STB	FD	33388	12-12-97	K	28629V5A 3/11

Attachment B-4
Cars Switched Per Day at Terminals

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Material Accident Frequency
NJ	ERail TV		CR	IM Ramp	11	191	180	1636.4%	5,765	443	1202%
NJ	North Bergen		CRN	Industrial	28	0	(28)	-100.0%	2,340	>40,000	-100%
NJ	South Amboy		CRN	Industrial	37	21	(16)	-43.2%	1,788	3,728	-52%
NJ	Perth Amboy		CRN	Industrial	28	24	(4)	-14.3%	2,340	3,277	-29%
NJ	Doremus ML		CRN	MI Ramp	57	52	(5)	-8.8%	1,178	1,554	-24%
NJ	Bayonne		CRN	Industrial	22	21	(1)	-4.5%	2,953	3,728	-21%
NJ	Bayway		CRN	Industrial	22	21	(1)	-4.5%	2,953	3,728	-21%
NJ	Linden		CRN	Industrial	23	22	(1)	-4.3%	2,829	3,564	-21%
NJ	Kearny API		CRN	IM Ramp	14	14	0	0.0%	4,568	5,513	-17%
NJ	Linden ML		CRN	MI Ramp	5	5	0	0.0%	12,338	14,890	-17%
NJ	Metuchen ML		CRN	MI Ramp	11	11	0	0.0%	5,765	6,958	-17%
NJ	New Brunswck		CRN	Industrial	9	9	0	0.0%	6,997	8,444	-17%
NJ	Nixon		CRN	Industrial	13	13	0	0.0%	4,907	5,922	-17%
NJ	Phoenix		CRN	Industrial	10	10	0	0.0%	6,320	7,628	-17%
NJ	Port Jersey ML		CRN	MI Ramp	2	2	0	0.0%	29,870	36,051	-17%
NJ	Greenville		CRN	Industrial	49	50	1	2.0%	1,364	1,614	-16%
NJ	Port Reading		CRN	Industrial	37	38	1	2.7%	1,788	2,103	-15%
NJ	Ridgfield ML		CRN	MI Ramp	34	35	1	2.9%	1,940	2,277	-15%
NJ	PortNewark		CRN	Industrial	47	49	2	4.3%	1,420	1,646	-14%
NJ	Metuchen		CRN	Industrial	34	40	6	17.6%	1,940	2,002	-3%
NJ	Croxton		CRN	Regional	28	37	9	32.1%	2,340	2,158	8%
NJ	Oak Island		CRN	Hump	330	447	117	35.5%	216	195	11%
NJ	Browns		CRN	Industrial	0	26	26	N/A	>40,000	3,034	N/A
NJ	Woodbury		CRS	Industrial	32	30	(2)	-6.3%	2,057	2,642	-22%
NJ	Carneys Pnt		CRS	Industrial	36	34	(2)	-5.6%	1,836	2,342	-22%
NJ	Paulsboro		CRS	Industrial	69	66	(3)	-4.3%	980	1,235	-21%
NJ	Millville		CRS	Industrial	29	28	(1)	-3.4%	2,262	2,824	-20%
NJ	Bulson St		CRS	Industrial	13	13	0	0.0%	4,907	5,922	-17%
NJ	Burlington		CRS	Industrial	17	17	0	0.0%	3,788	4,571	-17%
NJ	Winslow Jct		CRS	Industrial	11	11	0	0.0%	5,765	6,958	-17%
NJ	Pavonia		CRS	Regional	200	211	11	5.5%	351	402	-13%
NJ	Kearny	Meadows	Joint		106	24	(82)	-77.7%	651	3,344	-81%
NJ	Port Reading	Pt Reading	Joint		200	135	(65)	-32.5%	351	619	-43%
NJ	S. Plainfied	Manville	Joint		40	29	(12)	-28.8%	1,659	2,776	-40%
NJ	Bayonne		Joint		85	71	(14)	-16.7%	801	1,154	-31%
NJ	Camden	Pavonia	Joint	R	420	374	(46)	-11.0%	172	232	-26%
NJ	S Amboy	Browns	Joint		85	77	(8)	-9.9%	801	1,069	-25%
NJ	Metuchen		Joint		220	213	(7)	-3.3%	320	399	-20%
NJ	Linden		Joint		118	117	(1)	-0.9%	584	711	-18%
NJ	Bayway		Joint		45	50	5	11.6%	1,480	1,608	-8%
NJ	Newark	Oak Island	Joint	H	950	1,180	230	24.2%	78	76	2%
NJ	Portside TC		NS/CR	TC Ramp	32	132	100	312.5%	2,057	524	293%
NJ	Dockside TV		OSA	IM Ramp	15	15	0	0.0%	4,274	4,274	0%
NJ Total					3,624	4,303	678				
NY	Buffalo	Seneca	CR	R	158	15	(143)	-90.6%	441	5,225	-92%
NY	Syracuse	De Witt	CR	R	386	251	(135)	-35.0%	186	340	-45%
NY	Massena	Massena	CR	R	160	111	(49)	-30.8%	435	750	-42%
NY	Niagara	Niagara	CR		211	164	(47)	-22.3%	334	514	-35%
NY	Buffalo	Frontier Yd	CR	H	1,598	1,464	(134)	-8.4%	47	62	-24%
NY	Albany	Selkirk Yd	CR	H	2,196	2,125	(71)	-3.2%	35	43	-20%
NY	New York City	Oak Point	CR		180	181	1	0.7%	389	466	-17%
NY	Rochester	Rochester	CR	R	140	185	45	32.1%	495	457	8%
NY	Corning		CR	Regional	59	113	54	91.5%	1,140	735	55%
NY	Binghamton		CR	Industrial	24	118	94	391.7%	2,715	705	285%
NY	Buffalo ML		NS	ML Ramp	44	56	12	27.3%	3,432	2,719	26%
NY	Buffalo RH		NS	IM Ramp	54	88	34	63.0%	2,817	1,758	60%
NY	Seneca		OSA	System	35	0	(35)	-100.0%	1,887	>40,000	-100%
NY Total					5,244	4,870	(374)				
OH	Ashtabula	Ashtabula	CR	R	255	2	(253)	-99.1%	278	31,502	-99%
OH	Mingo Jct		CR	Regional	389	289	(100)	-25.7%	185	297	-38%
OH	Cleveland	Collinwood	CR	R	505	396	(109)	-21.6%	144	219	-34%
OH	Marion	Marion	CR	R	94	80	(14)	-14.9%	727	1,025	-29%
OH	Moraine		CR	Regional	162	142	(20)	-12.3%	430	589	-27%

Attachment B-4
Cars Switched Per Day at Terminals

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Material Accident Frequency
OH	Buckeye Yard		CR	Hump	1,175	1,050	(125)	-10.6%	64	85	-26%
OH	Marysville		CR		230	210	(20)	-8.6%	307	404	-24%
OH	Bedford		CR	Industrial	131	122	(9)	-6.9%	528	682	-23%
OH	Canton		CR	Industrial	164	157	(7)	-4.3%	425	535	-21%
OH	Rockport		CR	System	398	468	70	17.6%	181	186	-3%
OH	Lima	Lima	CR	R	42	50	8	17.9%	1,582	1,630	-3%
OH	Kenton		CR		29	37	8	26.6%	2,262	2,175	4%
OH	Middletown		CR	Industrial	65	170	105	161.5%	1,038	495	110%
OH	Lordstown	Lordstown	CR/CSX	R	184	161	(23)	-12.6%	380	522	-27%
OH	Cincinnati	Decoursey	CSXT		10	0	(10)	-100.0%	6,320	>40,000	-100%
OH	Marion		CSXT	No Yard	6	0	(6)	-100.0%	10,347	>40,000	-100%
OH	Toledo	Walbridge	CSXT	Reg	993	193	(800)	-80.5%	75	438	-83%
OH	Cincinnati	Springdale	CSXT		20	7	(13)	-64.7%	3,222	10,616	-70%
OH	Hamilton		CSXT		201	120	(81)	-40.2%	349	691	-50%
OH	Cincinnati	Ivorydale	CSXT		102	77	(25)	-24.5%	672	1,064	-37%
OH	Cincinnati	Queensgate	CSXT	H	1,875	1,498	(377)	-20.1%	40	61	-33%
OH	Cleveland	Clark Avenu	CSXT		300	274	(26)	-8.6%	237	312	-24%
OH	Akron	Akron	CSXT		75	78	3	3.9%	904	1,052	-14%
OH	Middletown	Excello	CSXT		80	85	5	6.3%	850	967	-12%
OH	Dayton	Needmore	CSXT	SF	125	133	8	6.7%	552	626	-12%
OH	Willard	Willard	CSXT	Hump	996	1,158	162	16.3%	75	78	-4%
OH	Columbus	Parsons	CSXT	Flat	315	437	122	38.9%	226	199	14%
OH	Lima	Robb Avenu	CSXT	SF	100	165	65	65.1%	685	510	34%
OH	Cleveland	Brook Park	Joint	R	70	70	0	0.1%	967	1,165	-17%
OH	Cleveland	Parma	Joint	R	150	175	25	16.7%	463	482	-4%
OH	Bellevue		NS	Hump	1,403	1,033	(370)	-26.4%	121	163	-26%
OH	Portsmouth		NS	Regional	278	259	(19)	-6.8%	579	620	-7%
OH	Cleveland 55		NS	Regional	131	131	0	0.0%	1,198	1,198	0%
OH	Sandusky Dock		NS	Industrial	196	204	8	4.1%	812	781	4%
OH	Cincinnati		NS	Regional	488	519	31	6.4%	337	317	6%
OH	Sheffield Yard		NS	Industrial	116	140	24	20.7%	1,347	1,123	20%
OH	Columbus RH		NS	IM Ramp	107	139	32	29.9%	1,456	1,131	29%
OH	Cleveland RH		NS	IM Ramp	25	35	10	40.0%	5,922	4,280	38%
OH	South Lorain		NS/CR	Regional	195	182	(13)	-6.7%	360	384	-6%
OH	Parma		OSA	Industrial	23	22	(1)	-4.3%	2,829	2,953	-4%
OH	Ashtabula Harbor		OSA	Industrial	390	389	(1)	-0.3%	184	185	0%
OH Total					12,594	10,859	(1,735)				
ON	Sarnia		CSXT		106	155	49	46.0%	645	541	19%
ON	Windsor ML		NS	ML Ramp	32	47	15	46.9%	4,667	3,220	45%
ON Total					138	202	64				
PA	Conway East		CR	Hump	1,339	858	(481)	-35.9%	56	104	-46%
PA	Erie		CR		102	72	(30)	-29.7%	672	1,140	-41%
PA	Conway West		CR	Hump	1,356	1,058	(298)	-22.0%	55	85	-35%
PA	Abrams		CR	System	108	91	(17)	-15.7%	636	906	-30%
PA	Allentown		CR	Hump	919	872	(47)	-5.1%	81	102	-21%
PA	Thomson		CR	Industrial	111	106	(5)	-4.5%	619	782	-21%
PA	Reading		CR	Regional	180	178	(2)	-1.1%	389	474	-18%
PA	Morrisville TV		CR	IM Ramp	118	205	87	73.7%	584	414	41%
PA	Pittsburgh TV		CR	IM Ramp	50	121	71	142.0%	1,337	688	94%
PA	Harrisburg TV		CR	IM Ramp	194	478	284	146.4%	361	183	98%
PA	Allentown TV		CR	IM Ramp	20	68	48	240.0%	3,238	1,200	170%
PA	Earnest ML		CR	ML Ramp	0	45	45	N/A	>40,000	1,787	N/A
PA	Morrisville TC		CR	TC Ramp	0	58	58	N/A	>40,000	1,399	N/A
PA	Port Richmond		CRS	Industrial	50	49	(1)	-2.0%	1,337	1,646	-19%
PA	Frankfrd Jct		CRS	Industrial	9	9	0	0.0%	6,997	8,444	-17%
PA	Marcus Hook		CRS	Industrial	31	31	0	0.0%	2,121	2,560	-17%
PA	Stoney Creek		CRS	Industrial	41	42	1	2.4%	1,620	1,910	-15%
PA	Morrisville		CRS	System	114	134	20	17.5%	604	623	-3%
PA	Midvale		CRS	Industrial	21	37	16	76.2%	3,089	2,158	43%
PA	Amenport		CRS	IM Ramp	0	12	12	N/A	>40,000	6,397	N/A
PA	Philadelphia	East Side	CSXT	SF	225	5	(220)	-97.7%	3[illegible]	14,608	-98%
PA	New Castle	New Castle	CSXT		200	98	(102)	-51.1%	[illegible]	846	-58%
PA	Pittsburgh	Glenwood	CSXT	SF	150	77	(73)	-48.6%	463	1,063	-56%

Attachment B-4
Cars Switched Per Day at Terminals

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Material Accident Frequency
PA	Pittsburgh	Demmler	CSXT	SF	112	100	(12)	-10.7%	613	824	-26%
PA	Hanover		CSXT		130	134	4	2.8%	532	625	-15%
PA	Morrisville		Joint		314	193	(121)	-38.5%	227	438	-48%
PA	Philadelphia	West Falls	Joint	R	46	40	(6)	-13.0%	1,449	2,002	-28%
PA	Philadelphia	Frankfort	Joint	R	75	70	(5)	-6.1%	904	1,160	[illegible]
PA	Midvale		Joint		400	400	0	0.0%	180	217	[illegible]
PA	Philadelphia	Greenwich Y	Joint	R	265	501	236	88.9%	267	175	53%
PA	W Brownsville		MON	Industrial	574	517	(57)	-9.9%	127	169	-25%
PA Total					7,254	6,659	(595)				
SC	Andrews		CSXT		222	170	(52)	-23.3%	318	495	-36%
SC	Florence	Florence	CSXT	Flat	425	342	(83)	-19.6%	170	253	-33%
SC	Greenwood		CSXT		316	265	(51)	-16.0%	226	322	-30%
SC	Charleston	Bennett	CSXT	Flat	435	366	(69)	-15.8%	166	236	-30%
SC	Spartanburg	Spartanburg	CSXT	No Yard	100	87	(13)	-12.9%	685	945	-27%
SC	Columbia	Cayce	CSXT	Flat	375	432	57	15.2%	191	201	-5%
SC	Andrews Yd		NS	System	255	259	4	1.6%	630	620	2%
SC	Charleston		NS	Industrial	157	201	44	28.0%	1,006	792	27%
SC	Hayne Yd		NS	System	149	209	60	40.3%	1,058	763	39%
SC	Rock Hill		NS	Industrial	43	121	78	181.4%	3,509	1,293	171%
SC Total					2,477	2,453	(24)				
TN	Chattanooga		NS	Hump	1,346	1,074	(272)	-20.2%	126	157	-20%
TN	Etowah	Etowah	CSXT	SF	200	112	(88)	-44.2%	351	743	-53%
TN	Knoxville		CSXT		70	55	(15)	-22.0%	967	1,483	-35%
TN	Erwin	Erwin	CSXT	RF	226	205	(21)	-9.3%	312	414	-25%
TN	Chattanooga		CSXT		239	248	9	3.6%	296	345	-14%
TN	Nashville	Radnor Yd	CSXT	Hump	2,100	2,250	150	7.1%	36	41	-11%
TN	Kingsport		CSXT		61	99	38	62.4%	1,102	833	32%
TN	Sevier Yd		NS	Hump	1,127	1,008	(119)	-10.6%	150	167	-10%
TN	Memphis		NS	Regional	542	497	(45)	-8.3%	304	331	-8%
TN	Kingsport		NS	Industrial	130	154	24	18.5%	1,206	1,025	18%
TN	Memphis RH		NS	IM Ramp	121	160	39	32.2%	1,293	987	31%
TN	Knoxville RH		NS	IM Ramp	11	22	11	100.0%	13,078	6,699	95%
TN Total					6,173	5,883	(290)				
VA	Newport News	Newport New	CSXT	Flat	175	165	(10)	-5.7%	398	509	-22%
VA	Fulton	Fulton	CSXT	SF	40	39	(1)	-3.0%	1,659	2,061	-20%
VA	Clifton Forge		CSXT		77	81	4	4.5%	879	1,017	-14%
VA	Richmond	ACCA	CSXT	Flat	510	609	99	19.5%	142	145	-2%
VA	Covington		CSXT		49	96	47	94.5%	1,358	863	57%
VA	Norfolk RH		NS	IM Ramp	160	109	(51)	-31.9%	987	1,430	-31%
VA	Weller		NS	Regional	738	597	(141)	-19.1%	226	277	-19%
VA	Portlock Yd		NS	Regional	303	258	(45)	-14.9%	533	623	-14%
VA	Carbo		NS	Regional	142	121	(21)	-14.8%	1,108	1,293	-14%
VA	Crewe		NS	Regional	228	213	(15)	-6.6%	702	749	-6%
VA	Montview		NS	ML, IM, H	231	222	(9)	-3.9%	693	720	-4%
VA	Lamberts Point		NS	Industrial	1,568	1,566	(2)	-0.1%	109	109	0%
VA	Norton		NS	System	479	507	28	5.8%	343	324	6%
VA	Schafers Crossg		NS	Hump	712	1,058	346	48.6%	234	160	47%
VA	Bristol		NS	Regional	36	68	32	88.9%	4,165	2,255	85%
VA Total					5,449	5,709	260		>40,000	>40,000	N/A
WV	Dickinson		CR	Regional	194	194	0	0.0%	361	436	-17%
WV	Weirton		CR	Industrial	362	362	0	0.0%	198	239	-17%
WV	Big Sandy Jct	Shelby	CSXT		10	0	(10)	-100.0%	6,320	>40,000	-100%
WV	Benwood	Benwood	CSXT	No Yard	60	5	(55)	-91.3%	1,122	14,337	-92%
WV	Parkersburg	Parkersburg	CSXT	2nd Flat	200	114	(86)	-42.8%	351	726	-52%
WV	S Charleston	S Charleston	CSXT	Flat	100	59	(41)	-41.1%	685	1,378	-50%
WV	Brooklyn Jct	Brooklyn Jct	CSXT	No Yard	200	143	(57)	-28.6%	351	586	-40%
WV	Huntington	Huntington	CSXT	Flat	94	97	3	3.2%	728	852	-15%
WV	Hinton	Hinton	CSXT	No Yard	45	51	6	12.9%	1,480	1,589	-7%
WV	Grafton	Grafton	CSXT	2nd Flat	100	117	17	16.8%	685	712	-4%
WV	Elmore		NS	Regional	392	292	(100)	-25.5%	416	553	-25%
WV	Iaeger		NS	Regional	551	423	(128)	-23.2%	299	386	-23%
WV	Gilbert		NS	Regional	130	108	(22)	-16.9%	1,206	1,443	-16%
WV	Kenova		NS	System	1,657	1,515	(142)	-8.6%	103	113	-8%

Attachment B-4
Cars Switched Per Day at Terminals

State	City	Yard Name	Road	Type	Oct '96 Base	Total	Change	Change (%)	Pre Acquisition Interval between Hazardous Material Releases	Post Acquisition Interval between Hazardous Material Releases	Projected Percent Change in Hazardous Material Accident Frequency
WV	Williamson		NS	System	1,738	1,701	(37)	-2.1%	99	101	-2%
WV	Kenova		NS	Regional	320	348	28	8.8%	506	467	8%
WV Total					6,153	5,529	(624)				
Grand Total Yards					107,615	103,532	(4,082)				
GRAND TOTALS:					111,995	111,640	(354)	-0.3%			

Attachment B-5

All Rail Line Segments with a Projected Increase in Hazardous Materials Activity

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership: Pre Acq	Ownership: Post Acq	SEGMENT COUNT 332 Rail Line Segment Description: Between		And		Length (mi.)	Passenger and Freight Train Data: 1995 Base: Pasgr Trains	1995 Base: Freight Trains	Post Acquisition: Pasgr Trains	Post Acquisition: Freight Trains	Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Δ	164 Current Key Route Segments	332 Increasing Hazardous Material Car Loads	65 New Key Route	52 New Major Key Route
C-267	CSX	CSX	Decatur	AL	Black Creek	AL	89	0.0	22.5	0.0	23.8	1.3	38.4	59.5	55%	22,000	47,000	114%	x	x		x
C-268	CSX	CSX	Black Crk	AL	Birmingham	AL	5	0.0	33.7	0.0	31.0	-2.7	48.9	67.2	37%	22,000	47,000	114%	x	x		x
C-269	CSX	CSX	Birmingham	AL	Parkwood	AL	12	0.0	32.8	0.0	30.7	-2.1	48.8	67.2	38%	15,000	59,000	293%	x	x		x
C-270	CSX	CSX	Parkwood	AL	Montgomery	AL	87	0.0	14.1	0.0	14.3	0.2	23.1	28.5	23%	5,000	39,000	680%	x	x	x	x
C-271	CSX	CSX	Montgomery	AL	Flomaton	AL	110	0.0	16.1	0.0	18.0	1.9	23.1	33.7	46%	3,000	64,000	2033%	x	x	x	x
C-374	CSX	CSX	Stevenson	AL	Chattanooga	TN	39	0.0	19.6	0.0	17.5	-2.1	37.5	38.4	2%	12,000	16,000	33%	x	x		
C-386	CSX	CSX	Flomaton	AL	Mobile	AL	59	0.8	25.1	0.8	25.8	0.7	38.4	47.6	24%	46,000	96,000	109%	x	x		x
C-387	CSX	CSX	Mobile	AL	New Orleans	LA	143	0.8	20.6	0.8	22.7	2.1	23.4	34.6	48%	44,000	88,000	100%	x	x		x
C-489	CSX	CSX	Montgomery	AL	Western Jct	AL	51	0.0	1.0	0.0	1.0	0.0	1.5	1.5	0%	0	1,000	1000%		x		
N-001	NS	NS	Attalla	AL	Norris Yard	AL	48	0.0	7.4	0.0	12.5	5.1	21.9	25.2	15%	10,000	14,000	40%	x	x		
N-337	NS	NS	Norris Yd	AL	Austell	GA	142	2.0	19.1	2.0	14.5	-4.6	37.7	33.6	-11%	32,000	41,000	28%	x	x		
N-343	NS	NS	Burstal	AL	Meridian	MS	140	2.0	16.2	2.0	16.2	0.0	31.7	36.0	14%	33,000	34,000	3%	x	x		
N-397	NS	NS	Wilson	AL	Memphis	TN	144	0.0	14.8	0.0	16.5	1.7	33.4	36.7	10%	19,000	20,000	5%	x	x		
N-412	NS	NS	Demopolis	AL	Marion Jct	AL	38	0.0	2.0	0.0	2.0	0.0	1.5	1.5	0%	0	1,000	1000%		x		
			AL Total				1,107															
C-001	CR	CSX	Anacostia	DC	Virginia Ave	DC	3	0.0	19.3	0.0	28.6	9.3	40.3	47.2	12%	21,000	29,000	38%		x		
C-002	CR	CSX	Virginia Ave	DC	Potomac Yard	VA	6	44.5	17.9	44.5	28.6	10.7	40.3	47.7	18%	21,000	29,000	38%		x		
C-003	CSX	CSX	Washington	DC	Pt of Rocks	MD	43	20.0	23.8	20.0	30.8	7.0	37.8	56.0	48%	12,000	17,000	42%	x	x		
			DC Total				52															
C-201	CSX	CSX	Wilsmere	DE	Baltimore	MD	68	0.0	26.9	0.0	28.8	1.9	44.0	50.4	14%	12,000	18,000	50%		x		
N-010	CR	NS	Bell	DE	Edgemoor	DE	1	0.0	5.0	0.0	11.8	6.8	5.1	13.5	165%	4,000	6,000	50%		x		
S-001	AMTK	AMTK	Davis	DE	Perryville	MD	21	73.0	4.5	73.0	12.4	7.9	25.8	44.8	74%	15,000	17,000	13%		x		
			DE Total				90															
C-383	CSX	CSX	Baldwin	FL	Chattahoochee	FL	189	0.8	11.7	0.8	11.1	-0.6	23.8	20.7	-13%	22,000	24,000	9%	x	x		
C-384	CSX	CSX	Chattahoochee	FL	Pensacola	FL	161	0.8	10.3	0.8	9.7	-0.6	17.8	15.6	-12%	18,000	24,000	33%	x	x		
C-385	CSX	CSX	Pensacola	FL	Flomaton	AL	43	0.8	9.9	0.8	11.3	1.4	20.4	21.5	5%	26,000	33,000	27%	x	x		
C-390	CSX	CSX	Callahan	FL	Baldwin	FL	21	0.0	17.7	0.0	18.3	0.6	44.4	51.0	15%	25,000	28,000	12%	x	x		
C-391	CSX	CSX	Baldwin	FL	Starke	FL	26	2.0	22.7	2.0	23.3	0.6	47.0	52.0	11%	28,000	29,000	4%	x	x		
C-392	CSX	CSX	Starke	FL	Vitis	FL	126	2.0	19.3	2.0	19.3	0.0	38.8	40.1	3%	28,000	29,000	4%	x	x		
C-402	CSX	CSX	Lakeland	FL	Winston	FL	4	4.0	17.6	4.0	18.9	1.3	19.5	23.4	20%	16,000	17,000	6%	x	x		
C-403	CSX	CSX	Winston	FL	Plant City	FL	5	4.0	9.8	4.0	11.1	1.3	18.1	19.9	10%	9,000	10,000	11%		x	x	
C-621	CSX	CSX	Newberry	FL	Dunnellon	FL	47	0.0	2.9	0.0	3.5	0.6	5.3	6.3	19%	17,000	28,000	65%		x		
C-623	CSX	CSX	Vitis	FL	Lakeland	FL	19	2.0	16.4	2.0	16.4	0.0	17.3	18.2	5%	21,000	22,000	5%	x	x		
C-629	CSX	CSX	Winston	FL	Mulberry	FL	12	0.0	8.9	0.0	8.9	0.0	15.3	15.3	0%	20,000	21,000	5%	x	x		
C-632	CSX	CSX	Achan	FL	Green Bay	FL	4	0.0	8.0	0.0	8.0	0.0	13.7	13.7	0%	10,000	11,000	10%	x	x		
			FL Total				657															
C-296	CSX	CSX	Cartersville	GA	Atlanta	GA	46	0.0	39.4	0.0	38.3	-1.1	81.8	79.3	-3%	22,000	33,000	50%	x	x		
C-297	CSX	CSX	Atlanta	GA	Manchester	GA	78	0.0	19.2	0.0	16.6	-2.6	35.3	34.2	-3%	6,000	9,000	50%		x		
C-298	CSX	CSX	Manchester	GA	Waycross	GA	203	0.0	27.9	0.0	26.0	-1.9	52.6	57.3	9%	14,000	28,000	100%	x	x		x
C-346	CSX	CSX	Savannah	GA	Jesup	GA	52	8.0	17.3	8.0	22.8	5.5	46.6	50.6	9%	10,000	17,000	70%		x		
C-347	CSX	CSX	Jesup	GA	Waycross	GA	39	0.0	7.2	0.0	7.8	0.6	20.1	22.1	10%	6,000	10,000	67%		x	x	
C-354	CSX	CSX	Athens	GA	Atlanta	GA	69	0.0	18.7	0.0	21.0	2.3	32.9	37.5	14%	22,000	51,000	132%	x	x		x
C-355	CSX	CSX	Atlanta	GA	Lagrange	GA	70	0.0	15.3	0.0	16.5	1.2	23.0	25.3	10%	3,000	48,000	1500%	x	x	x	x
C-356	CSX	CSX	Lagrange	GA	Montgomery	AL	100	0.0	11.9	0.0	11.2	-0.7	17.3	18.6	7%	2,000	43,000	2050%	x	x	x	x
C-366	CSX	CSX	Camak	GA	Atlanta	GA	126	0.0	8.1	0.0	7.7	-0.4	15.9	14.3	-10%	3,000	5,000	67%		x		

Δ = Projected change as a result of the proposed merger

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership Pre Acq	Ownership Post Acq	SEGMENT COUNT 332 Rail Line Segment Description Between		And		Length (mi.)	Passenger and Freight Train Data 1995 Base Pssgr Trains	1995 Base Freight Trains	Post Acquisition Pssgr Trains	Post Acquisition Freight Trains	Δ	Freight Rail Data Million Gross Tons 1995 Base	Million Gross Tons Post Acq	Δ	Estimated Car Loads of Hazardous Material 1995 Base	Estimated Car Loads of Hazardous Material Post Acq	Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car Loads	65 New Key Route	52 New Major Key Route
C-367	CSX	CSX	Augusta	GA	Camak	GA	48	0.0	7.1	0.0	5.7	-0.4	13.5	12.8	-5%	3,000	5,000	67%		x		
C-376	CSX	CSX	Lagrange	GA	Parkwood	AL	142	0.0	13.5	0.0	13.5	0.0	24.1	29.1	21%	9,000	20,000	122%		x	x	x
C-377	CSX	CSX	Manchester	GA	Lagrange	GA	45	0.0	12.0	0.0	11.6	-0.4	20.5	22.8	11%	8,000	17,000	113%		x	x	
C-378	CSX	CSX	Waycross	GA	Thomasville	GA	105	0.0	8.0	0.0	7.6	-0.4	11.5	11.9	4%	3,000	9,000	200%		x		
C-380	CSX	CSX	Thomasville	GA	Montgomery	AL	210	0.0	7.9	0.0	6.2	-1.7	10.6	10.5	0%	2,000	10,000	400%		x	x	
C-388	CSX	CSX	Waycross	GA	Folkston	GA	35	0.0	33.1	0.0	32.4	-0.7	64.6	66.0	2%	30,000	36,000	20%	x	x		
C-389	CSX	CSX	Folkston	GA	Callahan	FL	22	8.0	43.9	8.0	44.6	0.7	95.6	84.2	-12%	33,000	37,000	12%	x	x		
C-474	CSX	CSX	Bainbridge	GA	Tallahassee	FL	43	0.0	2.0	0.0	2.0	0.0	2.2	2.2	0%	6,000	7,000	17%		x		
N-020	NS	NS	Howell	GA	Spring	GA	1	0.0	33.3	0.0	40.4	7.1	67.5	81.4	21%	32,000	40,000	25%	x	x		
N-022	NS	NS	Spring	GA	Scherer Coal	GA	65	0.0	27.2	0.0	32.9	5.7	60.8	67.7	11%	31,000	39,000	26%	x	x		
N-331	NS	NS	Cohutta	GA	Austell	GA	108	0.0	32.8	0.0	36.5	3.7	66.4	71.0	7%	17,000	20,000	18%	x	x		
N-332	NS	NS	Austell	GA	Howell	GA	16	2.0	49.7	2.0	50.4	0.7	97.7	101.4	4%	48,000	63,000	31%	x	x		
N-333	NS	NS	Scherer Coal	GA	Macon Jct	GA	20	0.0	21.9	0.0	27.4	5.5	42.7	50.6	19%	31,000	39,000	26%	x	x		
N-334	NS	NS	Macon Jct	GA	Brosnan Yd	GA	2	0.0	37.0	0.0	40.0	3.0	72.6	75.0	3%	34,000	47,000	38%		x		
N-335	NS	NS	C of G Jct	GA	Langdale Yd	GA	146	0.0	15.3	0.0	16.5	1.2	24.2	27.1	12%	26,000	27,000	4%	x	x		
N-378	NS	NS	Valdosta	GA	Occidental	FL	42	0.0	5.4	0.0	3.8	-1.6	6.7	6.6	-1%	22,000	23,000	5%	x	x		
			GA Total				1,833															
C-011	CSX	CSX	Blue Island Jct	IL	59th Street	IL	15	0.0	19.5	0.0	22.9	3.4	27.0	37.0	37%	0	7,000	1000%		x		
C-263	CSX	CSX	Dolton	IL	Danville	IL	106	0.0	20.2	0.0	21.6	1.4	31.3	40.3	29%	18,000	31,000	72%	x	x		
C-264	CSX	CSX	Danville	IL	Terre Haute	IN	57	0.0	22.6	0.0	23.9	1.3	40.3	51.6	28%	20,000	32,000	60%	x	x		
C-417	CSX	CSX	Blue Island Jct	IL	Clearing	IL	15	0.0	17.0	0.0	17.4	0.4	35.2	36.9	5%	5,000	8,000	60%	x	x		
C-418	CSX	CSX	Joliet	IL	Ottawa	IL	45	0.0	3.0	0.0	3.0	0.0	4.9	4.9	1%	15,000	16,000	7%	x	x		
C-476	CSX	CSX	Chrisman	IL	Decatur	IL	69	0.0	1.8	0.0	2.1	0.3	3.7	4.0	8%	1,000	2,000	100%		x		
N-033	NS	NS	Tilton	IL	Decatur	IL	71	0.0	22.7	0.0	39.0	16.3	29.2	47.9	64%	10,000	17,000	70%	x	x		
N-312	CR	NS	Kankakee	IL	Streator	IL	49	0.0	4.9	0.0	5.0	0.1	8.3	9.2	11%	1,000	3,000	200%		x		
N-477	NS	NS	Decatur	IL	Moberly	MO	209	0.0	10.8	0.0	17.3	6.5	15.9	28.1	77%	3,000	7,000	133%		x		
N-490	NS	NS	Gibson City	IL	Bement	IL	41	0.0	5.4	0.0	7.0	1.6	11.0	16.4	49%	4,000	7,000	75%		x		
N-492	NS	NS	Decatur	IL	Taylorville	IL	30	0.0	9.7	0.0	16.7	7.0	16.0	19.9	24%	6,000	7,000	17%		x		
N-499	NS	NS	Calumet	IL	Landers	IL	8	0.0	23.2	0.0	18.0	-5.2	32.7	0.4	-99%	15,000	20,000	33%		x		
			IL Total				715															
C-021	CSX	CSX	Evansville	IN	Amqui	TN	137	0.0	23.4	0.0	32.7	9.3	48.3	73.8	53%	24,000	47,000	96%	x	x		
C-023	CSX	CSX	Pine Jct	IN	Barr Yd	IL	11	0.0	27.6	0.0	33.3	5.7	40.9	64.7	58%	21,000	32,000	52%	x	x		
C-025	CSX	CSX	Vincennes	IN	Evansville	IN	53	0.0	22.3	0.0	30.8	8.5	44.7	78.4	75%	21,000	44,000	110%	x	x		x
C-027	CSX	CSX	Willow Creek	IN	Pine Jct	IN	12	2.0	20.1	2.0	36.6	16.5	34.2	70.1	105%	17,000	40,000	135%	x	x		x
C-254	CSX	CSX	Munster	IN	Monon	IN	62	1.4	2.5	1.4	2.5	0.0	3.0	3.5	19%	1,000	5,000	400%		x		
C-255	CSX	CSX	Monon	IN	Lafayette	IN	30	1.4	3.0	1.4	3.0	0.0	3.8	4.7	25%	1,000	5,000	400%		x		
C-256	CSX	CSX	Lafayette	IN	Crawfordsville	IN	29	1.4	7.6	1.4	7.6	0.0	8.9	9.5	7%	1,000	5,000	400%		x		
C-265	CSX	CSX	Terre Haute	IN	Vincennes	IN	54	0.0	22.6	0.0	28.5	5.9	40.3	62.8	56%	19,000	35,000	84%	x	x		
C-475	CSX	CSX	Hillsdale	IN	Chrisman	IL	16	0.0	1.8	0.0	2.1	0.3	3.7	4.0	8%	1,000	2,000	100%		x		
C-676	CR	CSX	Avon	IN	Clermont	IN	4	1.4	8.6	1.4	8.9	0.1	12.3	13.1	6%	0	6,000	1000%		x		
C-677	CR	CSX	Clermont	IN	Crawfordsville	IN	34	1.4	7.4	1.4	7.5	0.1	11.8	12.0	1%	0	6,000	1000%		x		
C-693	CR	CSX	Willow Creek	IN	Ivanhoe	IN	13	0.0	9.6	0.0	11.4	1.8	21.3	22.7	6%	4,000	10,000	150%		x	x	
N-040	NS	NS	Alexandria	IN	Muncie	IN	16	0.0	2.6	0.0	11.8	9.2	5.6	26.3	370%	2,000	6,000	200%		x		
N-041	NS	NS	Butler	IN	Ft Wayne	IN	28	0.0	13.6	0.0	27.3	13.7	16.8	33.4	99%	5,000	28,000	460%		x	x	x
N-044	NS	NS	Ft Wayne	IN	Peru	IN	53	0.0	19.0	0.0	34.9	15.9	23.3	46.7	100%	11,000	47,000	327%	x	x		x

