%	6%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251730002	511	8%	8%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251731007	443	5%	16%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251731001	736	8%	9%	11%	6%	0.00	0.00

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GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251730003	756	9%	6%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251731003	376	5%	33%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251732007	812	13%	31%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251731006	757	7%	16%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251732001	1529	2%	6%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251731002	1239	3%	14%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251730004	2790	9%	7%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251730006	1473	9%	14%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251733003	66	0%	16%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251731003	0	2%	9%	11%	6%	0.00	0.00
Oakland	MI	Deerole Intermodal	Hazardous materials transport	261251736003	49	9%	13%	11%	6%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Hazardous Sites
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251734006	338	12%	29%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251733002	423	4%	13%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251733007	402	0%	24%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251733004	151	10%	18%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251734004	652	11%	7%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251734003	728	9%	8%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251733006	744	8%	14%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251733005	647	0%	30%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251734005	39	2%	15%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251733004	34	65%	30%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261251734003	88	56%	32%	11%	6%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Response Score
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261635080006	22	16%	74%	11%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261635381004	116	60%	8%	13%	6%	0.00	0.00
Oakland	MI	Detroit Intermodal	Hazardous materials transport	261635381002	3	75%	1%	11%	6%	0.00	0.00
Hinds	MS	Jackson	Hazardous Materials transport	280490006002	23	98%	18%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490012001	5	99%	30%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013001	508	26%	13%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	2804900135014	431	100%	57%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013203	506	9%	2%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490020003	506	100%	63%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490012003	1322	100%	48%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013006	206	8%	3%	52%	21%	0.00	0.00

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GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Hinds	MS	Jackson	Hazardous materials transport	280490011002	420	100%	46%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490011001	1300	96%	48%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490012002	1525	100%	65%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013004	17	6%	37%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013005	67	36%	49%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490010001	155	100%	61%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490015001	231	8%	5%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490015004	1	2%	6%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490011003	0	99%	61%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016001	243	67%	34%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490019001	144	99%	34%	52%	21%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of County Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Hinds	MS	Jackson	Hazardous materials transport	280490016002	828	40%	40%	52%	21%	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490019002	674	93%	38%	52%	21%	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016003	900	88%	55%	52%	21%	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490019003	28	9%	18%	52%	21%	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490017002	732	100%	15%	52%	21%	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490017001	638	100%	57%	52%	21%	0.00
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570053003	236	100%	33%	45%	18%	0.00
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570053006	40	99%	46%	45%	18%	0.00
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570056005	0	100%	19%	45%	18%	0.00
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570076004	0	0%	0%	45%	18%	0.00
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570222204	719	86%	33%	45%	18%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570222202	790	100%	36%	45%	18%	0.00	0.00
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570222203	469	99%	42%	45%	18%	0.00	0.00
Shelby	TN	Memphis Intermodal	Hazardous materials transport	471570222204	1361	100%	16%	45%	18%	0.00	0.00
Shelby Yards	TN	Memphis Intermodal	Hazardous materials transport	471570222205	479	98%	27%	45%	18%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970010022	66	72%	21%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970010023	420	98%	46%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970010024	271	89%	35%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970010025	18	52%	14%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970011001	111	100%	11%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970011013	403	100%	15%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010970011005	434	78%	34%	33%	22%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Mobile	AL	Mobile	Hazardous materials transport	010920011006	487	99%	54%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920011007	534	100%	37%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920011008	45	95%	54%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920012042	0	66%	35%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920012043	196	84%	38%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920012049	1	100%	0%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920012999	3	100%	0%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920013011	602	99%	41%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920013012	407	97%	76%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920013021	364	81%	44%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920013022	1115	90%	57%	33%	22%	0.00	0.00

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GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Mobile	AL	Mobile	Hazardous materials transport	010920013023	670	57%	48%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920013024	26	94%	34%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920013025	22	96%	49%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920015021	53	94%	73%	33%	22%	0.00	0.00
Mobile	AL	Mobile	Hazardous materials transport	010920015029	3	89%	31%	33%	22%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130011001	2	8%	1%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130011003	292	6%	10%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130012001	910	5%	5%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130012002	1113	4%	20%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130012003	1230	7%	28%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130013001	130	8%	6%	4%	9%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Linn	IA	Cedar Rapids	Hazardous materials transport	191130013003	766	5%	11%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130013003	206	40%	30%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130017005	106	27%	19%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130017006	548	12%	34%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130019001	792	13%	36%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130019002	852	14%	45%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130020001	643	16%	0%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130020002	501	9%	37%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130021001	167	13%	0%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130022001	1250	9%	31%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130022002	428	11%	27%	4%	9%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Linn	IA	Cedar Rapids	Hazardous materials transport	191130023001	470	9%	21%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130026002	36	0%	12%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130027001	22	27%	23%	4%	9%	0.00	0.00
Linn	IA	Cedar Rapids	Hazardous materials transport	191130027002	612	29%	34%	4%	9%	0.00	0.00
Polk	IA	Council Bluffs	Hazardous materials transport	191530301002	13	4%	17%	3%	10%	0.00	0.00
Polk	IA	Council Bluffs	Hazardous materials transport	191530301004	139	3%	1%	3%	10%	0.00	0.00
Polk	IA	Council Bluffs	Hazardous materials transport	191530301005	206	0%	22%	3%	10%	0.00	0.00
Polk	IA	Council Bluffs	Hazardous materials transport	191530302001	532	2%	11%	3%	10%	0.00	0.00
Polk	IA	Council Bluffs	Hazardous materials transport	191530302002	929	0%	16%	3%	10%	0.00	0.00
Polk	IA	Council Bluffs	Hazardous materials transport	191530302003	565	1%	17%	3%	10%	0.00	0.00
Polk	IA	Council Bluffs	Hazardous materials transport	191530303001	566	6%	9%	3%	10%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Port Washington	IA	Council Bluffs	Hazardous materials transport	191590303002	159	1%	5%	3%	10%	0.00	0.00
Port Washington	IA	Council Bluffs	Hazardous materials transport	191590318003	79	0%	5%	3%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610001000	231	0%	20%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610001002	448	10%	38%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610001003	193	0%	50%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610001004	238	3%	34%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610001005	527	10%	25%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610002002	26	34%	64%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610002003	340	7%	32%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610002004	44	5%	21%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610002005	21	0%	0%	1%	10%	0.00	0.00

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GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Dubuque	IA	Dubuque	Hazardous materials transport	190610007011	36	4%	15%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007012	745	6%	32%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007013	293	6%	19%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007021	645	5%	12%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007022	738	2%	17%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007023	343	11%	36%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007024	976	1%	7%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007025	38	10%	8%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007011	188	0%	17%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007013	729	4%	3%	1%	10%	0.00	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	190610007014	879	0%	6%	1%	10%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

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County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Dubuque	IA	Dubuque	Hazardous materials transport	190610000115	446	0%	8%	1%	10%	0.00
Dubuque	IA	Dubuque	Hazardous materials transport	1906100008116	1	4%	7%	1%	10%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820002002	166	3%	0%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820002002	166	3%	0%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820002003	526	0%	3%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820002003	526	0%	3%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820002004	514	0%	1%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820002004	514	0%	1%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820003001	700	5%	14%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820003001	700	5%	14%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191820003002	25	2%	14%	3%	12%	0.00

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County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Webster	IA	Fort Dodge	Hazardous materials transport	191870003002	25	2%	14%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004001	441	8%	3%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004001	441	8%	8%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004002	767	0%	26%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004002	767	0%	26%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004003	643	3%	18%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870004003	643	3%	18%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870006001	363	12%	22%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870006002	363	12%	22%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870006003	331	4%	14%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870006003	331	4%	14%	3%	12%	0.00	0.00

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County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Webster	IA	Fort Dodge	Hazardous materials transport	191870007002	1060	7%	41%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870007002	1050	7%	41%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870007003	157	0%	63%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870007003	157	0%	63%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870007004	217	19%	35%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870007004	217	19%	35%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870008001	131	97%	44%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870008001	131	97%	44%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870009001	64	0%	0%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870009001	64	0%	0%	3%	12%	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	191870009002	23	7%	26%	3%	12%	0.00