Δ = Projected change as a result of the proposed merger

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership: Pre Acq	Ownership: Post Acq	Rail Line Segment Description (SEGMENT COUNT 332): Between		And		Length (mi)	Passenger and Freight Train Data: 1995 Base: Pssgr Trains	1995 Base: Freight Trains	Post Acquisition: Pssgr Trains	Post Acquisition: Freight Trains	Post Acquisition: Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Million Gross Tons: Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Estimated Car Loads of Hazardous Material: Δ	164: Current Key Route Segments	332: Increase in Hazardous Material Car Loads	65: New Key Route	52: New Major Key Route
N-045	NS	NS	Lafayette Jct	IN	Tilton	IL	49	0.0	23.6	0.0	41.0	17.4	29.8	53.6	80%	10,000	46,000	360%	x	x		x
N-046	NS	NS	Peru	IN	Lafayette Jct	IN	53	0.0	18.4	0.0	40.2	21.8	23.9	50.8	113%	11,000	47,000	327%	x	x		x
N-305	CR	NS	Goshen	IN	Alexandria	IN	99	0.0	4.7	0.0	6.8	2.1	13.5	19.9	47%	12,000	16,000	33%		x		
N-485	NS	NS	Muncie	IN	Ivorydale	OH	106	0.0	20.6	0.0	20.5	-0.1	34.4	40.9	19%	15,000	24,000	60%	x	x		
			IN Total				859															
C-238	CSX	CSX	Big Sandy Jct	KY	Ashland	KY	6	0.9	32.5	0.9	30.5	-2.0	97.6	95.1	-3%	27,000	31,000	15%	x	x		
C-240	CSX	CSX	Ashland	KY	Russell	KY	4	0.9	32.5	0.9	32.5	0.0	107.0	103.0	-4%	27,000	30,000	11%	x	x		
C-241	CSX	CSX	Russell	KY	NJ Cabin	KY	19	0.9	20.8	0.9	18.8	-2.0	67.3	68.4	2%	24,000	28,000	17%	x	x		
C-272	CSX	CSX	Anchorage	KY	Winchester	KY	95	0.0	2.6	0.0	3.3	0.7	3.3	4.6	39%	0	2,000	1000%		x		
C-275	CSX	CSX	N Hazard	KY	Lothair	KY	2	0.0	10.9	0.0	10.9	0.0	24.1	24.1	0%	15,000	21,000	40%		x		
C-287	CSX	CSX	Latonia	KY	Anchorage	KY	86	0.0	15.0	0.0	12.7	-2.3	31.0	27.0	-13%	11,000	24,000	118%	x	x		x
C-288	CSX	CSX	Anchorage	KY	Louisville	KY	13	0.0	20.6	0.0	18.3	-2.3	35.3	34.6	-2%	12,000	26,000	117%	x	x		x
C-289	CSX	CSX	Louisville	KY	Amqui	TN	173	0.0	18.8	0.0	17.4	-1.4	35.4	32.1	-9%	11,000	25,000	127%	x	x		x
C-291	CSX	CSX	Covington	KY	Latonia	KY	1	0.0	30.3	0.0	28.9	-1.4	57.4	58.9	3%	18,000	37,000	106%	x	x		x
C-292	CSX	CSX	Latonia	KY	Winchester	KY	93	0.0	17.1	0.0	16.0	-1.1	27.1	29.1	7%	8,000	13,000	63%		x	x	
C-293	CSX	CSX	Winchester	KY	Sinks	KY	56	0.0	24.6	0.0	23.3	-1.3	40.2	41.8	4%	5,000	12,000	140%		x	x	
C-294	CSX	CSX	Sinks	KY	Corbin	KY	35	0.0	22.9	0.0	21.6	-1.3	40.6	41.4	2%	5,000	12,000	140%		x	x	
C-295	CSX	CSX	Corbin	KY	Cartersville	GA	263	0.0	27.3	0.0	26.1	-1.2	53.7	52.7	-2%	6,000	12,000	100%		x	x	
C-817	CSX	CSX	N Hazard	KY	Duane	KY	4	0.0	2.7	0.0	2.7	0.0	5.9	5.9	0%	5,000	10,000	100%		x	x	
N-327	NS	NS	SJ Jct	KY	Harriman	TN	144	0.0	37.9	0.0	35.0	-2.9	71.5	71.2	0%	34,000	38,000	12%	x	x		
N-415	NS	NS	Louisville	KY	SJ Jct	KY	87	0.0	13.7	0.0	11.2	-2.5	24.8	23.3	-6%	14,000	16,000	14%	x	x		
			KY Total				1,081															
N-346	NS	NS	Oliver Jct	LA	Oliver Yd	LA	2	0.0	15.0	0.0	18.1	3.1	28.6	30.6	7%	38,000	39,000	3%	x	x		
			LA Total				2															
C-720	CR	CSX	Boston Beacon Park	MA	Framingham	MA	18	41.0	9.3	41.0	8.7	-0.6	22.3	24.3	9%	4,000	5,000	25%		x		
C-723	CR	CSX	Worcester	MA	Palmer	MA	39	4.0	20.3	4.0	19.9	-0.4	27.7	30.5	10%	10,000	11,000	10%		x		
C-725	CR	CSX	Springfield	MA	Westfield	MA	11	2.0	22.3	2.0	22.1	-0.2	33.0	34.1	3%	15,000	16,000	7%		x		
C-726	CR	CSX	Westfield	MA	Selkirk	NY	85	2.0	24.3	2.0	24.1	-0.2	36.2	38.8	7%	13,000	14,000	8%		x		
			MA Total				153															
C-030	CSX	CSX	Alexandria Jct	MD	Benning	DC	6	0.0	18.7	0.0	24.3	5.6	40.3	51.3	27%	21,000	26,000	24%	x	x		
C-031	CSX	CSX	Alexandria Jct	MD	Washington	DC	5	22.0	23.9	22.0	30.8	6.9	34.5	56.1	63%	3,000	17,000	467%	x	x	x	
C-032	CSX	CSX	Baltimore	MD	Relay	MD	7	22.0	39.6	22.0	42.7	3.1	63.7	70.5	11%	14,000	18,000	29%		x		
C-033	CSX	CSX	Cumberland	MD	Sinns	PA	133	2.0	27.4	2.0	32.5	5.1	40.7	53.9	33%	16,000	18,000	13%	x	x		
C-034	CSX	CSX	Jessup	MD	Alexandria Jct	MD	17	22.0	33.4	22.0	37.1	3.7	48.0	69.7	45%	10,000	24,000	140%		x		x
C-035	CR	CSX	Landover	MD	Anacostia	DC	5	0.0	3.4	0.0	9.1	5.7	5.0	10.9	117%	0	4,000	1000%		x		
C-037	CSX	CSX	Relay	MD	Jessup	MD	7	22.0	33.1	22.0	37.0	3.9	4.8	57.8	26%	10,000	21,000	110%		x		x
C-243	CSX	CSX	Cumberland	MD	W Virginia C	WV	28	0.0	14.0	0.0	16.6	2.6	23.5	31.1	32%	5,000	7,000	40%		x		
S-010	AMTK	AMTK	Baltimore	MD	Bowie	MD	29	117.0	2.4	117.0	7.7	5.3	24.7	36.7	49%	0	3,000	1000%		x		
S-011	AMTK	AMTK	Bowie	MD	Landover	MD	8	117.0	3.2	117.0	9.3	6.1	28.5	43.0	51%	0	3,000	1000%		x		
S-238	AMTK	AMTK	Perryville	MD	Baltimore	MD	32	88.0	14.3	88.0	15.6	1.3	41.9	44.9	7%	2,000	4,000	100%		x		
			MD Total				278															
C-040	CSX	CSX	Carleton	MI	Toledo	OH	26	0.0	21.9	0.0	33.1	11.2	40.0	64.2	61%	14,000	31,000	121%	x	x		x
C-214	CSX	CSX	Detroit	MI	Plymouth	MI	25	0.0	15.1	0.0	12.3	-2.8	12.8	11.1	-13%	8,000	13,000	63%		x	x	
C-218	CSX	CSX	Saginaw	MI	Flint	MI	29	0.0	10.0	0.0	12.2	2.2	10.3	12.1	18%	4,000	7,000	75%		x		
C-219	CSX	CSX	Flint	MI	Holly	MI	28	0.0	12.8	0.0	14.0	1.2	14.5	17.8	22%	12,000	21,000	75%	x	x		

Δ = Projected change as a result of the proposed merger

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership: Pre Acq	Ownership: Post Acq	SEGMENT COUNT 332 — Rail Line Segment Description: Between		And		Length (mi)	Passenger and Freight Train Data — 1995 Base: Pasr Trains	1995 Base: Freight Trains	Post Acquisition: Pasr Trains	Post Acquisition: Freight Trains	Post Acquisition: Δ	Freight Rail Data — Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Million Gross Tons: Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Estimated Car Loads of Hazardous Material: Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car Loads	65 New Key Route	52 New Major Key Route
C-220	CSX	CSX	Holly	MI	Wixom	MI	20	0.0	11.3	0.0	12.5	1.2	14.5	17.4	20%	12,000	21,000	75%	x	x		
C-221	CSX	CSX	Wixom	MI	Plymouth	MI	12	0.0	12.2	0.0	12.9	0.7	16.3	18.5	14%	12,000	21,000	75%	x	x		
C-222	CSX	CSX	Plymouth	MI	Wayne	MI	8	0.0	23.6	0.0	26.5	2.9	51.0	53.0	4%	14,000	21,000	50%	x	x		
C-223	CSX	CSX	Wayne	MI	Carleton	MI	15	0.0	22.8	0.0	24.8	2.0	44.0	57.4	30%	14,000	21,000	50%	x	x		
C-424	CSX	CSX	Waverly	MI	Grand Haven	MI	20	0.0	2.8	0.0	2.8	0.0	4.0	4.0	0%	0	1,000	1000%		x		
C-425	CSX	CSX	Grand Haven	MI	Muskegon	MI	13	0.0	1.7	0.0	1.7	0.0	1.6	1.6	0%	0	1,000	1000%		x		
N-476	NS	NS	Oakwood	MI	Butler	IN	107	0.0	15.2	0.0	17.3	2.1	18.3	22.5	23%	6,000	9,000	50%		x		
S-020	CR	SHARED	Carleton	MI	Ecorse	MI	20	0.0	2.0	0.0	11.2	9.2	0.5	14.5	2802%	0	1,000	1000%		x		
			MI Total				323															
N-478	NS	NS	Moberly	MO	CA Jct	MO	94	0.0	18.6	0.0	25.9	7.3	27.7	39.4	42%	6,000	10,000	67%	x	x	x	
N-479	NS	NS	CA Jct	MO	N Kansas City	MO	31	0.0	30.0	0.0	31.3	1.3	50.8	56.3	11%	6,000	8,000	33%		x		
			MO Total				125															
C-323	CSX	CSX	Bostic	NC	Spartanburg	SC	32	0.0	13.8	0.0	13.8	0.0	27.9	30.5	9%	8,000	9,000	13%		x		
C-330	CSX	CSX	Charlotte	NC	Bostic	NC	73	0.0	7.6	0.0	7.6	0.0	15.3	16.9	10%	7,000	8,000	14%		x		
C-331	CSX	CSX	Monroe	NC	Charlotte	NC	24	0.0	12.0	0.0	12.4	0.4	18.5	20.3	10%	10,000	11,000	10%	x	x		
C-334	CSX	CSX	Weldon	NC	Rocky Mt	NC	37	10.0	19.6	10.0	25.5	5.9	49.9	55.9	12%	24,000	31,000	29%	x	x		
C-335	CSX	CSX	Rocky Mt	NC	Contentnea	NC	19	10.0	19.6	10.0	22.1	2.5	50.3	53.2	6%	18,000	30,000	67%	x	x		
C-336	CSX	CSX	Contentnea	NC	Selma	NC	22	10.0	18.2	10.0	21.0	2.8	44.4	45.1	2%	18,000	32,000	78%	x	x		
C-337	CSX	CSX	Selma	NC	Fayetteville	NC	49	6.0	20.4	6.0	21.6	1.2	44.8	45.0	0%	20,000	32,000	60%	x	x		
C-338	CSX	CSX	Fayetteville	NC	Pembroke	NC	31	6.0	22.1	6.0	22.2	0.1	43.9	45.4	3%	20,000	33,000	65%	x	x		
C-339	CSX	CSX	Pembroke	NC	Dillon	SC	21	6.0	15.7	6.0	17.2	1.5	22.8	28.2	24%	7,000	11,000	57%		x	x	
C-348	CSX	CSX	Pembroke	NC	Wilmington	NC	81	0.0	3.5	0.0	5.0	1.5	9.3	10.5	14%	14,000	18,000	29%	x	x		
C-349	CSX	CSX	Hamlet	NC	Pembroke	NC	34	0.0	11.8	0.0	13.1	1.3	31.6	32.0	1%	27,000	39,000	44%	x	x		
C-350	CSX	CSX	Hamlet	NC	Monroe	NC	53	0.0	20.4	0.0	23.0	2.6	41.5	43.1	4%	26,000	60,000	131%	x	x		x
C-351	CSX	CSX	Monroe	NC	Clinton	SC	92	0.0	13.1	0.0	15.6	2.5	22.5	28.9	29%	14,000	49,000	250%	x	x		x
C-357	CSX	CSX	Hamlet	NC	Mcbee	SC	50	2.0	3.4	2.0	3.3	-0.1	5.2	5.6	7%	4,000	12,000	200%		x	x	
C-361	CSX	CSX	Hamlet	NC	Dillon	SC	42	0.0	8.9	0.0	7.7	-1.2	18.0	18.8	4%	5,000	9,000	80%		x		
C-444	CSX	CSX	Weldon	NC	Franklin	VA	41	0.0	7.7	0.0	7.4	-0.3	8.0	6.8	-15%	1,000	2,000	100%		x		
C-446	CSX	CSX	Rocky Mt	NC	Parmele	NC	32	0.0	3.2	0.0	3.2	0.0	2.2	2.2	0%	13,000	14,000	8%	x	x		
C-448	CSX	CSX	Parmele	NC	Elmer	NC	38	0.0	2.0	0.0	2.0	0.0	2.1	2.1	0%	13,000	14,000	8%	x	x		
N-319	NS	NS	Greensboro	NC	Linwood	NC	41	6.0	20.2	6.0	18.3	-1.9	32.4	38.2	18%	21,000	25,000	19%	x	x		
N-347	NS	NS	Greensboro	NC	Raleigh Yd	NC	83	4.0	5.0	4.0	5.1	0.1	10.3	10.2	-1%	11,000	12,000	9%	x	x		
N-353	NS	NS	Goldsboro	NC	New Bern	NC	58	0.0	0.9	0.0	0.9	0.0	0.1	0.1	0%	0	5,000	1000%		x		
N-360	NS	NS	Salisbury	NC	Asheville	NC	142	0.0	6.6	0.0	5.4	-1.2	16.7	14.8	-11%	8,000	10,000	25%		x	x	
N-361	NS	NS	Asheville	NC	Leadvale	TN	74	0.0	8.4	0.0	7.6	-0.8	23.2	22.1	-5%	8,000	11,000	38%		x	x	
			NC Total				1,169															
C-758	CR	CSX	Ridgefield Heights	NJ	Newburgh	NY	45	0.0	23.6	0.0	24.8	1.2	40.5	48.4	19%	21,000	31,000	48%	x	x		
C-769	CR	CSX	Trenton	NJ	Port Reading	NJ	25	0.0	15.7	0.0	11.4	-4.3	17.0	15.6	-8%	7,000	20,000	186%		x	x	x
N-209	CR	NS	Oak Island	NJ	E Rail T V	NJ	6	0.0	10.4	0.0	15.2	4.8	15.1	18.4	22%	13,000	20,000	54%		x		
S-030	AMTK	AMTK	Lane	NJ	Union	NJ	7	277.0	3.4	277.0	11.0	7.6	58.6	75.6	29%	6,000	9,000	50%		x		
S-031	AMTK	AMTK	Midway	NJ	Morrisville	PA	17	175.0	3.4	175.0	11.0	7.6	37.2	54.2	46%	3,000	5,000	67%		x		
S-032	CR	SHARED	PN	NJ	Bayway	NJ	9	0.0	10.9	0.0	16.2	5.3	10.0	16.2	62%	10,000	22,000	120%		x		x
S-033	AMTK	AMTK	Union	NJ	Midway	NJ	22	189.0	3.4	189.0	11.0	7.6	41.4	58.4	41%	6,000	8,000	33%		x		
S-211	CR	SHARED	Nave	NJ	N Bergen	NJ	6	0.0	4.4	0.0	1.4	-3.0	12.7	0.4	-97%	7,000	20,000	186%		x	x	x
S-212	CR	SHARED	N Bergen	NJ	Ridgefield Hts	NJ	6	0.0	23.1	0.0	22.1	-1.0	40.5	42.1	4%	21,000	31,000	48%	x	x		

Δ = Projected change as a result of the proposed merger

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership: Pre Acq	Ownership: Post Acq	Rail Line Segment Description (SEGMENT COUNT 332): Between		And		Length (mi.)	Passenger and Freight Train Data: 1995 Base: Pasgr Trains	1995 Base: Freight Trains	Post Acquisition: Pasgr Trains	Post Acquisition: Freight Trains	Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Δ	164 Current Key Route Segments	332 INCREASE IN Hazardous Material Car Loads	65 New Key Route	52 New Major Key Route
S-217	CR	SHARED	Bayway	NJ	PD	NJ	6	0.0	6.0	0.0	7.7	1.7	7.0	10.3	47%	6,000	8,000	33%		x		
S-218	CR	SHARED	PD	NJ	Wood	NJ	3	0.0	4.0	0.0	4.0	0.0	3.6	3.6	1%	1,000	2,000	100%		x		
S-220	CR	SHARED	Nave	NJ	CP Green	NJ	4	0.0	18.5	0.0	16.5	-2.0	25.2	25.4	1%	14,000	27,000	93%		x		
S-221	CR	SHARED	Nave	NJ	Croxton	NJ	2	0.0	18.5	0.0	15.5	-3.0	25.2	25.1	0%	14,000	25,000	79%		x		
S-222	CR	SHARED	Green	NJ	Oak Island	NJ	1	0.0	18.5	0.0	18.5	0.0	25.2	27.9	11%	14,000	26,000	86%		x		
S-223	CR	SHARED	Hack	NJ	Croxton	NJ	1	0.0	17.7	0.0	8.2	-9.5	17.2	8.3	-52%	3,000	5,000	67%		x		
S-224	CR	SHARED	Croxton	NJ	North Bergen	NJ	3	0.0	19.1	0.0	19.2	0.1	25.1	28.4	13%	17,000	20,000	18%		x		
S-230	CR	SHARED	NK	NJ	Boundbrook	NJ	22	56.0	36.0	56.0	25.5	-10.5	46.4	42.7	-8%	26,000	31,000	19%		x		
S-231	CR	SHARED	Boundbrook	NJ	Pt Reading Jct	NJ	3	0.0	34.2	0.0	27.4	-6.8	44.2	45.5	3%	29,000	31,000	7%		x		
S-235	CR	SHARED	Woodbury	NJ	Paulsboro	NJ	6	0.0	3.2	0.0	3.2	0.0	3.7	3.7	0%	11,000	12,000	9%	x	x		
			NJ Total				193															
C-051	CR	CSX	Chili	NY	Frontier	NY	51	7.1	40.6	7.1	45.9	5.3	79.7	92.1	16%	33,000	41,000	24%	x	x		
C-052	CR	CSX	CP Sycamore	NY	Black Rock	NY	6	0.0	21.5	0.0	26.5	5.0	32.0	42.0	31%	7,000	20,000	186%	x	x	x	x
C-053	CR	CSX	Hoffmans	NY	Utica	NY	66	7.4	38.3	7.4	44.8	6.5	76.2	88.8	17%	23,000	28,000	22%	x	x		
C-054	CR	CSX	Selkirk	NY	Hoffmans	NY	25	0.0	38.7	0.0	45.2	6.5	78.5	88.4	13%	34,000	41,000	21%	x	x		
C-587	CR	CSX	Buffalo	NY	Draw	NY	2	2.0	55.8	2.0	58.5	2.7	91.8	110.0	20%	40,000	46,000	15%	x	x		
C-688	CR	CSX	Draw	NY	Buff Crk Jct	NY	1	2.0	55.8	2.0	52.5	-3.3	97.3	101.3	4%	40,000	46,000	15%	x	x		
C-689	CR	CSX	Buff Crk Jct	NY	Buff Seneca	NY	3	2.0	55.8	2.0	52.5	-3.3	103.8	101.3	-2%	43,000	49,000	14%	x	x		
C-690	CR	CSX	Buff Seneca	NY	Ashtabula	OH	123	2.0	50.1	2.0	50.8	0.7	102.6	100.2	-2%	40,000	46,000	15%	x	x		
C-735	CR	CSX	Utica	NY	Syracuse	NY	51	9.0	36.9	9.0	43.4	6.5	77.5	88.5	14%	48,000	59,000	23%	x	x		
C-736	CR	CSX	Syracuse	NY	Syracuse Jct	NY	6	9.0	40.0	9.0	46.6	6.6	81.8	89.3	9%	31,000	42,000	35%	x	x		
C-737	CR	CSX	Syracuse Jct	NY	Solvay	NY	2	9.0	38.2	9.0	44.8	6.6	80.1	91.1	14%	31,000	40,000	29%	x	x		
C-738	CR	CSX	Solvay	NY	Lyons	NY	42	9.0	39.5	9.0	44.8	5.3	79.7	91.1	14%	32,000	40,000	25%	x	x		
C-739	CR	CSX	Lyons	NY	Fairport	NY	23	9.0	39.8	9.0	45.1	5.3	79.7	90.9	14%	32,000	40,000	25%	x	x		
C-740	CR	CSX	Fairport	NY	Rochester	NY	11	9.0	31.8	9.0	36.5	4.7	66.0	72.8	10%	30,000	38,000	27%	x	x		
C-741	CR	CSX	Rochester	NY	Chili	NY	13	9.0	33.4	9.0	36.9	3.5	69.0	76.0	10%	31,000	39,000	26%	x	x		
C-742	CR	CSX	Frontier	NY	Buffalo	NY	4	9.0	52.8	9.0	49.5	-3.3	100.6	98.0	-3%	44,000	52,000	18%	x	x		
C-748	CR	CSX	Black Rock	NY	Niagara Falls	NY	21	7.0	23.0	7.0	22.0	-1.0	16.9	19.0	12%	20,000	22,000	10%	x	x		
C-749	CR	CSX	Fairport	NY	Genesee Jct	NY	14	0.0	11.4	0.0	11.2	-0.2	20.0	19.2	-4%	1,000	2,000	100%		x		
C-750	CR	CSX	Genesee Jct	NY	Chili	NY	7	0.0	11.4	0.0	11.8	0.4	21.0	20.7	-1%	1,000	2,000	100%		x		
C-751	CR	CSX	Syracuse	NY	Woodard	NY	4	0.0	10.0	0.0	10.0	0.0	13.7	13.8	1%	7,000	8,000	14%		x		
C-752	CR	CSX	Woodard	NY	Philadelphia	NY	84	0.0	7.0	0.0	7.0	0.0	10.4	10.5	1%	8,000	9,000	13%		x		
C-758	CR	CSX	Newburgh	NY	Selkirk	NY	80	0.0	22.2	0.0	23.4	1.2	42.4	48.0	13%	21,000	31,000	48%	x	x		
N-061	CR	NS	Ebenezer Jct	NY	Buffalo	NY	6	0.0	0.0	0.0	11.4	11.4	0.0	18.7	62233%	0	18,000	1000%		x	x	
N-062	CR	NS	Suffern	NY	Campbell Hall	NY	35	18.0	4.7	18.0	7.7	3.0	8.2	16.1	96%	0	18,000	1000%		x	x	
N-063	CR	NS	Campbell Hall	NY	Port Jervis	NY	30	18.0	7.9	18.0	12.0	4.1	14.4	22.4	56%	0	18,000	1000%		x	x	
N-065	CR	NS	Corning	NY	Buffalo	NY	128	0.0	13.6	0.0	20.6	7.0	22.8	29.0	27%	2,000	16,000	700%		x	x	
N-070	NS	NS	Buffalo Fw	NY	Ashtabula	OH	126	0.0	13.0	0.0	25.1	12.1	19.6	42.7	118%	8,000	26,000	225%		x	x	x
N-245	CR	NS	Port Jervis	NY	Binghamton	NY	126	0.0	7.9	0.0	12.0	4.1	11.5	19.4	69%	0	18,000	1000%		x	x	
N-246	CR	NS	Binghamton	NY	Waverly	NY	42	0.0	13.0	0.0	19.9	6.9	19.1	28.0	47%	0	18,000	1000%		x	x	
N-247	CR	NS	Waverly	NY	Corning	NY	36	0.0	16.4	0.0	21.4	5.0	22.5	31.1	38%	0	18,000	1000%		x	x	
N-473	NS	NS	Buffalo	NY	Black Rock	NY	7	0.0	10.6	0.0	5.1	-5.5	14.3	6.0	-58%	0	2,000	1000%		x		
			NY Total				1,177															
C-060	CR	CSX	Ashtabula	OH	Quaker	OH	47	2.0	48.3	2.0	54.2	5.9	102.8	107.8	5%	39,000	48,000	23%	x	x		
C-061	CR	CSX	Berea	OH	Greenwich	OH	42	0.0	14.5	0.0	54.2	39.7	30.9	108.4	250%	16,000	51,000	219%	x	x		x

Δ = Projected change as a result of the proposed merger

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership Pre Acq	Ownership Post Acq	SEGMENT COUNT 332 Rail Line Segment Description Between		And		Length (mi.)	Passenger and Freight Train Data 1995 Base Pasgr Trains	1995 Base Freight Trains	Post Acquisition Pasgr Trains	Post Acquisition Freight Trains	Δ	Freight Rail Data Million Gross Tons 1995 Base	Million Gross Tons Post Acq	Million Gross Tons Δ	Estimated Car Loads of Hazardous Material 1995 Base	Estimated Car Loads of Hazardous Material Post Acq	Estimated Car Loads of Hazardous Material Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car Loads	65 New Key Route	52 New Major Key Route
C-063	CSX	CSX	Cincinnati	OH	Hamilton	OH	21	1.0	28.2	1.0	31.2	3.0	55.3	64.1	16%	23,000	43,000	87%	x	x		
C-065	CSX	CSX	Deshler	OH	Toledo	OH	36	0.0	0.6	0.0	14.2	13.6	0.3	49.6	15913%	10,000	28,000	180%		x		x
C-066	CSX	CSX	Deshler	OH	Willow Creek	IN	174	2.0	21.4	2.0	47.7	26.3	44.6	94.1	111%	17,000	50,000	194%	x	x		x
C-067	CR	CSX	Greenwich	OH	Crestline	OH	21	0.0	14.5	0.0	31.3	16.8	30.9	58.3	88%	16,000	21,000	31%	x	x		
C-068	CSX	CSX	Greenwich	OH	Willard	OH	12	2.0	32.5	2.0	53.2	22.7	55.8	109.4	96%	18,000	69,000	283%	x	x		x
C-069	CR	CSX	Marcy	OH	Short	OH	9	0.0	16.4	0.0	45.8	29.4	26.0	95.4	267%	5,000	44,000	780%		x	x	x
C-070	CSX	CSX	Marion	OH	Fostoria	OH	40	0.0	17.8	0.0	27.4	9.6	40.0	62.5	56%	4,000	32,000	700%		x	x	x
C-072	CR	CSX	Mayfield	OH	Marcy	OH	6	0.0	3.4	0.0	43.8	40.4	9.0	93.0	933%	0	44,000	1000%		x	x	x
C-073	CR	CSX	Quaker	OH	Mayfield	OH	3	0.0	6.8	0.0	43.8	37.0	9.0	93.0	933%	0	44,000	1000%		x	x	x
C-074	CR	CSX	Short	OH	Berea	OH	4	0.0	13.4	0.0	47.3	33.9	15.0	101.6	578%	5,000	44,000	780%		x	x	x
C-075	CSX	CSX	Willard	OH	Fostoria	OH	37	2.0	32.5	2.0	54.0	21.5	55.8	109.8	97%	18,000	54,000	200%	x	x		x
C-204	CSX	CSX	Youngstown	OH	Sterling	OH	79	2.0	32.6	2.0	33.9	1.3	53.8	66.5	24%	17,000	28,000	65%	x	x		
C-205	CSX	CSX	Sterling	OH	Greenwich	OH	37	2.0	32.5	2.0	32.9	0.4	54.8	62.1	13%	18,000	35,000	94%	x	x		
C-206	CSX	CSX	Fostoria	OH	Deshler	OH	26	2.0	34.0	2.0	37.9	3.9	61.0	70.0	15%	12,000	26,000	117%	x	x		x
C-224	CSX	CSX	Hamilton	OH	Dayton	OH	34	0.0	25.4	0.0	26.5	1.1	49.9	50.4	1%	20,000	32,000	60%	x	x		
C-225	CSX	CSX	Dayton	OH	Sidney	OH	37	0.0	22.6	0.0	24.6	2.0	44.3	62.8	42%	20,000	31,000	55%	x	x		
C-226	CSX	CSX	Sidney	OH	Lima	OH	35	0.0	22.6	0.0	15.3	-7.3	44.3	44.3	0%	20,000	25,000	25%	x	x		
C-227	CSX	CSX	Lima	OH	Deshler	OH	33	0.0	26.5	0.0	14.9	-11.6	43.6	40.2	-8%	21,000	27,000	29%	x	x		
C-228	CSX	CSX	Fostoria	OH	Toledo	OH	29	0.0	33.3	0.0	37.4	4.1	66.7	79.3	19%	7,000	29,000	314%		x	x	x
C-229	CSX	CSX	Columbus	OH	Marion	OH	20	0.0	17.8	0.0	17.4	-0.4	40.0	44.0	10%	5,000	12,000	140%		x	x	
C-258	CSX	CSX	Hamilton	OH	Indianapolis	IN	99	0.9	3.0	0.9	5.0	2.0	6.0	8.0	34%	1,000	9,000	800%		x		
C-290	CSX	CSX	Cincinnati	OH	Covington	KY	6	0.9	35.9	0.9	33.6	-2.3	75.8	81.0	7%	34,000	59,000	74%	x	x		
C-438	CSX	CSX	Newark	OH	Columbus	OH	35	0.0	1.6	0.0	1.6	0.0	1.5	1.5	0%	12,000	16,000	33%		x		
C-525	CSX	CSX	W Marietta	OH	Relief	OH	27	0.0	1.8	0.0	1.8	0.0	2.2	2.2	0%	5,000	7,000	40%		x		
C-684	CR	CSX	Darby	OH	Mounds	OH	3	0.0	2.2	0.0	2.0	-0.2	2.5	1.3	-48%	0	1,000	1000%		x		
C-685	CR	CSX	Mounds	OH	Scioto	OH	6	0.0	2.2	0.0	2.0	-0.2	2.5	1.3	-49%	0	1,000	1000%		x		
C-695	CR	CSX	CP Maumee	OH	Oak	OH	1	0.0	15.2	0.0	4.0	-11.2	38.6	1.0	-97%	6,000	20,000	233%		x	x	x
N-071	NS	NS	Bucyrus	OH	Bellevue	OH	34	0.0	26.0	0.0	34.5	8.5	58.3	81.2	39%	13,000	17,000	31%	x	x		
N-072	NS	NS	Vermilion	OH	Bellevue	OH	26	0.0	15.6	0.0	27.0	11.4	30.6	50.1	64%	9,000	15,000	67%	x	x	x	
N-073	NS	NS	Fairgrounds (Columb	OH	Bucyrus	OH	61	0.0	26.0	0.0	34.3	8.3	54.2	76.3	41%	13,000	24,000	85%	x	x		
N-074	CR	NS	Cleveland	OH	Shortline Jct	OH	7	0.0	2.0	0.0	4.2	2.2	0.7	11.5	1543%	0	6,000	1000%		x		
N-075	NS	NS	Ashtabula	OH	Cleveland	OH	50	0.0	13.0	0.0	36.6	23.6	19.9	62.4	214%	7,000	37,000	429%	x	x	x	x
N-076	NS	NS	Ivorydale	OH	Cincinnati	OH	6	0.0	31.3	0.0	36.0	4.7	49.6	65.0	31%	18,000	33,000	83%	x	x		
N-078	CR	NS	Dayton	OH	Ivorydale	OH	48	0.0	11.7	0.0	18.9	7.2	24.3	34.9	44%	6,000	7,000	17%		x		
N-079	NS	NS	Oak Harbor	OH	Bellevue	OH	27	0.0	7.7	0.0	27.2	19.5	17.2	49.0	185%	3,000	18,000	500%		x	x	
N-080	NS	NS	Cleveland	OH	Vermilion	OH	37	0.0	13.5	0.0	34.1	20.6	25.5	46.2	81%	9,000	32,000	256%	x	x	x	x
N-081	CR	NS	White	OH	Cleveland	OH	11	2.0	12.5	2.0	29.7	17.2	25.9	59.9	131%	12,000	34,000	183%	x	x		x
N-082	CR	NS	Youngstown	OH	Ashtabula	OH	59	0.0	11.7	0.0	23.8	12.1	31.0	54.5	76%	2,000	11,000	450%		x	x	
N-084	CR	NS	Alliance	OH	White	OH	46	2.0	26.4	2.0	30.1	3.7	57.5	60.3	5%	29,000	33,000	14%		x		
N-287	CR	NS	Columbus	OH	Charleston	WV	185	0.0	4.1	0.0	3.4	-0.7	9.5	8.7	-8%	7,000	8,000	14%		x		
N-326	NS	NS	Cincinnati	OH	SJ Jct	KY	112	0.0	31.0	0.0	28.0	-3.0	53.7	55.9	4%	22,000	32,000	45%	x	x		
			OH Total				1,667															
C-434	CSX	CSX	Chatham	ON	Fargo	ON	7	0.0	1.2	0.0	1.2	0.0	0.4	0.4	0%	7,000	8,000	14%		x		
C-435	CSX	CSX	Chatham	ON	Sarnia	ON	53	0.0	1.2	0.0	1.2	0.0	0.3	0.3	0%	6,000	7,000	17%		x		
			ON Total				60															