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Webster	IA	Fort Dodge	Hazardous materials transport	1918700070002	23	7%	26%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	1918700090003	1416	3%	17%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	1918700090003	1416	3%	17%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	1918700090004	2	2%	9%	3%	12%	0.00	0.00
Webster	IA	Fort Dodge	Hazardous materials transport	1918700090004	2	2%	9%	3%	12%	0.00	0.00
Delaware	IA	Manchester	Hazardous materials transport	1905595030002	2	1%	18%	1%	13%	0.00	0.00
Delaware	IA	Manchester	Hazardous materials transport	1905595030003	41	0%	7%	1%	13%	0.00	0.00
Delaware	IA	Manchester	Hazardous materials transport	1905595030002	545	0%	13%	1%	13%	0.00	0.00
Delaware	IA	Manchester	Hazardous materials transport	1905595030003	1034	3%	18%	1%	13%	0.00	0.00
Delaware	IA	Manchester	Hazardous materials transport	1905595030004	136	0%	15%	1%	13%	0.00	0.00
Delaware	IA	Manchester	Hazardous materials transport	1905595030003	495	6%	22%	1%	13%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Delaware	IA	Manchester	Hazardous materials transport	19055950006	274	0%	8%	1%	13%	0.00	0.00
Delaware	IA	Manchester	Hazardous materials transport	190559504003	1	0%	10%	1%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930001001	351	8%	9%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930001002	19	0%	15%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930001005	304	12%	17%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930001006	170	16%	5%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930001007	10	42%	0%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930002005	426	4%	11%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930003001	1538	2%	4%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930003002	281	6%	2%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930011001	812	1%	6%	7%	13%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Woodbury	IA	Sioux City	Hazardous materials transport	191930010002	797	11%	17%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930010003	47	8%	12%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930010004	500	11%	19%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930010005	625	6%	14%	7%	13%	0.00	0.00
Woodbury	IA	Sioux City	Hazardous materials transport	191930012001	235	28%	38%	7%	13%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770100001	16	12%	21%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770100002	438	31%	39%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770100003	380	20%	21%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770100004	632	36%	29%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770100005	664	6%	31%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770100006	627	11%	50%	16%	31%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Jackson	IL	Carbondale	Hazardous materials transport	170770109002	165	99%	36%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770109003	432	95%	66%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770110005	18	20%	10%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770111001	132	11%	68%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770111002	634	15%	58%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770111003	315	34%	66%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770112001	417	63%	82%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	17077012002	17	41%	64%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770112003	116	55%	88%	16%	31%	0.00	0.00
Jackson	IL	Carbondale	Hazardous materials transport	170770112004	242	61%	40%	16%	31%	0.00	0.00
Marion	IL	Centralia	Hazardous materials transport	171219324002	660	8%	6%	5%	16%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Marion	IL	Centralls	Hazardous materials transport	171219525001	831	8%	21%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219525002	362	10%	24%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219525003	632	25%	10%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219525004	496	39%	34%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219525005	480	11%	10%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219525006	916	0%	8%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219525007	104	1%	24%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219527002	152	2%	19%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219527003	899	4%	29%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219527004	670	44%	33%	5%	16%	0.00
Marion	IL	Centralls	Hazardous materials transport	171219527005	607	55%	46%	5%	16%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Hazardous Materials Transport	Multiple Response Score
Champaign	IL	Champaign	Hazardous materials transport	170190001001	121	45%	42%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190001002	137	12%	47%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190001003	48	21%	4%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190001004	112	14%	42%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190001005	60	13%	9%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190002001	375	98%	46%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190002002	802	90%	72%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190002003	420	100%	28%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190002004	366	92%	37%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190002005	120	100%	4%	18%	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190003001	2123	27%	34%	18%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Champaign	IL	Champaign	Hazardous materials transport	170190003002	1484	19%	74%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190003003	1398	19%	73%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190003004	703	27%	63%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190004001	903	27%	84%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190004002	2293	9%	82%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190004003	727	14%	66%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190005001	493	13%	32%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190005002	83	22%	21%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190005003	202	10%	21%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190006001	329	36%	33%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190006002	713	12%	12%	16%	18%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEAS ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Response Score
Champaign	IL	Champaign	Hazardous materials transport	170190006003	478	11%	17%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190006004	817	8%	12%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190006005	401	18%	21%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190007001	668	65%	23%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190007002	370	84%	32%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190007003	746	41%	21%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190007004	649	30%	9%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190007005	636	36%	29%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	170190008002	4	31%	14%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900052002	165	31%	46%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900052003	486	27%	52%	16%	18%	0.00	0.00

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GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Champaign	IL	Champaign	Hazardous materials transport	1701900153001	6	29%	13%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900153002	406	84%	37%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900153003	615	55%	47%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900153004	16	34%	57%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900153005	774	140%	29%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900153001	1503	29%	52%	16%	18%	0.00	0.00
Champaign	IL	Champaign	Hazardous materials transport	1701900153004	18	17%	0%	16%	18%	0.00	0.00
Randolph	IL	Coulterville	Hazardous materials transport	17115001505001	215	2%	19%	9%	11%	0.00	0.00
Randolph	IL	Coulterville	Hazardous materials transport	17115001505002	79	5%	12%	9%	11%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150015001	302	31%	40%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150015002	90	53%	39%	13%	13%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Macon	IL	Decatur	Hazardous materials transport	171150002001	197	16%	16%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150002003	88	14%	33%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150002004	241	44%	50%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150002005	397	59%	49%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150005001	21	19%	45%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150006001	713	33%	41%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150006002	267	31%	53%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150006004	21	42%	17%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150007001	429	56%	44%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150008001	427	63%	30%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150008002	515	80%	47%	13%	13%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Macomb	IL	Decatur	Hazardous materials transport	171150010003	258	77%	47%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010004	711	90%	79%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010001	378	20%	23%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010002	498	62%	62%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010003	261	93%	20%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010004	383	56%	36%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010005	998	37%	24%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010006	127	58%	11%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010001	1	13%	15%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010002	134	26%	4%	13%	13%	0.00
Macomb	IL	Decatur	Hazardous materials transport	171150010001	135	14%	16%	13%	13%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Macon	IL	Decatur	Hazardous materials transport	171150020002	602	7%	3%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150020003	393	17%	4%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150020004	697	14%	14%	23%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150020005	768	33%	21%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150020006	1111	26%	50%	13%	13%	0.00	0.00
Macon	IL	Decatur	Hazardous materials transport	171150021002	648	4%	26%	13%	13%	0.00	0.00
Perry	IL	Du Quoin	Hazardous materials transport	171450304004	99	12%	30%	3%	16%	0.00	0.00
Perry	IL	Du Quoin	Hazardous materials transport	171450305001	586	3%	13%	3%	16%	0.00	0.00
Perry	IL	Du Quoin	Hazardous materials transport	171450304003	886	10%	35%	3%	16%	0.00	0.00
Perry	IL	Du Quoin	Hazardous materials transport	171450305002	648	-4%	10%	3%	16%	0.00	0.00
Perry	IL	Du Quoin	Hazardous materials transport	171450305004	10	6%	17%	3%	16%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Perry	IL	Du Quoin	Hazardous materials transport	171450304003	351	1%	17%	3%	16%	0.00	0.00
Perry	IL	Du Quoin	Hazardous materials transport	171450304002	3	26%	17%	3%	16%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499501001	86	2%	7%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499501002	432	3%	10%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499501003	671	2%	11%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499501004	947	0%	10%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499504001	77	4%	5%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499501003	9	0%	14%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499508002	141	0%	7%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499504003	340	1%	9%	1%	9%	0.00	0.00
Effingham	IL	Effingham	Hazardous materials transport	170499508004	700	2%	5%	1%	9%	0.00	0.00

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GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the County Population	Low-Income Share of the County Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Effingham	IL	Effingham	Hazardous materials transport	170499599002	60	8%	6%	1%	9%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770007001	363	79%	26%	8%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770007002	110	9%	27%	9%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770007003	391	63%	43%	8%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770008003	432	0%	25%	8%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770008004	245	16%	37%	8%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770008005	150	51%	45%	8%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770008006	473	0%	28%	8%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770008007	456	30%	29%	9%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770008008	830	57%	22%	8%	10%	0.00	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171770012001	509	6%	13%	3%	10%	0.00	0.00

ATTACHMENT L-1
DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Stephenson	IL	Freeport	Hazardous materials transport	171720012002	729	20%	16%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720012003	269	0%	6%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720012004	642	1%	1%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720012005	0	3%	2%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720013001	705	32%	15%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720013002	993	4%	10%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720013003	780	14%	10%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720013004	3	0%	3%	8%	10%	0.00
Stephenson	IL	Freeport	Hazardous materials transport	171720013005	490	4%	13%	8%	10%	0.00
Cook	IL	Clenn Yard	Hazardous materials transport	170315407001	257	9%	9%	43%	14%	0.00
Cook	IL	Clenn Yard	Hazardous materials transport	170315408001	704	8%	13%	43%	14%	0.00

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Multiple Resource Score
Cook	IL	Glenn Yard	Hazardous materials transport	170315608002	1372	6%	10%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315608003	873	9%	1%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315608004	720	3%	7%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315608005	1001	0%	1%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315609001	1045	3%	2%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315609002	608	6%	4%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315609003	567	3%	3%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315609004	207	3%	4%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315610001	35	5%	4%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315611003	18	3%	3%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	170315611004	124	3%	2%	43%	14%	0.00

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the County Population	Minority Share of the County Population	Low-Income Share of the County Population	Multiple Resource Score
Cook	IL	Glenn Yard	Hazardous materials transport	1703182070003	182	2%	9%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182070006	84	5%	0%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182070001	202	4%	3%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182070002	864	5%	0%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182070003	129	1%	11%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182070005	64	90%	62%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182080001	465	12%	4%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182080002	431	13%	7%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182080003	225	4%	6%	43%	14%	0.00
Cook	IL	Glenn Yard	Hazardous materials transport	1703182080009	0	0%	0%	43%	14%	0.00
Cook	IL	Hawthorne	Hazardous materials transport	1703181380004	134	53%	13%	43%	14%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cook	IL	Hawthorne	Hazardous materials transport	170318139005	204	40%	13%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318139006	342	37%	9%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318139007	415	31%	16%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318139008	712	52%	7%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318139009	683	25%	12%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318139010	251	26%	18%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318140003	102	17%	4%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318140004	268	34%	11%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318141002	870	53%	10%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318141003	739	15%	15%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318142001	542	40%	23%	43%	14%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of this Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cook	IL	Hawthorne	Hazardous materials transport	170318142002	976	64%	42%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318142003	365	34%	14%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318142004	1267	24%	9%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318142005	919	29%	12%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318142006	773	43%	18%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318143001	1493	31%	17%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318143002	1181	30%	13%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318143003	623	24%	9%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318144001	1016	9%	6%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318144002	256	8%	5%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318144003	1130	29%	4%	43%	14%	0.00	0.00

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cook	IL	Hawthorne	Hazardous materials transport	170318144004	1090	16%	5%	43%	34%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318144005	1228	7%	13%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318144006	679	26%	13%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318145001	176	7%	13%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318145002	1253	12%	1%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318145003	887	8%	2%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318145004	504	8%	3%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318152003	27	5%	1%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318152004	25	8%	6%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318155001	57	7%	5%	43%	14%	0.00	0.00
Cook	IL	Hawthorne	Hazardous materials transport	170318204005	95	90%	62%	43%	14%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Kankakee	IL	Kankakee	Hazardous materials transport	170910107003	879	1%	12%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910115001	12	42%	0%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910115002	321	90%	27%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910115003	105	74%	48%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910116001	472	100%	58%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910116002	1093	93%	43%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910116003	1102	93%	54%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910117001	923	0%	2%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910117002	783	29%	20%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910117003	659	5%	25%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910117004	1193	22%	33%	17%	13%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Kankakee	IL	Kankakee	Hazardous materials transport	170910118004	83	3%	1%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910118002	1750	4%	15%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910119004	134	2%	10%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910121002	88	1%	0%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910121003	115	10%	10%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910121004	39	1%	3%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910122001	384	60%	55%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910123002	993	21%	26%	17%	13%	0.00	0.00
Kankakee	IL	Kankakee	Hazardous materials transport	170910123003	1709	34%	27%	17%	13%	0.00	0.00
Cook	IL	Northam Yard	Hazardous materials transport	170318255031	125	57%	16%	43%	14%	0.00	0.00
Cook	IL	Northam Yard	Hazardous materials transport	170318255033	103	28%	8%	43%	14%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cook	IL	Markham Yard	Hazardous materials transport	170318276001	1	100%	1%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318276002	243	64%	10%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318276003	68	73%	9%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318276001	701	100%	24%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318276002	1416	99%	8%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318276003	457	100%	20%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318277001	537	17%	7%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318277002	1362	48%	6%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318277003	1094	26%	17%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318284011	878	15%	1%	43%	14%	0.00	0.00
Cook	IL	Markham Yard	Hazardous materials transport	170318284012	727	8%	1%	43%	14%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION					POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Group Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score	
Cook	IL	Marine Yard	Hazardous materials transport	17031824013	95	0%	2%	43%	14%	0.00	0.00	
Cook	IL	Marine Yard	Hazardous materials transport	17031824021	224	35%	5%	43%	14%	0.00	0.00	
Cook	IL	Marine Yard	Hazardous materials transport	17031824022	134	2%	0%	43%	14%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200003001	68	0%	13%	4%	20%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200003002	129	0%	5%	4%	20%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200003003	433	9%	4%	4%	20%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200003004	1	3%	6%	4%	20%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200003005	53	7%	23%	4%	20%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200004002	12	3%	11%	4%	20%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200004003	348	2%	22%	4%	20%	0.00	0.00	
Coles	IL	Marine	Hazardous materials transport	170200004004	54	20%	14%	4%	20%	0.00	0.00	

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Coles	IL	Mattoon	Hazardous materials transport	170290010001	620	2%	5%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290010003	16	11%	20%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290011004	694	1%	15%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290011002	623	0%	10%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290011003	557	4%	9%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290011004	633	1%	15%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290011005	307	6%	29%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290012002	969	5%	11%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290012002	1033	4%	20%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290012003	522	0%	0%	4%	20%	0.00	0.00
Coles	IL	Mattoon	Hazardous materials transport	170290012004	5	0%	3%	4%	20%	0.00	0.00

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Coles	IL	Mattoon	Hazardous materials transport	170290012005	350	5%	6%	4%	20%	0.00	0.00
Logan	IL	Mount Pulaski	Hazardous materials transport	171079536002	455	1%	7%	6%	10%	0.00	0.00
Logan	IL	Mount Pulaski	Hazardous materials transport	1710794234003	287	4%	13%	6%	10%	0.00	0.00
Logan	IL	Mount Pulaski	Hazardous materials transport	171079234004	7	3%	19%	6%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670018003	6	22%	26%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670018004	578	2%	3%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670018005	68	7%	8%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670021003	17	9%	3%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670021004	170	8%	4%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670022001	202	8%	11%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670022002	726	2%	2%	10%	10%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Sangamon	IL	Springfield	Hazardous materials transport	171670022003	678	0%	2%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670022004	620	0%	2%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670022005	51	3%	1%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670023003	370	4%	14%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670026001	312	1%	10%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670026002	691	2%	6%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670026003	692	5%	14%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670026004	761	4%	13%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670027003	326	3%	9%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670027002	364	3%	15%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670027003	1213	8%	4%	11%	11%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Stress
Sangamon	IL	Springfield	Hazardous materials transport	171670028004	277	0%	4%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670028001	200	15%	13%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670028002	671	3%	13%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670028003	248	10%	17%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670028005	601	16%	6%	10%	10%	0.00	0.00
Sangamon	IL	Springfield	Hazardous materials transport	171670028007	29	5%	2%	10%	10%	0.00	0.00
Fulton	KY	Fulton	Hazardous materials transport	2107598011002	34	6%	22%	20%	31%	0.00	0.00
Fulton	KY	Fulton	Hazardous materials transport	210759801003	329	3%	9%	20%	31%	0.00	0.00
Fulton	KY	Fulton	Hazardous materials transport	210759801004	894	1%	23%	20%	31%	0.00	0.00
Fulton	KY	Fulton	Hazardous materials transport	210759801005	342	61%	64%	20%	31%	0.00	0.00
Fulton	KY	Fulton	Hazardous materials transport	210759801006	1	30%	26%	20%	31%	0.00	0.00

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330008001	892	83%	47%	38%	20%	0.00	0.00
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330018002	448	97%	34%	38%	20%	0.00	0.00
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330012001	122	33%	29%	38%	20%	0.00	0.00
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330012002	130	42%	33%	38%	20%	0.00	0.00
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330012003	26	14%	27%	38%	20%	0.00	0.00
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330013002	3	70%	57%	38%	20%	0.00	0.00
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330030021	150	95%	38%	38%	20%	0.00	0.00
E. Baton Rouge	LA	Baton Rouge	Hazardous materials transport	220330030091	2	100%	0%	38%	20%	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179810025	10	19%	26%	32%	32%	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179810001	820	14%	34%	32%	32%	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179810003	183	4%	23%	32%	32%	0.00	0.00

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GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low Income Share of the Population	Minority Share of County Population	Low Income Share of County Population	Hazardous Materials Transport	Hazardous Materials Exposure	Multiple Resource Score
Washington	LA	Bogalusa	Hazardous materials transport	221179507004	326	5%	30%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179508001	17	0%	5%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179508002	1190	78%	50%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179508003	59	8%	2%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179508004	182	98%	62%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179509001	4	0%	0%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179509002	261	0%	2%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179509003	41	0%	42%	32%	32%	0.00	0.00	0.00
Washington	LA	Bogalusa	Hazardous materials transport	221179509004	157	49%	39%	32%	32%	0.00	0.00	0.00
St. Charles	LA	Desatrum	Hazardous materials transport	221090622002	343	3%	2%	27%	15%	0.00	0.00	0.00
St. Charles	LA	Desatrum	Hazardous materials transport	221090623001	547	6%	3%	27%	15%	0.00	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
Country	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
St. Charles	LA	Destrehan	Hazardous materials transport	220890623004	1765	33%	8%	27%	15%	0.00
St. Charles	LA	Destrehan	Hazardous materials transport	220890627004	1	25%	22%	27%	15%	0.00
St. Charles	LA	Destrehan	Hazardous materials transport	220890628004	111	38%	33%	27%	15%	0.00
St. Charles	LA	Destrehan	Hazardous materials transport	220890629002	0	6%	28%	27%	15%	0.00
Ascension	LA	Gellmar	Hazardous materials transport	220050303903	33	70%	24%	25%	18%	0.00
Ascension	LA	Gellmar	Hazardous materials transport	220050306001	156	34%	13%	25%	18%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510229003	15	0%	11%	25%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510230022	640	8%	4%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510230031	305	3%	7%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510230033	471	6%	0%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510231001	1003	0%	13%	26%	14%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Population Effects	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Jefferson	LA	Mays Yard	Hazardous materials transport	220510231002	1405	7%	11%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510232001	1009	4%	7%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510232002	1176	11%	13%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510233001	76	15%	3%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510241001	277	1%	13%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510242001	1061	21%	20%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510242002	607	7%	6%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510243001	55	7%	10%	26%	14%	0.00
Jefferson	LA	Mays Yard	Hazardous materials transport	220510243004	188	0%	10%	26%	14%	0.00
Calhoun	MI	Barile Creek	Hazardous materials transport	260250002001	473	14%	20%	13%	14%	0.00
Calhoun	MI	Barile Creek	Hazardous materials transport	260250002002	60	28%	39%	13%	14%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Calhoun	MI	Battle Creek	Hazardous materials transport	260250007001	91	46%	48%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250008001	420	18%	42%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250008002	1531	35%	14%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250008003	911	1%	20%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250009001	9	4%	4%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250020004	2	13%	10%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250021001	195	2%	40%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250021002	404	4%	27%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250022004	240	11%	38%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250022005	14	1%	20%	13%	14%	0.00	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	260250022007	2	4%	0%	13%	14%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Calhoun	MI	Battle Creek	Hazardous materials transport	2602500230005	205	13%	7%	13%	14%	0.00
Calhoun	MI	Battle Creek	Hazardous materials transport	2602500230006	161	9%	1%	13%	14%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400002	502	34%	30%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400003	583	4%	15%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400004	282	8%	10%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400004	374	3%	11%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400002	1995	9%	15%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400003	568	6%	17%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400004	763	11%	7%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400003	677	2%	3%	44%	20%	0.00
Wayne	MI	Dearborn	Hazardous materials transport	2616357400009	470	2%	2%	44%	20%	0.00

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GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Dearborn	Hazardous materials transport	261635743002	26	4%	2%	44%	20%	0.00	0.00
Wayne	MI	Dearborn	Hazardous materials transport	261635743009	1	100%	0%	44%	20%	0.00	0.00
Wayne	MI	Dearborn	Hazardous materials transport	261635760001	0	100%	0%	44%	20%	0.00	0.00
Wayne	MI	Dearborn	Hazardous materials transport	261635785002	134	12%	1%	44%	20%	0.00	0.00
Wayne	MI	Dearborn	Hazardous materials transport	261635785003	51	9%	16%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635106003	611	43%	38%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635106006	784	1%	18%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635107001	417	75%	60%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635107002	593	82%	44%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635107003	1132	47%	50%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635108002	22	97%	80%	44%	20%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635108003	3	32%	73%	44%	20%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635108004	430	64%	30%	44%	20%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635108005	32	90%	36%	44%	21%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635109001	738	98%	58%	44%	20%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635109002	368	79%	53%	44%	20%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635109003	586	94%	62%	44%	20%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635111001	0	25%	100%	44%	20%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635111002	65	100%	58%	44%	21%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635111003	0	0%	0%	44%	20%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635120001	416	0%	10%	44%	21%	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635120002	428	0%	12%	44%	20%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635520003	227	3%	20%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635520004	186	0%	23%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635521003	390	10%	19%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635522001	276	21%	43%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635522002	1366	11%	23%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635523003	932	0%	13%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635523004	1047	16%	31%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635523005	880	5%	31%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635523006	943	11%	22%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635524001	676	58%	31%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635524002	608	46%	44%	44%	20%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635324003	465	49%	48%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635324004	406	7%	17%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635325001	916	1%	27%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635325002	650	0%	22%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635326001	329	22%	30%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635326002	870	48%	43%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635326003	797	15%	38%	44%	20%	0.00	0.00
Wayne	MI	Detroit/Detroit East	Hazardous materials transport	261635327001	0	0%	0%	44%	20%	0.00	0.00
Shamusee	MI	Detroit	Hazardous materials transport	261550318003	743	4%	24%	2%	11%	0.00	0.00
Shamusee	MI	Detroit	Hazardous materials transport	261550319003	254	8%	9%	2%	11%	0.00	0.00
Shamusee	MI	Detroit	Hazardous materials transport	261550318004	4	0%	2%	2%	11%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Shiawassee	MI	Durand	Hazardous materials transport	261550319001	1243	0%	10%	2%	11%	0.00	0.00
Shiawassee	MI	Durand	Hazardous materials transport	261550312002	28	0%	0%	2%	11%	0.00	0.00
Shiawassee	MI	Durand	Hazardous materials transport	261550312001	194	0%	29%	2%	11%	0.00	0.00
Shiawassee	MI	Durand	Hazardous materials transport	261550319002	1045	0%	13%	2%	11%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261633794009	0	0%	0%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261633791002	150	15%	27%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261633792001	1115	24%	24%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261633792002	1173	8%	18%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261633792003	697	11%	33%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261633792004	1176	8%	31%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261633792002	260	99%	33%	44%	20%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Ecorse	Hazardous materials transport	261635795004	915	100%	23%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795006	317	100%	35%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795007	122	100%	23%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795008	468	4%	45%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795002	600	11%	30%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795003	3	100%	0%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795004	1061	17%	36%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795005	121	30%	20%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795009	0	0%	0%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635795999	20	15%	0%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635796001	963	99%	51%	44%	20%	0.00	0.00