Δ = Projected change as a result of the proposed merger

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership: Pre Acq	Ownership: Post Acq	Rail Line Segment Description (SEGMENT COUNT 332): Between		And		Length (mi)	Passenger and Freight Train Data: 1995 Base: Pasgr Trains	1995 Base: Freight Trains	Post Acquisition: Pasgr Trains	Post Acquisition: Freight Trains	Post Acquisition: Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Million Gross Tons: Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Estimated Car Loads of Hazardous Material: Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car Loads	65 New Key Route	52 New Major Key Route
C-080	CR	CSX	Field	PA	Belmont	PA	4	0.0	8.2	0.0	15.8	7.6	11.2	20.0	80%	1,000	5,000	400%		x		
C-081	CSX	CSX	New Castle	PA	Youngstown	OH	18	2.0	32.6	2.0	39.6	7.0	53.8	78.5	46%	8,000	12,000	50%	x	x	x	
C-082	CSX	CSX	Rankin Jct	PA	New Castle	PA	51	0.0	28.9	0.0	38.3	9.4	41.3	72.1	74%	17,000	20,000	18%		x		
C-083	CR	CSX	RG	PA	Field	PA	2	0.0	0.0	0.0	16.0	16.0	0.0	16.5	1000%	0	6,000	1000%		x		
C-084	CSX	CSX	RG	PA	Wilsmere	DE	26	0.0	22.9	0.0	26.4	3.5	39.7	49.0	23%	12,000	17,000	42%		x		
C-086	CSX	CSX	Sinns	PA	Rankin Jct	PA	9	2.0	30.8	2.0	40.2	9.4	40.3	71.6	77%	16,000	18,000	13%		x		
C-764	CR	CSX	Park Jct	PA	Belmont	PA	1	0.0	17.0	0.0	18.3	1.3	33.2	34.4	4%	22,000	35,000	59%		x		
C-765	CR	CSX	Belmont	PA	West Falls	PA	1	0.0	24.5	0.0	27.1	2.6	44.3	50.1	13%	23,000	37,000	61%		x		
C-768	CR	CSX	West Falls	PA	CP Newtown Jct	PA	4	0.0	11.1	0.0	11.4	0.3	13.2	15.6	18%	5,000	20,000	300%		x	x	x
N-093	CR	NS	Harrisburg	PA	Shocks	PA	22	0.0	2.2	0.0	6.0	3.8	2.8	6.8	143%	0	1,000	1000%		x		
N-095	CR	NS	Rochester	PA	Youngstown	OH	39	0.0	12.6	0.0	17.7	5.1	31.8	37.1	17%	2,000	11,000	450%		x	x	
N-203	CR	NS	Bethlehem	PA	Allentown	PA	3	0.0	17.2	0.0	13.3	-3.9	24.8	22.8	-8%	8,000	11,000	38%		x	x	
N-204	CR	NS	Allentown	PA	Burn	PA	3	0.0	24.9	0.0	21.3	-3.6	49.7	56.0	13%	31,000	33,000	6%	x	x		
N-216	CR	NS	Reading	PA	Reading Belt Jct	PA	2	0.0	6.0	0.0	4.9	-1.1	8.5	12.4	46%	4,000	10,000	150%	x	x	x	
N-223	CR	NS	Zoo	PA	Arsenal	PA	2	0.0	5.4	0.0	9.3	3.9	7.1	14.7	107%	1,000	8,000	700%		x		
N-225	CR	NS	Eastwick	PA	Marcus Hook	PA	12	0.0	3.0	0.0	7.8	4.8	7.0	11.7	67%	5,000	8,000	60%		x		
S-040	AMTK	AMTK	Arsenal	PA	Davis	DE	25	131.0	2.3	131.0	10.5	8.2	28.4	46.4	63%	13,000	17,000	31%		x		
S-041	AMTK	AMTK	Morrisville	PA	Zoo	PA	29	145.0	3.4	145.0	7.1	3.7	32.9	41.2	25%	4,000	8,000	100%		x		
S-042	CR	SHARED	South Philadelphia	PA	Field	PA	5	0.0	8.2	0.0	21.1	12.9	6.3	25.5	303%	1,000	7,000	600%		x		
S-232	CR	SHARED	Park Jct	PA	Phil Frankfort	PA	6	0.0	7.8	0.0	10.7	2.9	13.5	17.2	27%	8,000	11,000	38%		x	x	
S-233	CR	SHARED	Phil Frankfort	PA	Camden	NJ	4	0.0	7.8	0.0	10.7	2.9	13.3	17.2	29%	8,000	11,000	38%		x	x	
S-234	CR	SHARED	Eastwick	PA	Lester	PA	6	0.0	3.2	0.0	3.2	0.0	5.5	5.6	1%	10,000	11,000	10%	x	x		
			PA Total				274															
C-324	CSX	CSX	Laurens	SC	Spartanburg	SC	38	0.0	13.6	0.0	12.8	-0.8	27.3	22.7	-17%	5,000	6,000	20%		x		
C-340	CSX	CSX	Dillon	SC	Florence	SC	31	6.0	15.6	6.0	19.0	3.4	33.7	34.6	3%	10,000	14,000	40%		x		
C-341	CSX	CSX	Florence	SC	Lane	SC	49	6.0	12.7	6.0	16.6	3.9	28.8	31.2	8%	8,000	13,000	63%		x	x	
C-342	CSX	CSX	Lane	SC	St Stephen	SC	8	6.0	16.2	6.0	19.9	3.7	33.4	35.6	7%	10,000	13,000	30%		x		
C-343	CSX	CSX	St Stephen	SC	Ashley Jct	SC	39	6.0	12.7	6.0	16.5	3.8	29.0	31.0	7%	9,000	13,000	44%		x	x	
C-344	CSX	CSX	Ashley Jct	SC	Yemassee	SC	54	6.0	16.7	6.0	20.6	3.9	32.4	37.9	17%	9,000	16,000	78%		x	x	
C-345	CSX	CSX	Yemassee	SC	Savannah	GA	47	6.0	12.2	6.0	16.1	3.9	27.1	32.7	21%	8,000	13,000	63%		x	x	
C-352	CSX	CSX	Clinton	SC	Greenwood	SC	28	0.0	17.1	0.0	19.6	2.5	28.3	30.1	7%	17,000	49,000	188%	x	x		x
C-353	CSX	CSX	Greenwood	SC	Athens	GA	81	0.0	16.1	0.0	18.8	2.7	28.3	30.6	8%	21,000	51,000	143%	x	x		x
C-358	CSX	CSX	Mcbee	SC	Columbia	SC	108	2.0	4.4	2.0	4.4	0.0	5.4	5.9	9%	5,000	12,000	140%		x	x	
C-359	CSX	CSX	Columbia	SC	Fairfax	SC	76	2.0	3.9	2.0	3.7	-0.2	4.3	4.5	3%	6,000	12,000	100%	x	x	x	
C-360	CSX	CSX	Fairfax	SC	Savannah	GA	62	2.0	12.4	2.0	11.6	-0.8	23.1	21.3	-8%	5,000	6,000	20%		x		
C-362	CSX	CSX	Dillon	SC	Andrews	SC	74	0.0	4.3	0.0	4.2	-0.1	8.5	7.4	-13%	1,000	2,000	100%		x		
C-365	CSX	CSX	Remount	SC	Charleston	SC	10	0.0	1.6	0.0	1.6	0.0	3.5	3.5	0%	4,000	5,000	25%		x		
N-359	NS	NS	Columbia	SC	Millen	GA	135	0.0	6.0	0.0	5.2	-0.8	11.9	8.3	-30%	2,000	4,000	100%		x		
			SC Total				840															
C-090	CSX	CSX	Amqui	TN	Nashville	TN	16	0.0	40.8	0.0	48.4	7.6	80.1	104.1	30%	36,000	71,000	97%	x	x		
C-371	CSX	CSX	Mckenzie	TN	Memphis	TN	116	0.0	10.1	0.0	12.4	2.3	19.4	21.0	8%	7,000	9,000	29%		x		
C-373	CSX	CSX	Nashville	TN	Stevenson	AL	113	0.0	20.6	0.0	21.1	0.5	40.1	41.6	4%	22,000	47,000	114%	x	x		x
C-375	CSX	CSX	Chattanooga	TN	Cartersville	GA	87	0.0	17.7	0.0	17.4	-0.3	36.3	35.6	-2%	12,000	16,000	33%	x	x		
N-328	NS	NS	Harriman	TN	Citico Jct	TN	74	0.0	26.6	0.0	28.1	1.5	51.6	53.6	4%	21,000	24,000	14%	x	x		
N-329	NS	NS	Citico Jct	TN	Ooltewah	TN	12	0.0	37.0	0.0	44.0	7.0	69.4	82.1	18%	29,000	37,000	28%	x	x		

Δ = Projected change as a result of the proposed merger

Attachment B-5
All Rail Line Segments with a Projected Increase in Hazardous Materials

Site ID	Ownership: Pre Acq	Ownership: Post Acq	SEGMENT COUNT 332 Rail Line Segment Description: Between		And		Length (mi.)	Passenger and Freight Train Data: 1995 Base: Pasgr Trains	1995 Base: Freight Trains	Post Acquisition: Pasgr Trains	Post Acquisition: Freight Trains	Post Acquisition: Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Million Gross Tons: Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Estimated Car Loads of Hazardous Material: Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car Loads	65 New Key Route	52 New Major Key Route
N-330	NS	NS	Ooltewah	TN	Cohutta	GA	12	0.0	27.9	0.0	33.4	5.5	52.2	59.0	13%	16,000	20,000	25%	x	x		
N-340	NS	NS	Citico Jct	TN	Chattanooga	TN	2	0.0	63.2	0.0	55.7	-7.5	116.6	111.6	-4%	43,000	54,000	26%	x	x		
N-341	NS	NS	Wauhatchie	TN	Attalla	AL	82	0.0	6.5	0.0	11.9	5.4	20.1	23.4	16%	10,000	13,000	30%	x	x		
N-386	NS	NS	Bulls Gap	TN	New Line	TN	16	0.0	18.2	0.0	17.7	-0.5	39.3	49.3	25%	16,000	23,000	44%	x	x		
N-387	NS	NS	New Line	TN	Sevier Yd	TN	32	0.0	21.9	0.0	21.1	-0.8	48.1	60.0	25%	24,000	35,000	46%	x	x		
N-388	NS	NS	Sevier Yd	TN	Cleveland	TN	88	0.0	15.1	0.0	17.1	2.0	35.0	44.7	28%	11,000	18,000	64%	x	x		
N-389	NS	NS	Cleveland	TN	Ooltewah	TN	14	0.0	9.2	0.0	12.6	3.4	17.1	28.8	68%	12,000	19,000	58%	x	x		
N-392	NS	NS	New Line	TN	Leadvale	TN	11	0.0	4.9	0.0	5.7	0.8	11.4	10.7	-6%	9,000	12,000	33%	x	x	x	
N-393	NS	NS	Harriman	TN	Sevier Yd	TN	58	0.0	15.6	0.0	9.4	-6.2	26.0	23.1	-11%	13,000	14,000	8%	x	x		
N-395	NS	NS	Wauhatchie	TN	Sheffield	AL	154	0.0	10.2	0.0	10.8	0.6	24.7	29.4	19%	10,000	14,000	40%	x	x		
N-399	NS	NS	Bulls Gap	TN	Frisco	TN	41	0.0	18.0	0.0	12.1	-5.9	40.0	38.8	-3%	8,000	13,000	63%	x	x	x	
			TN Total				928															
C-100	CSX	CSX	Doswell	VA	Fredericksburg	VA	37	18.0	16.2	18.0	22.8	6.6	40.7	52.0	28%	21,000	26,000	24%	x	x		
C-101	CSX	CSX	Fredericksburg	VA	Potomac Yard	VA	49	30.0	16.3	30.0	23.4	7.1	40.3	51.8	29%	21,000	26,000	24%	x	x		
C-102	CSX	CSX	Richmond	VA	Doswell	VA	24	18.0	17.8	18.0	24.8	7.0	44.0	53.8	22%	21,000	26,000	24%	x	x		
C-103	CSX	CSX	S. Richmond	VA	Weldon	NC	82	10.0	18.4	10.0	23.0	4.6	47.5	56.0	18%	24,000	30,000	25%	x	x		
C-233	CSX	CSX	Rivanna Jct	VA	Clifton Forge	VA	229	0.0	9.8	0.0	9.7	-0.1	54.2	53.4	-1%	2,000	4,000	100%		x		
C-234	CSX	CSX	Clifton Forge	VA	St Albans	WV	195	0.9	9.8	0.9	10.9	1.1	57.0	59.7	5%	3,000	5,000	67%		x		
N-100	NS	NS	Riverton Jct	VA	Roanoke	VA	181	0.0	3.9	0.0	12.1	8.2	8.8	28.9	226%	1,000	5,000	400%		x		
N-315	NS	NS	Alexandria	VA	Manassas	VA	22	16.7	7.8	16.7	9.6	1.8	12.9	15.4	19%	0	16,000	1000%		x	x	
N-317	NS	NS	Montview	VA	Altavista	VA	21	2.0	15.4	2.0	19.6	4.2	23.0	30.5	33%	17,000	18,000	6%	x	x		
N-385	NS	NS	Walton	VA	Bulls Gap	TN	187	0.0	8.6	0.0	10.3	1.7	12.7	23.2	83%	6,000	9,000	50%		x		
N-406	NS	NS	Frisco	VA	Kingsport	VA	6	0.0	4.0	0.0	4.0	0.0	4.5	6.2	38%	7,000	12,000	71%		x	x	
N-420	NS	NS	Roanoke	VA	Salem	VA	7	0.0	34.3	0.0	40.4	6.1	70.8	84.9	20%	11,000	14,000	27%	x	x		
N-421	NS	NS	Salem	VA	Walton	VA	33	0.0	28.2	0.0	32.1	3.9	52.1	56.9	9%	10,000	14,000	40%	x	x		
N-432	NS	NS	Poe Mi	VA	Petersburg	VA	3	0.0	6.4	0.0	8.0	-0.4	16.4	12.3	-25%	7,000	11,000	57%	x	x	x	
			VA Total				1,076															
C-202	CSX	CSX	Harpers Ferry	WV	Cherry Run	WV	32	12.0	33.3	12.0	40.6	7.3	58.0	74.8	29%	17,000	18,000	6%	x	x		
C-235	CSX	CSX	St Albans	WV	Barboursville	WV	29	0.9	10.9	0.9	12.8	1.9	68.1	66.0	-3%	6,000	9,000	50%		x		
C-236	CSX	CSX	Barboursville	WV	Huntington	WV	10	0.9	13.4	0.9	14.9	1.5	71.1	69.3	-2%	6,000	9,000	50%		x		
C-237	CSX	CSX	Huntington	WV	Kenova	WV	8	0.9	15.5	0.9	16.8	1.3	62.2	67.1	8%	16,000	20,000	25%	x	x		
C-238	CSX	CSX	Kenova	WV	Big Sandy Jct	WV	1	0.9	32.5	0.9	33.2	0.7	59.1	65.5	11%	16,000	20,000	25%	x	x		
C-245	CSX	CSX	MK Jct	WV	Grafton	WV	26	0.0	9.4	0.0	12.0	2.6	20.0	27.3	36%	5,000	7,000	40%		x		
C-246	CSX	CSX	Grafton	WV	Berkeley Jct	WV	2	0.0	10.8	0.0	10.8	0.0	20.9	23.2	11%	5,000	7,000	40%		x		
C-247	CSX	CSX	Berkeley Jct	WV	Short Line Jct	WV	21	0.0	3.8	0.0	3.8	0.0	7.4	6.8	-8%	5,000	7,000	40%		x		
C-248	CSX	CSX	Brooklyn Jct	WV	Short Line Jct	WV	58	0.0	4.6	0.0	4.4	-0.2	6.4	6.1	-5%	5,000	7,000	40%		x		
C-249	CSX	CSX	Parkersburg	WV	Brooklyn Jct	WV	55	0.0	4.5	0.0	4.5	0.0	7.0	7.0	0%	12,000	15,000	25%		x		
C-250	CSX	CSX	Parkersburg	WV	Huntington	WV	119	0.0	5.3	0.0	5.1	-0.2	9.3	9.3	0%	12,000	20,000	67%	x	x		
N-288	CR	NS	Charleston	WV	Dickinson	WV	14	0.0	4.3	0.0	4.6	0.3	7.6	7.2	-5%	4,000	6,000	50%		x		
			WV Total				375															
			Grand Total				15,033															

Δ = Projected change as a result of the proposed merger

Attachment B-6

New Key Route and Major Key Route Rail Line Segments

Attachment B-6
New Key Route and Major Key Route Rail Line Segments

Site ID	Ownership: Pre Acq	Ownership: Post Acq	SEGMENT COUNT 97 Rail Line Segment Description: Between		And		Length (mi.)	Passenger and Freight Train Data: 1995 Base: Pssgr Trains	1995 Base: Freight Trains	Post Acquisition: Pssgr Trains	Post Acquisition: Freight Trains	Post Acquisition: Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Million Gross Tons: Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Estimated Car Loads of Hazardous Material: Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car	65 New Key Route
C-267	CSX	CSX	Decatur	AL	Black Creek	AL	89	0.0	22.5	0.0	23.8	1.3	38.4	59.5	55%	22,000	47,000	114%	X		X
C-268	CSX	CSX	Black Crk	AL	Birmingham	AL	5	0.0	33.7	0.0	31.0	-2.7	48.9	67.2	37%	22,000	47,000	114%	X		X
C-269	CSX	CSX	Birmingham	AL	Parkwood	AL	12	0.0	32.8	0.0	30.7	-2.1	48.8	67.2	38%	15,000	59,000	293%	X		X
C-270	CSX	CSX	Parkwood	AL	Montgomery	AL	87	0.0	14.1	0.0	14.3	0.2	23.1	28.5	23%	5,000	39,000	680%	X	X	X
C-271	CSX	CSX	Montgomery	AL	Flomaton	AL	110	0.0	16.1	0.0	18.0	1.9	23.1	33.7	46%	3,000	64,000	2033%	X	X	X
C-386	CSX	CSX	Flomaton	AL	Mobile	AL	59	0.8	25.1	0.8	25.8	0.7	38.4	47.6	24%	46,000	96,000	109%	X		X
C-387	CSX	CSX	Mobile	AL	New Orleans	LA	143	0.8	20.0	0.8	22.7	2.1	23.4	34.6	48%	44,000	88,000	100%	X		X
			AL Total				505														
C-403	CSX	CSX	Winston	FL	Plant City	FL	5	4.0	9.8	4.0	11.1	1.3	18.1	19.9	10%	9,000	10,000	11%		X	
			FL Total				5														
C-298	CSX	CSX	Manchester	GA	Waycross	GA	203	0.0	27.9	0.0	26.0	-1.9	52.6	57.3	9%	14,000	28,000	100%	X		X
C-347	CSX	CSX	Jesup	GA	Waycross	GA	39	0.0	7.2	0.0	7.8	0.6	20.1	22.1	10%	6,000	10,000	67%		X	
C-354	CSX	CSX	Athens	GA	Atlanta	GA	69	0.0	18.7	0.0	21.0	2.3	32.9	37.5	14%	22,000	51,000	132%	X		X
C-355	CSX	CSX	Atlanta	GA	Lagrange	GA	70	0.0	15.3	0.0	16.5	1.2	23.0	25.3	10%	3,000	48,000	1500%	X	X	X
C-356	CSX	CSX	Lagrange	GA	Montgomery	AL	100	0.0	11.9	0.0	11.2	-0.7	17.3	18.6	7%	2,000	43,000	2050%	X	X	X
C-376	CSX	CSX	Lagrange	GA	Parkwood	AL	142	0.0	13.5	0.0	13.5	0.0	24.1	29.1	21%	9,000	20,000	122%		X	X
C-377	CSX	CSX	Manchester	GA	Lagrange	GA	45	0.0	12.0	0.0	11.6	-0.4	20.5	22.8	11%	8,000	17,000	113%		X	
C-380	CSX	CSX	Thomasville	GA	Montgomery	AL	210	0.0	7.9	0.0	6.2	-1.7	10.6	10.5	0%	2,000	10,000	400%		X	
			GA Total				878														
C-025	CSX	CSX	Vincennes	IN	Evansville	IN	53	0.0	22.3	0.0	30.8	8.5	44.7	78.4	75%	21,000	44,000	110%	X		X
C-027	CSX	CSX	Willow Creek	IN	Pine Jct	IN	12	2.0	20.1	2.0	36.6	16.5	34.2	70.1	105%	17,000	40,000	135%	X		X
C-693	CR	CSX	Willow Creek	IN	Ivanhoe	IN	13	0.0	9.6	0.0	11.4	1.8	21.3	22.7	6%	4,000	10,000	150%		X	
N-041	NS	NS	Butler	IN	Ft Wayne	IN	28	0.0	13.6	0.0	27.3	13.7	16.8	33.4	99%	5,000	28,000	460%		X	X
N-044	NS	NS	Ft Wayne	IN	Peru	IN	53	0.0	19.0	0.0	34.9	15.9	23.3	46.7	100%	11,000	47,000	327%	X		X
N-045	NS	NS	Lafayette Jct	IN	Tilton	IL	49	0.0	23.6	0.0	41.0	17.4	29.8	53.6	80%	10,000	46,000	360%	X		X
N-046	NS	NS	Peru	IN	Lafayette Jct	IN	53	0.0	18.4	0.0	40.2	21.8	23.9	50.8	113%	11,000	47,000	327%	X		X
			IN Total				261														
C-287	CSX	CSX	Latonia	KY	Anchorage	KY	86	0.0	15.0	0.0	12.7	-2.3	31.0	27.0	-13%	11,000	24,000	118%	X		X
C-288	CSX	CSX	Anchorage	KY	Louisville	KY	13	0.0	20.6	0.0	18.3	-2.3	35.3	34.6	-2%	12,000	26,000	117%	X		X
C-289	CSX	CSX	Louisville	KY	Amqui	TN	173	0.0	18.8	0.0	17.4	-1.4	35.4	32.1	-9%	11,000	25,000	127%	X		X
C-291	CSX	CSX	Covington	KY	Latonia	KY	1	0.0	30.3	0.0	28.9	-1.4	57.4	58.9	3%	18,000	37,000	106%	X		X
C-292	CSX	CSX	Latonia	KY	Winchester	KY	93	0.0	17.1	0.0	16.0	-1.1	27.1	29.1	7%	8,000	13,000	63%		X	
C-293	CSX	CSX	Winchester	KY	Sinks	KY	56	0.0	24.6	0.0	23.3	-1.3	40.2	41.8	4%	5,000	12,000	140%		X	
C-294	CSX	CSX	Sinks	KY	Corbin	KY	35	0.0	22.9	0.0	21.6	-1.3	40.6	41.4	2%	5,000	12,000	140%		X	
C-295	CSX	CSX	Corbin	KY	Cartersville	GA	263	0.0	27.3	0.0	26.1	-1.2	53.7	52.7	-2%	6,000	12,000	100%		X	
C-617	CSX	CSX	N Hazard	KY	Duane	KY	4	0.0	2.7	0.0	2.7	0.0	5.9	5.9	0%	5,000	10,000	100%		X	
			KY Total				724														
C-031	CSX	CSX	Alexandria Jct	MD	Washington	DC	5	22.0	23.9	22.0	30.8	6.9	34.5	56.1	63%	3,000	17,000	467%	X	X	
C-034	CSX	CSX	Jessup	MD	Alexandria Jct	MD	17	22.0	33.4	22.0	37.1	3.7	48.0	69.7	45%	10,000	24,000	140%			X
C-037	CSX	CSX	Relay	MD	Jessup	MD	7	22.0	33.1	22.0	37.0	3.9	45.8	57.8	26%	10,000	21,000	110%			X
			MD Total				29														
C-040	CSX	CSX	Carleton	MI	Toledo	OH	26	0.0	21.9	0.0	33.1	11.2	40.0	64.2	61%	14,000	31,000	121%	X		X
C-214	CSX	CSX	Detroit	MI	Plymouth	MI	25	0.0	15.1	0.0	12.3	-2.8	12.8	11.1	-13%	8,000	13,000	63%		X	

Δ = Projected change as a result of the proposed merger

Attachment B-6
New Key Route and Major Key Route Rail Line Segments

Site ID	Ownership: Pre Acq	Ownership: Post Acq	SEGMENT COUNT 97 Rail Line Segment Description: Between		And		Length (mi.)	Passenger and Freight Train Data: 1995 Base: Psgr Trains	1995 Base: Freight Trains	Post Acquisition: Psgr Trains	Post Acquisition: Freight Trains	Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car	65 New Key Route
			MI Total				51														
N-478	NS	NS	Moberly	MO	CA Jct	MO	94	0.0	18.6	0.0	25.9	7.3	27.7	39.4	42%	6,000	10,000	67%	x	x	
			MO Total				94													x	
C-339	CSX	CSX	Pembroke	NC	Dillon	SC	21	6.0	15.7	6.0	17.2	1.5	22.8	28.2	24%	7,000	11,000	57%			
C-350	CSX	CSX	Hamlet	NC	Monroe	NC	53	0.0	20.4	0.0	23.0	2.6	41.5	43.1	4%	26,000	60,000	131%	x		x
C-351	CSX	CSX	Monroe	NC	Clinton	SC	92	0.0	13.1	0.0	15.6	2.5	22.5	28.9	29%	14,000	49,000	250%	x		x
C-357	CSX	CSX	Hamlet	NC	Mcbee	SC	50	2.0	3.4	2.0	3.3	-0.1	5.2	5.6	7%	4,000	12,000	200%		x	
N-360	NS	NS	Salisbury	NC	Asheville	NC	142	0.0	6.6	0.0	5.4	-1.2	16.7	14.8	-11%	8,000	10,000	25%		x	
N-361	NS	NS	Asheville	NC	Leadvale	TN	74	0.0	8.4	0.0	7.6	-0.8	23.2	22.1	-5%	8,000	11,000	38%		x	
			NC Total				432														
C-769	CR	CSX	Trenton	NJ	Port Reading	NJ	25	0.0	15.7	0.0	11.4	-4.3	17.0	15.6	-8%	7,000	20,000	186%		x	x
S-032	CR	SHARED	PN	NJ	Bayway	NJ	9	0.0	10.9	0.0	16.2	5.3	10.0	16.2	62%	10,000	22,000	120%			x
S-211	CR	SHARED	Nave	NJ	N Bergen	NJ	6	0.0	4.4	0.0	1.4	-3.0	12.7	0.4	-97%	7,000	20,000	186%		x	x
			NJ Total				40														
C-052	CR	CSX	CP Sycamore	NY	Black Rock	NY	6	0.0	21.5	0.0	26.5	5.0	32.0	42.0	31%	7,000	20,000	186%	x	x	x
N-061	CR	NS	Ebenezer Jct	NY	Buffalo	NY	6	0.0	0.0	0.0	11.4	11.4	0.0	18.7	62233%	0	18,000	1000%		x	
N-062	CR	NS	Suffern	NY	Campbell Hall	NY	35	18.0	4.7	18.0	7.7	3.0	8.2	16.1	96%	0	18,000	1000%		x	
N-063	CR	NS	Campbell Hall	NY	Port Jervis	NY	30	18.0	7.9	18.0	12.0	4.1	14.4	22.4	56%	0	18,000	1000%		x	
N-065	CR	NS	Corning	NY	Buffalo	NY	128	0.0	13.6	0.0	20.6	7.0	22.8	29.0	27%	2,000	16,000	700%		x	
N-070	NS	NS	Buffalo Fw	NY	Ashtabula	OH	128	0.0	13.0	0.0	25.1	12.1	19.6	42.7	118%	8,000	26,000	225%		x	x
N-245	CR	NS	Port Jervis	NY	Binghamton	NY	126	0.0	7.9	0.0	12.0	4.1	11.5	19.4	69%	0	18,000	1000%		x	
N-246	CR	NS	Binghamton	NY	Waverly	NY	42	0.0	13.0	0.0	19.9	6.9	19.1	28.0	47%	0	18,000	1000%		x	
N-247	CR	NS	Waverly	NY	Corning	NY	36	0.0	16.4	0.0	21.4	5.0	22.5	31.1	38%	0	18,000	1000%		x	
			NY Total				537														
C-061	CR	CSX	Berea	OH	Greenwich	OH	42	0.0	14.5	0.0	54.2	39.7	30.9	108.4	250%	16,000	51,000	219%	x		x
C-065	CSX	CSX	Deshler	OH	Toledo	OH	36	0.0	0.6	0.0	14.2	13.6	0.3	49.6	15913%	10,000	28,000	180%			x
C-066	CSX	CSX	Deshler	OH	Willow Creek	IN	174	2.0	21.4	2.0	47.7	26.3	44.6	94.1	111%	17,000	50,000	194%	x		x
C-068	CSX	CSX	Greenwich	OH	Willard	OH	12	2.0	32.5	2.0	55.2	22.7	55.8	109.4	96%	18,000	69,000	283%	x		x
C-069	CR	CSX	Marcy	OH	Short	OH	9	0.0	16.4	0.0	45.8	29.4	26.0	95.4	267%	5,000	44,000	780%		x	x
C-070	CSX	CSX	Marion	OH	Fostoria	OH	40	0.0	17.8	0.0	27.4	9.6	40.0	62.5	56%	4,000	32,000	700%		x	x
C-072	CR	CSX	Mayfield	OH	Marcy	OH	6	0.0	3.4	0.0	43.8	40.4	9.0	93.0	933%	0	44,000	1000%		x	x
C-073	CR	CSX	Quaker	OH	Mayfield	OH	3	0.0	6.8	0.0	43.8	37.0	9.0	93.0	933%	0	44,000	1000%		x	x
C-074	CR	CSX	Short	OH	Berea	OH	4	0.0	13.4	0.0	47.3	33.9	15.0	101.6	578%	5,000	44,000	780%		x	x
C-075	CSX	CSX	Willard	OH	Fostoria	OH	37	2.0	32.5	2.0	54.0	21.5	55.8	109.8	97%	18,000	54,000	200%	x		x
C-206	CSX	CSX	Fostoria	OH	Deshler	OH	26	2.0	34.0	2.0	37.9	3.9	61.0	70.0	15%	12,000	26,000	117%	x		x
C-228	CSX	CSX	Fostoria	OH	Toledo	OH	29	0.0	33.3	0.0	37.4	4.1	66.7	79.3	19%	7,000	29,000	314%		x	x
C-229	CSX	CSX	Columbus	OH	Marion	OH	20	0.0	17.8	0.0	17.4	-0.4	40.0	44.0	10%	5,000	12,000	140%		x	
C-695	CR	CSX	CP Maumee	OH	Oak	OH	1	0.0	15.2	0.0	4.0	-11.2	38.6	1.0	-97%	6,000	20,000	233%		x	x
N-072	NS	NS	Vermilion	OH	Bellevue	OH	26	0.0	15.6	0.0	27.0	11.4	30.6	50.1	64%	9,000	15,000	67%	x	x	
N-075	NS	NS	Ashtabula	OH	Cleveland	OH	50	0.0	13.0	0.0	36.6	23.6	19.9	62.4	214%	7,000	37,000	429%	x	x	x
N-079	NS	NS	Oak Harbor	OH	Bellevue	OH	27	0.0	7.7	0.0	27.2	19.5	17.2	49.0	185%	3,000	18,000	500%		x	
N-080	NS	NS	Cleveland	OH	Vermilion	OH	37	0.0	13.5	0.0	34.1	20.6	25.5	46.2	81%	9,000	32,000	256%	x	x	x
N-081	CR	NS	White	OH	Cleveland	OH	11	2.0	12.5	2.0	29.7	17.2	25.9	59.9	131%	12,000	34,000	183%	x		x

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Attachment B-6
New Key Route and Major Key Route Rail Line Segments

Site ID	Ownership: Pre Acq	Ownership: Post Acq	SEGMENT COUNT 97 Rail Line Segment Description: Between		And		Length (mi.)	Passenger and Freight Train Data: 1995 Base: Psgr Trains	1995 Base: Freight Trains	Post Acquisition: Psgr Trains	Post Acquisition: Freight Trains	Δ	Freight Rail Data: Million Gross Tons: 1995 Base	Million Gross Tons: Post Acq	Million Gross Tons: Δ	Estimated Car Loads of Hazardous Material: 1995 Base	Estimated Car Loads of Hazardous Material: Post Acq	Estimated Car Loads of Hazardous Material: Δ	164 Current Key Route Segments	332 Increase in Hazardous Material Car	65 New Key Route
N-082	CR	NS	Youngstown	OH	Ashtabula	OH	59	0.0	11.7	0.0	23.8	12.1	31.0	54.5	76%	2,000	11,000	450%		X	
			OH Total				648														
C-081	CSX	CSX	New Castle	PA	Youngstown	OH	18	2.0	32.6	2.0	39.6	7.0	53.8	78.5	46%	8,000	12,000	50%	X	X	
C-766	CR	CSX	West Falls	PA	CP Newtown Jct	PA	4	0.0	11.1	0.0	11.4	0.3	13.2	15.6	18%	5,000	20,000	300%		X	X
N-095	CR	NS	Rochester	PA	Youngstown	OH	39	0.0	12.6	0.0	17.7	5.1	31.6	37.1	17%	2,000	11,000	450%		X	
N-203	CR	NS	Bethlehem	PA	Allentown	PA	3	0.0	17.2	0.0	13.3	-3.9	24.8	22.8	-8%	8,000	11,000	38%		X	
N-216	CR	NS	Reading	PA	Reading Belt Jct	PA	2	0.0	6.0	0.0	4.9	-1.1	8.5	12.4	46%	4,000	10,000	150%	X	X	
S-232	CR	SHARED	Park Jct	PA	Phil Frankfort	PA	.6	0.0	7.8	0.0	10.7	2.9	13.5	17.2	27%	8,000	11,000	38%		X	
S-233	CR	SHARED	Phil Frankfort	PA	Camden	NJ	4	0.0	7.8	0.0	10.7	2.9	13.3	17.2	29%	8,000	11,000	38%		X	
			PA Total				76														
C-341	CSX	CSX	Florence	SC	Lane	SC	49	6.0	12.7	6.0	16.6	3.9	28.8	31.2	8%	8,000	13,000	63%		X	
C-343	CSX	CSX	St Stephen	SC	Ashley Jct	SC	39	6.0	12.7	6.0	16.5	3.8	29.0	31.0	7%	9,000	13,000	44%		X	
C-344	CSX	CSX	Ashley Jct	SC	Yemassee	SC	54	6.0	16.7	6.0	20.6	3.9	32.4	37.9	17%	9,000	16,000	78%		X	
C-345	CSX	CSX	Yemassee	SC	Savannah	GA	47	6.0	12.2	6.0	16.1	3.9	27.1	32.7	21%	8,000	13,000	63%		X	
C-352	CSX	CSX	Clinton	SC	Greenwood	SC	28	0.0	17.1	0.0	19.6	2.5	28.3	30.1	7%	17,000	49,000	188%	X		X
C-353	CSX	CSX	Greenwood	SC	Athens	GA	81	0.0	16.1	0.0	18.8	2.7	28.3	30.6	8%	21,000	51,000	143%	X		X
C-358	CSX	CSX	Mcbee	SC	Columbia	SC	108	2.0	4.4	2.0	4.4	0.0	5.4	5.9	9%	5,000	12,000	140%		X	
C-359	CSX	CSX	Columbia	SC	Fairfax	SC	76	2.0	3.9	2.0	3.7	-0.2	4.3	4.5	3%	6,000	12,000	100%	X	X	
			SC Total				482														
C-373	CSX	CSX	Nashville	TN	Stevenson	AL	113	0.0	20.6	0.0	21.1	0.5	40.1	41.6	4%	22,000	47,000	114%	X		X
N-392	NS	NS	New Line	TN	Leadvale	TN	11	0.0	4.9	0.0	5.7	0.8	11.4	10.7	-6%	9,000	12,000	33%	X	X	
N-399	NS	NS	Bulls Gap	TN	Frisco	TN	41	0.0	18.0	0.0	12.1	-5.9	40.0	38.8	-3%	8,000	13,000	63%	X	X	
			TN Total				165														
N-315	NS	NS	Alexandria	VA	Manassas	VA	22	16.7	7.8	16.7	9.6	1.8	12.9	15.4	19%	0	16,000	1000%		X	
N-406	NS	NS	Frisco	VA	Kingsport	VA	6	0.0	4.0	0.0	4.0	0.0	4.5	6.2	38%	7,000	12,000	71%		X	
N-432	NS	NS	Poe Mi	VA	Petersburg	VA	3	0.0	8.4	0.0	8.0	-0.4	16.4	12.3	-25%	7,000	11,000	57%	X	X	
			VA Total				31														
			Grand Total				4,958														