ATTACHMENT L-1 **DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
Country	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the County Population	Minority Share of the County Population	Low-Income Share of the County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Ecorse	Hazardous materials transport	261635796002	525	100%	34%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635796002	68	100%	20%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635796005	545	99%	23%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635797001	69	18%	21%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635798004	1083	21%	24%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635798002	384	3%	32%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635798003	64	31%	23%	44%	20%	0.00	0.00
Wayne	MI	Ecorse	Hazardous materials transport	261635798009	0	0%	0%	44%	20%	0.00	0.00
Wayne	MI	Flat Rock	Hazardous materials transport	261635917001	4	6%	0%	44%	20%	0.00	0.00
Wayne	MI	Flat Rock	Hazardous materials transport	261635917002	112	6%	13%	44%	20%	0.00	0.00
Wayne	MI	Flat Rock	Hazardous materials transport	261635918009	470	6%	6%	44%	20%	0.00	0.00

ATTACHMENT L-1
DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Flat Rock	Hazardous materials transport	261635931003	91	7%	0%	44%	20%	0.00	0.00
Wayne	MI	Flat Rock	Hazardous materials transport	261635931004	367	7%	0%	44%	20%	0.00	0.00
Wayne	MI	Flat Rock	Hazardous materials transport	261635931009	436	6%	6%	44%	20%	0.00	0.00
Wayne	MI	Flat Rock	Hazardous materials transport	261635930000	2	3%	0%	44%	20%	0.00	0.00
Wayne	MI	Flat Rock	Hazardous materials transport	261635930009	582	5%	17%	44%	20%	0.00	0.00
Genesee	MI	Flint	Hazardous materials transport	260490028002	24	39%	21%	23%	17%	0.00	0.00
Genesee	MI	Flint	Hazardous materials transport	260490028003	460	24%	41%	23%	17%	0.00	0.00
Genesee	MI	Flint	Hazardous materials transport	260490028004	68	40%	34%	23%	17%	0.00	0.00
Genesee	MI	Flint	Hazardous materials transport	260490028005	634	26%	51%	23%	17%	0.00	0.00
Genesee	MI	Flint	Hazardous materials transport	260490028006	735	30%	52%	23%	17%	0.00	0.00
Genesee	MI	Flint	Hazardous materials transport	260490028007	97	27%	1%	23%	17%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Genesee	MI	P/Inc	Hazardous materials transport	260490029002	97	23%	23%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490032001	465	98%	48%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490032004	97	93%	24%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490033001	42	14%	8%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490034007	31	7%	0%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490037003	274	13%	56%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490037005	0	8%	18%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490037006	336	4%	29%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490038004	355	9%	67%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490038012	306	92%	22%	23%	17%	0.00	0.00
Genesee	MI	P/Inc	Hazardous materials transport	260490038003	620	44%	29%	23%	17%	0.00	0.00

DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Genesee	MI	Plant	Hazardous materials transport	260490038004	351	2%	35%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490038005	528	8%	36%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490039001	164	1%	11%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490039002	377	13%	11%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490039003	798	11%	24%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490039004	502	0%	24%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490039006	71	17%	15%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490039007	256	17%	29%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490039008	0	0%	0%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490040001	1149	5%	30%	23%	17%	0.00
Genesee	MI	Plant	Hazardous materials transport	260490040002	1274	5%	24%	23%	17%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Cassia	MI	Plant	Hazardous materials transport	260490040003	736	4%	18%	23%	17%	0.00	0.00
Cassia	MI	Plant	Hazardous materials transport	260490040005	87	5%	15%	23%	17%	0.00	0.00
Eaton	MI	Lansing	Hazardous materials transport	260490202021	539	10%	8%	7%	7%	0.00	0.00
Eaton	MI	Lansing	Hazardous materials transport	260490202022	1393	44%	17%	7%	7%	0.00	0.00
Eaton	MI	Lansing	Hazardous materials transport	260490202029	115	12%	5%	7%	7%	0.00	0.00
Eaton	MI	Lansing	Hazardous materials transport	260490317022	34	25%	7%	7%	7%	0.00	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158316001	82	0%	7%	4%	9%	0.00	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158316002	953	8%	8%	4%	9%	0.00	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158316003	202	3%	8%	4%	9%	0.00	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158317004	62	10%	6%	4%	9%	0.00	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158317012	334	3%	12%	4%	9%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Monroe	MI	Monroe	Hazardous materials transport	261158317003	1001	6%	21%	4%	9%	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158317804	829	6%	0%	4%	9%	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158317005	914	8%	10%	4%	9%	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158318001	2	66%	34%	4%	9%	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158318002	49	13%	32%	4%	9%	0.00
Monroe	MI	Monroe	Hazardous materials transport	261158319001	9	3%	22%	4%	9%	0.00
St. Clair	MI	Port Huron	Hazardous materials transport	261476350003	19	3%	13%	4%	11%	0.00
St. Clair	MI	Port Huron	Hazardous materials transport	261476350004	3	6%	10%	4%	11%	0.00
St. Clair	MI	Port Huron	Hazardous materials transport	261476350002	782	14%	23%	4%	11%	0.00
St. Clair	MI	Port Huron	Hazardous materials transport	261476350003	293	19%	15%	4%	11%	0.00
Oakland	MI	Pontiac	Hazardous materials transport	261251414005	0	34%	13%	11%	6%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE		
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	CA	Pontiac	Hazardous materials transport	261251416004	1010	44%	56%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251416005	417	54%	59%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251416006	28	30%	28%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251417001	742	46%	55%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251417002	642	37%	45%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251417003	796	31%	40%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251417004	2012	27%	42%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251417005	970	27%	31%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251418001	499	34%	27%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251418002	715	21%	19%	11%	6%	0.00	0.00
Oakland	CA	Pontiac	Hazardous materials transport	261251418003	706	24%	32%	11%	6%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Oakland	MI	Pondiac	Hazardous materials transport	261251419001	1504	33%	0%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251420001	767	34%	31%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251420002	956	29%	34%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251420003	681	31%	14%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251420004	577	39%	10%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251421001	607	39%	36%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251421002	475	54%	47%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251421003	47	87%	23%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251421004	974	54%	44%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251430001	265	58%	23%	11%	6%	0.00
Oakland	MI	Pondiac	Hazardous materials transport	261251430002	151	51%	7%	11%	6%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Oakland	MI	Pontiac	Hazardous materials transport	261251426003	21	33%	9%	11%	6%	0.00	0.00
Oakland	MI	Pontiac	Hazardous materials transport	261251446005	33	0%	6%	11%	6%	0.00	0.00
Oakland	MI	Pontiac	Hazardous materials transport	261251447001	353	14%	16%	11%	6%	0.00	0.00
Oakland	MI	Pontiac	Hazardous materials transport	261251454001	31	1%	16%	11%	6%	0.00	0.00
Wayne	MI	Edison (Trenon)	Hazardous materials transport	261635943001	312	0%	0%	44%	20%	0.00	0.00
Wayne	MI	Edison (Trenon)	Hazardous materials transport	261635943002	440	0%	0%	44%	20%	0.00	0.00
Wayne	MI	Edison (Trenon)	Hazardous materials transport	261635943003	404	1%	2%	44%	20%	0.00	0.00
Wayne	MI	Edison (Trenon)	Hazardous materials transport	261635943004	46	0%	3%	44%	20%	0.00	0.00
Wayne	MI	Edison (Trenon)	Hazardous materials transport	261635944001	244	0%	11%	44%	20%	0.00	0.00
Wayne	MI	Edison (Trenon)	Hazardous materials transport	261635944002	452	7%	0%	44%	20%	0.00	0.00
Wayne	MI	Edison (Trenon)	Hazardous materials transport	261635944003	1148	4%	26%	44%	20%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633944004	129	2%	2%	44%	20%	0.00	0.00
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633944005	219	7%	0%	44%	20%	0.00	0.00
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633943004	333	3%	0%	44%	20%	0.00	0.00
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633943003	242	3%	0%	44%	20%	0.00	-0.00
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633943004	430	1%	5%	44%	20%	0.00	0.00
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633943003	86	0%	3%	44%	20%	0.00	0.00
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633943001	142	5%	3%	44%	20%	0.00	0.00
Wayne	MI	Edison (Transmission)	Hazardous materials transport	261633943004	17	0%	7%	44%	20%	0.00	0.00
Wayne	MI	Woodhaven	Hazardous materials transport	261633945009	799	9%	10%	44%	20%	0.00	0.00
Wayne	MI	Woodhaven	Hazardous materials transport	261633940002	733	4%	5%	44%	20%	0.00	0.00
Wayne	MI	Woodhaven	Hazardous materials transport	261633940009	60	11%	8%	44%	20%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Wayne	MI	Woodhaven	Hazardous materials transport	261639931001	1146	9%	3%	44%	20%	0.00	0.00
Wayne	MI	Woodhaven	Hazardous materials transport	261639942003	17	4%	0%	44%	20%	0.00	0.00
Wayne	MI	Woodhaven	Hazardous materials transport	261639943004	646	0%	5%	44%	20%	0.00	0.00
Wayne	MI	Woodhaven	Hazardous materials transport	261639952009	36	3%	3%	44%	20%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	280859903001	82	26%	22%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	280859905002	379	29%	19%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	280859905003	223	33%	31%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	280859905004	1290	61%	28%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	280859905005	929	20%	23%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	280859906001	27	83%	78%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	280859906002	323	65%	13%	30%	23%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION					POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Lincoln	MS	Brookhaven	Hazardous materials transport	2808595060003	643	67%	59%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	2808595060004	1	98%	41%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	2808595060005	331	1%	4%	30%	23%	0.00	0.00
Lincoln	MS	Brookhaven	Hazardous materials transport	2808595060006	1	6%	0%	30%	23%	0.00	0.00
Lawrence	MS	Ferguson	Hazardous materials transport	2807796010002	73	43%	29%	34%	28%	0.00	0.00
Lawrence	MS	Ferguson	Hazardous materials transport	2807796010003	5	53%	26%	34%	28%	0.00	0.00
Lawrence	MS	Ferguson	Hazardous materials transport	2807796020002	3	91%	42%	34%	28%	0.00	0.00
Forest	MS	Wallerburg	Hazardous materials transport	2803500010004	538	67%	58%	32%	27%	0.00	0.00
Forest	MS	Wallerburg	Hazardous materials transport	2803500010002	567	75%	65%	32%	27%	0.00	0.00
Forest	MS	Wallerburg	Hazardous materials transport	2803500020001	514	43%	40%	32%	27%	0.00	0.00
Forest	MS	Wallerburg	Hazardous materials transport	2803500020002	439	20%	21%	32%	27%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Black Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Forrest	MS	Harrisburg	Hazardous materials transport	280350002003	87	10%	8%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350002004	6	13%	11%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350003001	738	64%	40%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350003002	349	12%	35%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350004001	219	85%	39%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350004002	646	61%	48%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350004003	502	100%	62%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350005004	797	100%	62%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350005001	150	67%	81%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350005002	169	74%	64%	32%	27%	0.00	0.00
Forrest	MS	Harrisburg	Hazardous materials transport	280350005003	4	97%	57%	32%	27%	0.00	0.00

ATTACHMENT L-1

DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Adversely Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Forrest	MS	Hattiesburg	Hazardous materials transport	2803500110003	410	65%	26%	32%	27%	0.00	0.00
Forrest	MS	Hattiesburg	Hazardous materials transport	2803500110004	8	34%	26%	32%	27%	0.00	0.00
Forrest	MS	Hattiesburg	Hazardous materials transport	2803501020004	1	32%	24%	32%	27%	0.00	0.00
Forrest	MS	Hattiesburg	Hazardous materials transport	2803501030004	37	24%	28%	32%	27%	0.00	0.00
Pike	MS	McComb	Hazardous materials transport	2811395020004	14	31%	27%	46%	33%	0.00	0.00
Pike	MS	McComb	Hazardous materials transport	2811395030001	3	95%	57%	46%	33%	0.00	0.00
Pike	MS	McComb	Hazardous materials transport	2811395030003	973	91%	59%	46%	33%	0.00	0.00
Pike	MS	McComb	Hazardous materials transport	2811395030004	650	58%	37%	46%	33%	0.00	0.00
Pike	MS	McComb	Hazardous materials transport	2811395030005	853	40%	15%	46%	33%	0.00	0.00
Pike	MS	McComb	Hazardous materials transport	2811395040001	723	27%	22%	46%	33%	0.00	0.00
Pike	MS	McComb	Hazardous materials transport	2811395040002	57	4%	14%	46%	33%	0.00	0.00

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Pike	MS	McComb	Hazardous materials transport	281139505001	9	73%	34%	46%	33%	0.00
Pike	MS	McComb	Hazardous materials transport	281139505004	96	0%	7%	46%	33%	0.00
Pike	MS	McComb	Hazardous materials transport	281139505005	205	50%	31%	46%	33%	0.00
Pike	MS	McComb	Hazardous materials transport	281139505006	640	55%	60%	46%	33%	0.00
Pike	MS	McComb	Hazardous materials transport	281139505007	1207	11%	21%	46%	33%	0.00
Prebourn	MIN	Glenville	Hazardous materials transport		2	0%	4%	0%	6%	0.00
Prebourn	MIN	Glenville	Hazardous materials transport		21	0%	6%	4%	6%	0.00
Prebourn	MIN	Glenville	Hazardous materials transport		113	0%	4%	4%	6%	0.00
Koochiching	MIN	Ramsey	Hazardous materials transport	270719902002	196	0%	7%	26%	13%	0.00
Koochiching	MIN	Ramsey	Hazardous materials transport	270719902007	96	0%	15%	26%	13%	0.00
Koochiching	MIN	Ramsey	Hazardous materials transport	270719903001	3	0%	15%	26%	13%	0.00

ATTACHMENT L-1 DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Keechiching	MIN	Barrier	Hazardous materials transport	270719013002	27	0%	4%	-26%	13%	0.00	0.00
Keechiching	MIN	Barrier	Hazardous materials transport	270719013003	7	0%	4%	-26%	13%	0.00	0.00
Keechiching	MIN	Barrier	Hazardous materials transport	270719014002	0	0%	15%	-26%	13%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370128001	164	0%	9%	-19%	5%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370128002	910	0%	4%	-19%	5%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370128003	37	39%	2%	-19%	5%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370130001	8	13%	3%	-19%	5%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370131003	0	13%	0%	-19%	5%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370131004	5	10%	1%	-19%	5%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370132002	635	20%	1%	-19%	5%	0.00	0.00
St. Louis	MO	Virginia	Hazardous materials transport	271370132003	1607	62%	6%	-19%	5%	0.00	0.00

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GENERAL INFORMATION				POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score	
St. Louis	MO	Virginia	Hazardous materials transport	27132H132004	210	0%	8%	19%	5%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110001	325	100%	61%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110001	325	100%	61%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110001	65	96%	48%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110001	65	96%	48%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110002	325	100%	46%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110002	325	100%	46%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110002	1597	99%	61%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900110003	1597	99%	61%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900120002	0	100%	65%	52%	21%	0.00	0.00	
Winds	MS	Jackson	Hazardous materials transport	2804900120002	0	100%	65%	52%	21%	0.00	0.00	

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Hinds	MS	Jackson	Hazardous materials transport	280490012003	347	100%	38%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490012003	347	100%	39%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013001	777	26%	13%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013001	777	26%	13%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013003	34	36%	0%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490013003	34	36%	49%	52%	21%	0.00	0.00
Winn	MS	Jackson	Hazardous materials transport	280490015002	8	0%	0%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490015002	8	0%	6%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490015003	643	5%	18%	52%	21%	0.00	0.00
Winn	MS	Jackson	Hazardous materials transport	280490015003	643	5%	18%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490015004	438	2%	6%	52%	21%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Hinds	MS	Jackson	Hazardous materials transport	280490016004	430	2%	6%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016001	144	67%	34%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016001	144	67%	34%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016002	1496	40%	40%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016002	1496	40%	40%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016003	674	88%	53%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016003	674	88%	53%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016004	294	16%	20%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016004	294	16%	20%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016005	56	59%	33%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490016005	56	59%	33%	52%	21%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Hinds	MS	Jackson	Hazardous materials transport	280490017001	869	100%	57%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490017001	869	100%	57%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490017002	162	100%	15%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490017002	162	100%	15%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490017003	696	100%	52%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490017003	696	100%	52%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490018001	1128	100%	53%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490018001	1128	100%	53%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490018002	178	99%	75%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490018002	178	99%	75%	52%	21%	0.00	0.00
Hinds	MS	Jackson	Hazardous materials transport	280490019001	1110	99%	34%	52%	21%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Minds	MS	Jackson	Hazardous materials transport	280490019001	1110	99%	34%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490019002	1856	93%	38%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490019002	1856	93%	38%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490019003	338	100%	40%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490019003	338	100%	40%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490020001	717	100%	41%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490020001	717	100%	47%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490020002	310	97%	74%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490020002	310	97%	74%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490022001	16	75%	59%	52%	21%	0.00
Minds	MS	Jackson	Hazardous materials transport	280490022001	16	75%	59%	52%	21%	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment of Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Shelby	TN	Johnson	Hazardous materials transport	4715700053003	230	100%	33%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	4715700053006	3	99%	46%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	4715700055004	59	97%	45%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	4715700055005	422	100%	19%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	4715700056005	76	95%	18%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	4715700076001	0	0%	0%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	471570004101	113	0%	9%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	471570222201	877	80%	33%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	471570222202	512	100%	30%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	471570222204	290	100%	16%	45%	18%	0.00	0.00
Shelby	TN	Johnson	Hazardous materials transport	471570222205	652	95%	77%	45%	18%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION**

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310201001	384	22%	23%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310201002	664	23%	56%	3%	19%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310201003	51	0%	14%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310201004	69	0%	22%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310201009	82	5%	30%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310201999	0	0%	0%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310202001	634	5%	39%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310202001	6	0%	34%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310203002	1	3%	19%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310203003	1346	2%	32%	3%	15%	0.00	0.00
Douglas	WI	Pokegama (Superior)	Hazardous materials transport	550310203004	775	4%	17%	3%	15%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION			POPULATION INFORMATION							ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-income Share of the Population	Minority Share of County Population	Low-income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Douglas	WI	Pottergama (Superior)	Hazardous materials transport	5503102015004	12	9%	7%	3%	15%	0.00	0.00
Douglas	WI	Pottergama (Superior)	Hazardous materials transport	5503102015003	765	0%	9%	3%	15%	0.00	0.00
Douglas	WI	Pottergama (Superior)	Hazardous materials transport	5503102016004	1235	14%	32%	3%	15%	0.00	0.00
Douglas	WI	Pottergama (Superior)	Hazardous materials transport	5503102016002	32	0%	10%	3%	15%	0.00	0.00
Douglas	WI	Pottergama (Superior)	Hazardous materials transport	5503102016004	367	6%	22%	3%	15%	0.00	0.00
Douglas	WI	Pottergama (Superior)	Hazardous materials transport	5503102017004	347	4%	7%	3%	15%	0.00	0.00
Douglas	WI	Pottergama (Superior)	Hazardous materials transport	5503102017002	92	0%	5%	3%	15%	0.00	0.00
Facility that is both yard and intermodal facility											
Black Hawk	IA	Waterloo	Hazardous materials transport	1901300011001	294	13%	46%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	1901300011002	339	59%	56%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	1901300011003	616	27%	48%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	1901300011004	452	75%	39%	9%	15%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION						ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Hazardous Materials Transport	Multiple Resource Score
Black Hawk	IA	Waterloo	Hazardous materials transport	190130004001	9	0%	74%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130005001	138	0%	14%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130005002	532	24%	19%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130005003	192	30%	25%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130007001	626	51%	41%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130007002	502	47%	61%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130007003	339	41%	65%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130009005	139	11%	33%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130009006	22	4%	28%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130017012	629	84%	35%	9%	15%	0.00	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130017013	1049	52%	38%	9%	15%	0.00	0.00