Δ = Projected change as a result of the proposed merger

Attachment B-7

Grade Crossing Safety Analysis

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-010	IL	COOK	163412M	ROLL	0.0645	0.0791
C-010	IL	COOK	163413U	CHATHAM	0.1032	0.1179
C-010	IL	COOK	163415H	DIXIE HWY	0.1176	0.1358
C-010	IL	COOK	163416P	BROADWAY-135TH ST	0.0446	0.0543
TOTAL					**0.3300**	**0.3870**
C-020	IN	ALLEN	532833T	ADAMS CENTER RD.	0.0656	0.0804
C-020	IN	ALLEN	532834A	LINKER CR-MEYR RD	0.0205	0.0285
TOTAL					**0.0861**	**0.1089**
C-021	KY	CHRISTIAN	345246C	DUFFEY STREET	0.1470	0.1600
C-021	KY	CHRISTIAN	345247J	JACKSON STREET	0.0634	0.0706
C-021	KY	CHRISTIAN	345248R	MAIN STREET	0.0227	0.0258
C-021	KY	CHRISTIAN	345249X	JOHN RIVERS ROAD	0.0650	0.0708
C-021	KY	CHRISTIAN	345250S	CASKY LANE	0.0174	0.0199
C-021	KY	CHRISTIAN	345251Y	SR109	0.0387	0.0438
C-021	KY	CHRISTIAN	345254U	SKYLINE DRIVE	0.0348	0.0390
C-021	KY	CHRISTIAN	345262L	E 14TH STREET	0.0512	0.0570
C-021	KY	CHRISTIAN	345263T	E 13TH STREET	0.0375	0.0425
C-021	KY	CHRISTIAN	345264A	E 12TH STREET	0.0270	0.0311
C-021	KY	CHRISTIAN	345265G	E 11TH STREET	0.0382	0.0432
C-021	KY	CHRISTIAN	345266N	E 10TH STREET	0.0373	0.0423
C-021	KY	CHRISTIAN	345267V	E 9TH STREET	0.0415	0.0461
C-021	KY	CHRISTIAN	345268C	E 7TH STREET	0.0488	0.0545
C-021	KY	CHRISTIAN	345269J	E 6TH STREET	0.2534	0.2728
C-021	KY	CHRISTIAN	345270D	E 5TH STREET	0.0512	0.0570
C-021	KY	CHRISTIAN	345271K	4 STREET	0.1055	0.1151
C-021	KY	CHRISTIAN	345273Y	E 2ND STREET	0.1041	0.1136
C-021	KY	CHRISTIAN	345274F	E 1ST STREET	0.0540	0.0599
C-021	KY	CHRISTIAN	345276U	METCALF LANE	0.0276	0.0321
C-021	KY	CHRISTIAN	345278H	CONCORD CHURCH LA.	0.0212	0.0245
C-021	KY	CHRISTIAN	345284L	CR 1105	0.0162	0.0186
C-021	KY	CHRISTIAN	345285T	OLD MADISONV ROAD	0.0678	0.0751
C-021	KY	CHRISTIAN	345288N	J. KNIGHT RD	0.0143	0.0169
C-021	KY	CHRISTIAN	345291W	OLD MADISONV ROAD	0.0233	0.0269
C-021	KY	CHRISTIAN	345292D	BROWN STREET	0.0136	0.0157
C-021	KY	CHRISTIAN	345293K	E MILL ST	0.0931	0.0989
C-021	KY	CHRISTIAN	345294S	PRINCETON STREET	0.0993	0.1085
C-021	KY	HENDERSON	345369N	PEDDLER MCDONALD	0.0136	0.0159
C-021	KY	HENDERSON	345382C	KNOB LICK ROAD	0.0175	0.0204
C-021	KY	HENDERSON	345383J	FIRST ST	0.0208	0.0238
C-021	KY	HENDERSON	345384R	SR283	0.0302	0.0345
C-021	KY	HENDERSON	345385X	ED OTLEY RD.	0.0341	0.0393
C-021	KY	HENDERSON	345388T	CHERRY HILL RD	0.0497	0.0562
C-021	KY	HENDERSON	345389A	BUSBY STATION RD	0.0206	0.0239
C-021	KY	HENDERSON	345390U	ANTOSTON RD	0.0497	0.0562
C-021	KY	HENDERSON	345393P	SCHUETTE LN	0.0195	0.0226
C-021	KY	HENDERSON	345396K	MADSION	0.0500	0.0557
C-021	KY	HENDERSON	345398Y	CLAY	0.0315	0.0355
C-021	KY	HENDERSON	345399F	POWELL	0.0594	0.0641
C-021	KY	HENDERSON	345400X	WASHINGTON ST	0.0353	0.0395
C-021	KY	HOPKINS	345301A	NEW SALEM CIRCLE	0.0231	0.0266
C-021	KY	HOPKINS	345304V	PINE STREET	0.0257	0.0296
C-021	KY	HOPKINS	345307R	OAK HL ST CHAS RD	0.0859	0.0934
C-021	KY	HOPKINS	345312M	CROSS ST/SR 813	0.0287	0.0324
C-021	KY	HOPKINS	345313U	WALNUT ST	0.0303	0.0350
C-021	KY	HOPKINS	345314B	ED BRACKETT LANE	0.0187	0.0217
C-021	KY	HOPKINS	345316P	BELL CROSSING RD	0.0182	0.0211

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-021	KY	HOPKINS	345317W	WILSON AVE	0.0549	0.0618
C-021	KY	HOPKINS	345318D	W MOSS AVE	0.2973	0.3212
C-021	KY	HOPKINS	345323A	VICTORIA HILL	0.0602	0.0674
C-021	KY	HOPKINS	345325N	W. JAGOE ST	0.0332	0.0378
C-021	KY	HOPKINS	345326V	W LAKE STREET	0.0381	0.0431
C-021	KY	HOPKINS	345327C	W.BROADWAY STREET	0.0540	0.0598
C-021	KY	HOPKINS	345328J	SUGG STREET	0.0455	0.0510
C-021	KY	HOPKINS	345329R	W CENTER STREET	0.1289	0.1396
C-021	KY	HOPKINS	345331S	W. NOEL AVE	0.1374	0.1482
C-021	KY	HOPKINS	345332Y	W. NORTH STREET	0.0416	0.0468
C-021	KY	HOPKINS	345341X	SUNSET ROAD	0.0195	0.0223
C-021	KY	HOPKINS	345344T	JOE TIPPETT	0.0670	0.0744
C-021	KY	HOPKINS	345346G	JONES ROAD	0.0578	0.0648
C-021	KY	HOPKINS	354241S	HOSPITAL DR	0.0300	0.0338
C-021	KY	TODD	345229L	PARK AVE	0.0295	0.0333
C-021	KY	TODD	345234H	ELKTN-GREENFLD RD	0.0432	0.0485
C-021	KY	TODD	345236W	ROSENWALD ST	0.0537	0.0605
C-021	KY	TODD	345237D	SR848	0.0181	0.0208
C-021	KY	TODD	345238K	SR104	0.0199	0.0227
C-021	KY	TODD	345239S	CR475	0.0688	0.0762
C-021	KY	WEBSTER	345348V	SR 138	0.0245	0.0278
C-021	KY	WEBSTER	345350W	CR 1109	0.0167	0.0196
C-021	KY	WEBSTER	345353S	BRETON ROAD	0.0292	0.0334
C-021	KY	WEBSTER	345356M	MARTIN BROWN ROAD	0.0523	0.0564
C-021	KY	WEBSTER	345359H	SEBREE SPRINGS	0.0394	0.0451
C-021	KY	WEBSTER	345360C	W. MILL STREET	0.0231	0.0267
C-021	KY	WEBSTER	345362R	W. DIXON STREET	0.1223	0.1323
C-021	KY	WEBSTER	345366T	E. WEBSTER STREET	0.0173	0.0198
C-021	KY	WEBSTER	345367A	E. JEFFERSON	0.0170	0.0195
C-021	TN	DAVIDSON	348096G	PUBLIC	0.0578	0.0648
C-021	TN	DAVIDSON	348097N	W. MONTICELLO AVE	0.0578	0.0648
C-021	TN	DAVIDSON	348108Y	BAKERS STATION RD	0.0146	0.0171
C-021	TN	ROBERTSON	348110A	INDUSTRIAL DRIVE	0.0345	0.0393
C-021	TN	ROBERTSON	348112N	E SOUTH ST	0.0311	0.0355
C-021	TN	ROBERTSON	348113V	COLLEGE ST	0.0463	0.0518
C-021	TN	ROBERTSON	348114C	MAIN ST	0.0461	0.0516
C-021	TN	ROBERTSON	348115J	WILSON ST	0.0327	0.0373
C-021	TN	ROBERTSON	348116R	LIGHTS CHAPEL RD	0.0430	0.0483
C-021	TN	ROBERTSON	348119L	COURTLAND RD	0.0211	0.0244
C-021	TN	ROBERTSON	348120F	OAKLAND ROAD	0.0264	0.0303
C-021	TN	ROBERTSON	348122U	W HILLCREST RD	0.0405	0.0456
C-021	TN	ROBERTSON	348124H	MAIN ST	0.0602	0.0662
C-021	TN	ROBERTSON	348125P	CHEATHAM ST	0.0353	0.0401
C-021	TN	ROBERTSON	348126W	RICHARDS	0.0338	0.0384
C-021	TN	ROBERTSON	348130L	HOLMAN ROAD	0.0232	0.0271
C-021	TN	ROBERTSON	348131T	MATTHEWS RD	0.0514	0.0580
C-021	TN	ROBERTSON	348132A	(KINNEY)	0.0445	0.0507
C-021	TN	ROBERTSON	348135V	MAIN ST/WASHINGTON	0.0254	0.0288
C-021	TN	ROBERTSON	348136C	AYERS ST	0.0341	0.0393
C-021	TN	ROBERTSON	348137J	GOSPEL ST	0.0531	0.0599
C-021	TN	ROBERTSON	348138R	BYRDS CROSSING	0.0264	0.0307
C-021	TN	ROBERTSON	348139X	BELL CROSS ROAD	0.0341	0.0393
C-021	TN	ROBERTSON	348140S	MURPHY	0.0364	0.0418
C-021	TN	ROBERTSON	348141Y	S. COMMERCE ST	0.0228	0.0264
C-021	TN	ROBERTSON	348143M	S ADAMS ST	0.0587	0.0658
C-021	TN	ROBERTSON	348147P	BAGBY ROAD	0.0264	0.0307
C-021	TN	ROBERTSON	348149D	QUALLS ROAD	0.0507	0.0573
TOTAL					4.9863	5.5558

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-022	IN	ALLEN	532855T	THOMAS ROAD	0.0141	0.0209
TOTAL					**0.0141**	**0.0209**
C-025	IN	GIBSON	342447H	FIRST	0.0369	0.0417
C-025	IN	GIBSON	342448P	MAIN	0.0233	0.0267
C-025	IN	GIBSON	342449W	MILL ST	0.0233	0.0267
C-025	IN	GIBSON	342454T	870 N.	0.0314	0.0361
C-025	IN	GIBSON	342456G	STEELMAN CHAPEL R	0.0554	0.0621
C-025	IN	GIBSON	342458V	CR377	0.0173	0.0202
C-025	IN	GIBSON	342459C	CR174	0.0842	0.0921
C-025	IN	GIBSON	342461D	CROSS ST	0.0302	0.0344
C-025	IN	GIBSON	342462K	VINE ST	0.0233	0.0267
C-025	IN	GIBSON	342465F	GRAVE ST	0.0233	0.0267
C-025	IN	GIBSON	342468B	225N	0.0304	0.0349
C-025	IN	GIBSON	342469H	150N	0.0076	0.0090
C-025	IN	GIBSON	342470C	CR 100N	0.3111	0.3348
C-025	IN	GIBSON	342473X	SPRING ST	0.1724	0.1855
C-025	IN	GIBSON	342475L	BROADWAY	0.0352	0.0393
C-025	IN	GIBSON	342477A	HALL ST	0.0300	0.0341
C-025	IN	GIBSON	342478G	CLARK ST	0.0588	0.0656
C-025	IN	GIBSON	342479N	MONROE ST	0.0588	0.0656
C-025	IN	GIBSON	342480H	PINKNEY ST	0.0594	0.0662
C-025	IN	GIBSON	342481P	MULBERRY ST	0.3105	0.3287
C-025	IN	GIBSON	342482W	HART ST	0.0675	0.0746
C-025	IN	GIBSON	342483D	MAKEMSON AVE	0.0783	0.0855
C-025	IN	GIBSON	342484K	GARFIELD AVE	0.0290	0.0330
C-025	IN	GIBSON	342486Y	CR66	0.0221	0.0254
C-025	IN	GIBSON	342487F	CR64	0.0205	0.0236
C-025	IN	GIBSON	342488M	CR 52	0.0079	0.0093
C-025	IN	GIBSON	342489U	CR54	0.0511	0.0575
C-025	IN	GIBSON	342490N	CR252	0.0399	0.0455
C-025	IN	GIBSON	342491V	650S	0.0447	0.0506
C-025	IN	GIBSON	342492C	PARK ST	0.0470	0.0524
C-025	IN	GIBSON	342493J	W JOHN	0.1813	0.1944
C-025	IN	GIBSON	342494R	WILLIAMS ST	0.0256	0.0293
C-025	IN	GIBSON	342495X	VINE ST	0.0370	0.0417
C-025	IN	GIBSON	342497L	LOCUST ST	0.1198	0.1298
C-025	IN	GIBSON	342498T	WALNUT ST	0.0235	0.0270
C-025	IN	GIBSON	342499A	STRAIN ST	0.0433	0.0484
C-025	IN	GIBSON	342500S	COAL MINE RD	0.0505	0.0560
C-025	IN	GIBSON	342505B	MAPLE ST	0.0386	0.0435
C-025	IN	GIBSON	342506H	CHURCH ST	0.0705	0.0776
C-025	IN	GIBSON	342508W	GIBSON	0.0373	0.0421
C-025	IN	GIBSON	342513T	ELM	0.0748	0.0820
C-025	IN	GIBSON	342514A	PLUM ST	0.0235	0.0266
C-025	IN	GIBSON	342515G	CR 136	0.1315	0.1434
C-025	IN	GIBSON	342516N	1200S.	0.0664	0.0734
C-025	IN	GIBSON	342517V	CR4	0.0537	0.0602
C-025	IN	KNOX	342405W	COLLEGE STREET	0.0417	0.0467
C-025	IN	KNOX	342407K	TENTH STREET	0.0237	0.0272
C-025	IN	KNOX	342410T	N. 11TH ST	0.0237	0.0272
C-025	IN	KNOX	342411A	SCOTT STREET	0.0237	0.0272
C-025	IN	KNOX	342413N	HART STREET	0.2465	0.2649
C-025	IN	KNOX	342414V	SEMINARY STREET	0.0624	0.0693
C-025	IN	KNOX	342416J	PERRY STREET	0.1453	0.1578
C-025	IN	KNOX	342417R	BUNTIN STREET	0.1453	0.1578
C-025	IN	KNOX	342421F	BUSSERON ST.	0.0237	0.0272
C-025	IN	KNOX	342422M	MAIN STREET	0.0237	0.0272
C-025	IN	KNOX	342423U	S. 13TH ST	0.0298	0.0339

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-025	IN	KNOX	342424B	S. 14TH ST	0.0237	0.0272
C-025	IN	KNOX	342425H	S. 15H ST.	0.3809	0.4085
C-025	IN	KNOX	342427W	RAMSEY RD	0.0579	0.0623
C-025	IN	KNOX	342428D	BROKHAGE	0.0747	0.0814
C-025	IN	KNOX	342429K	DECKER ROAD	0.0544	0.0583
C-025	IN	KNOX	342432T	CR 110	0.0202	0.0230
C-025	IN	KNOX	342435N	CR 208	0.0731	0.0803
C-025	IN	KNOX	342436V	CR 96	0.0678	0.0749
C-025	IN	KNOX	342439R	CR 92	0.0557	0.0624
C-025	IN	KNOX	342442Y	1350S	0.0120	0.0138
C-025	IN	KNOX	342443F	MAIN	0.0852	0.0930
C-025	IN	VANDERBURGH	342829D	STACER RD	0.1646	0.1776
C-025	IN	VANDERBURGH	342830X	BASELINE RD	0.0184	0.0209
C-025	IN	VANDERBURGH	342832L	BOONVIL-N.HARMONY	0.0274	0.0308
C-025	IN	VANDERBURGH	342834A	OLD STATE RD.	0.0425	0.0477
C-025	IN	VANDERBURGH	342835G	HILLSDALE	0.0723	0.0795
C-025	IN	VANDERBURGH	342843Y	WEST MILL RD	0.1306	0.1409
C-025	IN	VANDERBURGH	342844F	ALLEN LANE	0.1334	0.1431
C-025	IN	VANDERBURGH	342846U	W. MARYLAND ST	0.1342	0.1446
C-025	IN	VANDERBURGH	342848H	W. FRANKLIN ST	0.0489	0.0537
C-025	IN	VANDERBURGH	342850J	OHIO ST	0.1433	0.1538
TOTAL					**5.4183**	**5.9342**
C-027	IN	LAKE	155632M	COUNTYLINE RD.	0.1358	0.1552
C-027	IN	LAKE	155633U	HOBART RD	0.3112	0.3540
C-027	IN	LAKE	155636P	HOWARD ST	0.0848	0.0997
C-027	IN	LAKE	155637W	LAKE STREET	0.2182	0.2453
C-027	IN	LAKE	155645N	CLARK RD.	0.1489	0.1684
TOTAL					**0.8989**	**1.0226**
C-036	MD	FREDERICK	140608S	MAPLE AVE	0.0273	0.0296
TOTAL					**0.0273**	**0.0296**
C-040	MI	MONROE	232123C	LAVOY	0.0476	0.0546
C-040	MI	MONROE	232124J	STERNS RD.	0.0301	0.0348
C-040	MI	MONROE	232126X	WASHINGTON-ERIE	0.0303	0.0351
C-040	MI	MONROE	232129T	LAKEWOOD-LUNAPIER	0.0412	0.0469
C-040	MI	MONROE	232131U	RAUCH RD	0.0213	0.0250
C-040	MI	MONROE	232132B	WOOD RD	0.0366	0.0434
C-040	MI	MONROE	232133H	STEIN RD	0.0156	0.0185
C-040	MI	MONROE	232134P	SWARTZ	0.0233	0.0273
C-040	MI	MONROE	232135W	S OTTER CREEK RD	0.0341	0.0393
C-040	MI	MONROE	232136D	N OTTER CREEK RD	0.0217	0.0255
C-040	MI	MONROE	232139Y	ALBAIN RD.	0.0332	0.0382
C-040	MI	MONROE	232140T	DUNBAR RD.	0.1005	0.1108
C-040	MI	MONROE	232142G	SEVENTH ST.	0.0895	0.0989
C-040	MI	MONROE	232146J	FRONT ST	0.0509	0.0572
C-040	MI	MONROE	232147R	ELM	0.0420	0.0478
C-040	MI	MONROE	232148X	STEWART RD	0.0529	0.0592
C-040	MI	MONROE	232151F	HURD RD	0.0386	0.0457
C-040	MI	MONROE	232152M	HEISS RD	0.0227	0.0267
C-040	MI	MONROE	232153U	STOMPMIER RD	0.0797	0.0890
C-040	MI	MONROE	232154B	STEINER RD	0.0697	0.0789
C-040	MI	MONROE	232155H	S STONEY CREEK RD	0.0282	0.0328
C-040	MI	MONROE	232156P	N STONEY CREEK RD	0.0479	0.0559
C-040	MI	MONROE	232157W	LABO RD	0.0251	0.0293
C-040	MI	MONROE	232158D	SIGLER RD	0.0201	0.0236
C-040	MI	MONROE	232161L	ASH ST	0.0139	0.0165
C-040	OH	LUCAS	232121N	DIXIE (DETROIT)	0.0440	0.0499

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
C-040	OH	LUCAS	232122V	CONNEAU	0.1521	0.1646
TOTAL					**1.2128**	**1.3754**
C-061	OH	CUYAHOGA	524363S	BAGLEY RD.	0.0449	0.0648
C-061	OH	CUYAHOGA	524364Y	WEST RD	0.0233	0.0377
C-061	OH	CUYAHOGA	524367U	COLUMBIA RD	0.0853	0.1167
C-061	OH	CUYAHOGA	524368B	SPRAGUE	0.0369	0.0582
C-061	OH	HURON	518483U	KNIFFEN RD	0.0181	0.0319
C-061	OH	HURON	518484B	ALPHA RD	0.0283	0.0491
C-061	OH	HURON	518485H	SR 13	0.0172	0.0289
C-061	OH	HURON	518486P	OMEGA	0.0228	0.0408
C-061	OH	HURON	518487W	US 250	0.0253	0.0405
C-061	OH	HURON	518488D	TOWNLINE	0.0919	0.1329
C-061	OH	HURON	518489K	GREENWICH E TWNLN	0.0259	0.0456
C-061	OH	HURON	518491L	W. MAIN ST	0.0251	0.0402
C-061	OH	HURON	518492T	N. MAIN ST (SR 60)	0.0256	0.0408
C-061	OH	HURON	518493A	WALNUT ST	0.0250	0.0423
C-061	OH	HURON	518495N	CHENANGO RD	0.0556	0.0842
C-061	OH	HURON	518496V	NEW LONDON SEC RD	0.0619	0.0911
C-061	OH	HURON	518497C	BUTLER RD	0.0566	0.0853
C-061	OH	LORAIN	518498J	GORE-ORPHANAGE RD	0.0190	0.0348
C-061	OH	LORAIN	518499R	BURSLEY RD	0.0324	0.0551
C-061	OH	LORAIN	518501P	STATE ST	0.0221	0.0360
C-061	OH	LORAIN	518502W	GRIGGS RD	0.0131	0.0225
C-061	OH	LORAIN	518503D	ANDERSON RD	0.0087	0.0169
C-061	OH	LORAIN	518504K	QUARRY RD	0.0230	0.0393
C-061	OH	LORAIN	518506Y	JONES RD	0.0230	0.0393
C-061	OH	LORAIN	518507F	PITTS RD	0.2320	0.3081
C-061	OH	LORAIN	518508M	MAGYAR	0.0250	0.0422
C-061	OH	LORAIN	518509U	HERRICK AVE.	0.0347	0.0528
C-061	OH	LORAIN	518510N	NO. MAIN ST	0.0341	0.0520
C-061	OH	LORAIN	518511V	BARKER ST	0.0607	0.0829
C-061	OH	LORAIN	518512C	HAWLEY RD	0.0566	0.0793
C-061	OH	LORAIN	518513J	PECK-WADSWORTH RD	0.0131	0.0238
C-061	OH	LORAIN	518514R	WEBSTER RD	0.0547	0.0739
C-061	OH	LORAIN	518515X	NICKLE PLATE RD	0.0188	0.0312
C-061	OH	LORAIN	518518T	WHITEHEAD ST	0.0876	0.1118
C-061	OH	LORAIN	518519A	WHITNEY	0.0541	0.0753
C-061	OH	LORAIN	518520U	S. CENTER ST.	0.0262	0.0416
C-061	OH	LORAIN	518521B	E. MAIN ST	0.0264	0.0420
C-061	OH	LORAIN	518522H	WHEELER RD	0.0632	0.0897
C-061	OH	LORAIN	518523P	BIGGS RD	0.0488	0.0665
C-061	OH	LORAIN	518527S	INDIAN-HOLLOW RD	0.0244	0.0392
C-061	OH	LORAIN	518529F	CROOK RD	0.0202	0.0351
C-061	OH	LORAIN	518530A	MAIN ST	0.0320	0.0494
C-061	OH	LORAIN	518531G	ELM ST	0.0370	0.0582
C-061	OH	LORAIN	518532N	AVON-BELDEN	0.0264	0.0420
C-061	OH	LORAIN	518533V	ISLAND RD	0.0990	0.1294
C-061	OH	LORAIN	518534C	REED RD	0.0277	0.0460
C-061	OH	LORAIN	518535J	TWNSBRG-ELYRIA RD	0.0288	0.0452
C-061	OH	LORAIN	518536R	HAWKE RD	0.0182	0.0303
C-061	OH	LORAIN	518537X	ROOT RD	0.0648	0.0889
C-061	OH	LORAIN	518538E	STATION RD	0.0229	0.0371
C-061	OH	LORAIN	518539L	OSBORNE RD	0.0125	0.0228
C-061	OH	LORAIN	518540F	JAQUAY	0.0193	0.0337
TOTAL					**2.0799**	**3.1053**
C-062	IN	ALLEN	532805P	STATE LINE RD	0.0193	0.0280
C-062	IN	ALLEN	532806W	MORGAN RD	0.0159	0.0239

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
C-062	IN	ALLEN	532809S	LORTIE RD.	0.0268	0.0388
C-062	IN	ALLEN	532810L	OHIO ST.	0.0091	0.0132
C-062	IN	ALLEN	532811T	MAIN ST. SR 101	0.0163	0.0229
C-062	IN	ALLEN	532812A	WASHINGTON ST.	0.0237	0.0337
C-062	IN	ALLEN	532813G	SNYDER RD.	0.0159	0.0239
C-062	IN	ALLEN	532814N	HOFFMAN RD	0.0159	0.0239
C-062	IN	ALLEN	532815V	GROTRIAN RD	0.0159	0.0239
C-062	IN	ALLEN	532816C	WILSON RD	0.0159	0.0239
C-062	IN	ALLEN	532817J	FACKLER RD	0.0159	0.0239
C-062	IN	ALLEN	532818R	GARADOT RD	0.0159	0.0239
C-062	IN	ALLEN	532819X	HOUK RD.	0.0159	0.0239
C-062	IN	ALLEN	532820S	WASHINGTON ST.	0.0159	0.0239
C-062	IN	ALLEN	532821Y	FRANKE RD.	0.0117	0.0167
C-062	IN	ALLEN	532824U	TILLMAN RD	0.0117	0.0167
C-062	IN	ALLEN	532825B	MINNICH RD.	0.0152	0.0214
C-062	IN	ALLEN	532829D	PAULDING RD	0.0307	0.0439
C-062	IN	ALLEN	532830X	HARTZELL RD.	0.0157	0.0221
C-062	OH	ALLEN	532685B	BENTLEY ROAD	0.0385	0.0538
C-062	OH	ALLEN	532686H	PEVEE ROAD	0.0385	0.0538
C-062	OH	ALLEN	532688W	LAFAYETTE ROAD	0.2064	0.2530
C-062	OH	ALLEN	532689D	SHRIDER ROAD	0.0254	0.0370
C-062	OH	ALLEN	532690X	VINT RD	0.0085	0.0132
C-062	OH	ALLEN	532691E	PHLLPS RD	0.0480	0.0651
C-062	OH	ALLEN	532692L	S.HIGH ST	0.0208	0.0299
C-062	OH	ALLEN	532693T	CHURCH ST	0.0070	0.0106
C-062	OH	ALLEN	532694A	WASHINGTON ST.	0.0224	0.0321
C-062	OH	ALLEN	532695G	RUMBAUGH ROAD	0.0509	0.0684
C-062	OH	ALLEN	532696N	FISHER ROAD	0.0273	0.0395
C-062	OH	ALLEN	532697V	MCCLURE CROSSING	0.0090	0.0129
C-062	OH	ALLEN	532698C	COOL ROAD	0.0528	0.0706
C-062	OH	ALLEN	532699J	THAYER ROAD	0.0512	0.0687
C-062	OH	ALLEN	532700B	FETTER RD	0.0125	0.0178
C-062	OH	ALLEN	532701H	METZGER ROAD	0.0378	0.0529
C-062	OH	ALLEN	532703W	ROUSH CROSSING	0.0211	0.0292
C-062	OH	ALLEN	532706S	N. PINE ST.	0.0299	0.0416
C-062	OH	ALLEN	532707Y	N. JACKSON ST	0.0236	0.0324
C-062	OH	ALLEN	532710G	MAIN ST.	0.0279	0.0377
C-062	OH	ALLEN	532711N	N ELIZABETH ST	0.0321	0.0443
C-062	OH	ALLEN	532712V	N. WEST ST.	0.0322	0.0445
C-062	OH	ALLEN	532713C	N MCDONEL ST.	0.0349	0.0477
C-062	OH	ALLEN	532714J	N. METCALF ST.	0.0215	0.0297
C-062	OH	ALLEN	532715R	N. BAXTER ST	0.0288	0.0402
C-062	OH	ALLEN	532719T	COLE ST	0.0211	0.0292
C-062	OH	ALLEN	532720M	CABLE ROAD	0.0367	0.0483
C-062	OH	ALLEN	532721U	HARTZLER RD	0.0431	0.0593
C-062	OH	ALLEN	532722B	EASTTOWN ROAD	0.0757	0.0930
C-062	OH	ALLEN	532723H	EAST ROAD	0.0179	0.0251
C-062	OH	ALLEN	532724P	BATY ROAD	0.0155	0.0218
C-062	OH	ALLEN	532726D	DUTCH HOLLOW	0.0357	0.0487
C-062	OH	ALLEN	532727K	PIQUAD RD	0.0288	0.0402
C-062	OH	ALLEN	532728S	OLD WAPAK ROAD	0.0760	0.0860
C-062	OH	ALLEN	532730T	KEMP ROAD	0.0457	0.0540
C-062	OH	ALLEN	532733N	GRUBB RD.	0.1175	0.1479
C-062	OH	ALLEN	532735C	REDD ROAD	0.0346	0.0489
C-062	OH	ALLEN	532736J	STATE RD	0.0568	0.0750
C-062	OH	ALLEN	532737R	OLD DELPHOS RD	0.0171	0.0249
C-062	OH	ALLEN	532738X	DEFIANCE TRAIL	0.0466	0.0634
C-062	OH	ALLEN	532739E	BAUGH RD	0.0204	0.0302
C-062	OH	ALLEN	532740Y	PELTIER RD	0.0314	0.0449

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-062	OH	ALLEN	532741F	LEHMAN RD.	0.0138	0.0196
C-062	OH	ALLEN	532743U	PIERCE ST.	0.0305	0.0424
C-062	OH	ALLEN	532744B	FRANKLIN ST	0.0325	0.0448
C-062	OH	ALLEN	532745H	S MAIN ST	0.0219	0.0302
C-062	OH	CRAWFORD	532580M	LANE ST	0.0217	0.0300
C-062	OH	CRAWFORD	532581U	WALNUT ST.	0.0388	0.0523
C-062	OH	CRAWFORD	532582B	ALLEY	0.0111	0.0165
C-062	OH	CRAWFORD	532583H	N SANDUSKY AVE	0.0499	0.0647
C-062	OH	CRAWFORD	532584P	ALLEY	0.0099	0.0149
C-062	OH	CRAWFORD	532585W	POPLAR ST	0.0966	0.1207
C-062	OH	CRAWFORD	532586D	SPRING ST	0.0357	0.0486
C-062	OH	CRAWFORD	532587K	SEARS ST	0.0595	0.0740
C-062	OH	CRAWFORD	532588S	MANSFIELD ST	0.0481	0.0628
C-062	OH	CRAWFORD	532590T	MCCRACKEN	0.0083	0.0121
C-062	OH	CRAWFORD	532591A	SIMMS CR.	0.0178	0.0266
C-062	OH	CRAWFORD	532594V	GLENVILLE CR	0.0408	0.0566
C-062	OH	CRAWFORD	532596J	STRIEB CR-KNAUSS	0.0322	0.0458
C-062	OH	CRAWFORD	532597R	MARION-MELMORE RD	0.0189	0.0274
C-062	OH	HARDIN	532646K	COUNTY LINE RD.	0.0412	0.0570
C-062	OH	HARDIN	532647S	LOUISA ST	0.0175	0.0261
C-062	OH	HARDIN	532648Y	MARY ST.	0.0094	0.0136
C-062	OH	HARDIN	532649F	GORMLY ST.	0.0137	0.0195
C-062	OH	HARDIN	532650A	DAVIS ST	0.0437	0.0600
C-062	OH	HARDIN	532651G	MARTIN ST SR 37	0.0283	0.0396
C-062	OH	HARDIN	532652N	CAMPBELL ST.	0.0407	0.0564
C-062	OH	HARDIN	532653V	BERLIN CR	0.0315	0.0450
C-062	OH	HARDIN	532655J	PATTERSON RD	0.0316	0.0451
C-062	OH	HARDIN	532658E	GROAT CR.	0.0155	0.0234
C-062	OH	HARDIN	532659L	WYKES CR.	0.0128	0.0195
C-062	OH	HARDIN	532662U	WALNUT ST.	0.0176	0.0257
C-062	OH	HARDIN	532663B	MAIN ST-US #68	0.0189	0.0264
C-062	OH	HARDIN	532664H	CHERRY ST.	0.0121	0.0181
C-062	OH	HARDIN	532665P	TOWNSHIP ROAD	0.0425	0.0586
C-062	OH	HARDIN	532667D	HOPPS RD.	0.0139	0.0210
C-062	OH	HARDIN	532669S	WAYNE ST.	0.0084	0.0127
C-062	OH	HARDIN	532670L	MAIN ST.	0.0098	0.0141
C-062	OH	HARDIN	532671T	CROZIER CR.	0.0314	0.0449
C-062	OH	HARDIN	532673G	TRAVERSE PIKE	0.0138	0.0209
C-062	OH	HARDIN	532675V	PETERSON CR.-SR81	0.0111	0.0159
C-062	OH	HARDIN	532676C	SCOTT CROSSING	0.0462	0.0630
C-062	OH	HARDIN	532677J	VAN ATTA RD	0.0234	0.0343
C-062	OH	HARDIN	532678R	JOHNSON ST	0.0144	0.0204
C-062	OH	HARDIN	532679X	MAIN ST.	0.0635	0.0777
C-062	OH	HARDIN	532680S	GILBERT ST	0.0128	0.0182
C-062	OH	HARDIN	532681Y	KLINGLER ROAD	0.0500	0.0674
C-062	OH	HARDIN	532682F	ST. PAUL ROAD	0.1010	0.1282
C-062	OH	HARDIN	532684U	COUNTY LINE ROAD	0.0454	0.0620
C-062	OH	VAN WERT	532746P	CANAL ST.	0.0234	0.0334
C-062	OH	VAN WERT	532747W	JEFFERSON ST	0.0228	0.0325
C-062	OH	VAN WERT	532748D	S. CLAY ST	0.0128	0.0182
C-062	OH	VAN WERT	532749K	S BREDICK ST.	0.0245	0.0348
C-062	OH	VAN WERT	532750E	STATE ST	0.0161	0.0227
C-062	OH	VAN WERT	532751L	BRICKNER RD.	0.0375	0.0526
C-062	OH	VAN WERT	532754G	BOCKEY RD.	0.0387	0.0540
C-062	OH	VAN WERT	532755N	CONVERSE RD.	0.0341	0.0483
C-062	OH	VAN WERT	532756V	MIDDLEPOINT RD.	0.0425	0.0586
C-062	OH	VAN WERT	532757C	MAIN ST	0.0112	0.0167
C-062	OH	VAN WERT	532758J	ADAMS ST	0.0212	0.0305
C-062	OH	VAN WERT	532759R	MASON ST	0.0145	0.0214

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
C-062	OH	VAN WERT	532760K	DOG CREEK RD	0.0471	0.0640
C-062	OH	VAN WERT	532761S	RINGWALD RD.	0.0363	0.0510
C-062	OH	VAN WERT	532762Y	CHENOWITH RD.	0.0306	0.0438
C-062	OH	VAN WERT	532763F	GAMBLE RD.	0.0295	0.0424
C-062	OH	VAN WERT	532764M	HOAGLIN CENTER RD	0.0416	0.0575
C-062	OH	VAN WERT	532766B	GILLAND RD	0.0270	0.0392
C-062	OH	VAN WERT	532767H	MENDON RD.	0.0471	0.0640
C-062	OH	VAN WERT	532768P	WAYNE ST	0.0176	0.0246
C-062	OH	VAN WERT	532769W	VINE ST	0.0126	0.0187
C-062	OH	VAN WERT	532770R	FRANKLIN ST	0.0217	0.0312
C-062	OH	VAN WERT	532771X	CHESTNUT ST.	0.0157	0.0230
C-062	OH	VAN WERT	532772E	RACE ST	0.0214	0.0308
C-062	OH	VAN WERT	532773L	N. TYLER ST	0.0177	0.0258
C-062	OH	VAN WERT	532774T	HARRISON ST.	0.0181	0.0263
C-062	OH	VAN WERT	532775A	CHERRY ST	0.0540	0.0719
C-062	OH	VAN WERT	532776G	WALNUT ST	0.0224	0.0321
C-062	OH	VAN WERT	532778V	MARKET ST.	0.0284	0.0397
C-062	OH	VAN WERT	532779C	WASHINGTON	0.0215	0.0296
C-062	OH	VAN WERT	532780W	JEFFERSON ST	0.0257	0.0363
C-062	OH	VAN WERT	532781D	N. SHANNON ST	0.0092	0.0138
C-062	OH	VAN WERT	532782K	WALL ST	0.0216	0.0310
C-062	OH	VAN WERT	532783S	BURT ST.	0.0798	0.1004
C-062	OH	VAN WERT	532784Y	FISHER AVE	0.0186	0.0269
C-062	OH	VAN WERT	532785F	JOHN BROWN RD.	0.0151	0.0214
C-062	OH	VAN WERT	532788B	LIBERTY UNION RD.	0.0341	0.0483
C-062	OH	VAN WERT	532789H	RICHEY CR	0.0363	0.0510
C-062	OH	VAN WERT	532790C	MACE CR-ROBNSN RD	0.0270	0.0392
C-062	OH	VAN WERT	532791J	ALT RT. US 30	0.0143	0.0202
C-062	OH	VAN WERT	532792R	BERGNER RD	0.0256	0.0372
C-062	OH	VAN WERT	532794E	MAIN ST.-SR 49	0.0144	0.0204
C-062	OH	VAN WERT	532795L	TULLY ST.	0.0129	0.0183
C-062	OH	VAN WERT	532797A	PAYNE RD	0.0341	0.0483
C-062	OH	VAN WERT	532798G	SHANER CR	0.0073	0.0113
C-062	OH	VAN WERT	532799N	LARE CR	0.0295	0.0424
C-062	OH	VAN WERT	532800F	MENTZER ROAD	0.0306	0.0438
C-062	OH	VAN WERT	532802U	MENTZER CURCH CR.	0.0256	0.0372
C-062	OH	VAN WERT	532803B	CLEM CR-SPONSELLR	0.0139	0.0210
C-062	OH	VAN WERT	532804H	DIOXON CAVETT	0.0325	0.0463
C-062	OH	WYANDOT	532599E	COUNTY LINE ROAD	0.0314	0.0449
C-062	OH	WYANDOT	532601D	AYERS ST	0.0101	0.0151
C-062	OH	WYANDOT	532602K	MAIN ST	0.0343	0.0469
C-062	OH	WYANDOT	532603S	ALLEY-MORRISON	0.0109	0.0166
C-062	OH	WYANDOT	532605F	GOODBREAD ST.	0.0251	0.0366
C-062	OH	WYANDOT	532606M	EDENVILLE ROAD	0.0181	0.0270
C-062	OH	WYANDOT	532608B	DOUGLAS RD.	0.0181	0.0270
C-062	OH	WYANDOT	532610C	ROCK RUN CROSSING	0.0174	0.0260
C-062	OH	WYANDOT	532613X	WILLIAMS CR.	0.0404	0.0561
C-062	OH	WYANDOT	532617A	RESERVIOR RD	0.0259	0.0377
C-062	OH	WYANDOT	532618G	S. FIFTH ST	0.0182	0.0264
C-062	OH	WYANDOT	532619N	S. SANDUSKY ST	0.0182	0.0255
C-062	OH	WYANDOT	532620H	SEVENTH ST	0.0734	0.0923
C-062	OH	WYANDOT	532622W	EIGHTH ST	0.0185	0.0259
C-062	OH	WYANDOT	532623D	HAZEL ST.	0.0194	0.0281
C-062	OH	WYANDOT	532624K	S. WARPOLE ST	0.0280	0.0393
C-062	OH	WYANDOT	532625S	TOWNSHIP ROAD	0.0222	0.0327
C-062	OH	WYANDOT	532626Y	WHITE RD	0.0397	0.0553
C-062	OH	WYANDOT	532629U	WILL RD	0.0155	0.0234
C-062	OH	WYANDOT	532630N	MIGRET RD (CR 53)	0.0341	0.0483
C-062	OH	WYANDOT	532633J	GAMBER RD.	0.0162	0.0244

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-062	OH	WYANDOT	532635X	KRAUS RD.	0.0169	0.0253
C-062	OH	WYANDOT	532638T	MAIN ST.	0.0210	0.0302
C-062	OH	WYANDOT	532639A	PUBLIC ALLEY	0.0128	0.0195
C-062	OH	WYANDOT	532640U	LILES CR.	0.0147	0.0222
C-062	OH	WYANDOT	532641B	HELLER RD	0.0270	0.0392
C-062	OH	WYANDOT	532645D	ANGLING RD	0.0256	0.0372
TOTAL					**5.3340**	**7.3478**
C-064	OH	CRAWFORD	502674G	WHETSTONE ST	0.0245	0.0329
C-064	OH	CRAWFORD	502676V	ALBRIGHT	0.0445	0.0600
C-064	OH	CRAWFORD	502677C	LOWER LEESVILLE	0.0262	0.0362
C-064	OH	CRAWFORD	502679R	OLENTANGY RD	0.0341	0.0474
C-064	OH	CRAWFORD	502680K	MAIN ST	0.0325	0.0439
C-064	OH	CRAWFORD	502681S	BECK RD	0.0349	0.0483
C-064	OH	CRAWFORD	502682Y	BIDDLE RD	0.1781	0.2175
C-064	OH	CRAWFORD	502683F	CRESTLINE RD	0.0139	0.0193
C-064	OH	CRAWFORD	502684M	SR 598	0.0176	0.0241
C-064	OH	CRAWFORD	502685U	WILEY ST	0.0341	0.0459
C-064	OH	CRAWFORD	502686B	THOMAN ST	0.0397	0.0525
TOTAL	OH	CRAWFORD	502852R	WESTERN AVE.	0.0135	0.0195
					0.4937	**0.6475**
C-065	OH	HENRY	155755Y	MAIN ST.	0.0486	0.1054
C-065	OH	HENRY	155757M	MAPLE ST.	0.0079	0.0321
C-065	OH	HENRY	155759B	ELM ST.	0.0193	0.0671
C-065	OH	HENRY	155760V	NORTH ST.	0.0270	0.0831
C-065	OH	HENRY	155761C	CR E	0.0102	0.0419
C-065	OH	HENRY	155762J	HNRY-WOOD CO LNRD	0.0158	0.0586
C-065	OH	WOOD	155763R	CYGNET RD	0.0070	0.0309
C-065	OH	WOOD	155764X	JERRY CITY RD	0.0081	0.0348
C-065	OH	WOOD	155766L	BAYS RD.	0.0117	0.0470
C-065	OH	WOOD	155767T	CUSTAR RD.	0.0043	0.0190
C-065	OH	WOOD	155768A	MAIN ST.	0.0086	0.0345
C-065	OH	WOOD	155770B	DEFIANCE	0.0051	0.0222
C-065	OH	WOOD	155771H	RAILROAD ST.	0.0063	0.0285
C-065	OH	WOOD	155772P	SOUTH ST.	0.0041	0.0195
C-065	OH	WOOD	155773W	SUGAR ST.	0.0066	0.0293
C-065	OH	WOOD	155774D	MILTON RD	0.0126	0.0498
C-065	OH	WOOD	155775K	MAPLEWOOD RD.	0.0050	0.0229
C-065	OH	WOOD	155776S	PORTAGE RD.	0.0130	0.0509
C-065	OH	WOOD	155778F	WESTON RD.	0.0170	0.0619
C-065	OH	WOOD	155779M	TAYLOR	0.0061	0.0260
C-065	OH	WOOD	155780G	MAIN	0.0083	0.0335
C-065	OH	WOOD	155781N	WALNUT ST.	0.0065	0.0271
C-065	OH	WOOD	155782V	OAK ST	0.0201	0.0510
C-065	OH	WOOD	155784J	EULER RD.	0.0034	0.0155
C-065	OH	WOOD	155785R	OTSEGO RD	0.0058	0.0209
C-065	OH	WOOD	155788L	WILLOW RD	0.0036	0.0170
C-065	OH	WOOD	155789T	RANGE LINE RD.	0.0224	0.0744
C-065	OH	WOOD	155790M	POE RD.	0.0164	0.0603
C-065	OH	WOOD	155791U	LONG JUDSON RD.	0.0059	0.0266
C-065	OH	WOOD	155792B	TULLER RD.	0.0143	0.0547
C-065	OH	WOOD	155793H	TULLER RD.	0.0053	0.0243
C-065	OH	WOOD	155794P	KELLOGG RD	0.0295	0.0878
C-065	OH	WOOD	155795W	LINCOLN ST.	0.0132	0.0516
C-065	OH	WOOD	155796D	WALL ST. & BROAD	0.0046	0.0204
C-065	OH	WOOD	155797K	MAIN	0.0057	0.0245
C-065	OH	WOOD	155798S	WASHINGTON ST	0.0214	0.0722
C-065	OH	WOOD	155799Y	TONTOGANY RD	0.0210	0.0714

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-065	OH	WOOD	155800R	HANNAH	0.0108	0.0442
C-065	OH	WOOD	155801X	CROSS CREEK	0.0126	0.0498
C-065	OH	WOOD	155804T	MIDDLETOWN PIKE	0.0746	0.1696
C-065	OH	WOOD	155805A	FINDLAY ST.	0.0100	0.0387
C-065	OH	WOOD	155806G	MAIN ST.	0.0044	0.0193
C-065	OH	WOOD	155807N	CHURCH RD.	0.0070	0.0308
C-065	OH	WOOD	155808V	KINGS RD	0.0159	0.0591
C-065	OH	WOOD	155809C	OVITT RD	0.0140	0.0539
C-065	OH	WOOD	155810W	REITZ RD	0.0179	0.0640
C-065	OH	WOOD	155811D	HULL PRAIRIE RD	0.0130	0.0509
C-065	OH	WOOD	155812K	FIRE POINT RD.	0.0229	0.0755
C-065	OH	WOOD	155814Y	ROACHTON RD.	0.0280	0.0852
C-065	OH	WOOD	155815F	FORT MEIGS RD	0.0199	0.0688
C-065	OH	WOOD	155818B	ECKEL JCT RD	0.0272	0.0838
C-065	OH	WOOD	155819H	ECKEL RD	0.0218	0.0730
C-065	OH	WOOD	155820C	ECKEL RD	0.0239	0.0774
C-065	OH	WOOD	155821J	W. BOUNDARY ST.	0.0506	0.1015
C-065	OH	WOOD	155822R	MULBERRY ST.	0.0155	0.0579
C-065	OH	WOOD	155823X	INDIANA ST.	0.0084	0.0288
C-065	OH	WOOD	155825L	CHERRY ST	0.0083	0.0357
C-065	OH	WOOD	155827A	WALNUT ST	0.0093	0.0367
C-065	OH	WOOD	155829N	LOUISIANA AVE.	0.0113	0.0367
C-065	OH	WOOD	155830H	ELM ST.	0.0126	0.0462
C-065	OH	WOOD	155831P	LOCUST ST	0.0082	0.0330
C-065	OH	WOOD	155832W	MAPLE ST.	0.0159	0.0591
C-065	OH	WOOD	155833D	HICKORY ST	0.0185	0.0656
C-065	OH	WOOD	155834K	E.BOUNDARY ST.	0.0134	0.0483
C-065	OH	WOOD	155835S	HUFFORD RD	0.0203	0.0697
C-065	OH	WOOD	155837F	WHITE RD	0.0197	0.0685
C-065	OH	WOOD	155838M	FORD RD.	0.0282	0.0855
C-065	OH	WOOD	155839U	BATES RD	0.0224	0.0773
C-065	OH	WOOD	155840N	SCHRICK RD.	0.0236	0.0768
C-065	OH	WOOD	155841V	LIME CITY RD	0.0074	0.0260
C-065	OH	WOOD	155842C	GLENWOOD RD.	0.0088	0.0349
TOTAL					**1.0780**	**3.6274**
C-066	IN	DE KALB	155285T	STATE LINE ROAD	0.0212	0.0299
C-066	IN	DE KALB	155288N	CR 75	0.0378	0.0520
C-066	IN	DE KALB	155289V	CENTER RD - CR 60	0.1019	0.1276
C-066	IN	DE KALB	155290P	SR 101	0.0199	0.0272
C-066	IN	DE KALB	155292D	CR 218	0.0375	0.0516
C-066	IN	DE KALB	155295Y	CR 63	0.0157	0.0217
C-066	IN	DE KALB	155297M	FIRST ST	0.0217	0.0295
C-066	IN	DE KALB	155298U	THIRD ST.	0.0722	0.0902
C-066	IN	DE KALB	155299B	SPENCERVILLE ROAD	0.0247	0.0344
C-066	IN	DE KALB	155301A	C.R.58	0.0198	0.0287
C-066	IN	DE KALB	155302G	CO. RD. 55	0.0374	0.0515
C-066	IN	DE KALB	155304V	LANCASTER RD	0.0188	0.0266
C-066	IN	DE KALB	155305C	CR 179	0.0295	0.0416
C-066	IN	DE KALB	155306J	CR 49	0.0984	0.1234
C-066	IN	DE KALB	155311F	PROSSER RD	0.0354	0.0491
C-066	IN	DE KALB	155314B	CR 149	0.0310	0.0435
C-066	IN	DE KALB	155315H	HOOK ROAD	0.0192	0.0263
C-066	IN	DE KALB	155318D	MAGGINS ROAD	0.0138	0.0192
C-066	IN	DE KALB	155319K	(CEMETERYRD)CR29	0.0226	0.0317
C-066	IN	DE KALB	155320E	SOUTH WAYNE	0.0856	0.1039
C-066	IN	DE KALB	155322T	AUBURN DR	0.1046	0.1284
C-066	IN	DE KALB	155323A	WEST ST.	0.1174	0.1461
C-066	IN	DE KALB	155326V	CR 19	0.0190	0.0260

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-066	IN	DE KALB	155329R	TAYLOR ROAD	0.0535	0.0677
C-066	IN	DE KALB	155330K	RANDOLPH	0.0358	0.0465
C-066	IN	ELKHART	155417B	C.R. 11	0.0727	0.0907
C-066	IN	ELKHART	155419P	CR 9	0.1778	0.2099
C-066	IN	ELKHART	155420J	CR 7	0.0574	0.0718
C-066	IN	ELKHART	155421R	JACKSON ST	0.0429	0.0562
C-066	IN	ELKHART	155424L	MADISON	0.0203	0.0276
C-066	IN	ELKHART	155426A	NAPPANEE ST	0.0394	0.0522
C-066	IN	ELKHART	155427G	WILLIAMS ST	0.0143	0.0199
C-066	IN	ELKHART	155431W	TOMAHAWK	0.0870	0.1044
C-066	IN	KOSCIUSKO	155385X	CR 1000	0.0202	0.0275
C-066	IN	KOSCIUSKO	155387L	CR 900E	0.0962	0.1124
C-066	IN	KOSCIUSKO	155388T	775 E	0.0934	0.1103
C-066	IN	KOSCIUSKO	155389A	WARNER ROAD	0.0272	0.0375
C-066	IN	KOSCIUSKO	155390U	EAST SHORE DRIVE	0.0235	0.0317
C-066	IN	KOSCIUSKO	155391B	SEVENTH ST-FRONT	0.1262	0.1530
C-066	IN	KOSCIUSKO	155392H	HUNTINGTON STREET	0.1337	0.1592
C-066	IN	KOSCIUSKO	155394W	MAINSYR-WEB	0.1904	0.2271
C-066	IN	KOSCIUSKO	155395D	OAK ST	0.1629	0.1952
C-066	IN	KOSCIUSKO	155400X	300E	0.0758	0.0944
C-066	IN	KOSCIUSKO	155404A	150 E	0.0177	0.0259
C-066	IN	KOSCIUSKO	155406N	OLD SR 15	0.0721	0.0875
C-066	IN	KOSCIUSKO	155408C	50W	0.0496	0.0659
C-066	IN	KOSCIUSKO	155410D	75W	0.0288	0.0407
C-066	IN	KOSCIUSKO	155411K	200 W	0.0432	0.0585
C-066	IN	KOSCIUSKO	155414F	300 W	0.0561	0.0732
C-066	IN	KOSCIUSKO	155415M	GRAVELTON	0.0512	0.0678
C-066	IN	KOSCIUSKO	155416U	CR 400W	0.0191	0.0271
C-066	IN	LA PORTE	155484V	CR 875 E	0.1443	0.1759
C-066	IN	LA PORTE	155485C	750 E	0.0122	0.0181
C-066	IN	LA PORTE	155487R	KANKAKEE	0.0653	0.0830
C-066	IN	LA PORTE	155490Y	RANGE RD.	0.0787	0.0978
C-066	IN	LA PORTE	155492M	SR 39	0.0269	0.0359
C-066	IN	LA PORTE	155494B	LONG LANE	0.0340	0.0458
C-066	IN	LA PORTE	155495H	WATER ST.	0.0206	0.0280
C-066	IN	LA PORTE	155496P	500W	0.1462	0.1779
C-066	IN	LA PORTE	155497W	600 W	0.0205	0.0279
C-066	IN	LA PORTE	155498D	700 W	0.0596	0.0770
C-066	IN	LA PORTE	155499K	800W	0.0593	0.0767
C-066	IN	LA PORTE	155600G	900 W	0.0610	0.0785
C-066	IN	LA PORTE	155601N	US 421	0.0294	0.0389
C-066	IN	LA PORTE	155603C	CR 1100W	0.0725	0.0904
C-066	IN	MARSHALL	155435Y	BEECH ST	0.0703	0.0882
C-066	IN	MARSHALL	155440V	DOGWOOD RD	0.1077	0.1272
C-066	IN	MARSHALL	155443R	CENTER ST.	0.0267	0.0368
C-066	IN	MARSHALL	155446L	BOWEN ST	0.0294	0.0389
C-066	IN	MARSHALL	155449G	MIAMI ROAD	0.0164	0.0226
C-066	IN	MARSHALL	155454D	JARRAH RD	0.0261	0.0372
C-066	IN	MARSHALL	155455K	KING RD.	0.0706	0.0885
C-066	IN	MARSHALL	155456S	LINDEN RD	0.0454	0.0611
C-066	IN	MARSHALL	155458F	MAPLE RD	0.0211	0.0306
C-066	IN	MARSHALL	155464J	PINE RD	0.0673	0.0852
C-066	IN	MARSHALL	155465R	FIRST RD. SMITH	0.1650	0.1973
C-066	IN	MARSHALL	155466X	QUINCE RD	0.0454	0.0611
C-066	IN	MARSHALL	155471U	REDWOOD RD.	0.1147	0.1429
C-066	IN	MARSHALL	155473H	SYCAMORE RD.	0.0706	0.0885
C-066	IN	MARSHALL	155476D	THORN RD	0.1541	0.1862
C-066	IN	MARSHALL	155477K	ULE RD.	0.0673	0.0852
C-066	IN	NOBLE	155341X	C.R. 1100E	0.0436	0.0590

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
C-066	IN	NOBLE	155345A	900 E	0.0722	0.0902
C-066	IN	NOBLE	155349C	700E	0.0620	0.0796
C-066	IN	NOBLE	155350W	100N	0.0256	0.0355
C-066	IN	NOBLE	155353S	600 E	0.0549	0.0719
C-066	IN	NOBLE	155355F	500E	0.0281	0.0387
C-066	IN	NOBLE	155362R	75 E & SEVENTH ST	0.0220	0.0298
C-066	IN	NOBLE	155363X	ORANGE ST.	0.0787	0.0956
C-066	IN	NOBLE	155365L	YORK ST.	0.0689	0.0868
C-066	IN	NOBLE	155371P	450 W	0.0474	0.0633
C-066	IN	NOBLE	155372W	CR 500W	0.1384	0.1696
C-066	IN	NOBLE	155374K	600 W & 300N	0.0807	0.0985
C-066	IN	NOBLE	155375S	CLARK	0.0261	0.0362
C-066	IN	NOBLE	155378M	SPARTA LAKE RD	0.0611	0.0786
C-066	IN	NOBLE	155380N	900 W	0.1831	0.2149
C-066	IN	NOBLE	155381V	MAIN ST-JEFFERSON	0.0242	0.0326
C-066	IN	NOBLE	155383J	1025 W	0.0727	0.0907
C-066	IN	NOBLE	155384R	1075 W	0.0255	0.0364
C-066	IN	PORTER	155605R	600 EAST	0.0143	0.0206
C-066	IN	PORTER	155608L	400 E	0.0587	0.0707
C-066	IN	PORTER	155609T	700 NORTH	0.0128	0.0191
C-066	IN	PORTER	155610M	SUMAN RD	0.0755	0.0934
C-066	IN	PORTER	155612B	MANDER RD.	0.0160	0.0221
C-066	IN	PORTER	155613H	TRATEBAS RD.	0.0704	0.0883
C-066	IN	PORTER	155615W	900 N.	0.1465	0.1707
C-066	IN	PORTER	155617K	MERIDAN RD	0.0314	0.0414
C-066	IN	PORTER	155619Y	100W	0.0711	0.0890
C-066	IN	PORTER	155620T	150 W	0.0197	0.0269
C-066	IN	PORTER	155621A	200 W	0.0262	0.0350
C-066	IN	PORTER	155623N	CROCKER	0.0362	0.0469
C-066	IN	PORTER	155624V	MCCOOL RD.	0.0275	0.0366
C-066	IN	PORTER	155626J	HAMSTROM	0.0325	0.0440
C-066	IN	PORTER	155627R	PORTAGE AVE	0.1154	0.1404
C-066	IN	PORTER	155628X	WILLOW CREEK RD	0.0844	0.1024
C-066	IN	ST JOSEPH	155478S	LIBERTY-MICHIGAN	0.0354	0.0450
C-066	IN	ST JOSEPH	155479Y	ADAMS ST	0.0205	0.0279
C-066	IN	ST JOSEPH	155481A	SR 104	0.0222	0.0301
C-066	IN	ST JOSEPH	155483N	POPLAR RD	0.0247	0.0353
C-066	OH	DEFIANCE	142343Y	SNYDER	0.0592	0.0766
C-066	OH	DEFIANCE	142345M	HARRIS	0.0699	0.0878
C-066	OH	DEFIANCE	142348H	HIRE	0.0305	0.0403
C-066	OH	DEFIANCE	142352X	SQUIER ST	0.0443	0.0577
C-066	OH	DEFIANCE	142356A	OTTAWA AVE	0.0400	0.0513
C-066	OH	DEFIANCE	142366F	JACKSON ST	0.1392	0.1690
C-066	OH	DEFIANCE	142367M	DEATRICK ST	0.0299	0.0395
C-066	OH	DEFIANCE	142368U	ATLANTIC DR	0.0655	0.0793
C-066	OH	DEFIANCE	142370V	KROUSE RD	0.0168	0.0232
C-066	OH	DEFIANCE	142374X	ASHWOOD RD	0.0579	0.0751
C-066	OH	DEFIANCE	142375E	US 24	0.0319	0.0419
C-066	OH	DEFIANCE	142377T	TITTLE RD	0.0186	0.0271
C-066	OH	DEFIANCE	142379G	JACOBS RD	0.0186	0.0271
C-066	OH	DEFIANCE	142381H	THE BEND RD	0.0331	0.0448
C-066	OH	DEFIANCE	142382P	DELAWARE ST	0.0294	0.0403
C-066	OH	DEFIANCE	142385K	COY RD	0.0098	0.0148
C-066	OH	DEFIANCE	142386S	HARRISON AVENUE	0.0825	0.1002
C-066	OH	DEFIANCE	142387Y	BEHNFEDT RD	0.0510	0.0675
C-066	OH	DEFIANCE	142388F	OPENLANDER RD	0.0138	0.0193
C-066	OH	DEFIANCE	142389M	WILLIAMS CNTR RD	0.0489	0.0651
C-066	OH	DEFIANCE	142390G	FARMER MARK RD	0.0331	0.0448
C-066	OH	DEFIANCE	142392V	WONDERLY RD	0.0535	0.0703

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
C-066	OH	DEFIANCE	142394J	BREININER	0.0592	0.0766
C-066	OH	DEFIANCE	142396X	ROSEDALE RD	0.0592	0.0766
C-066	OH	DEFIANCE	142398L	CICERO	0.0424	0.0575
C-066	OH	DEFIANCE	142402Y	LAKE RD	0.0530	0.0698
C-066	OH	HENRY	142303B	N KEYSER AVE	0.0243	0.0327
C-066	OH	HENRY	142304H	TOWNSHIP ROAD 3 (CR 3)	0.0732	0.0909
C-066	OH	HENRY	142305P	TWP D	0.0540	0.0709
C-066	OH	HENRY	142306W	SR 65/18	0.1147	0.1360
C-066	OH	HENRY	142307D	CR 5	0.0433	0.0586
C-066	OH	HENRY	142308K	CR 6	0.0433	0.0586
C-066	OH	HENRY	142309S	CR 7	0.0703	0.0882
C-066	OH	HENRY	142310L	CR E	0.0490	0.0578
C-066	OH	HENRY	142311T	TWNSHP HWY.	0.0292	0.0412
C-066	OH	HENRY	142312A	TWHSHP 8B	0.0602	0.0777
C-066	OH	HENRY	142313G	MAIN ST.	0.0300	0.0410
C-066	OH	HENRY	142314N	MARION ST.	0.0300	0.0410
C-066	OH	HENRY	142315V	FIRST ST.	0.0716	0.0870
C-066	OH	HENRY	142316C	CR 10	0.0496	0.0659
C-066	OH	HENRY	142320S	CR 11	0.0433	0.0586
C-066	OH	HENRY	142321Y	TWP F	0.0626	0.0802
C-066	OH	HENRY	142323M	CR 12	0.0547	0.0654
C-066	OH	HENRY	142325B	CR 13	0.0185	0.0263
C-066	OH	HENRY	142326H	KEYSER ST	0.0723	0.0879
C-066	OH	HENRY	142328W	WILHELM	0.0453	0.0589
C-066	OH	HENRY	142329D	BRAYER ST.	0.0533	0.0636
C-066	OH	HENRY	142334A	CR 16	0.0558	0.0729
C-066	OH	HENRY	142335G	CR 17	0.0656	0.0834
C-066	OH	HENRY	142338C	CR 18	0.0574	0.0746
C-066	OH	HENRY	142340D	CR 19	0.0226	0.0317
TOTAL					**9.3640**	**11.8701**
C-067	OH	CRAWFORD	518441H	BUCYRUS ST.	0.0229	0.0306
C-067	OH	CRAWFORD	518443W	MAIN ST	0.0371	0.0475
C-067	OH	CRAWFORD	518445K	WASHINGTON	0.0921	0.1063
C-067	OH	HURON	518477R	EDWARDS RD	0.0271	0.0380
C-067	OH	HURON	518479E	PLYMOUTH EAST RD	0.0110	0.0158
C-067	OH	HURON	518480Y	GREENWICH-MILAN	0.0303	0.0420
C-067	OH	HURON	518481F	MAIN ST	0.0273	0.0360
C-067	OH	HURON	518482M	TOWNSEND ST.	0.0199	0.0268
C-067	OH	RICHLAND	518446S	BEAM RD	0.0603	0.0721
C-067	OH	RICHLAND	518448F	THRUSH RD	0.0201	0.0287
C-067	OH	RICHLAND	518449M	HOOK RD	0.0498	0.0654
C-067	OH	RICHLAND	518450G	FINNEGAN RD	0.0263	0.0369
C-067	OH	RICHLAND	518451N	SETTLEMENT RD	0.0154	0.0211
C-067	OH	RICHLAND	518452V	GERMAN-STTLMNT RD	0.0323	0.0433
C-067	OH	RICHLAND	518454J	STENTZ RD	0.0535	0.0696
C-067	OH	RICHLAND	518455R	HUMMEL RD	0.0768	0.0940
C-067	OH	RICHLAND	518456X	MAIN ST	0.1428	0.1678
C-067	OH	RICHLAND	518458L	NO. GAMBLE	0.0300	0.0392
C-067	OH	RICHLAND	518459T	SMILEY	0.0511	0.0646
C-067	OH	RICHLAND	518460M	NO.BROADWAY	0.0784	0.0945
C-067	OH	RICHLAND	518461U	SHELBY-GANGES RD	0.0166	0.0226
C-067	OH	RICHLAND	518462B	LONDON WEST RD	0.0735	0.0907
C-067	OH	RICHLAND	518464P	BISTLINE	0.0489	0.0644
C-067	OH	RICHLAND	518465W	SPRGMLL-PLYMTH RD	0.1087	0.1276
C-067	OH	RICHLAND	518466D	HAZEL-BRUSH RD	0.0178	0.0257
C-067	OH	RICHLAND	518468S	BOWMAN RD	0.0406	0.0530
C-067	OH	RICHLAND	518472G	MAIN ST	0.0265	0.0350
C-067	OH	RICHLAND	518473N	NOBLE RD	0.0196	0.0281

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
C-067	OH	RICHLAND	518474V	MALONE RD	0.0136	0.0198
C-067	OH	RICHLAND	518475C	PLANKTOWN	0.0651	0.0821
C-067	OH	RICHLAND	518476J	BASE LINE RD	0.1432	0.1735
TOTAL					**1.4784**	**1.8622**
C-068	OH	HURON	142119N	KNIFFIN ST	0.0299	0.0369
C-068	OH	HURON	142120H	UNION ST	0.0220	0.0276
C-068	OH	HURON	142123D	MILAN-GREENWCH RD	0.0728	0.0828
C-068	OH	HURON	142124K	LANE	0.0230	0.0293
C-068	OH	HURON	142125S	EDWARDS	0.0723	0.0841
C-068	OH	HURON	142126Y	OLD STATE RD.	0.0733	0.0852
C-068	OH	HURON	142127F	BOUGHTONVILLE RD	0.0810	0.0929
C-068	OH	HURON	142129U	NEW STATE RD.	0.0896	0.1012
C-068	OH	HURON	142135X	PERU CENTER	0.0260	0.0316
C-068	OH	HURON	142137L	THIRD ST.	0.0194	0.0240
C-068	OH	HURON	142139A	FIRST ST.	0.0298	0.0359
TOTAL					**0.5391**	**0.6315**
C-070	OH	MARION	228721J	CENTER STREET	0.0424	0.0485
C-070	OH	MARION	228722R	SILVER STREET	0.0317	0.0368
C-070	OH	MARION	228723X	FAIRGROUNDS ST	0.0273	0.0319
C-070	OH	MARION	228726T	HILLMAN-FORD RD.	0.0799	0.0896
C-070	OH	MARION	228729N	KENTON-GALION RD.	0.0154	0.0184
C-070	OH	MARION	228730H	IRVIN-SHOOTS ROAD	0.0641	0.0735
C-070	OH	MARION	228731P	MARSEILLES-GALION	0.0639	0.0733
C-070	OH	MARION	228732W	S. EAST ST.	0.0252	0.0302
C-070	OH	MARION	228733D	W. NEFF ST.	0.0331	0.0391
C-070	OH	MARION	228734K	N. CENTER ST.	0.0266	0.0323
C-070	OH	MARION	228735S	WEST	0.0187	0.0230
C-070	OH	MARION	228736Y	COUNTY LINE ROAD	0.0329	0.0395
C-070	OH	SENECA	228770F	TR 240	0.0510	0.0596
C-070	OH	SENECA	228772U	CO00600	0.0683	0.077[illegible]
C-070	OH	SENECA	228773B	TWP 0560	0.1089	0.122[illegible]
C-070	OH	SENECA	228774H	MAIN STREET	0.1442	0.16[illegible]9
C-070	OH	SENECA	228775P	TWP 0960	0.0448	0.05[illegible]9
C-070	OH	SENECA	228776W	TWP 0100	0.0194	0.02[illegible]7
C-070	OH	SENECA	228778K	050 2240	0.0769	0.0854
C-070	OH	SENECA	228779S	TWP 0108	0.0507	0.0593
C-070	OH	SENECA	228780L	TWP 0180	0.1469	0.1638
C-070	OH	SENECA	228781T	TWP 0112	0.0701	0.0797
C-070	OH	SENECA	228784N	COLUMBUS AVE	0.0240	0.0283
C-070	OH	SENECA	228786C	NORTH STREET	0.0684	0.0758
C-070	OH	SENECA	228787J	FREMONT STREET	0.0265	0.0310
C-070	OH	SENECA	228788R	SANDUSKY STREET	0.0254	0.0299
C-070	OH	SENECA	228789X	HIGH STREET	0.0657	0.0728
C-070	OH	WYANDOT	228737F	TWPO 125	0.0357	0.0428
C-070	OH	WYANDOT	228739U	WYANDOT STREET	0.0340	0.0401
C-070	OH	WYANDOT	228740N	SE[illegible]RS	0.0199	0.0236
C-070	OH	WYANDOT	228741V	T[illegible] 65	0.0214	0.0261
C-070	OH	WYANDOT	228742C	[illegible]R 62	0.0109	0.0135
C-070	OH	WYANDOT	228743J	CR 58	0.0301	0.0364
C-070	OH	WYANDOT	228744R	SR67	0.0406	0.0473
C-070	OH	WYANDOT	228745X	CR 57	0.0651	0.0746
C-070	OH	WYANDOT	228747L	O'DONNEL ST.	0.0751	0.0844
C-070	OH	WYANDOT	228748T	W. HICKS ST.	0.0714	0.0800
C-070	OH	WYANDOT	228749A	W. JOHNSON ST.	0.0309	0.0367
C-070	OH	WYANDO[illegible]	228750U	W. WYANDOT ST.	0.1226	0.1310
C-070	OH	WYANDOT	228751B	W. WALKER ST.	0.0344	0.0412
C-070	OH	WYANDOT	228752H	US 30	0.0301	0.0351