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DATA ON POTENTIALLY AFFECTED POPULATIONS USED IN SEA'S ENVIRONMENTAL JUSTICE EVALUATION

GENERAL INFORMATION				POPULATION INFORMATION					ENVIRONMENTAL RESOURCE SCORE	
County	State	Affected Segment or Facility	Potential Effect	Census Block Group Identifier	Total Population	Minority Share of the Population	Low-Income Share of the Population	Minority Share of County Population	Low-Income Share of County Population	Multiple Resource Score
Black Hawk	IA	Waterloo	Hazardous materials transport	190130017014	224	21%	25%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130017021	24	53%	19%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130017025	2	48%	38%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130018001	544	85%	20%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130018002	229	89%	24%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130018003	598	97%	29%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130019001	117	73%	14%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130019002	281	20%	20%	9%	15%	0.00
Black Hawk	IA	Waterloo	Hazardous materials transport	190130019003	17	13%	10%	9%	15%	0.00

GLOSSARY OF TERMS

abandonment:	The discontinuance of service on a rail line segment, with no intention of resuming that service.
Acquisition:	The proposal by CN and IC for CN to acquire control of IC's assets and its basic railroad operations.
active warning devices:	Traffic control devices that give positive notice to highway users of the approach or presence of a train. These devices may include a flashing red light signal (a device which, when activated, displays red lights flashing alternately), a bell (a device which, when activated, provides an audible warning, usually used with a flashing red light signal), automatic gates (a mechanism added to flashing red light signals to provide a cantilevered arm that can lower across the lanes of the roadway equipped with flashing red light signals and extending over one or more lanes of traffic).
adverse environmental impact:	A negative effect, resulting from the implementation of a proposed action, that serves to degrade or diminish an aspect of human or natural resources.
Advisory Council on Historic Preservation (ACHP):	An independent Federal agency charged with advising the President and Congress on historic preservation matters and administering the provisions of Section 106 of the National Historic Preservation Act.

Applicants:	Canadian National Railway Company (and subsidiaries Grand Trunk Corporation and Grand Western Railroad Incorporated) and Illinois Central Corporation (and subsidiaries Illinois Central Railroad Company; Chicago, Central & Pacific Railroad Company; and Cedar River Railroad Company).
Application:	A formal filing with the Surface Transportation Board related to certain railroad transactions such as railroad mergers, acquisitions, constructions, or abandonments. For the proposed CN/IC Acquisition, applications may be either Primary Applications or Inconsistent and Responsive (IR) Applications. See <i>Primary Application</i> and <i>Inconsistent and Responsive (IR) Application</i> .
attainment area:	An area that EPA has classified as complying with the National Ambient Air Quality Standards specified under the Clean Air Act.
bad order cars:	Rail cars that fail routine inspections.
bad order support tracks:	Tracks used to store bad order cars until they can be repaired.
ballast:	The portion of the track bed that lies below the railroad ties and consists of crushed stone or other material.
Best Management Practice (BMP):	Technique that various parties (e.g., the construction industry) use to provide protection from adverse impacts to the environment. The Board may designate these techniques as mitigation measures.

block:	(1) A defined length of track, with defined limits, on which operators govern train movements. (2) A group of freight cars handled as one unit for a portion or all of their journey from origin to destination.
block swapping:	The process of moving groups of rail cars with a common destination (called "blocks") from one train to another.
blocking:	The process of aggregating freight cars into blocks.
blocking pattern:	The assignment of a specific freight car to a specific block.
Board:	The Surface Transportation Board, the licensing agency for the proposed CN/IC Acquisition.
bulletins:	Documents addressed to train crews and other operating employees specifying temporary or local operating rules and restrictions.
Census block group:	The smallest geographic unit for which the U.S. Census provides information on racial background, ethnic heritage, and household income.
Class 1 railroad:	As defined by the Board, any railroad with average annual operating revenue of \$255.9 million or more.

Clean Air Act (Clean Air Act Amendments): The Clean Air Act of 1970 and the subsequent amendments, including the Clean Air Act Amendments of 1990 (42 U.S.C. 7401-7671g); the primary Federal law that protects the nation's air resources. This act establishes a comprehensive set of standards, planning processes, and requirements to address air pollution problems and reduce emissions from major sources of pollutants.

Clean Water Act: The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251 *et seq.*) is the primary Federal law that protects the nation's waters, including lakes, rivers, aquifers, and coastal areas. This act provides a comprehensive framework of standards, technical tools, and financial assistance to address the many causes of pollution and poor water quality, including municipal and industrial wastewater discharges, polluted runoff from urban and rural areas, and habitat destruction. Specifically, the Clean Water Act provides for the following:

- Requires major industries to meet performance standards to ensure pollution control.
- Charges states and tribes with setting specific water quality standards appropriate for their waters and developing pollution control programs to meet them.
- Provides funding to states and communities to help them meet their clean water infrastructure needs.
- Protects valuable wetlands and other aquatic habitats through a permitting process that conducts land development activities and other activities in an environmentally sound manner.

common corridor: An area in which passenger and freight rail lines run on adjacent parallel lines.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601-9675; P.L. 96-510); the Federal act that provides EPA with the authority to clean up inactive hazardous waste sites and distribute the cleanup costs among the parties who generated and/or handled the hazardous substances at these sites.
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS):	Federal database containing information on potential hazardous waste sites that states, municipalities, private companies, and private persons have reported to the EPA, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act. This database contains sites that are either currently on, or proposed for inclusion on, the National Priorities List (NPL) and sites that are in the screening and assessment phase for possible inclusion on the NPL.
condition:	A provision that the Board imposes as part of any decision approving the proposed CN/IC Acquisition and that requires action by one or more of the Applicants.
control boxes:	Structures at highway/rail at-grade crossings that house the electronics and apparatus that control the warning devices at the crossing.
Council on Environmental Quality (CEQ):	Federal agency responsible for developing regulations and guidance for agencies implementing the National Environmental Policy Act.
crew caller:	Term applied to a railroad employee who is responsible for notifying train crews when and where to report for duty.
crew calling:	Process of notifying train crew members when and where their next tour-of-duty will start. Labor agreements commonly specify that railroads call train crews a minimum of 2 hours before crew members are required to begin their tour-of-duty.

criteria of significance:	The criteria SEA developed to determine whether a potential adverse environmental effect is significant and may warrant mitigation.
critical habitat:	The specific sites within the geographical area occupied by threatened or endangered species that include the physical or biological features essential to the conservation of the species. These areas may require special management considerations or protection. These areas include specific sites outside the geographical areas occupied by the species at the time of the listing that are essential for the conservation of the species.
cultural resource:	Any prehistoric or historic district, site, building, structure, or object that warrants consideration for inclusion in the National Register of Historic Places. A cultural resource that is listed in or is eligible for listing in the National Register of Historic Places is considered a historic property (or a significant cultural resource). For the purposes of this Draft EA, the term applies to any resource more than 50 years old for which SEA gathered information to evaluate its significance.
cumulative effects:	Effects resulting from the incremental impacts of the proposed CN/IC Acquisition when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (Federal or non-Federal) or person undertakes such actions, as described in 40 CFR 1508.7. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.
Day 1:	In the event that the Board approves the proposed CN/IC Acquisition, the date (as the Applicants determine through mutual agreement) when operating responsibility for the acquired railroad is transferred to the Applicants' organization.

decibel (dB):	A unit of noise measured on a logarithmic scale that compresses the range of sound pressures audible to the human ear over a range from 0 to 140, where 0 decibels represents sound pressure corresponding to the threshold of human hearing, and 140 decibels corresponds to a sound pressure at which pain occurs. Noise analysts measure sound pressure levels that people hear in decibels, much like other analysts measure linear distances in yards or meters. A-weighted decibel (dBA) refers to a weighting that accounts for the various frequency components in a way that corresponds to human hearing.
degradation:	Changes to a habitat, either terrestrial or aquatic, so that it no longer meets the survival needs of a particular species of plant or wildlife. Such change could include reducing the feeding area, modifying the vegetation type, and limiting the available shelter.
dispatcher (train):	The railroad operating employee responsible for issuing on-track movement and/or occupancy authority through the use of remotely controlled switches, signals, visual displays, voice control written mandatory directives, and/or all of the above.
double-stack freight service:	The transport of two intermodal containers stacked on top of each other on one platform of an intermodal rail flat car.
emissions:	Air pollutants that enter the atmosphere.
Environmental Assessment (EA):	A document that the CEQ regulations implementing the National Environmental Policy Act requires Federal agencies to prepare for major projects or legislative proposals having the potential to significantly affect the environment. A tool for decision-making, it describes the positive and negative environmental effects of the undertaking and alternative actions and measures to eliminate potentially significant environmental impacts.

Environmental Justice (EJ):

For purposes of this document, SEA defines environmental justice as the mission discussed in Executive Order (EO) 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (59 FR 7629, February 11, 1994). This EO directs Federal agencies to identify and address "disproportionately high and adverse human health or environmental effects" of their programs, policies, and activities on minority and low-income populations in the United States. EO 12898 also calls for public notification for environmental justice populations, as well as meaningful public participation of environmental justice populations. In this document, SEA used the guidance provided in the Department of Transportation Order on Environmental Justice, the Council of Environmental Quality, Environmental Justice Guidance under the National Environmental Policy Act, and the Interim Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA analysis to analyze potential disproportionately high and adverse impacts on environmental justice populations for rail segments, intermodal facilities, rail yards, and new construction.