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-070	OH	WYANDOT	228754W	CR 49	0.0142	0.0170
C-070	OH	WYANDOT	228756K	C004700	0.0673	0.0768
C-070	OH	WYANDOT	228757S	TWP 0440	0.0678	0.0773
C-070	OH	WYANDOT	228759F	TR 42	0.1083	0.1223
C-070	OH	WYANDOT	228761G	C000400	0.0344	0.0412
C-070	OH	WYANDOT	228762N	TWP0103	0.0792	0.0889
C-070	OH	WYANDOT	228763V	TWP0980	0.0801	0.0898
C-070	OH	WYANDOT	228764C	FINDLAY STREET	0.0315	0.0366
C-070	OH	WYANDOT	228765J	PATTERSON STREET	0.0434	0.0504
C-070	OH	WYANDOT	228766R	US02300	0.0321	0.0373
C-070	OH	WYANDOT	228769L	C000300	0.0371	0.0443
TOTAL					**2.6701**	**3.0545**
C-071	OH	HARDIN	518370N	MAIN ST.	0.0218	0.0283
C-071	OH	HARDIN	518371V	TR 179	0.0215	0.0294
C-071	OH	HARDIN	518372C	TR 197	0.0589	0.0735
C-071	OH	HARDIN	518373J	W MANSFIELD RD	0.0152	0.0200
C-071	OH	HARDIN	518376E	MAIN ST	0.0305	0.0387
C-071	OH	HARDIN	518379A	WHEELER-MT VCTRY	0.0936	0.1063
C-071	OH	HARDIN	518381B	BORDAN ROAD	0.0235	0.0320
C-071	OH	HARDIN	518382H	MARSH ROAD	0.1525	0.1796
C-071	OH	HARDIN	518384W	MITCHELL RD/ TR 217	0.0267	0.0361
C-071	OH	MARION	518385D	MARION-HARDIN RD	0.0224	0.0306
C-071	OH	MARION	518387S	LARUE-MT. VICTORY	0.0269	0.0354
C-071	OH	MARION	518388Y	WINNEMAC RD	0.0163	0.0226
C-071	OH	MARION	518389F	FRONT ST	0.0258	0.0340
C-071	OH	MARION	518390A	HIGH ST	0.0380	0.0485
C-071	OH	MARION	518391G	SECTION ST.	0.1808	0.2037
C-071	OH	MARION	518392N	DRY LANE RD	0.0538	0.0679
C-071	OH	MARION	518393V	DECLIFF RD.	0.0570	0.0715
C-071	OH	MARION	518396R	MAIN ST	0.0296	0.0387
C-071	OH	MARION	518397X	SO. CAREY	0.0503	0.0641
C-071	OH	MARION	518398E	SR 95	0.0223	0.0289
C-071	OH	MARION	518407B	ESPYVILLE RD	0.0302	0.0405
C-071	OH	MARION	518410J	UPR SANDSKY PRSPT	0.0599	0.0701
C-071	OH	MARION	518413E	CAMPBELL	0.0806	0.0952
C-071	OH	MARION	518415T	CENTER ST	0.0333	0.0419
TOTAL					**1.1714**	**1.4375**
C-074	OH	CUYAHOGA	523971H	HUMMEL ROAD	0.0312	0.0475
C-074	OH	CUYAHOGA	523973W	ENGLE ROAD	0.0471	0.0663
C-074	OH	CUYAHOGA	523975K	HOLLAND ROAD	0.0288	0.0443
C-074	OH	CUYAHOGA	523977Y	FRONT ST	0.0341	0.0511
TOTAL					**0.1411**	**0.2093**
C-075	OH	HURON	142142H	SECTION LINE ROAD	0.0754	0.0853
C-075	OH	HURON	142144W	DANIELS RD	0.0361	0.0445
C-075	OH	HURON	142145D	WULTZ	0.0606	0.0684
C-075	OH	SENECA	142149F	TR 1046	0.0682	0.0795
C-075	OH	SENECA	142154C	SANDUSKY COLUMBIA	0.0944	0.1066
C-075	OH	SENECA	142155J	TR 81G	0.0820	0.0934
C-075	OH	SENECA	142160F	TR 106	0.0630	0.0741
C-075	OH	SENECA	142161M	TR 79N	0.0630	0.0741
C-075	OH	SENECA	142164H	TR 181	0.0608	0.0718
C-075	OH	SENECA	142165P	MUD ROAD	0.0329	0.0408
C-075	OH	SENECA	142166W	LIBERTY ST. (TR 181D)	0.0599	0.0673
C-075	OH	SENECA	142169S	BROADWAY STREET	0.0513	0.0616
C-075	OH	SENECA	142170L	KILBOURN STREET	0.0298	0.0357
C-075	OH	SENECA	142172A	CR 43	0.0743	0.0857

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-075	OH	SENECA	142177J	CR 17	0.0649	0.0761
C-075	OH	SENECA	142178R	GILLICK ROAD	0.1582	0.1786
C-075	OH	SENECA	142179X	MORRISON ROAD	0.1856	0.2059
C-075	OH	SENECA	142180S	TR 153	0.0290	0.0348
C-075	OH	SENECA	142181Y	HOLMES ST	0.0715	0.0808
C-075	OH	SENECA	142183M	PERRY ST	0.0372	0.0440
C-075	OH	SENECA	142184U	MARKET ST	0.0387	0.0456
C-075	OH	SENECA	142185B	CLINTON AVENUE	0.0494	0.0582
C-075	OH	SENECA	142189D	NORTH MONROE	0.0233	0.0283
C-075	OH	SENECA	142193T	NELSON ST	0.0324	0.0386
C-075	OH	SENECA	142195G	TR 121A	0.0826	0.0940
C-075	OH	SENECA	142198C	TR 31	0.0462	0.0559
C-075	OH	SENECA	142200B	TR 109Q	0.0211	0.0257
C-075	OH	SENECA	142206S	BEECH ST	0.0320	0.0382
C-075	OH	SENECA	142210G	CR 101	0.0709	0.0823
C-075	OH	SENECA	142213C	CR 5	0.0696	0.0809
C-075	OH	SENECA	142215R	TR 57	0.0582	0.0690
C-075	OH	SENECA	142216X	TR 57	0.0608	0.0718
C-075	OH	SENECA	142230T	TR 43	0.0630	0.0741
C-075	OH	SENECA	142232G	COLUMBUS AVENUE	0.0359	0.0426
C-075	OH	SENECA	142233N	LEWIS ST	0.0682	0.0795
C-075	OH	SENECA	142234V	POPLAR ST	0.0860	0.0973
C-075	OH	SENECA	142235C	MAIN ST	0.0342	0.0407
TOTAL					**2.2705**	**2.6312**
C-082	PA	ALLEGHENY	584831X	LENORA ST	0.0838	0.0901
C-082	PA	ALLEGHENY	584834T	BROADWAY ST	0.0690	0.0738
C-082	PA	ALLEGHENY	584835A	MULBERRY	0.0234	0.0261
C-082	PA	ALLEGHENY	584836G	MILL ST	0.0275	0.0305
C-082	PA	ALLEGHENY	584837N	MAIN STREET	0.0258	0.0287
C-082	PA	ALLEGHENY	584838V	WATT ST	0.0234	0.0261
C-082	PA	ALLEGHENY	584839C	THORN ST	0.0234	0.0261
C-082	PA	BEAVER	584865S	14TH STREET	0.1038	0.1110
C-082	PA	BEAVER	584879A	6TH AVE	0.0198	0.0224
C-082	PA	LAWRENCE	145826R	FOURTH ST	0.0280	0.0310
C-082	PA	LAWRENCE	145830F	ROCK POINT XING	0.0263	0.0299
C-082	PA	LAWRENCE	145833B	JOHNSON XING	0.0314	0.0355
C-082	PA	LAWRENCE	145835P	EDGEMORE XING	0.0402	0.0445
TOTAL					**0.5258**	**0.5757**
C-085	PA	ALLEGHENY	584753T	HARRISON ST.	0.0117	0.0281
C-085	PA	ALLEGHENY	584761K	LONG ST	0.0374	0.0755
C-085	PA	ALLEGHENY	584763Y	LOCUST STREET	0.0043	0.0118
C-085	PA	ALLEGHENY	584764F	CHURCH ST	0.0300	0.0644
C-085	PA	ALLEGHENY	584767B	PARK ALLEY	0.0104	0.0267
C-085	PA	ALLEGHENY	584769P	MILL STREET	0.0339	0.0703
C-085	PA	ALLEGHENY	584770J	MARKET ST	0.0321	0.0677
C-085	PA	ALLEGHENY	584771R	PLUM STREET	0.0331	0.0691
C-085	PA	ALLEGHENY	584772X	STRAWBERRY ALLEY	0.0312	0.0663
C-085	PA	ALLEGHENY	584774L	BAYARD STREET	0.0312	0.0663
C-085	PA	ALLEGHENY	584775T	MULBERRY ALLEY	0.0292	0.0631
C-085	PA	ALLEGHENY	584786F	KERR STREET	0.0101	0.0260
C-085	PA	ALLEGHENY	584791C	MAIN STREET	0.0070	0.0186
C-085	PA	FAYETTE	584816V	MILLER ST.	0.0216	0.0500
C-085	PA	FAYETTE	584817C	MORGAN ST	0.0094	0.0233
TOTAL					**0.3326**	**0.7270**
C-086	PA	ALLEGHENY	584654V	1ST STREET	0.0781	0.0839
C-086	PA	ALLEGHENY	584655C	2ND STREET	0.0482	0.0533

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
C-086	PA	ALLEGHENY	584659E	CLARA STREET	0.0731	0.0790
C-086	PA	ALLEGHENY	584664B	3RD STREET	0.0883	0.0942
C-086	PA	ALLEGHENY	584667W	6TH STREET	0.0247	0.0274
C-086	PA	ALLEGHENY	584668D	7TH STREET	0.0281	0.0309
C-086	PA	ALLEGHENY	584669K	8TH STREET	0.0247	0.0274
C-086	PA	ALLEGHENY	584671L	11TH STREET	0.1038	0.1114
C-086	PA	ALLEGHENY	584674G	LOCUST STREET	0.0167	0.0186
C-086	PA	ALLEGHENY	584679R	HAMILTON STREET	0.1056	0.1110
C-086	PA	ALLEGHENY	584681S	RIVER ST	0.0648	0.0690
TOTAL					**0.6561**	**0.7062**
N-033	IL	CHAMPAIGN	479895X	MAPLE	0.0494	0.0562
N-033	IL	CHAMPAIGN	479896E	MAIN	0.0352	0.0435
N-033	IL	CHAMPAIGN	479897L	ELLEN ST	0.0232	0.0303
N-033	IL	CHAMPAIGN	479898T	TR 312	0.0379	0.0489
N-033	IL	CHAMPAIGN	479900S	CH 13	0.0224	0.0294
N-033	IL	CHAMPAIGN	479902F	TR 304	0.0317	0.0414
N-033	IL	CHAMPAIGN	479903M	TR 286	0.0134	0.0179
N-033	IL	CHAMPAIGN	479905B	TR 274	0.0317	0.0414
N-033	IL	CHAMPAIGN	479910X	DAVID ST/SR 522	0.0180	0.0231
N-033	IL	CHAMPAIGN	479911E	DAVID ST/S. DODD St.	0.0347	0.0440
N-033	IL	CHAMPAIGN	479913T	TR 236	0.0134	0.0179
N-033	IL	CHAMPAIGN	479915G	TR 230	0.0175	0.0237
N-033	IL	CHAMPAIGN	479916N	TWP RD. 220	0.0162	0.0216
N-033	IL	CHAMPAIGN	479917V	HARRISON	0.0611	0.0708
N-033	IL	CHAMPAIGN	479919J	ILL 130/ SR 130	0.0766	0.0894
N-033	IL	CHAMPAIGN	479920D	TR 198	0.0379	0.0489
N-033	IL	CHAMPAIGN	479921K	TR 182	0.0379	0.0489
N-033	IL	CHAMPAIGN	479923Y	TR 255	0.0357	0.0463
N-033	IL	CHAMPAIGN	479925M	TR 154	0.0159	0.0206
N-033	IL	CHAMPAIGN	479927B	BOURNE ST	0.0252	0.0318
N-033	IL	CHAMPAIGN	479930J	TR 134D	0.1187	0.1305
N-033	IL	CHAMPAIGN	479933E	TR 126H	0.0497	0.0567
N-033	IL	CHAMPAIGN	479935T	TR112-A	0.0223	0.0298
N-033	IL	CHAMPAIGN	479937G	TR 94	0.0109	0.0142
N-033	IL	CHAMPAIGN	479938N	CENTER	0.0119	0.0156
N-033	IL	CHAMPAIGN	479940P	MILLS	0.0193	0.0248
N-033	IL	CHAMPAIGN	479945Y	TR 58	0.0357	0.0463
N-033	IL	CHAMPAIGN	479946F	TR 44A	0.0317	0.0414
N-033	IL	CHAMPAIGN	479949B	TR34A	0.0899	0.1075
N-033	IL	CHAMPAIGN	479950V	FAS532	0.0239	0.0311
N-033	IL	CHAMPAIGN	479951C	TR267A	0.0176	0.0233
N-033	IL	CHAMPAIGN	479952J	SANDFORD	0.0125	0.0163
N-033	IL	MACON	479171C	TR 95	0.0624	0.0735
N-033	IL	MACON	479173R	CR 52	0.0366	0.0462
N-033	IL	MACON	479174X	CEN TER ST.	0.0150	0.0200
N-033	IL	MACON	479176L	SANGAMON RD.	0.1060	0.1207
N-033	IL	PIATT	479156A	TR 60	0.0193	0.0260
N-033	IL	PIATT	479157G	SR 7	0.0206	0.0263
N-033	IL	PIATT	479160P	TR 28	0.0176	0.0238
N-033	IL	PIATT	479162D	TR 20	0.0647	0.0759
N-033	IL	PIATT	479164S	TR 14	0.0176	0.0238
N-033	IL	PIATT	479165Y	JACKSON ST	0.0261	0.0329
N-033	IL	PIATT	479166F	MONROE	0.0924	0.1095
N-033	IL	PIATT	479168U	JEFFERSON	0.0382	0.0480
N-033	IL	PIATT	479169B	LINCOLN	0.0389	0.0488
N-033	IL	PIATT	479956L	TR 178	0.0208	0.0279
N-033	IL	PIATT	479957T	TR 145	0.1114	0.1275
N-033	IL	PIATT	479958A	FAS1530	0.0131	0.0179

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-033	IL	PIATT	479960B	TR 124A	0.0126	0.0169
N-033	IL	PIATT	479962P	TR 104	0.0317	0.0414
N-033	IL	PIATT	479964D	TR 92	0.0645	0.0756
N-033	IL	PIATT	479965K	CHAMPAIGN	0.0309	0.0395
N-033	IL	PIATT	479966S	PIATT	0.0374	0.0471
N-033	IL	PIATT	479967Y	MACON	0.0348	0.0430
N-033	IL	PIATT	479969M	SANGAMON/MORGAN	0.0393	0.0493
N-033	IL	VERMILION	479872R	ROSS LANE	0.0704	0.0832
N-033	IL	VERMILION	479874E	VERMILLION	0.0143	0.0185
N-033	IL	VERMILION	479875L	PARIS	0.0249	0.0315
N-033	IL	VERMILION	479876T	SANDUSKY	0.0216	0.0276
N-033	IL	VERMILION	479879N	TR 218	0.0175	0.0237
N-033	IL	VERMILION	479880H	TR 158	0.0193	0.0260
N-033	IL	VERMILION	479882W	TR 126	0.0147	0.0191
N-033	IL	VERMILION	479883D	TR108-A	0.0175	0.0237
N-033	IL	VERMILION	479884K	TR 84-A	0.0317	0.0414
N-033	IL	VERMILION	479886Y	MAIN ST.	0.0784	0.0914
N-033	IL	VERMILION	479889U	TR 54	0.0237	0.0316
N-033	IL	VERMILION	479891V	TR 32	0.0175	0.0237
N-033	IL	VERMILION	479892C	TR 24	0.0138	0.0188
N-033	IL	VERMILION	479893J	TR 12	0.0175	0.0237
TOTAL					**2.4139**	**2.9791**
N-040	IN	DELAWARE	474547C	COUNCIL ST.	0.0076	0.0144
N-040	IN	DELAWARE	474549R	ELLIOTT ST.	0.0115	0.0172
N-040	IN	DELAWARE	474550K	KILGORE	0.0777	0.1070
N-040	IN	DELAWARE	474552Y	WHITERIVER BLVD.	0.0193	0.0338
N-040	IN	DELAWARE	474553F	NICKOLS	0.0288	0.0504
N-040	IN	DELAWARE	474561X	GODMAN AVE.	0.0119	0.0235
N-040	IN	DELAWARE	474562E	HUTCHINSON ST.	0.0119	0.0235
N-040	IN	DELAWARE	474563L	CELIA AVE.	0.0347	0.0618
N-040	IN	DELAWARE	474564T	MANNING AVE	0.0955	0.1442
N-040	IN	DELAWARE	474565A	TILLOTSON	0.0248	0.0419
N-040	IN	DELAWARE	474566G	JACKSON ST.	0.0138	0.0251
N-040	IN	DELAWARE	474567N	JACKSON ST.	0.0206	0.0382
N-040	IN	DELAWARE	474568V	CORD300W MORRISON	0.0137	0.0249
N-040	IN	DELAWARE	474569C	SHERWOOD DR.	0.0705	0.1057
N-040	IN	DELAWARE	474572K	CO RD 500 W	0.0109	0.0203
N-040	IN	DELAWARE	474573S	JACKSON PIKE	0.0090	0.0170
N-040	IN	DELAWARE	474575F	WEST ST.	0.0233	0.0445
N-040	IN	DELAWARE	474576M	CO RD 600 W	0.0102	0.0190
N-040	IN	DELAWARE	474577U	CO RD 150 N	0.0088	0.0178
N-040	IN	DELAWARE	474578B	CO RD 700 W	0.0266	0.0497
N-040	IN	DELAWARE	474580C	CO RD 800 W	0.0683	0.1021
N-040	IN	DELAWARE	474581J	CO RD 850 W	0.0308	0.0561
N-040	IN	DELAWARE	474584E	CO RD 925 W	0.0208	0.0404
N-040	IN	DELAWARE	474585L	CO RD 950 W	0.0201	0.0391
N-040	IN	MADISON	474586T	CO LINE RD 1000	0.0317	0.0574
N-040	IN	MADISON	474587A	CO RD 900 N	0.0222	0.0427
N-040	IN	MADISON	474588G	MAIN ST	0.0219	0.0421
N-040	IN	MADISON	474592W	CO.RD 400 E	0.0249	0.0471
N-040	IN	MADISON	474594K	CO RD 300 E	0.0238	0.0453
N-040	IN	MADISON	474596Y	CO RD 1000 N	0.0072	0.0138
N-040	IN	MADISON	474597F	CO RD 200E	0.0107	0.0214
N-040	IN	MADISON	474598M	CO RD 100 E	0.1101	0.1638
N-040	IN	MADISON	474599U	CLARK AVE	0.0088	0.0165
N-040	IN	MADISON	474600L	S. R. 9	0.0182	0.0321
N-040	IN	MADISON	474601T	HARRISON ST.	0.0276	0.0487
TOTAL					**0.9780**	**1.6484**

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-041	IN	ALLEN	478176H	LEO RD	0.0223	0.0291
N-041	IN	ALLEN	478180X	HURSHTOWN RD	0.0185	0.0251
N-041	IN	ALLEN	478182L	SPRINGFIELDCENTER	0.1048	0.1273
N-041	IN	ALLEN	478183T	ROTH RD	0.0621	0.0730
N-041	IN	ALLEN	478185G	STATE ST	0.0247	0.0320
N-041	IN	ALLEN	478186N	ANTWERP RD	0.1048	0.1273
N-041	IN	ALLEN	478188C	NOTESTINE RD	0.2679	0.3083
N-041	IN	ALLEN	478192S	RICKER RD	0.0399	0.0524
N-041	IN	ALLEN	478196U	MAYSVILLE RD	0.0256	0.0330
N-041	IN	ALLEN	478197B	DOTY RD	0.0236	0.0315
N-041	IN	ALLEN	478200G	IRVING RD	0.0399	0.0524
N-041	IN	ALLEN	478202V	STELLHORN ROAD	0.0221	0.0288
N-041	IN	ALLEN	478203C	SCHWARTZ ROAD	0.0605	0.0756
N-041	IN	ALLEN	478205R	PARENT ROAD	0.0605	0.0756
N-041	IN	ALLEN	478208L	NORTH RIVER ROAD	0.0631	0.0783
N-041	IN	ALLEN	478210M	LANDIN ROAD	0.0734	0.0856
N-041	IN	ALLEN	478211U	PARROT RD./ROSE AVE.	0.0442	0.0558
N-041	IN	ALLEN	478212B	WEST STREET	0.0627	0.0779
N-041	IN	ALLEN	478213H	CLEMENT ST MAIN	0.0696	0.0851
N-041	IN	ALLEN	478214P	HARTZELL ROAD	0.1125	0.1339
N-041	IN	ALLEN	478216D	ESTELLA AVE	0.1738	0.2042
N-041	IN	ALLEN	478218S	MEYER ROAD	0.0746	0.0884
N-041	IN	ALLEN	478223N	LUMBARD ST	0.0243	0.0315
N-041	IN	ALLEN	478224V	WABASH AVE	0.0315	0.0412
N-041	IN	ALLEN	478225C	FLETCHER AVE	0.0190	0.0249
N-041	IN	ALLEN	478226J	ANTHONY BLVD	0.1649	0.1910
N-041	IN	ALLEN	478227R	WINTER ST	0.0186	0.0245
N-041	IN	DE KALB	478149L	BROADWAY	0.0198	0.0259
N-041	IN	DE KALB	478150F	CORD221	0.0809	0.0982
N-041	IN	DE KALB	478152U	CORD 46	0.0295	0.0398
N-041	IN	DE KALB	478153B	C.R. 36	0.0250	0.0341
N-041	IN	DE KALB	478154H	C.R. 63	0.0108	0.0145
N-041	IN	DE KALB	478157D	CR 40	0.0144	0.0192
N-041	IN	DE KALB	478159S	CR 36	0.0354	0.0470
N-041	IN	DE KALB	478160L	ST HWY8	0.0143	0.0190
N-041	IN	DE KALB	478161T	CR59	0.0129	0.0172
N-041	IN	DE KALB	478164N	CR 32	0.0327	0.0438
N-041	IN	DE KALB	478170S	CORD 98	0.0267	0.0362
N-041	IN	DE KALB	478171Y	CR 60	0.0127	0.0169
N-041	IN	DE KALB	478173M	CR 10	0.0290	0.0391
N-041	IN	DE KALB	478174U	AUBURN ST.	0.0152	0.0201
N-041	IN	DE KALB	478175B	COUNTYLINEROAD	0.0103	0.0139
TOTAL					**2.1791**	**2.6788**
N-042	IN	Lake	522929F	CALUMET AVE	0.0570	0.0621
TOTAL					**0.0570**	**0.0621**
N-044	IN	ALLEN	478237W	BROOKLYN AVE	0.1001	0.1155
N-044	IN	ALLEN	478238D	NUTTMAN AVE	0.0338	0.0415
N-044	IN	ALLEN	478240E	ENGLE ROAD	0.1457	0.1654
N-044	IN	ALLEN	478241L	ARDMORE AVE	0.0352	0.0431
N-044	IN	ALLEN	478243A	SMITH ROAD	0.1173	0.1362
N-044	IN	ALLEN	478248J	ELLISON RD	0.0248	0.0310
N-044	IN	ALLEN	478249R	HOMESTEAD ROAD	0.0190	0.0241
N-044	IN	ALLEN	478250K	AMBER ROAD	0.0473	0.0592
N-044	IN	ALLEN	478251S	ABOITE ROAD	0.0171	0.0219
N-044	IN	HUNTINGTON	478252Y	CR 1100 N	0.0557	0.0685
N-044	IN	HUNTINGTON	478256B	LAFAYETTE CENTER RD.	0.0216	0.0273

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-044	IN	HUNTINGTON	478257H	STATION RD	0.0166	0.0213
N-044	IN	HUNTINGTON	478259W	N MAYHON RD/ CR 158	0.0155	0.0198
N-044	IN	HUNTINGTON	478262E	CR 66	0.0276	0.0361
N-044	IN	HUNTINGTON	478263L	SIMPSON ROAD	0.0270	0.0345
N-044	IN	HUNTINGTON	478264T	OLD FT. WAYNE RD	0.0412	0.0523
N-044	IN	HUNTINGTON	478265A	MERIDIAN ROAD	0.0175	0.0224
N-044	IN	HUNTINGTON	478266G	BROADWAY	0.0704	0.0815
N-044	IN	HUNTINGTON	478267N	GRAYSTONE AVE	0.0221	0.0279
N-044	IN	HUNTINGTON	478269C	CONDIT ST	0.0246	0.0309
N-044	IN	HUNTINGTON	478270W	BRIANT ST	0.1851	0.2120
N-044	IN	HUNTINGTON	478271D	BYRON ST.	0.1077	0.1258
N-044	IN	HUNTINGTON	478272K	WARREN ST	0.0248	0.0311
N-044	IN	HUNTINGTON	478273S	JEFFERSON ST	0.0446	0.0535
N-044	IN	HUNTINGTON	478274Y	LAFONTAIN ST	0.0620	0.0730
N-044	IN	HUNTINGTON	478275F	HITZFIELD ST	0.0338	0.0436
N-044	IN	HUNTINGTON	478278B	RANGELWE RD (CR 17)	0.0627	0.0760
N-044	IN	HUNTINGTON	478280C	C.R. 700W	0.0557	0.0685
N-044	IN	HUNTINGTON	478281J	MARKET ST	0.0318	0.0402
N-044	IN	HUNTINGTON	478282R	MAIN ST	0.0227	0.0287
N-044	IN	HUNTINGTON	478283X	SNOWDEN ST	0.0221	0.0286
N-044	IN	MIAMI	478323T	CR 75	0.0143	0.0193
N-044	IN	MIAMI	478325G	CR 203	0.0517	0.0641
N-044	IN	MIAMI	478327V	PAW PAW PIKE	0.0883	0.1016
N-044	IN	MIAMI	478329J	COUNTRY CLUB RD	0.0621	0.0754
N-044	IN	MIAMI	478330D	CO RD 240 E	0.0774	0.0910
N-044	IN	MIAMI	478334F	CHILI ST	0.0331	0.0407
N-044	IN	MIAMI	478335M	WATER ST	0.0300	0.0372
N-044	IN	MIAMI	478336U	TIPPECANOE ST	0.1066	0.1184
N-044	IN	WABASH	478286T	CR 250	0.0663	0.0797
N-044	IN	WABASH	478288G	CR 167	0.0446	0.0561
N-044	IN	WABASH	478289N	CR 500 E	0.0663	0.0797
N-044	IN	WABASH	478292W	DAVIS ST	0.0307	0.0380
N-044	IN	WABASH	478301T	EAST ST	0.0190	0.0241
N-044	IN	WABASH	478302A	SPRING ST	0.0190	0.0241
N-044	IN	WABASH	478303G	ALLEN ST	0.0204	0.0259
N-044	IN	WABASH	478304N	HUNTINGTON ST	0.0190	0.0241
N-044	IN	WABASH	478305V	WABASH ST	0.0349	0.0428
N-044	IN	WABASH	478306C	MIAMI ST	0.0348	0.0437
N-044	IN	WABASH	478307J	CASS ST	0.0292	0.0363
N-044	IN	WABASH	478308R	CARROLL ST	0.0190	0.0241
N-044	IN	WABASH	478309X	FISHER ST	0.0318	0.0402
N-044	IN	WABASH	478310S	COMSTOCK ST	0.0318	0.0402
N-044	IN	WABASH	478311Y	THORNE ST	0.0318	0.0402
N-044	IN	WABASH	478312F	BOND ST	0.0849	0.1001
N-044	IN	WABASH	478313M	OLIVE ST	0.2469	0.2821
N-044	IN	WABASH	478314U	WOLF ROAD	0.2849	0.3259
N-044	IN	WABASH	478316H	CR 500W	0.0564	0.0693
N-044	IN	WABASH	478319D	BRIDGE ST	0.0270	0.0346
TOTAL					**3.1953**	**3.8203**
N-045	IL	VERMILION	479843F	ST LINE	0.0301	0.0374
N-045	IL	VERMILION	479844M	POLAND	0.0229	0.0290
N-045	IL	VERMILION	479847H	TR448	0.0256	0.0329
N-045	IL	VERMILION	479848P	CAMPBELL XING/TR 450	0.1674	0.1925
N-045	IL	VERMILION	479854T	VOORHEES	0.1019	0.1160
N-045	IL	VERMILION	479855A	PRIES ST	0.0118	0.0149
N-045	IL	VERMILION	479856G	BOWMAN ST.	0.0398	0.0474
N-045	IL	VERMILION	479857N	MARTIN ST	0.0358	0.0440
N-045	IL	VERMILION	479859C	WMS/WILLIAM ST.	0.0901	0.1029

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-045	IL	VERMILION	479861D	VAN BUREN	0.0252	0.0310
N-045	IL	VERMILION	479862K	MAIN	0.1231	0.1384
N-045	IL	VERMILION	479863S	S.ST.	0.1063	0.1207
N-045	IL	VERMILION	479864Y	THIRD	0.0250	0.0307
N-045	IL	VERMILION	479867U	14TH	0.0304	0.0369
N-045	IN	FOUNTAIN	484327J	CR 900 E	0.0676	0.0780
N-045	IN	FOUNTAIN	484328R	CR 1500 N.	0.0081	0.0104
N-045	IN	FOUNTAIN	484332F	650 E	0.0103	0.0134
N-045	IN	FOUNTAIN	484334U	CR 1400 N.	0.0159	0.0199
N-045	IN	FOUNTAIN	484337P	MARKET ST 500 E	0.0148	0.0186
N-045	IN	FOUNTAIN	484341E	CR 375 E.	0.0109	0.0144
N-045	IN	FOUNTAIN	484342L	CR 325 E.	0.0220	0.0284
N-045	IN	FOUNTAIN	484344A	250 E	0.0258	0.0331
N-045	IN	FOUNTAIN	484346N	PERRY ST	0.0191	0.0237
N-045	IN	TIPPECANOE	484295F	FERRY ST	0.0368	0.0442
N-045	IN	TIPPECANOE	484296M	MAIN ST	0.0386	0.0461
N-045	IN	TIPPECANOE	484297U	11TH ST	0.0976	0.1130
N-045	IN	TIPPECANOE	484298B	COLUMBIA ST	0.0395	0.0471
N-045	IN	TIPPECANOE	484299H	10TH ST	0.1268	0.1444
N-045	IN	TIPPECANOE	484300A	SOUTH ST S.R. 26	0.0406	0.0483
N-045	IN	TIPPECANOE	484301G	9TH ST	0.1054	0.1197
N-045	IN	TIPPECANOE	484302N	8TH ST.	0.3170	0.3582
N-045	IN	TIPPECANOE	484303V	7TH ST.	0.2413	0.2729
N-045	IN	TIPPECANOE	484304C	NEW YORK ST.	0.0279	0.0348
N-045	IN	TIPPECANOE	484306R	ROMIG ST	0.2271	0.2575
N-045	IN	TIPPECANOE	484307X	LINGLE AVE	0.1130	0.1298
N-045	IN	TIPPECANOE	484308E	5TH ST	0.1604	0.1844
N-045	IN	TIPPECANOE	484309L	4TH ST U.S. 231	0.1640	0.1844
N-045	IN	TIPPECANOE	484310F	3RD ST	0.0602	0.0702
N-045	IN	TIPPECANOE	484311M	SMITH ST	0.1650	0.1881
N-045	IN	TIPPECANOE	484318K	CR 500 W.	0.0227	0.0293
N-045	IN	TIPPECANOE	484319S	CR 400 S	0.1183	0.1377
N-045	IN	TIPPECANOE	484320L	CR 575 W.	0.0590	0.0708
N-045	IN	TIPPECANOE	484322A	CR 700 W (MAIN ST.)	0.0235	0.0290
N-045	IN	TIPPECANOE	484323G	CO 172	0.2332	0.2647
N-045	IN	TIPPECANOE	484324N	CR 900W	0.0582	0.0661
N-045	IN	WARREN	484347V	RIVER RD (CR 165)	0.0154	0.0202
N-045	IN	WARREN	484351K	FOURTH ST EX. (CR 88)	0.0309	0.0383
N-045	IN	WARREN	484352S	MONROE ST.	0.0305	0.0370
N-045	IN	WARREN	484355M	CR 100 W	0.0325	0.0410
N-045	IN	WARREN	484356U	CR 175 W	0.0739	0.0858
N-045	IN	WARREN	484357B	TOWER RD (CR 84)	0.0235	0.0302
N-045	IN	WARREN	484358H	HIGH ST IND 263	0.0311	0.0377
N-045	IN	WARREN	484362X	CR 450 S	0.0281	0.0351
N-045	IN	WARREN	484363E	CR 775 W	0.1055	0.1232
N-045	IN	WARREN	484364L	CR 600 S	0.0418	0.0519
N-045	IN	WARREN	484365T	CR 875 W(JACKSONVILLE RD.)	0.0157	0.0197
N-045	IN	WARREN	484367G	CR 1000 W	0.0699	0.0808
N-045	IN	WARREN	484420R	WASHINGTON ST	0.0917	0.1063
TOTAL						
N-046	IN	CARROLL	342069P	MARKET ST	0.0508	0.0600
N-046	IN	CARROLL	342072X	WASHINGTON STREET	0.0169	0.0231
N-046	IN	CARROLL	342074L	UNION ST	0.0111	0.0154
N-046	IN	CARROLL	342077G	INDIANA STREET	0.0111	0.0154
N-046	IN	CARROLL	342080P	WILSON STREET	0.0594	0.0712
N-046	IN	CARROLL	484245C	CR 150E	0.0673	0.0847
N-046	IN	CARROLL	484246J	WASHINGTON ST/ CR 100E	0.1308	0.1604
N-046	IN	CARROLL	484247R	MADISON	0.0554	0.0671

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-046	IN	CARROLL	484248X	MERIDIAN LINE 000	0.1308	0.1604
N-046	IN	CARROLL	484249E	CR 100W	0.0544	0.0708
N-046	IN	CARROLL	484250Y	OAK ST.	0.0544	0.0708
N-046	IN	CARROLL	484251F	WALNUT ST	0.0544	0.0708
N-046	IN	CARROLL	484252M	CR 600 N	0.0423	0.0570
N-046	IN	CARROLL	484253U	CR 400 W	0.0263	0.0372
N-046	IN	CARROLL	484254B	CR 500 N	0.0423	0.0570
N-046	IN	CARROLL	484256P	CR 550 W	0.0326	0.0451
N-046	IN	CARROLL	484258D	SR 218	0.0224	0.0301
N-046	IN	CARROLL	484263A	MONROE & WABASH	0.0149	0.0205
N-046	IN	CARROLL	484264G	FRANKLIN ST	0.0563	0.0671
N-046	IN	CARROLL	484265N	MAIN ST	0.0297	0.0391
N-046	IN	CARROLL	484266V	FALLEN SPRINGS	0.0454	0.0607
N-046	IN	CASS	484215K	CO.RD. 1100E.	0.0504	0.0664
N-046	IN	CASS	484216S	CEDAR ST.	0.1633	0.1947
N-046	IN	CASS	484217Y	CO.RD. 950E.	0.0481	0.0638
N-046	IN	CASS	484219M	CO.RD.800E.	0.0190	0.0274
N-046	IN	CASS	484223C	CO.RD.600E	0.0214	0.0288
N-046	IN	CASS	484227E	POTTAWATOMIE RD.	0.0122	0.0169
N-046	IN	CASS	484229T	18TH ST	0.1763	0.2109
N-046	IN	CASS	484237K	CR 175 WEST	0.0493	0.0651
N-046	IN	CASS	484238S	CO.RD.300S	0.0299	0.0417
N-046	IN	CASS	484239Y	CO.RD.325W	0.0227	0.0324
N-046	IN	CASS	484241A	CLYMERSMAINST400W	0.0413	0.0557
N-046	IN	CASS	484242G	CO.RD.400S	0.0362	0.0496
N-046	IN	CASS	484243N	CO.RD.500W	0.0145	0.0212
N-046	IN	CASS	484244V	CORD 500S/CR 1000N	0.0286	0.0401
N-046	IN	CASS	534061S	KING ST.	0.0213	0.0306
N-046	IN	MIAMI	484209G	CO RD 250W	0.1423	0.1730
N-046	IN	TIPPECANOE	484267C	CR 900 N.	0.3023	0.3458
N-046	IN	TIPPECANOE	484268J	CR 800 N.	0.0148	0.0216
N-046	IN	TIPPECANOE	484269R	CR 700 N.	0.1528	0.1840
N-046	IN	TIPPECANOE	484270K	CR 1000 E.	0.0159	0.0231
N-046	IN	TIPPECANOE	484271S	CR 600 N	0.0631	0.0767
N-046	IN	TIPPECANOE	484272Y	CR 900 E.	0.0267	0.0366
N-046	IN	TIPPECANOE	484275U	MAIN ST CR 750 E.	0.0274	0.0374
N-046	IN	TIPPECANOE	484278P	CR 625 E	0.0319	0.0443
N-046	IN	TIPPECANOE	484279W	CR 400 N	0.0329	0.0456
N-046	IN	TIPPECANOE	484282E	CR 500 E	0.1686	0.2000
N-046	IN	TIPPECANOE	484284T	HEATH RD CR 300N.	0.0440	0.0570
N-046	IN	TIPPECANOE	484285A	CR 400 E	0.0230	0.0308
N-046	IN	TIPPECANOE	484290W	UNDERWOOD ST	0.0610	0.0751
N-046	IN	TIPPECANOE	484291D	GREENBUSH ST	0.3094	0.3656
N-046	IN	TIPPECANOE	484292K	18TH	0.6712	0.7754
N-046	IN	TIPPECANOE	484293S	17TH & SALEM ST.	0.6043	0.6831
N-046	IN	TIPPECANOE	484294Y	UNION ST	0.2083	0.2445
TOTAL					4.6432	5.6489
N-061	NY	ERIE	519388C	MEYER RD.	0.0005	0.0155
N-061	NY	ERIE	519511Y	WILLETT ROAD	0.0003	0.0193
TOTAL					0.0008	0.0348
N-070	NY	CHAUTAUQUA	471743Y	ALLEGHENY ROAD	0.0194	0.0251
N-070	NY	CHAUTAUQUA	471744F	HANFORD	0.0155	0.0202
N-070	NY	CHAUTAUQUA	471750J	CENTER RD/E. SHERIDAN RD.	0.0139	0.0182
N-070	NY	CHAUTAUQUA	471755T	NEWELL ROAD	0.0206	0.0266
N-070	NY	CHAUTAUQUA	471756A	WERLE ROAD	0.0108	0.0143
N-070	NY	CHAUTAUQUA	471757G	MIDDLE ROAD	0.0200	0.0258
N-070	NY	CHAUTAUQUA	471758N	ROBERT ROAD	0.0255	0.0324