Environmental Justice (EJ) population:

A population within an Area of Potential Effect whose minority and low-income composition meets at least one of the following criteria: (1) the percentage of minority and low-income population in the Area of Potential Effect is greater than 50 percent of the total population in the Area of Potential Effect, or (2) the percentage of minority and low-income population in the Area of Potential Effect is at least ten percentage points greater than the percentage of minority or low-income population in the county of which the Area of Potential Effect is a part.

Environmental Resource Score (ERS):

The impact score determined for an environmental resource category within a (block group) area of potential effect. A typical ERS ranges from 0 to 6, reflecting the relative impact on the Area of Potential Effect compared with impacts on other Areas of Potential Effect. For the Environmental Justice analysis, SEA calculated an ERS for noise, hazardous materials transport, and traffic safety and delay.

equipment:	For a railroad, a term used to refer to the mobile assets of the railroad, such as locomotives, freight cars, and on-track maintenance machines. Also used more narrowly as a collective term for freight cars operated by this railroad.
Executive Order (EO) 12898:	Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations," issued in February of 1994, directs Federal agencies to identify and address as appropriate "disproportionately high and adverse human health or environmental effects," including interrelated social and economic effects of their programs, policies, and activities on minority populations and low-income populations in the United States.
floodplain:	The lowlands adjoining inland and coastal waters and relatively flat areas and flood-prone areas of offshore islands, including, at a minimum, those areas that have a 1 percent or greater chance of flood in any given year (also known as a 100-year or a Zone A floodplain).
fugitive dust:	According to EPA regulations, those particulate matter emissions that could not "reasonably pass" through a stack, chimney, vent, or other functionally equivalent opening. Examples of fugitive dust include windborne particulate matter from earth-moving and material handling during construction activities.
Geographic Information System (GIS):	A computer system for storing, retrieving, manipulating, analyzing, and displaying geographic data. GIS combines mapping and databases.
grade crossing:	<i>See highway/trail at-grade crossing.</i>
grade separation:	<i>See separated grade crossing.</i>

gross ton-mile:	A measure of railroad production that represents the weight of cars and freight movement in terms of total tons per mile transported system-wide or over a specific rail line segment. Specifically, 1 ton of railroad car and loading carried 1 mile.
haulage right(s):	The limited right (or combination of limited rights) of one railroad to have its freight traffic moved by another railroad over the designated lines of the other railroad.
hazardous materials:	Substances or materials that the Secretary of Transportation has determined are capable of posing an unreasonable risk to human health, safety, and property when transported in commerce, as designated under 49 CFR Parts 172 and 173.
hazardous wastes:	Waste materials that, by their nature, are inherently dangerous to handle or dispose of (e.g., old explosives, radioactive materials, some chemicals, some biological wastes). Usually, industrial operations produce these waste materials.
highway/rail at-grade crossing:	The general area of an intersection of a public or private road and a railroad where the intersecting rail and highway traffic are at the same level.
historic property:	Any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places (NRHP). The term "eligible for inclusion in the NRHP" pertains to both properties that the Secretary of the Interior has formally determined to be eligible and to all other properties that meet NRHP listing criteria.
horn noise (train):	Noise that occurs when locomotives sound warning horns in the vicinity of highway/rail at-grade crossings.

hours-of-service regulations:	Federal Hours of Service Law, which the Federal Railroad Administration enforces, governing maximum shift lengths and minimum rest periods for railroad operating employees. These employees include train crew, train dispatchers, and signal maintainers, as well as mechanical employees who move equipment for the purpose of test and inspection.
Inconsistent and Responsive (IR) Application:	Proposal to the Surface Transportation Board that Parties of Record submitted prior to October 21, 1997, requesting modifications of, or alternatives to, the proposed CN/IC Acquisition.
Indian tribe:	According to Indian Self-Determination and Education Assistance Act (25 U.S.C. 450-458; P.L. 93-638), any Indian tribe, band, nation, or other organized group or community recognized as eligible for the special programs and services that the United States provides to Indians because of their status as Indians.
interchange point:	Point at which two or more railroads join to exchange freight traffic.
interlocking:	An arrangement of switch, lock, and signal devices that is located where rail tracks cross, join, or separate. The devices are interconnected in such a way that their movements must succeed each other in a predetermined order, thereby preventing opposing or conflicting movements.
intermodal facility:	A site consisting of tracks, lifting equipment, paved and/or unpaved areas, and a control point for the transfer (receiving, loading, unloading, and dispatching) of trailers and containers between rail and highway, or between rail and marine modes of transportation.

Key Route:	For the purposes of this Draft EA, a rail line segment that carries an annual volume of 10,000 or more carloads of hazardous material.
key train:	Any train with five or more tank carloads of chemicals classified as a Poison Inhalation Hazard (PIH) or with a total of 20 rail cars with any combination of PIHs, flammable gases, explosives, or environmentally sensitive chemicals.
L_{dn}:	The day-night average noise sound level, which is the receptor's cumulative noise exposure from all noise events over a full 24 hours. This is adjusted to account for the perception that noise at night is more bothersome than the same noise during the day.
left-hand turnout:	See <i>TURNOUT</i> .
Level of Service (LOS):	A degree of peak congestion experienced by a roadway vehicle traffic stream using procedures that consider factors such as vehicle delay, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Traffic analysts express LOS as letter grades, ranging from Level of Service A (free flowing) to Level of Service F (severely congested); they measure LOS by the average delay for all vehicles. Specifically, Level of Service A describes operations with very low delay (less than 5.0 seconds per vehicle); Level of Service B describes operations with delay in the range of 5.1 to 15.0 seconds per vehicle; Level of Service C describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle; Level of Service D describes operations with delay in the range of 25.1 to 40.0 seconds per vehicle; Level of Service E describes operations with delay in the range of 40.1 to 60.0 seconds per vehicle; and Level of Service F describes operations with delay in excess of 60.0 seconds per vehicle.

low-income population:	A population composed of persons whose median household income is below the Department of Health and Human Services poverty guidelines.
mainline:	Railroad line that through trains use between terminals.
maintenance area:	An area classified by EPA as meeting National Ambient Air Quality Standards (NAAQS) and which previously (within the last 10 years before reclassification) did not meet NAAQS.
Major Key Route:	For the purposes of this Draft EA, a rail line segment where the annual volume of hazardous material it carries is projected to double and also exceed 20,000 carloads as a result of the proposed CN/IC Acquisition.
minority population:	A population composed of persons who are Black (non-Hispanic), Hispanic, Asian American, American Indian, or Alaskan Native.
mitigation:	An action taken to prevent, reduce, or eliminate adverse environmental effects.
motive power:	Locomotives operated by the railroad.
multi-level rail car:	A two- or three-level freight car, designed for transporting automotive vehicles.
Multiple Resource Score (MRS):	For the Environmental Justice analysis, a measure of aggregate impacts used to identify the geographic areas of greatest concern. This score sums the environmental resource scores for hazardous materials transport, noise, and traffic safety and delay and forms the basis for the tests for disproportionality.

National Ambient Air Quality Standards (NAAQS):	Air pollutant concentration limits established by the EPA for the protection of human health, structures, and the natural environment.
National Environmental Policy Act (NEPA):	The National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321-4347; P.L. 91-190) is the basic national charter for the protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. Its purpose is to provide for the establishment of a Council on Environmental Quality and to instruct Federal agencies on what they must do to comply with the procedures and achieve the goals of NEPA.
National Historic Preservation Act (NHPA):	The National Historic Preservation Act of 1966, as amended (16 U.S.C. 470-470t <i>et seq.</i> ; P.L. 89-665), is the basic legislation of the Nation's historic preservation program that established the Advisory Council on Historic Preservation and the Section 106 review process. Section 106 of the NHPA requires every Federal agency to "take into account" the effects of its undertakings on historic properties.
National Priorities List (NPL):	A subset of CERCLIS; EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund Program.
National Register of Historic Places (NRHP):	Administered by the National Park Service, the Nation's master inventory of known historic properties, including buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archeological, or cultural significance at the Federal, state, and local levels.
Native American:	According to the Native American Graves Protection and Repatriation Act of 1990, as amended (25 U.S.C. 3001 <i>et seq.</i> ; P.L. 101-601), of or relating to a tribe, people, or culture that is indigenous to the United States.

Native American lands:	According to the regulations of the Advisory Council on Historic Preservation in 36 CFR 800.2, as modified by the scope of this Draft EA, all lands under the jurisdiction or control of an Indian tribe, including all lands within the exterior boundaries of any American Indian reservation.
Negotiated Agreement:	An agreement between CN, IC, or both, and one or more communities or other governmental units that addresses potential environmental impacts or other issues.
No-action Alternative:	The proposed acquisition of IC by CN does not take place under this alternative; also, the present setting for the pre-Acquisition conditions.
noise:	A disturbance or annoyance of an intruding or unwanted sound. Noise impacts essentially depend on the amount and nature of the intruding sound, the amount of background sound already present before the intruding or unwanted sound occurred, and the nature of working or living activity of the people occupying the area where the sound occurs.
noise contour:	Line plotted on a map or drawing connecting points of equal sound levels.
noise-sensitive receptor:	Location where noise can interrupt ongoing activities and can result in community annoyance, especially in residential areas. The Board's environmental regulations include schools, libraries, hospitals, residences, retirement communities, and nursing homes as examples of noise-sensitive receptors.
nonattainment area:	An area that EPA has classified as not complying with the National Ambient Air Quality Standards promulgated under the Clean Air Act.