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-070	NY	CHAUTAUQUA	471759V	TOWNSEND STREET	0.0126	0.0165
N-070	NY	CHAUTAUQUA	471760P	NEVINS STREET	0.0503	0.0577
N-070	NY	CHAUTAUQUA	471761W	HOYT STREET	0.0112	0.0148
N-070	NY	CHAUTAUQUA	471762D	LORD STREET	0.0125	0.0165
N-070	NY	CHAUTAUQUA	471763K	FRANKLIN STREET	0.0194	0.0251
N-070	NY	CHAUTAUQUA	471764S	LINCOLN STREET	0.0163	0.0213
N-070	NY	CHAUTAUQUA	471765Y	KING STREET	0.0158	0.0206
N-070	NY	CHAUTAUQUA	471766F	LAMPHERE STREET	0.0298	0.0375
N-070	NY	CHAUTAUQUA	471767M	MAIN STREET	0.0224	0.0287
N-070	NY	CHAUTAUQUA	471772J	TEMPLE ROAD	0.0138	0.0181
N-070	NY	CHAUTAUQUA	471774X	VAN BUREN ROAD	0.0145	0.0190
N-070	NY	CHAUTAUQUA	471775E	BERRY RD.	0.0151	0.0197
N-070	NY	CHAUTAUQUA	471776L	LAKE ROAD	0.0115	0.0152
N-070	NY	CHAUTAUQUA	471778A	MARTIN ROAD	0.0080	0.0107
N-070	NY	CHAUTAUQUA	471782P	CENTRAL AVENUE	0.0145	0.0190
N-070	NY	CHAUTAUQUA	471783W	MATHEWS ROAD	0.0113	0.0149
N-070	NY	CHAUTAUQUA	471784D	PECOR STREET	0.0503	0.0577
N-070	NY	CHAUTAUQUA	471785K	ONTHANK ROAD	0.0311	0.0412
N-070	NY	CHAUTAUQUA	471786S	WALKER ROAD	0.0121	0.0160
N-070	NY	CHAUTAUQUA	471788F	EAST FOREST ROAD	0.0134	0.0185
N-070	NY	CHAUTAUQUA	471791N	PRATT ROAD	0.0123	0.0161
N-070	NY	CHAUTAUQUA	471794J	MCKINLEY ROAD	0.0155	0.0203
N-070	NY	CHAUTAUQUA	471796X	EAST PEARL STREET	0.0139	0.0182
N-070	NY	CHAUTAUQUA	471797E	WEST PEARL STREET	0.0119	0.0157
N-070	NY	CHAUTAUQUA	471799T	FRANKLIN STREET	0.0185	0.0247
N-070	NY	CHAUTAUQUA	471802Y	NORTH GALE STREET	0.0142	0.0186
N-070	NY	CHAUTAUQUA	471803F	WALKER ROAD	0.0098	0.0130
N-070	NY	CHAUTAUQUA	471804M	LIGHT ROAD	0.0367	0.0479
N-070	NY	CHAUTAUQUA	471805U	ROGERVILLE ROAD	0.0093	0.0124
N-070	NY	CHAUTAUQUA	471814T	CEMETARY RD.	0.0120	0.0159
N-070	NY	CHAUTAUQUA	471815A	KLONDYKE ROAD	0.0126	0.0172
N-070	NY	CHAUTAUQUA	471818V	SO. BROCKWAY ROAD	0.0127	0.0167
N-070	NY	CHAUTAUQUA	471821D	SHAVER STREET	0.0507	0.0582
N-070	NY	CHAUTAUQUA	471822K	STATE STREET	0.0146	0.0191
N-070	NY	CHAUTAUQUA	471823S	GOODRICK STREET	0.0644	0.0765
N-070	NY	CHAUTAUQUA	471824Y	MAPLE AVENUE	0.0214	0.0284
N-070	NY	CHAUTAUQUA	471825F	LOOMIS STREET	0.0960	0.1156
N-070	NY	CHAUTAUQUA	471853J	PHILLIPS ROAD	0.0089	0.0118
N-070	NY	CHAUTAUQUA	471858T	STATION ROAD	0.0601	0.0711
N-070	NY	ERIE	471711T	LAKE AVENUE	0.0777	0.0911
N-070	NY	ERIE	471713G	BAYVIEW ROAD	0.0174	0.0226
N-070	NY	ERIE	471716C	ROGERS ROAD	0.0692	0.0810
N-070	NY	ERIE	471717J	CLOVERBANK ROAD	0.0201	0.0259
N-070	NY	ERIE	471719X	PLEASANT AVENUE	0.0181	0.0235
N-070	NY	ERIE	471721Y	LAKE VIEW ROAD	0.0233	0.0298
N-070	NY	ERIE	471722F	NORTH CREEK ROAD	0.0155	0.0202
N-070	NY	ERIE	471726H	STURGEON PT. RD.	0.0228	0.0292
N-070	NY	ERIE	471727P	BURNS ROAD	0.0161	0.0210
N-070	NY	ERIE	471728W	EVAN CTR EDEN RD	0.0233	0.0298
N-070	NY	ERIE	471729D	GOWANS ROAD	0.0137	0.0180
N-070	NY	ERIE	471733T	CAIN ROAD	0.0132	0.0174
N-070	NY	ERIE	471739J	ERIE ROAD	0.0270	0.0352
N-070	OH	ASHTABULA	471951A	THOMPSON ROAD	0.0207	0.0281
N-070	OH	ASHTABULA	471952G	WOODWORTH ROAD	0.0635	0.0779
N-070	OH	ASHTABULA	471953N	HARBOR STREET	0.0223	0.0286
N-070	OH	ASHTABULA	471956J	SANDUSKY STREET	0.0167	0.0217
N-070	OH	ASHTABULA	471957R	MILL STREET	0.0243	0.0311
N-070	OH	ASHTABULA	471958X	CHESTNUT STREET	0.0209	0.0269
N-070	OH	ASHTABULA	471960Y	PARISH BOULEVARD	0.0207	0.0267

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-070	OH	ASHTABULA	471961F	GORE ROAD	0.0160	0.0209
N-070	OH	ASHTABULA	471964B	NO AMBOY RD	0.0924	0.1043
N-070	OH	ASHTABULA	471968D	REED ROAD	0.0132	0.0174
N-070	OH	ASHTABULA	471972T	LAKE STREET	0.0259	0.0329
N-070	OH	ASHTABULA	471973A	INIRMARY ROAD	0.0132	0.0174
N-070	OH	ASHTABULA	471975N	BLAKE ROAD	0.0187	0.0243
N-070	OH	ASHTABULA	471979R	STATE AVENUE	0.0132	0.0173
N-070	OH	ASHTABULA	471980K	DWIGHT AVENUE	0.0162	0.0218
N-070	OH	ASHTABULA	471983Y	MAIN ST.	0.0162	0.0218
N-070	OH	ASHTABULA	471984F	PARK ST.	0.0244	0.0311
N-070	PA	ERIE	471859A	GULF ROAD	0.0155	0.0202
N-070	PA	ERIE	471861B	BORT ROAD	0.0133	0.0180
N-070	PA	ERIE	471863P	REMINGTON ROAD	0.0107	0.0141
N-070	PA	ERIE	471867S	LOOMIS STREET	0.0148	0.0193
N-070	PA	ERIE	471868Y	WASHINGTON STREET	0.0160	0.0209
N-070	PA	ERIE	471869F	SMEDLEY STREET	0.0148	0.0193
N-070	PA	ERIE	471872N	CEMETERY ROAD	0.0454	0.0514
N-070	PA	ERIE	471874C	WILLIAMS ROAD	0.0175	0.0228
N-070	PA	ERIE	471875J	SPENCER ROAD	0.0110	0.0146
N-070	PA	ERIE	471876R	STATION ROAD	0.0157	0.0205
N-070	PA	ERIE	471877X	KING ROAD	0.0116	0.0154
N-070	PA	ERIE	471878E	DAVIDSON ROAD	0.0177	0.0237
N-070	PA	ERIE	471881M	WALBRIDGE ROAD	0.0232	0.0297
N-070	PA	ERIE	471886W	DOWNING AVENUE	0.0182	0.0237
N-070	PA	ERIE	471893G	ASH STREET	0.0486	0.0599
N-070	PA	ERIE	471894N	PARADE STREET	0.0408	0.0501
N-070	PA	ERIE	471896C	GERMAN STREET	0.0269	0.0351
N-070	PA	ERIE	471898R	HOLLAND STREET	0.0460	0.0570
N-070	PA	ERIE	471901W	PEACH STREET	0.1535	0.1768
N-070	PA	ERIE	471902D	SASSAFRAS STREET	0.0828	0.0971
N-070	PA	ERIE	471903K	MYRTLE STREET	0.0269	0.0351
N-070	PA	ERIE	471904S	CHESTNUT STREET	0.0329	0.0422
N-070	PA	ERIE	471905Y	WALNUT STREET	0.0129	0.0169
N-070	PA	ERIE	471906F	CHERRY STREET	0.2738	0.3136
N-070	PA	ERIE	471907M	POPLAR STREET	0.0660	0.0785
N-070	PA	ERIE	471908U	LIBERTY STREET	0.0425	0.0519
N-070	PA	ERIE	471909B	PLUM STREET	0.0248	0.0326
N-070	PA	ERIE	471910V	CASCADE STREET	0.0895	0.1068
N-070	PA	ERIE	471911C	RASPBERRY STREET	0.1826	0.2120
N-070	PA	ERIE	471912J	CRANBERRY STREET	0.0782	0.0935
N-070	PA	ERIE	471913R	GREEN GARDEN ROAD	0.0787	0.0923
N-070	PA	ERIE	471915E	PITTSBURG ROAD	0.0280	0.0354
N-070	PA	ERIE	471920B	TOWNLINE ROAD	0.0151	0.0197
N-070	PA	ERIE	471921H	MANCHESTER ROAD	0.0585	0.0680
N-070	PA	ERIE	471922P	OLD DUTCH ROAD	0.0687	0.0818
N-070	PA	ERIE	471923W	EATON ROAD	0.0177	0.0237
N-070	PA	ERIE	471925K	BLAIR ROAD	0.0428	0.0480
N-070	PA	ERIE	471926S	FAIRPLAIN ROAD	0.0349	0.0457
N-070	PA	ERIE	471930G	HAGERTY ROAD	0.0129	0.0169
N-070	PA	ERIE	471931N	MECHANIC ROAD	0.0129	0.0169
N-070	PA	ERIE	471937E	TANNERY ROAD	0.0122	0.0166
N-070	PA	ERIE	471939T	MIDDLE RD/TOWLINE RD	0.0122	0.0166
N-070	PA	ERIE	471940M	LUCAS ROAD	0.1102	0.1266
N-070	PA	ERIE	471941U	MILLS RD/HAPPY VALLEY RD	0.0158	0.0212
N-070	PA	ERIE	471942B	DEPOT ROAD	0.0255	0.0334
N-070	PA	ERIE	471943H	SCOTT ROAD	0.0459	0.0586
N-070	PA	ERIE	471944P	NASH ROAD	0.0094	0.0125
N-070	PA	ERIE	471948S	CRAYTON ROAD	0.0656	0.0801
N-070	PA	ERIE	471949Y	RUDO ROAD	0.0289	0.0384

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
TOTAL					**3.9730**	**4.8888**
N-071	OH	CRAWFORD	481570N	PLYMOUTH	0.0798	0.0855
N-071	OH	CRAWFORD	481572C	ANDREWS	0.0998	0.1082
N-071	OH	CRAWFORD	481573J	CARRELL	0.0345	0.0389
N-071	OH	CRAWFORD	481574R	T-81	0.0139	0.0160
N-071	OH	CRAWFORD	481575X	BRANDYWINE	0.0738	0.0801
N-071	OH	CRAWFORD	481576E	HIEBER	0.0200	0.0229
N-071	OH	CRAWFORD	481578T	LEMERT	0.0139	0.0160
N-071	OH	CRAWFORD	481579A	RIDGETON	0.0166	0.0187
N-071	OH	CRAWFORD	481580U	BROKEN SWORD	0.0139	0.0160
N-071	OH	CRAWFORD	481581B	CAREY	0.0383	0.0430
N-071	OH	CRAWFORD	481582H	ORR	0.0236	0.0269
N-071	OH	CRAWFORD	481584W	CHATFIELD	0.1685	0.1799
N-071	OH	CRAWFORD	481585D	WASHINGTON/GLADY RD	0.0325	0.0367
N-071	OH	CRAWFORD	481587S	NEW WASHINGTON	0.0371	0.0413
N-071	OH	CRAWFORD	481590A	ALBAUGH	0.0865	0.0928
N-071	OH	CRAWFORD	481592N	CRWFRD-SNECA COU	0.0690	0.0753
N-071	OH	SANDUSKY	481635E	SANDUSKY CO. 305	0.0265	0.0301
N-071	OH	SENECA	481595J	TWP 44	0.0372	0.0418
N-071	OH	SENECA	481599L	C 8	0.0403	0.0452
N-071	OH	SENECA	481602S	CENTER SCHOOL	0.0383	0.0430
N-071	OH	SENECA	481603Y	TIFFIN	0.0213	0.0238
N-071	OH	SENECA	481604F	TWP 88	0.0393	0.0441
N-071	OH	SENECA	481606U	US 224	0.1407	0.1496
N-071	OH	SENECA	481607B	LEMON ST.	0.0607	0.0648
N-071	OH	SENECA	481610J	TWP 104	0.0436	0.0488
N-071	OH	SENECA	481614L	4 & SENECA CO 36	0.0540	0.0589
N-071	OH	SENECA	481616A	TWP 8	0.0393	0.0441
N-071	OH	SENECA	481617G	SR162	0.1077	0.1141
N-071	OH	SENECA	481618N	TWP 122	0.0313	0.0354
N-071	OH	SENECA	481619V	TWP 124	0.0811	0.0877
N-071	OH	SENECA	481620P	T-126	0.0268	0.0304
N-071	OH	SENECA	481621W	SENECA CO 24	0.0372	0.0418
N-071	OH	SENECA	481622D	T-136	0.0292	0.0331
N-071	OH	SENECA	481623K	CO-46	0.0769	0.0832
N-071	OH	SENECA	481624S	CO 32	0.0383	0.0430
N-071	OH	SENECA	481626F	T-178	0.0799	0.0863
N-071	OH	SENECA	481627M	T-199	0.0188	0.0216
N-071	OH	SENECA	481630V	MAIN	0.0966	0.1042
N-071	OH	SENECA	481631C	CO-34	0.0916	0.0978
N-071	OH	SENECA	481634X	COUNTY LINE ROAD	0.0550	0.0585
TOTAL					**2.1332**	**2.3291**
N-072	OH	ERIE	472341V	STRECKER ROAD	0.0247	0.0311
N-072	OH	ERIE	472344R	THOMAS ROAD	0.0576	0.0693
N-072	OH	ERIE	472345X	RANSOM RD	0.0137	0.0172
N-072	OH	ERIE	472348T	PATTEN TRACT ROAD	0.0612	0.0695
N-072	OH	ERIE	472351B	STATE ROUTE 99	0.0750	0.0857
N-072	OH	ERIE	481671A	MONROE	0.0119	0.0276
TOTAL					**0.2441**	**0.3003**
N-073	OH	CRAWFORD	481551J	MONNETTE	0.0188	0.0210
N-073	OH	CRAWFORD	481552R	DALLAS TWP 115	0.0951	0.1029
N-073	OH	CRAWFORD	481553X	DALLAS TWP 96	0.0292	0.0330
N-073	OH	CRAWFORD	481554E	CALDWELL	0.0998	0.1080
N-073	OH	CRAWFORD	481556T	MT ZION	0.0994	0.1048
N-073	OH	CRAWFORD	481557A	SR 98	0.1262	0.1339
N-073	OH	CRAWFORD	481558G	BEAL	0.2117	0.2210

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-073	OH	CRAWFORD	481559N	CHARLOTTE	0.0312	0.0345
N-073	OH	CRAWFORD	481560H	SOUTHERN	0.0320	0.0352
N-073	OH	CRAWFORD	481561P	HOPLEY	0.0903	0.0966
N-073	OH	CRAWFORD	481562W	OAKWOOD	0.0263	0.0295
N-073	OH	CRAWFORD	481563D	WOODLAWN	0.1110	0.1192
N-073	OH	CRAWFORD	481564K	WARREN	0.0395	0.0437
N-073	OH	CRAWFORD	481565S	RENNSLAER	0.0262	0.0294
N-073	OH	DELAWARE	481482D	FRANKLIN	0.0281	0.0318
N-073	OH	DELAWARE	481483K	LEWIS CENTER	0.0355	0.0395
N-073	OH	DELAWARE	481485Y	SHANNON ROAD	0.0187	0.0209
N-073	OH	DELAWARE	481487M	PEACHBLOW ROAD	0.0850	0.0912
N-073	OH	DELAWARE	481488U	CHESIRE ROAD	0.0199	0.0222
N-073	OH	DELAWARE	481490V	BERLIN ROAD	0.1768	0.1880
N-073	OH	DELAWARE	481498A	HORSESHOE ROAD	0.0241	0.0268
N-073	OH	DELAWARE	481503U	PENRY	0.0621	0.0681
N-073	OH	DELAWARE	481504B	WILLEY	0.0550	0.0607
N-073	OH	DELAWARE	481505H	TROUTMAN	0.0571	0.0629
N-073	OH	DELAWARE	481506P	RADNOR	0.0287	0.0322
N-073	OH	DELAWARE	481512T	NORTON	0.0598	0.0636
N-073	OH	FRANKLIN	481467B	WEBER	0.0415	0.0453
N-073	OH	FRANKLIN	481470J	COOK	0.1679	0.1767
N-073	OH	FRANKLIN	481472X	LINCOLN	0.0425	0.0464
N-073	OH	FRANKLIN	481474L	SHROCK	0.0304	0.0336
N-073	OH	FRANKLIN	481475T	GALENA-WRTHNGTON	0.0769	0.0822
N-073	OH	FRANKLIN	481476A	WILSON BRIDGE	0.0307	0.0339
N-073	OH	FRANKLIN	481478N	PARK	0.0211	0.0235
N-073	OH	MARION	481515N	SR 47	0.1046	0.1125
N-073	OH	MARION	481516V	MAIN	0.0347	0.0386
N-073	OH	MARION	481518J	KLINGLE	0.0659	0.0720
N-073	OH	MARION	481520K	BETHLEHEM	0.0580	0.0617
N-073	OH	MARION	481521S	WOLFINGER	0.0412	0.0461
N-073	OH	MARION	481522Y	NEWMAN CRDNGTN	0.0744	0.0806
N-073	OH	MARION	481524M	BENZLER LUST	0.0529	0.0561
N-073	OH	MARION	481525U	OWENS	0.0226	0.0252
N-073	OH	MARION	481526B	SUMMERLOT HFFMAN	0.0246	0.0273
N-073	OH	MARION	481529W	MARION CARDINGTON	0.0233	0.0259
N-073	OH	MARION	481530R	BARKS	0.0398	0.0436
N-073	OH	MARION	481531X	PROSPECT	0.0417	0.0455
N-073	OH	MARION	481532E	BELLEFOUNTAINE	0.1139	0.1213
N-073	OH	MARION	481533L	DARIUS	0.0265	0.0294
N-073	OH	MARION	481536G	CENTER	0.0496	0.0537
N-073	OH	MARION	481538V	SILVER	0.0389	0.0426
N-073	OH	MARION	481539C	FAIRGROUND	0.0297	0.0328
N-073	OH	MARION	481540W	WILLIAMSPORT	0.0236	0.0262
N-073	OH	MARION	481541D	N. MAIN SR 4	0.1017	0.1085
N-073	OH	MARION	481542K	LIKENS	0.1673	0.1768
N-073	OH	MARION	481544Y	LINN-HIPSHER	0.1042	0.1101
N-073	OH	MARION	481545F	LUCAS	0.0621	0.0681
N-073	OH	MARION	481546M	GALION-MARSEILLES	0.1536	0.1646
N-073	OH	MARION	481547U	SCOTT TWP RD-190	0.1516	0.1625
N-073	OH	MARION	481548B	MORRAL KIRKPATRCK	0.0731	0.0793
N-073	OH	MARION	481550C	COUNTY LINE	0.0497	0.0551
N-073	OH	MARION	481535A	COLUMBIA	0.0134	0.0150
TOTAL					**3.8412**	**4.1432**
N-075	OH	ASHTABULA	471985U	GARY AVENUE	0.0557	0.0705
N-075	OH	ASHTABULA	471986B	JEFFERSON AVENUE	0.0309	0.0457
N-075	OH	ASHTABULA	471988P	WEST 52ND STREET	0.0985	0.1287
N-075	OH	ASHTABULA	471989W	WEST AVENUE	0.0282	0.0405

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-075	OH	ASHTABULA	471990R	NATHAN AVENUE	0.0852	0.1124
N-075	OH	ASHTABULA	471991X	SAMUEL AVENUE	0.0195	0.0304
N-075	OH	ASHTABULA	471992E	WOODMAN AVENUE	0.0708	0.0909
N-075	OH	ASHTABULA	471993L	SANBORNE ROAD	0.0798	0.1054
N-075	OH	ASHTABULA	471997N	STATE ROUTE 45	0.0252	0.0366
N-075	OH	ASHTABULA	471998V	DEPOT ROAD	0.0644	0.0846
N-075	OH	ASHTABULA	472001J	BROWN ROAD	0.0547	0.0767
N-075	OH	ASHTABULA	472004E	MYERS ROAD	0.015[illegible]	0.0237
N-075	OH	ASHTABULA	472005L	CENTENNIAL ROAD	0.0202	0.0301
N-075	OH	ASHTABULA	472007A	SHERMAN STREET	0.0205	0.0304
N-075	OH	ASHTABULA	472008G	BROADWAY AVENUE	0.0277	0.0398
N-075	OH	ASHTABULA	472009N	EAGLE AVENUE	0.0326	0.0479
N-075	OH	ASHTABULA	472010H	CHESTNUT STREET	0.0442	0.0538
N-075	OH	ASHTABULA	472011P	WEST STREET	0.0119	0.0183
N-075	OH	ASHTABULA	472012W	WALTER MAIN RD	0.1388	0.1794
N-075	OH	CUYAHOGA	472089J	CHARDON ROAD	0.0369	0.0512
N-075	OH	CUYAHOGA	472093Y	DILLE ROAD	0.0386	0.0531
N-075	OH	CUYAHOGA	472097B	WAYSIDE ROAD	0.0282	0.0406
N-075	OH	CUYAHOGA	472098H	LONDON ROAD	0.0305	0.0435
N-075	OH	LAKE	472013D	COUNTY LINE RD	0.0220	0.0324
N-075	OH	LAKE	472015S	BATES ROAD	0.0142	0.0217
N-075	OH	LAKE	472017F	LAKE STREET	0.0549	0.0733
N-075	OH	LAKE	472018M	DAYTON ROAD	0.0282	0.0422
N-075	OH	LAKE	472023J	WOOD ROAD	0.0434	0.0526
N-075	OH	LAKE	472024R	TOWNLINE ROAD	0.0174	0.0262
N-075	OH	LAKE	472025X	DAVIS ROAD	0.0146	0.0223
N-075	OH	LAKE	472026E	MAIN STREET	0.0835	0.1102
N-075	OH	LAKE	472027L	MAPLE	0.0224	0.0345
N-075	OH	LAKE	472028T	SHEPARD ROAD	0.0183	0.0274
N-075	OH	LAKE	472029A	BAKER ROAD	0.0075	0.0128
N-075	OH	LAKE	472030U	LANE ROAD	0.0179	0.0269
N-075	OH	LAKE	472031B	PARK ROAD	0.0301	0.0447
N-075	OH	LAKE	472032H	MADISON AVENUE	0.1144	0.1426
N-075	OH	LAKE	472033P	RIVERSIDE DRIVE	0.0354	0.0514
N-075	OH	LAKE	472035D	BANK ST	0.0210	0.0310
N-075	OH	LAKE	472036K	STATE STREET	0.0223	0.0328
N-075	OH	LAKE	472039F	LIBERTY ST	0.0279	0.0401
N-075	OH	LAKE	472040A	CHESTNUT STREET	0.0264	0.0381
N-075	OH	LAKE	472044C	MENTOR AVENUE	0.0344	0.0482
N-075	OH	LAKE	472045J	JACKSON STREET	0.0255	0.0371
N-075	OH	LAKE	472046R	HEISLEY ROAD	0.0273	0.0393
N-075	OH	LAKE	472048E	HOPKINS ROAD	0.0263	0.0381
N-075	OH	LAKE	472050F	STATION ST	0.0644	0.0825
N-075	OH	LAKE	472051M	MAPLE STREET	0.0284	0.0424
N-075	OH	LAKE	472052U	HART STREET	0.0674	0.0864
N-075	OH	LAKE	472055P	PELTON STREET	0.0250	0.0364
N-075	OH	LAKE	472056W	ERIE STREET	0.0292	0.0418
N-075	OH	LAKE	472060L	CHURCH STREET	0.0188	0.0294
N-075	OH	LAKE	472062A	BEILDER ROAD	0.0414	0.0585
N-075	OH	LAKE	472064N	RUSH ROAD	0.0312	0.0441
N-075	OH	LAKE	472068R	LLOYD ROAD	0.0283	0.0406
N-075	OH	LAKE	472070S	DEPOT ROAD	0.0407	0.0491
N-075	OH	LAKE	472263R	PATTERSON DRIVE	0.0485	0.0602
TOTAL					**2.2176**	**3.0315**
N-077	OH	LUCAS	509436M	OAKDALE AVE	0.0474	0.0510
N-077	OH	OTTAWA	509390B	BENTON ROAD	0.0861	0.0917
N-077	OH	OTTAWA	509391H	PORTAGE RD	0.0244	0.0268
N-077	OH	OTTAWA	509392P	VOGEL RD	0.0271	0.0303

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
N-077	OH	OTTAWA	509393W	BENTON-TARRO RD	0.0306	0.0334
N-077	OH	OTTAWA	509394D	LICKERT	0.0734	0.0780
N-077	OH	OTTAWA	509395K	ROCKY RIDGE	0.0822	0.0874
N-077	OH	OTTAWA	509396S	WEST	0.0484	0.0531
N-077	OH	OTTAWA	509397Y	SR 590 LIMESTONE	0.1314	0.1387
N-077	OH	OTTAWA	509400E	TRUE RD	0.0219	0.0241
N-077	OH	OTTAWA	509401L	TWP 21 STANGE	0.0673	0.0713
N-077	OH	OTTAWA	509402T	GRAYTOWN(WALKER)	0.0312	0.0341
N-077	OH	OTTAWA	509403A	TOUSSIANT NORTH	0.0492	0.0517
N-077	OH	OTTAWA	509404G	JAMES	0.0531	0.0581
N-077	OH	OTTAWA	509405N	ELLISTON-BENTON	0.0431	0.0471
N-077	OH	OTTAWA	509406V	NISSEN RD	0.0260	0.0286
N-077	OH	OTTAWA	509407C	LENTZ-OPFER	0.0531	0.0581
N-077	OH	OTTAWA	509408J	MARTIN (FOURTH)	0.0271	0.0297
N-077	OH	OTTAWA	509409R	WILLISTON RD	0.0448	0.0489
N-077	OH	OTTAWA	509410K	GENOA-CLAY RD	0.0400	0.0434
N-077	OH	OTTAWA	509411S	(TROWBRDG)BOLANDR	0.0322	0.0351
N-077	OH	OTTAWA	509412Y	REIMAN	0.0576	0.0627
N-077	OH	OTTAWA	509413F	BILLMAN RD	0.1061	0.1115
N-077	OH	OTTAWA	509415U	FOSTORIA RD	0.0357	0.0389
N-077	OH	WOOD	509417H	MAIN	0.0871	0.0926
N-077	OH	WOOD	509418P	CHERRY	0.0718	0.0762
N-077	OH	WOOD	509419W	BRADNER	0.0525	0.0568
N-077	OH	WOOD	509420R	AYRES	0.0960	0.1014
N-077	OH	WOOD	509421X	MATTHEWS RD	0.0464	0.0511
N-077	OH	WOOD	509422E	PEMBERVILLE	0.0337	0.0367
N-077	OH	WOOD	509423L	WALBRIDGE	0.0428	0.0463
N-077	OH	WOOD	509424T	LAMOYNE RD	0.0403	0.0437
N-077	OH	WOOD	509854D	WALES	0.0409	0.0443
N-077	OH	WOOD	509855K	DROUILLARD	0.0469	0.0505
TOTAL					**1.7980**	**1.9332**
N-079	OH	HURON	473665B	SOUTHWEST ST.	0.0174	0.0285
N-079	OH	OTTAWA	473745U	BLOOM RD.	0.0219	0.0385
N-079	OH	OTTAWA	473747H	ELMORE EAST RD	0.0468	0.0726
N-079	OH	OTTAWA	473750R	CULLMAN (TWP 107)	0.0387	0.0624
N-079	OH	OTTAWA	473752E	PORTAGE RIVER RD	0.0679	0.0959
N-079	OH	OTTAWA	473754T	WATER ST	0.0236	0.0373
N-079	OH	SANDUSKY	473667P	YORK ST	0.0479	0.0738
N-079	OH	SANDUSKY	473668W	KILBOURNE	0.1183	0.1551
N-079	OH	SANDUSKY	473669D	MT. PLEASANT RD.	0.0177	0.0290
N-079	OH	SANDUSKY	473671E	CR. 302	0.0489	0.0752
N-079	OH	SANDUSKY	473672L	CR.177	0.0760	0.1066
N-079	OH	SANDUSKY	473673T	CR 292	0.1289	0.1773
N-079	OH	SANDUSKY	473678C	CR 270	0.0425	0.0673
N-079	OH	SANDUSKY	473679J	COBLEY RD	0.0233	0.0405
N-079	OH	SANDUSKY	473680D	CR175	0.1244	0.1540
N-079	OH	SANDUSKY	473681K	CR 260	0.0496	0.0760
N-079	OH	SANDUSKY	473683Y	EAST ST	0.0507	0.0772
N-079	OH	SANDUSKY	473684F	DUANE ST	0.0292	0.0470
N-079	OH	SANDUSKY	473685M	CHURCH ST	0.0202	0.0344
N-079	OH	SANDUSKY	473686U	MAPLE ST.	0.0349	0.0546
N-079	OH	SANDUSKY	473687B	MAIN ST.	0.0444	0.0660
N-079	OH	SANDUSKY	473688H	VINE ST.	0.0225	0.0377
N-079	OH	SANDUSKY	473690J	GEORGE ST.	0.0502	0.0659
N-079	OH	SANDUSKY	473691R	NELSON ST	0.0445	0.0697
N-079	OH	SANDUSKY	473692X	AMANDA ST	0.0257	0.0423
N-079	OH	SANDUSKY	473693E	SPRING ST.	0.0151	0.0249
N-079	OH	SANDUSKY	473696A	WOODLAND	0.0380	0.0585

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-079	OH	SANDUSKY	473697G	CR 236	0.0646	0.0925
N-079	OH	SANDUSKY	473698N	CR 224	0.0280	0.0476
N-079	OH	SANDUSKY	473700M	CR 220	0.0365	0.0594
N-079	OH	SANDUSKY	473702B	CR 212	0.0483	0.0744
N-079	OH	SANDUSKY	473703H	E STATE ST	0.0265	0.0434
N-079	OH	SANDUSKY	473704P	CR 198	0.0503	0.0661
N-079	OH	SANDUSKY	473705W	FINEFROCK RD	0.0868	0.1091
N-079	OH	SANDUSKY	473706D	SMITH RD	0.0149	0.0247
N-079	OH	SANDUSKY	473707K	BUCHANAN ST	0.0308	0.0493
N-079	OH	SANDUSKY	473709Y	HAYES AVE	0.0233	0.0369
N-079	OH	SANDUSKY	473711A	STATE	0.0365	0.0541
N-079	OH	SANDUSKY	473716J	NORTH ST	0.0908	0.1293
N-079	OH	SANDUSKY	473717R	SAND ST	0.0309	0.0518
N-079	OH	SANDUSKY	473719E	PORT CLINTON (SR 53)	0.0183	0.0297
N-079	OH	SANDUSKY	473726P	UNKNOWN	0.1160	0.1622
N-079	OH	SANDUSKY	473728D	CR. 89	0.0586	0.0861
N-079	OH	SANDUSKY	473730E	LINDSEY RD	0.0055	0.0106
N-079	OH	SANDUSKY	473731L	SR. 19	0.0358	0.0558
N-079	OH	SANDUSKY	473734G	CR127	0.0448	0.0702
N-079	OH	SANDUSKY	473739R	CR 143	0.0363	0.0592
N-079	OH	SANDUSKY	473740K	CR 153	0.0417	0.0662
N-079	OH	SANDUSKY	473742Y	CR 89	0.0085	0.0160
TOTAL					**2.2031**	**3.2626**
N-080	OH	CUYAHOGA	472187A	WEST 110 STREET	0.0310	0.0426
N-080	OH	CUYAHOGA	472188G	WEST 111 STREET	0.0398	0.0548
N-080	OH	CUYAHOGA	472189N	WEST 112 ST	0.0188	0.0270
N-080	OH	CUYAHOGA	472190H	WEST 114 STREET	0.0255	0.0371
N-080	OH	CUYAHOGA	472191P	WEST 116 STREET	0.0462	0.0621
N-080	OH	CUYAHOGA	472192W	WEST 117 STREET	0.1106	0.1356
N-080	OH	CUYAHOGA	472194K	HIRD AVE	0.0658	0.0821
N-080	OH	CUYAHOGA	472195S	FRY	0.0324	0.0458
N-080	OH	CUYAHOGA	472196Y	BEACH AVENUE	0.0843	0.1081
N-080	OH	CUYAHOGA	472197F	COVE AVENUE	0.0232	0.0328
N-080	OH	CUYAHOGA	472198M	THOREAU AVENUE	0.0278	0.0401
N-080	OH	CUYAHOGA	472199U	NICHOLSON AVENUE	0.0284	0.0394
N-080	OH	CUYAHOGA	472200L	GIEL AVENUE	0.0240	0.0338
N-080	OH	CUYAHOGA	472201T	BUNTS RD	0.0302	0.0416
N-080	OH	CUYAHOGA	472202A	MANOR PARK	0.0427	0.0581
N-080	OH	CUYAHOGA	472203G	MARLOWE AVENUE	0.0393	0.0542
N-080	OH	CUYAHOGA	472204N	BELLE AVENUE	0.0779	0.0976
N-080	OH	CUYAHOGA	472205V	ST.CHARLES AVENUE	0.0361	0.0503
N-080	OH	CUYAHOGA	472206C	WARREN ROAD	0.0265	0.0369
N-080	OH	CUYAHOGA	472207J	COOK AVENUE	0.1192	0.1455
N-080	OH	CUYAHOGA	472208R	GLADYS AVENUE	0.0340	0.0478
N-080	OH	CUYAHOGA	472209X	ANDREWS AVENUE	0.1069	0.1296
N-080	OH	CUYAHOGA	472210S	LAKELAND AVENUE	0.0387	0.0535
N-080	OH	CUYAHOGA	472212F	BROCKLEY AVENUE	0.0364	0.0507
N-080	OH	CUYAHOGA	472213M	CRAWFORD AVENUE	0.0359	0.0501
N-080	OH	CUYAHOGA	472214U	WESTLAKE AVE	0.0848	0.1087
N-080	OH	CUYAHOGA	472215B	HALL AVENUE	0.0310	0.0441
N-080	OH	CUYAHOGA	472216H	ETHEL AVENUE	0.0902	0.1153
N-080	OH	CUYAHOGA	472217P	EDWARDS AVENUE	0.0937	0.1196
N-080	OH	CUYAHOGA	472218W	BONNIEVIEW AVENUE	0.0966	0.1231
N-080	OH	CUYAHOGA	472219D	GRANGER AVENUE	0.0423	0.0577
N-080	OH	CUYAHOGA	472230D	WEBB ROAD	0.0451	0.0608
N-080	OH	CUYAHOGA	472237B	LINDA STREET	0.0243	0.0341
N-080	OH	CUYAHOGA	472239P	MORRWOOD STREET	0.0209	0.0298
N-080	OH	CUYAHOGA	472240J	WAGER ROAD	0.0303	0.0417