Operating Plan:	The document that CN and IC provided as part of the Application, detailing their planned railroad operations following the proposed CN/IC Acquisition.
operating practices:	Safety and operating rules, practices, and procedures contained in operating rule book, timetable, special instructions, or any other company-issued instructions and the management decisions implementing those rules and instructions that govern the movement of trains and work on or around active tracks.
operating rules:	Written rules of a railroad governing the operation of trains and the conduct of employees responsible for train operations when working on or around active tracks.
particulate matter (PM):	Airborne dust or aerosols.
Party of Record (POR):	Party that notified the Board of their active participation in the proceeding about the proposed CN/IC Acquisition. When submitting a filing to the Board, the POR must also notify the entire POR service list.
passive warning devices:	Traffic control devices that do not give positive notice to highway users of the approach or presence of a train. These devices may include signs and pavement markings, located at, or in advance of, railroad crossings to indicate the presence of a crossing and the presence of a train. These signs are either regulatory or nonregulatory and may include parallel track signs, crossbucks, stop signs, yield signs, and constantly flashing lights.

positive train separation:	Mechanism included in positive train control, an experimental, automated safety system, using Global Positioning System (GPS) technology, onboard computers and wayside information inputs to control train movement. In the event of failure on the primary safety system, positive train control reduces the risk of single-point failure (i.e., human error).
posted speed:	Maximum speed permitted at a specific location on the railroad network irrespective of train type.
Prevention of Significant Deterioration (PSD) Class I Areas:	National parks and wilderness areas designated under the Clean Air Act as areas for which users are to maintain air quality at pristine levels, with very small increases in air pollution levels allowed.
Primary Application:	The formal filing of documents with the Surface Transportation Board by applicants for railroad mergers, acquisitions, constructions, or abandonments. The Primary Application contains the Operating Plan and information describing related construction projects.
prime farmland:	According to Natural Resources Conservation Service, land having the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops.
proposed CN/IC Acquisition:	The proposed acquisition of IC's physical assets and operating systems by CN, for which the Applicants are seeking approval from the Board.

public uses:	According to 49 U.S.C. 10905 and STB Regulations "Surface Transportation Manual," Section 1105.7(3)iv, those identified alternative public purposes for the use of rail properties proposed for abandonment or discontinuance, including highways, other forms of mass transportation, conservation, energy production or transmission, or recreation.
queue:	A line of vehicles waiting at a highway/rail at-grade crossing for an obstruction to clear.
rail line segment:	For the purposes of this Draft EA, portions of rail lines that extend between two terminals or junction points.
rail line switch:	See <i>turnout</i> .
rail route:	Line of railroad track between two points on a rail system.
rail yard:	A location or facility with multiple tracks where rail operators switch and store rail cars.
receptor:	See <i>noise-sensitive receptor</i> .
Request for Conditions:	A document filed with the Board by a party to this proceeding on or before <i>[Date]</i> that requests the Board to impose one or more specified requirements on the Applicants as a condition of the Board's approval of the proposed CN/IC Acquisition.
Resource Conservation and Recovery Act (RCRA):	The Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6901 <i>et seq.</i> ; P.L. 94-580) is a Federal act governing the generating, storing, transporting, treating, and disposing of hazardous waste.

**Resource Conservation
and Recovery
Information System
(RCRIS):**

Federal database containing information on facilities that generate, transport, store, treat, and/or dispose of hazardous waste.

**Responsive
Environmental Report
(RER):**

A report, submitted by an Inconsistent or Responsive applicant, that contains detailed environmental information regarding the activities proposed in its IR Application and complies with the requirements for environmental reports in the Board's rules at 49 CFR 1105.7(e).

retarder:

In railroad yards, a braking device, usually power-operated, built into a railroad track to reduce the speed of cars by means of brake-shoes which, when set in braking position, press against the sides of the lower portions of the wheels.

right-hand turnout:

See *turnout*.

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.

route miles:

Length of a railroad line, regardless of the number of tracks.

safety culture:

The manner in which management and employees in an organization view and approach the issue of safety, including both formalized rules and informal practices in the organization.

Safety Integration Plan:	Plan that the Applicants prepared and submitted to the Board to explain how they propose to provide for the safe integration of their separate corporate cultures and operating systems, if the Board approves the proposed CN/IC Acquisition.
seamless corridor:	A railroad route that does not require cars or blocks of cars to interchange.
sensitive receptor:	See <i>noise-sensitive receptor</i> .
separated grade crossing:	The site where a local street or highway crosses railroad tracks at a different level or elevation, either as an overpass or as an underpass.
service:	The official notification and delivery of Board decisions and notices (including environmental documents) by the Secretary of the Board to persons involved in a particular proceeding.
Settlement Agreement:	An agreement negotiated between CN or IC, or both, and one or more parties, including other railroads, that addresses concerns or requests of the party (or parties). Generally, such an agreement addresses competitive customer service or labor issues.
siding:	A track parallel to a main track that is connected to the main track at each end. A siding is used for the passing and/or storage of trains.
single-line service:	Service over one railroad, without having to interchange rail cars between railroads.

Sound Exposure Level (SEL):	For a transient noise event such as a passing train, equivalent to the maximum A-weighted sound level that would occur if all of the noise energy associated with the event were restricted to a time period of 1 second. The SEL accounts for both the magnitude and the duration of the noise event; noise analysts use SEL to calculate the day-night average noise level.
superior train:	For purposes of this Draft EA, a passenger train operating on the same track network with freight trains. Superior trains must have track clear of all trains not less than 15 minutes prior to their arrival.
switch:	The portion of the track structure used to direct cars and locomotives from one track to another.
switching:	The activity of moving cars from one track to another in a yard or where tracks go into a railroad customer's facility.
tank car:	A type of freight car that shippers use to ship liquids and liquefied gases in bulk.
threshold for environmental analysis:	A level of proposed change in railroad activities that determines the need for SEA's environmental review. In conducting its environmental analysis for the proposed CN/IC Acquisition, SEA first applied the Board's thresholds for environmental analysis at 49 CFR Part 1105. The Board thresholds apply specifically to air quality and noise. For issue areas where the Board does not have specific thresholds for environmental analysis, SEA assessed whether it would be appropriate to apply thresholds developed for the recent Conrail Acquisition. SEA concluded that the analysis thresholds developed for the Conrail Acquisition were also appropriate for environmental analysis of the proposed CN/IC Acquisition.

ton-mile:	The movement of one ton of cargo or equipment over a distance of 1 mile.
track class:	Designation between 1 and 6 by the Federal Railroad Administration to characterize the quality and condition of track. The track geometry and type of track structure govern the allowable speed over the track and the level of upkeep to maintain the track. For Class 3 track the maximum allowable operating speed is 40 mph for freight trains and 60 mph for passenger trains. For Class 4 track the maximum allowable operating speed is 60 mph for freight trains and 80 mph for passenger trains.
train-mile:	The movement of one train over a distance of 1 mile.
truck-mile:	The movement of one truck over a distance of 1 mile.
turnout:	The portion of railroad track structure where a single track divides into two tracks.
Verified Statement:	A party's sworn statement that provides information to the Board.
wayside:	Adjacent to the railroad track, as in "wayside signals" or "wayside defect detectors."
wayside noise:	Train noise adjacent to the right-of-way that comes from sources other than the horn, such as engine noise, exhaust noise, and noise from steel train wheels rolling on steel rails.

wetlands:

According to 40 CFR Part 230.41, those "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions," generally including swamps, marshes, bogs, and similar areas.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAR	Association of American Railroads
ACHP	Advisory Council on Historic Preservation
ADT	average daily traffic
AST	aboveground storage tank
BIA	Bureau of Indian Affairs
BNSF	Burlington Northern Santa Fe Railway Company
Board	Surface Transportation Board
BRC	Belt Railway Company of Chicago
CAA	Clean Air Act of 1970
CAAA	Clean Air Act Amendments (1977)
CARES	CN Accident Reporting and Evaluation System
CATS	Crew Assignment and Timekeeping System
CCP	Chicago, Central & Pacific Railroad Company
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CN	Canadian National Railway Company (and subsidiaries)
CO	carbon monoxide
CPR	cardiopulmonary resuscitation
dB	decibel
dBA	A-weighted decibel
DOT	U.S. Department of Transportation
DWP	Duluth, Winnipeg and Pacific Railway Company
EA	Environmental Assessment
EDR	Environmental Data Resources, Inc.
EJ&E	Elgin, Joliet & Eastern Railway Company
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System
ERS	Environmental Resource Score
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FMEA	Failure Mode and Effects Analysis
FRA	Federal Railroad Administration
FWS	U.S. Fish and Wildlife Service
GIS	Geographic Information System

List of Acronyms and Abbreviations

GTM	gross ton-miles
GTW	Grand Trunk Western Railroad
HC	hydrocarbon
HMIRS	Hazardous Materials Incident Reporting System
IC	Illinois Central Corporation (and subsidiaries)
ICC	Interstate Commerce Commission
ICP	Internal Control Plan
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
IR	Inconsistent and Responsive [Application]
KCSR	The Kansas City Southern Railway Company
LCS	Locomotive Control System
L_{dn}	day-night equivalent sound level
L_{max}	maximum sound level
L_{max-ref}	L _{max} under specific set of reference conditions
LOS	level of service
LUST	leaking underground storage tank
MDEQ	Mississippi Department of Environmental Quality
MDWFP	Mississippi Department of Wildlife, Fisheries, and Parks
MOU	Memorandum of Understanding
MRS	Multiple Resource Score
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NFRAP	No Further Remedial Action Planned
NHPA	National Historic Preservation Act of 1966
NHTSA	National Highway Transportation Safety Administration
NO₂	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
NTSB	National Transportation Safety Board
NWI	National Wetlands Inventory
OSHA	U.S. Occupational Safety and Health Administration
O₃	ozone
OTR	over-the-road
P&I	Paducah & Illinois Railroad
Pb	lead
PDEA	Preliminary Draft Environmental Assessment
PIRS	Police Incident Reporting System
P.L.	Public Law
PM₁₀	particulate matter less than 10 microns in diameter
PM_{2.5}	particulate matter less than 2.5 microns in diameter

POR	Party of Record
PSA	public service announcement
PSD	Prevention of Significant Deterioration
PTC	Positive Train Control
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
RER	Responsive Environmental Report
RTMS	Rail Traffic Management System
SACP	Safety Assurance and Compliance Program
SEA	Section of Environmental Analysis
SEL	sound exposure level
SHPO	State Historic Preservation Office
SHWS	State Hazardous Waste Sites
SO₂	sulfur dioxide
SRS	Service Reliability System
STCC	Standard Commodity Classification Code
TCS	Traffic Control System
TIBS	Train Information and Braking System
TransCAER®	Transportation Community Awareness and Emergency Response
U.S.C.	United States Code
USGS	U. S. Geological Survey
UST	underground storage tank
VOC	volatile organic compound
WC	Wisconsin Central Limited
Y2K	Year 2000