Attachment B-7
Grade Crossing Safety Analysis

SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Estimated Annual Accident Frequency	
					Pre Acquisition	Post Acquisition
N-080	OH	CUYAHOGA	472241R	ELMWOOD ROAD	0.0260	0.0363
N-080	OH	CUYAHOGA	472245T	COLUMBIA ROAD	0.0936	0.1165
N-080	OH	CUYAHOGA	472248N	DOVER CENTER ROAD	0.0340	0.0462
N-080	OH	CUYAHOGA	472249V	CAHOON ROAD	0.1171	0.1463
N-080	OH	CUYAHOGA	472250P	BASSETT ROAD	0.0147	0.0214
N-080	OH	CUYAHOGA	472252D	BRADLEY ROAD	0.0319	0.0436
N-080	OH	DEFIANCE	472211Y	SUMMIT AVENUE	0.0402	0.0552
N-080	OH	ERIE	472312K	COEN ROAD/ 147	0.0535	0.0657
N-080	OH	ERIE	472313S	RISDEN ROAD	0.0530	0.0650
N-080	OH	ERIE	472315F	BARNES ROAD	0.0685	0.0892
N-080	OH	ERIE	472316M	STANLEY ROAD	0.0526	0.0721
N-080	OH	ERIE	472318B	JOPPA ROAD	0.0132	0.0193
N-080	OH	ERIE	472320C	FRAILEY RD	0.0510	0.0622
N-080	OH	ERIE	472321J	DARROW RD	0.0160	0.0232
N-080	OH	ERIE	472322R	SMOKEY ROAD/ TR80	0.0799	0.0926
N-080	OH	ERIE	472323X	STATE ROUTE 61	0.0407	0.0558
N-080	OH	ERIE	472325L	BARROWS ROAD	0.0284	0.0409
N-080	OH	ERIE	472328G	JEFFRIES ROAD	0.0131	0.0193
N-080	OH	ERIE	472329N	WEIKEL ROAD	0.0525	0.0719
N-080	OH	ERIE	472334K	HOOVER ROAD	0.0557	0.0756
N-080	OH	ERIE	472306G	WATER STREET	0.0289	0.0400
N-080	OH	ERIE	472308V	STATE STREET	0.0770	0.0964
N-080	OH	ERIE	876686J	DOUGLAS ST	0.0101	0.0150
N-080	OH	LORAIN	472256F	NAGLE RD	0.0963	0.1154
N-080	OH	LORAIN	472257M	JAYCOX ROAD	0.0164	0.0237
N-080	OH	LORAIN	472258U	AVON CENTER ROAD	0.0295	0.0407
N-080	OH	LORAIN	472268A	MOORE ROAD	0.0793	0.0992
N-080	OH	LORAIN	472269G	MILLER ROAD	0.0310	0.0426
N-080	OH	LORAIN	472277Y	HARRIS ROAD	0.0263	0.0367
N-080	OH	LORAIN	472278F	LAKE BREEZE ROAD	0.0254	0.0356
N-080	OH	LORAIN	472281N	ROOT ROAD	0.0234	0.0330
N-080	OH	LORAIN	472282V	EUCLID AVENUE	0.0210	0.0299
N-080	OH	LORAIN	472283C	MISSOURI AVENUE	0.0252	0.0354
N-080	OH	LORAIN	472284J	KANSAS AVENUE	0.1877	0.2273
N-080	OH	LORAIN	472286X	COLORADO AVENUE	0.0789	0.0988
N-080	OH	LORAIN	472289T	RIED STREET	0.0255	0.0358
N-080	OH	LORAIN	472290M	LONG STREET	0.0166	0.0240
N-080	OH	LORAIN	472291U	WASHINGTON STREET	0.0255	0.0357
N-080	OH	LORAIN	472292B	OBERLIN AVENUE	0.0329	0.0448
N-080	OH	LORAIN	472293H	LEAVITT ROAD	0.0319	0.0436
N-080	OH	LORAIN	472299Y	WOODSIDE DR	0.0182	0.0262
N-080	OH	LORAIN	472300R	OVERLOOK RD	0.1180	0.1439
TOTAL					**3.7010**	**4.8340**
N-081	OH	CUYAHOGA	524190E	EAST 26TH ST	0.0271	0.0369
N-081	OH	CUYAHOGA	524223P	BESSEMER	0.0739	0.0912
N-081	OH	CUYAHOGA	524226K	AETNA	0.1210	0.1458
TOTAL					**0.2220**	**0.2740**
N-082	OH	ASHTABULA	502651A	STATE	0.0203	0.0267
N-082	OH	ASHTABULA	503107T	PLYMOUTH	0.0218	0.0294
N-082	OH	ASHTABULA	503108A	CARSON RD	0.0130	0.0175
N-082	OH	ASHTABULA	503110B	MEANEY RD/MORGAN ROAD EA.	0.0530	0.0677
N-082	OH	ASHTABULA	503113W	SR167	0.0287	0.0380
N-082	OH	ASHTABULA	503114D	MARCH RD	0.0174	0.0243
N-082	OH	ASHTABULA	503115K	NETCHER	0.0229	0.0316
N-082	OH	ASHTABULA	503116S	CLAY RD	0.0205	0.0285
N-082	OH	ASHTABULA	503117Y	S. DENMARK RD	0.0590	0.0743

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-082	OH	ASHTABULA	503118F	TOWER RD	0.0526	0.0673
N-082	OH	ASHTABULA	503119M	FOOTVILLE RI	0.0264	0.0353
N-082	OH	ASHTABULA	503120G	SR 193	0.0276	0.0366
N-082	OH	ASHTABULA	503121N	MARRIAN RD	0.0357	0.0477
N-082	OH	ASHTABULA	503122V	AYERS RD	0.0174	0.0243
N-082	OH	ASHTABULA	503124J	US 6	0.0263	0.0351
N-082	OH	ASHTABULA	503125R	DODGEVILLE RD/MANN RD	0.0152	0.0214
N-082	OH	ASHTABULA	503126X	WOODWORTH RD	0.0120	0.0171
N-082	OH	ASHTABULA	503127E	MEADVILLE RD (US 322)	0.0174	0.0231
N-082	OH	ASHTABULA	503128L	UNDERWOOD RD	0.0357	0.0477
N-082	OH	ASHTABULA	544582K	W 54TH ST.	0.0206	0.0270
N-082	OH	ASHTABULA	544595L	W 52ND ST	0.0217	0.0284
N-082	OH	ASHTABULA	544908Y	WEST 32ND ST	0.0376	0.0485
N-082	OH	MAHONING	544711X	VALLEY ST	0.0304	0.0400
N-082	OH	MAHONING	544716G	HUBBARD RD	0.0821	0.0975
N-082	OH	TRUMBULL	503129T	WAKEFIELD CRK RD	0.0402	0.0530
N-082	OH	TRUMBULL	503130M	SR 87	0.0172	0.0228
N-082	OH	TRUMBULL	503131U	GARDNER BARCLAY	0.0511	0.0655
N-082	OH	TRUMBULL	503132B	SR 88	0.0198	0.0260
N-082	OH	TRUMBULL	503133H	BRADLEY-BROWNLEE	0.1660	0.1858
N-082	OH	TRUMBULL	503134P	CORLAND HULL RD	0.1113	0.1354
N-082	OH	TRUMBULL	503135W	DAVIS PECK RD	0.0543	0.0691
N-082	OH	TRUMBULL	503136D	FISHER CORINTH RD	0.0435	0.0569
N-082	OH	TRUMBULL	503138S	SR 305	0.0200	0.0263
N-082	OH	TRUMBULL	544717N	LOGAN GATE RD	0.0414	0.0529
N-082	OH	TRUMBULL	544718V	SR 304	0.0225	0.0294
N-082	OH	TRUMBULL	544719C	LEWIS-SEIFERT	0.0279	0.0370
N-082	OH	TRUMBULL	544720W	BELL WICK RD	0.0284	0.0376
N-082	OH	TRUMBULL	544721D	MT. EVERT	0.0171	0.0227
N-082	OH	TRUMBULL	544729H	WARREN SHARON RD	0.1581	0.1873
N-082	OH	TRUMBULL	544731J	AMY BOIL RD	0.0643	0.0769
N-082	OH	TRUMBULL	544732R	KINGS GRAVE RD	0.0141	0.0188
N-082	PA	Lawrence	503738U	MONTGOMERY	0.0299	0.0384
TOTAL					**1.6421**	**2.0769**
N-085	OH	ERIE	481642P	POTTER	0.0239	0.0569
N-085	OH	ERIE	481643W	KNAUS	0.0154	0.0399
N-085	OH	ERIE	481646S	BRAGG	0.0549	0.0918
N-085	OH	ERIE	481647Y	STRECKER	0.0651	0.0823
N-085	OH	ERIE	481649M	BILLINGS	0.0193	0.0482
N-085	OH	ERIE	481651N	PORTLAND RD	0.0686	0.0903
N-085	OH	ERIE	481653C	MAPLE AVE.	0.0154	0.0399
N-085	OH	ERIE	481657E	MASON	0.0315	0.0698
N-085	OH	ERIE	481659T	BRADSHAR	0.0643	0.1121
N-085	OH	ERIE	481660M	SKADDEN/ CR 42	0.0887	0.1564
N-085	OH	ERIE	481665W	BOGART	0.0184	0.0433
N-085	OH	ERIE	481668S	SR 101 TIFFIN	0.0135	0.0306
N-085	OH	ERIE	481669Y	VENICE	0.0126	0.0288
N-085	OH	ERIE	481670T	OLDS	0.0425	0.0644
N-085	OH	HURON	47[illegible]356K	MONROE STREET	0.0367	0.0773
N-085	OH	HURON	481638A	S BUCKEYE(CENTER)	0.0722	0.0982
N-085	OH	HURON	481641H	GOODRICH	0.0385	0.0553
TOTAL					**0.6815**	**1.1854**
N-091	MD	WASHINGTON	469316J	RENCH RD	0.0249	0.0315
N-091	MD	WASHINGTON	469320Y	COLLEGE RD	0.0220	0.0281
N-091	MD	WASHINGTON	469321F	LAPPANS RD.	0.1012	0.1174
N-091	MD	WASHINGTON	469323U	JORDAN RD	0.0208	0.0266
N-091	MD	WASHINGTON	469324B	SPIELMAN RD	0.0233	0.0296

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-091	MD	WASHINGTON	469327W	TOMMY TOWN RD	0.0113	0.0148
N-091	MD	WASHINGTON	469329K	TAYLORS LANDING	0.0155	0.0200
N-091	MD	WASHINGTON	469332T	MONDEL RD	0.0135	0.0175
N-091	MD	WASHINGTON	534883D	REIFF CHURCH RD	0.2044	0.2348
N-091	MD	WASHINGTON	534884K	NORTH ST	0.0162	0.0204
N-091	MD	WASHINGTON	534886Y	MAIN ST	0.0175	0.0219
N-091	MD	WASHINGTON	534887F	SHAWLEY DR	0.0470	0.0580
N-091	PA	CUMBERLAND	592199A	TENTH ST	0.0318	0.0387
N-091	PA	CUMBERLAND	592200S	18TH ST.	0.0316	0.0385
N-091	PA	CUMBERLAND	592204U	SLATE HILL	0.0568	0.0669
N-091	PA	CUMBERLAND	592207P	ROSSMOYNE ROAD	0.0235	0.0291
N-091	PA	CUMBERLAND	592272V	WINDING HILL RD	0.0149	0.0188
N-091	PA	CUMBERLAND	592279T	MILL	0.0166	0.0208
N-091	PA	CUMBERLAND	592288S	WILLIAMS GROVE	0.0159	0.0200
N-091	PA	CUMBERLAND	592289Y	SHEAFFER	0.0378	0.0475
N-091	PA	CUMBERLAND	592290T	York Road/SR 74	0.1218	0.1376
N-091	PA	CUMBERLAND	592292G	CREEK ROAD	0.0178	0.0223
N-091	PA	CUMBERLAND	592293N	LEIDIGS DR	0.0149	0.0189
N-091	PA	CUMBERLAND	592295C	CRISWALL	0.1663	0.1891
N-091	PA	CUMBERLAND	592296J	RACE	0.0335	0.0416
N-091	PA	CUMBERLAND	592298X	TANGER	0.0333	0.0422
N-091	PA	CUMBERLAND	592309H	CHESTNUT	0.0815	0.0950
N-091	PA	CUMBERLAND	592311J	MT VIEW	0.0068	0.0087
N-091	PA	CUMBERLAND	592313X	PINE ROAD	0.0176	0.0221
N-091	PA	CUMBERLAND	592317A	STUARTS	0.0435	0.0541
N-091	PA	CUMBERLAND	592319N	MOORS MILL ROAD	0.0118	0.0150
N-091	PA	CUMBERLAND	592320H	MILL	0.1235	0.1441
N-091	PA	CUMBERLAND	592321P	SHEAFFER	0.0236	0.0306
N-091	PA	CUMBERLAND	592524U	HUNTSDALE	0.0136	0.0172
N-091	PA	CUMBERLAND	592526H	PINE GROVE RD	0.0206	0.0256
N-091	PA	CUMBERLAND	592528W	LONGSDORF ROAD	0.0114	0.0145
N-091	PA	CUMBERLAND	592532L	HAYS GROVE	0.0113	0.0144
N-091	PA	CUMBERLAND	592533T	QUARRY HILL	0.0157	0.0207
N-091	PA	CUMBERLAND	592538C	HIGH MOUNTAIN	0.0206	0.0264
N-091	PA	CUMBERLAND	592540D	FURNACE HOLLOW RD	0.0119	0.0151
N-091	PA	CUMBERLAND	592541K	HAMMOND	0.0136	0.0172
N-091	PA	CUMBERLAND	592542S	KELSO	0.0153	0.0198
N-091	PA	CUMBERLAND	592544F	LEES CROSS ROADS	0.0167	0.0210
N-091	PA	CUMBERLAND	592546U	REESE/GOODHEART RD	0.0360	0.0455
N-091	PA	FRANKLIN	534606U	CRESSLER	0.0404	0.0505
N-091	PA	FRANKLIN	534607B	POSSUM HOLLOW RD	0.0459	0.0568
N-091	PA	FRANKLIN	535145R	KRINER ROAD	0.0453	0.0548
N-091	PA	FRANKLIN	535146X	GUILFRD SPRNGS RD	0.2358	0.2683
N-091	PA	FRANKLIN	535148L	LIGHT HOUSE RD.	0.0443	0.0550
N-091	PA	FRANKLIN	535150M	OVERCASH ROAD	0.0282	0.0362
N-091	PA	FRANKLIN	535151U	ALLEMAN	0.0933	0.1095
N-091	PA	FRANKLIN	535152B	T452	0.0220	0.0286
N-091	PA	FRANKLIN	535153H	LRA230	0.0921	0.1073
N-091	PA	FRANKLIN	535154P	COLORADO	0.0214	0.0273
N-091	PA	FRANKLIN	535159Y	MASON ROAD	0.0482	0.0594
N-091	PA	FRANKLIN	535162G	MILNOR ROAD	0.0581	0.0702
N-091	PA	FRANKLIN	535163N	HAYES ROAD	0.3221	0.3676
N-091	PA	FRANKLIN	535178D	MASON DIXON RD	0.0313	0.0390
N-091	VA	CLARKE	468598Y	BOOM RD (SR 615)	0.0132	0.0167
N-091	VA	CLARKE	468599F	SR 7	0.1202	0.1357
N-091	VA	CLARKE	468600X	JOSEPHINE ST. (SR 614)	0.0171	0.0215
N-091	VA	CLARKE	468601E	SR 680	0.0306	0.0390
N-091	VA	CLARKE	468609J	BROWNTOWN RD (SR 620)	0.0105	0.0134
N-091	VA	CLARKE	468610D	OLD CHAPEL AVE (SR 617)	0.0098	0.0125

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-091	VA	CLARKE	468611K	MAIN ST	0.0189	0.0236
N-091	VA	CLARKE	468618H	DEPOT ROAD (SR 628)	0.0475	0.0531
N-091	VA	CLARKE	468621R	F.LOFTON RD (SR 627)	0.0100	0.0128
N-091	VA	CLARKE	468623E	SR 644	0.0110	0.0140
N-091	VA	WARREN	468628N	ASHBY STN RD.	0.0098	0.0125
N-091	VA	WARREN	468631W	FAIRGROUNDS RD (SR 661)	0.0184	0.0230
N-091	VA	WARREN	468634S	ROCKLAND ROAD	0.1222	0.1399
N-091	WV	JEFFERSON	469342Y	HIGH	0.0192	0.0240
N-091	WV	JEFFERSON	469343F	GERMAN	0.0168	0.0211
N-091	WV	JEFFERSON	469344M	MILL	0.1391	0.1609
N-091	WV	JEFFERSON	469345U	WASHINGTON	0.0228	0.0283
N-091	WV	JEFFERSON	469348P	MORGAN-GROVE	0.0101	0.0129
N-091	WV	JEFFERSON	469350R	GARDNER'S-LANE	0.0432	0.0477
N-091	WV	JEFFERSON	469354T	SR 16/3	0.0064	0.0082
N-091	WV	JEFFERSON	469355A	LUTHER JONES (SR 14)	0.0122	0.0160
N-091	WV	JEFFERSON	469358V	SR 20	0.0602	0.0686
N-091	WV	JEFFERSON	469361D	SR 9	0.0281	0.0344
N-091	WV	JEFFERSON	469362K	CRANES-LANE	0.0078	0.0100
N-091	WV	JEFFERSON	469366M	SR 51	0.0663	0.0759
N-091	WV	JEFFERSON	469369H	SUMMIT-POINT-PIKE	0.0211	0.0263
N-091	WV	JEFFERSON	469373X	WHEATLAND RD.	0.0122	0.0155
N-091	WV	JEFFERSON	469375L	WITHER/LARLE (SR 19)	0.0116	0.0148
N-091	WV	JEFFERSON	469378G	PUBLIC XING	0.0120	0.0159
N-091	WV	JEFFERSON	469380H	DARK LANE W	0.0116	0.0148
TOTAL					**3.6974**	**4.4034**
N-100	VA	AUGUSTA	468075U	2ND ST/SR 256	0.0203	0.0327
N-100	VA	AUGUSTA	468085A	SR 616	0.0059	0.0103
N-100	VA	AUGUSTA	468086G	SR 628	0.0079	0.0135
N-100	VA	AUGUSTA	468091D	SR 612	0.0106	0.0169
N-100	VA	AUGUSTA	468095F	SR 619	0.0055	0.0096
N-100	VA	AUGUSTA	468101G	SR 611	0.0097	0.0156
N-100	VA	AUGUSTA	468115P	WINDSOR ROAD	0.0137	0.0216
N-100	VA	AUGUSTA	468118K	OAKLAND	0.0148	0.0245
N-100	VA	AUGUSTA	468120L	SR 664	0.0134	0.0212
N-100	VA	AUGUSTA	468125V	SR 635	0.0071	0.0122
N-100	VA	AUGUSTA	468127J	SR 634	0.0068	0.0118
N-100	VA	AUGUSTA	468135B	SR 608	0.0167	0.0259
N-100	VA	AUGUSTA	468137P	SR 909	0.0203	0.0326
N-100	VA	AUGUSTA	468139D	SR 656	0.0588	0.0785
N-100	VA	AUGUSTA	468143T	WILDA RD	0.0049	0.0081
N-100	VA	AUGUSTA	468146N	SR 658	0.0054	0.0094
N-100	VA	AUGUSTA	468149J	SR 662	0.0163	0.0268
N-100	VA	AUGUSTA	468150D	FARM X-ING	0.0386	0.0594
N-100	VA	AUGUSTA	468153Y	SR 666	0.0131	0.0219
N-100	VA	AUGUSTA	468159P	SR 1212	0.0101	0.0176
N-100	VA	AUGUSTA	468161R	SR 702	0.0548	0.0708
N-100	VA	BOTETOURT	468224T	SR 614	0.0126	0.0211
N-100	VA	BOTETOURT	468230W	BRIDGE ST	0.0118	0.0198
N-100	VA	BOTETOURT	468232K	PINE ST	0.0078	0.0127
N-100	VA	BOTETOURT	468233S	STATION RD. (SR 1313)	0.0090	0.0146
N-100	VA	BOTETOURT	468236M	SR 617	0.0428	0.0526
N-100	VA	BOTETOURT	468237U	SR 625	0.0132	0.0221
N-100	VA	BOTETOURT	468239H	SR 640	0.0100	0.0161
N-100	VA	BOTETOURT	468244E	SR 640	0.0069	0.0113
N-100	VA	BOTETOURT	468248G	SR 784	0.0199	0.0332
N-100	VA	BOTETOURT	468250H	SR 640	0.0066	0.0108
N-100	VA	BOTETOURT	468253D	SR 645	0.0107	0.0187
N-100	VA	BOTETOURT	468256Y	SR 763	0.0221	0.0366

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-100	VA	BOTETOURT	468264R	SR 640	0.0071	0.0115
N-100	VA	BOTETOURT	468269A	SR 716	0.0084	0.0136
N-100	VA	BOTETOURT	468270U	MOUNTAIN AVENUE	0.0078	0.0126
N-100	VA	BOTETOURT	468271B	BOONE DR	0.0298	0.0476
N-100	VA	BOTETOURT	468272H	BLUE RIDGE ROAD	0.0140	0.0233
N-100	VA	BOTETOURT	468281G	SR 654	0.0162	0.0253
N-100	VA	BUCHANAN	468247A	SR 640	0.0077	0.0125
N-100	VA	PAGE	468670M	ST 664	0.0121	0.0210
N-100	VA	PAGE	468676D	SR 662	0.0125	0.0209
N-100	VA	PAGE	468679Y	SR 661	0.0063	0.0103
N-100	VA	PAGE	468680T	SR 611	0.0060	0.0098
N-100	VA	PAGE	468684V	SR 611	0.0052	0.0086
N-100	VA	PAGE	468686J	SR 611	0.0149	0.0254
N-100	VA	PAGE	468689E	SR 658	0.0091	0.0156
N-100	VA	PAGE	468696P	WALLACE AV	0.0172	0.0281
N-100	VA	PAGE	468699K	EAST MAIN ST.	0.0349	0.0522
N-100	VA	PAGE	468700C	CAVE ST/CAMPBELL	0.0164	0.0270
N-100	VA	PAGE	468706T	SR 629	0.0176	0.0297
N-100	VA	PAGE	468708G	SR 633	0.0065	0.0106
N-100	VA	PAGE	468710H	SR 632	0.0324	0.0511
N-100	VA	PAGE	468711P	SR 631	0.0061	0.0106
N-100	VA	PAGE	468714K	SR 624	0.0067	0.0109
N-100	VA	PAGE	468715S	MAIN ST. (US 24)	0.0154	0.0241
N-100	VA	PAGE	468716Y	SR 622	0.0105	0.0168
N-100	VA	PAGE	468717F	SR 723	0.0102	0.0164
N-100	VA	PAGE	468718M	SR 621	0.0134	0.0224
N-100	VA	ROANOKE	468284C	SHADWELL DR.	0.0130	0.0205
N-100	VA	ROANOKE	468286R	CARLOS DR.	0.0252	0.0411
N-100	VA	ROCKBRIDGE	468166A	SR 56	0.0076	0.0123
N-100	VA	ROCKBRIDGE	468171W	SR 608	0.0123	0.0206
N-100	VA	ROCKBRIDGE	468173K	SR 709	0.0153	0.0261
N-100	VA	ROCKBRIDGE	468175Y	SR 710	0.0114	0.0193
N-100	VA	ROCKBRIDGE	468177M	SR 714	0.0223	0.0368
N-100	VA	ROCKBRIDGE	468190B	SR 805	0.0232	0.0382
N-100	VA	ROCKBRIDGE	468192P	SR 631	0.0116	0.0184
N-100	VA	ROCKBRIDGE	468196S	FACTORY ST	0.0182	0.0296
N-100	VA	ROCKBRIDGE	468197Y	21ST STREET	0.0098	0.0167
N-100	VA	ROCKBRIDGE	468198F	10TH ST	0.0128	0.0203
N-100	VA	ROCKBRIDGE	468205N	SR 1101	0.0101	0.0162
N-100	VA	ROCKBRIDGE	468206V	SR 684	0.0474	0.0597
N-100	VA	ROCKINGHAM	468067C	SR 708	0.0070	0.0113
N-100	VA	ROCKINGHAM	468070K	SR 955	0.0048	0.0079
N-100	VA	ROCKINGHAM	468072Y	SR 659	0.0131	0.0207
N-100	VA	ROCKINGHAM	468074M	SR 256	0.0147	0.0230
N-100	VA	ROCKINGHAM	468744C	COUNTY RD	0.0072	0.0117
N-100	VA	ROCKINGHAM	468745J	SR 884	0.0069	0.0112
N-100	VA	ROCKINGHAM	468750F	SR-1706	0.0143	0.0225
N-100	VA	ROCKINGHAM	468751M	ELK RUN	0.0149	0.0234
N-100	VA	ROCKINGHAM	468753B	MARSHALL AVE.	0.0090	0.0145
N-100	VA	ROCKINGHAM	468754H	SR 1709	0.0266	0.0431
N-100	VA	ROCKINGHAM	468757D	SR 642	0.0071	0.0115
N-100	VA	ROCKINGHAM	468767J	SR 649	0.0115	0.0184
N-100	VA	WARREN	468656S	MAIN ST. (SR 622)	0.0061	0.0105
N-100	VA	WARREN	468657Y	SPANGLER LANE	0.0051	0.0090
N-100	VA	WARREN	468660G	SR 613	0.0107	0.0171
N-100	VA	WARREN	714417V		0.0130	0.0225
N-100	VA	WARREN	714419J		0.0869	0.1063
N-100	VA	WARREN	714423Y	MANASSAS AVE	0.0450	0.0559
N-100	VA	WARREN	714424F	MANASSAS AVE	0.0119	0.0207

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-100	VA	WAYNESBORO	468109L	7TH ST	0.0136	0.0214
TOTAL					**1.4420**	**2.2262**
N-121	MI	JACKSON	545254W	FRANCISCO RD	0.0069	0.0128
N-121	MI	JACKSON	545256K	KALMBACH RD	0.0037	0.0070
N-121	MI	JACKSON	545257S	MAUTE RD	0.0051	0.0095
N-121	MI	JACKSON	545259F	SAROSSY LAKE RD	0.0058	0.0108
N-121	MI	JACKSON	545261G	MT HOPE ST	0.0127	0.0225
N-121	MI	JACKSON	545262N	BROWN ST	0.0048	0.0090
N-121	MI	JACKSON	545263V	LAKE ST	0.0115	0.0206
N-121	MI	JACKSON	545264C	WILLIS RD	0.0093	0.0168
N-121	MI	JACKSON	545265J	CRAFT RD.	0.0041	0.0076
N-121	MI	JACKSON	545271M	PORTAGE RD	0.0107	0.0192
N-121	MI	JACKSON	545274H	PAGE AVE	0.0130	0.0231
N-121	MI	JACKSON	545275P	SIXTH ST	0.0109	0.0196
N-121	MI	JACKSON	545276W	FIFTH ST.	0.0216	0.0363
N-121	MI	JACKSON	545278K	FELTERS RD.	0.0055	0.0103
N-121	MI	JACKSON	545279S	FALAHEE RD.	0.0197	0.0335
N-121	MI	JACKSON	545281T	S. ELM AVE.	0.0690	0.0969
N-121	MI	JACKSON	545282A	ELLIOTT ST.	0.0120	0.0215
N-121	MI	WASHTENAW	545203L	GROVE ST	0.0213	0.0381
N-121	MI	WASHTENAW	545204T	PARK ST	0.0110	0.0198
N-121	MI	WASHTENAW	545205A	RIVER ST.	0.0759	0.1109
N-121	MI	WASHTENAW	545206G	CROSS ST	0.1031	0.1462
N-121	MI	WASHTENAW	545207N	FORREST ST	0.0719	0.1009
N-121	MI	WASHTENAW	545209C	LEFORGE ST.	0.0399	0.0634
N-121	MI	WASHTENAW	545211D	SUPERIOR ST	0.0257	0.0447
N-121	MI	WASHTENAW	545212K	DIXBORO RD	0.0172	0.0297
N-121	MI	WASHTENAW	545215F	GEDDES RD	0.0381	0.0613
N-121	MI	WASHTENAW	545220C	MAPLE RD.	0.0101	0.0181
N-121	MI	WASHTENAW	545221J	HURON RIVER DR.	0.0120	0.0214
N-121	MI	WASHTENAW	545224E	DELHI RD	0.0095	0.0172
N-121	MI	WASHTENAW	545225L	SCIO (ZEEB RD)	0.0297	0.0504
N-121	MI	WASHTENAW	545226T	C ST (CENTRAL ST)	0.0153	0.0268
N-121	MI	WASHTENAW	545227A	BROAD ST	0.0109	0.0196
N-121	MI	WASHTENAW.	545229N	WYLIE RD	0.0044	0.0083
N-121	MI	WASHTENAW	545230H	DANCER RD.	0.0054	0.0100
N-121	MI	WASHTENAW	545232W	LIMA CENTER RD.	0.0064	0.0118
N-121	MI	WASHTENAW	545233D	DEXTER CHELSEA RD	0.0112	0.0216
N-121	MI	WASHTENAW	545235S	FLETCHER RD	0.0070	0.0129
N-121	MI	WASHTENAW	545239U	MCKINLEY ST	0.0103	0.0186
N-121	MI	WASHTENAW	545240N	EAST ST	0.0174	0.0320
N-121	MI	WASHTENAW	545241V	M-52	0.0214	0.0359
N-121	MI	WASHTENAW	545242C	HAYES ST	0.0091	0.0165
N-121	MI	WASHTENAW	545243J	CAVANAUGH ST.	0.0127	0.0226
N-121	MI	WASHTENAW	545245X	GARVEY RD.	0.0048	0.0090
N-121	MI	WASHTENAW	545246E	PIERCE RD.	0.0404	0.0517
N-121	MI	WASHTENAW	545250U	FAHRNER RD.	0.0055	0.0103
N-121	MI	WASHTENAW	545252H	HOPPE RD	0.0048	0.0090
N-121	MI	WASHTENAW	545253P	NOTTEN RD.	0.0038	0.0072
N-121	MI	WAYNE	511945J	CENTRAL	0.0257	0.0422
N-121	MI	WAYNE	511951M	LONYO	0.0267	0.0437
N-121	MI	WAYNE	545169G	MONROE ST	0.0321	0.0536
N-121	MI	WAYNE	545170B	MASON ST	0.0145	0.0254
N-121	MI	WAYNE	545176S	GULLEY RD	0.0168	0.0291
N-121	MI	WAYNE	545177Y	BEECH DALY RD	0.0901	0.1177
N-121	MI	WAYNE	545178F	JOHN DALY RD	0.0448	0.0693
N-121	MI	WAYNE	545180G	HARRISON RD	0.0490	0.0662
N-121	MI	WAYNE	545182V	HENRY RUFF RD	0.0197	0.0335

Attachment B-7
Grade Crossing Safety Analysis

					Estimated Annual Accident Frequency	
SEGMENT ID	STATE	COUNTY	FRA ID	STREET NAME	Pre Acquisition	Post Acquisition
N-121	MI	WAYNE	545184J	MERRIMAN RD	0.0278	0.0450
N-121	MI	WAYNE	545185R	WINIFRED AVE.	0.0197	0.0356
N-121	MI	WAYNE	545186X	VENOY AVE.	0.0465	0.0712
N-121	MI	WAYNE	545187E	HOWE AVE	0.0227	0.0379
N-121	MI	WAYNE	545191U	HANNAN RD.	0.0328	0.0545
N-121	MI	WAYNE	545192B	LOTZ RD	0.0079	0.0144
N-121	MI	WAYNE	545193H	HAGGERTY RD	0.0174	0.0300
N-121	MI	WAYNE	545195W	SHELDON RD	0.0143	0.0269
N-121	MI	WAYNE	545197K	BECK RD	0.0093	0.0182
N-121	MI	WAYNE	545198S	DENTON ROAD	0.0123	0.0218
TOTAL					**1.4132**	**2.2591**
S-020	MI	MONROE	511813Y	MATLIN	0.0034	0.0082
S-020	MI	MONROE	511814F	GRAFTON	0.0171	0.0353
S-020	MI	MONROE	511815M	NEWBURG	0.0229	0.0474
S-020	MI	WAYNE	511011Y	PARK ST.	0.0101	0.0223
S-020	MI	WAYNE	511013M	N. HURON RIVER DR	0.0219	0.0433
S-020	MI	WAYNE	511015B	VAN HORN RD	0.0114	0.0248
S-020	MI	WAYNE	511016H	MIDDLEBELT RD	0.0194	0.0393
S-020	MI	WAYNE	511017P	GRIX RD	0.0129	0.0289
S-020	MI	WAYNE	511018W	WEST RD	0.0123	0.0264
S-020	MI	WAYNE	511020X	INKSTER RD	0.0245	0.0475
S-020	MI	WAYNE	511021E		0.0161	0.0351
S-020	MI	WAYNE	511022L	KING RD	0.0123	0.0265
S-020	MI	WAYNE	511024A	SIBLEY	0.0130	0.0277
S-020	MI	WAYNE	511026N	BAILEY RD	0.0058	0.0137
S-020	MI	WAYNE	511027V	PENNSYLVANIA RD	0.1334	0.2000
S-020	MI	WAYNE	511029J	RACHO RD	0.0217	0.0430
S-020	MI	WAYNE	511031K	SUPERIOR RD	0.0191	0.0408
S-020	MI	WAYNE	511032S	NORTHLINE RD	0.0550	0.0852
S-020	MI	WAYNE	511033Y	ALLEN RD	0.0535	0.0837
S-020	MI	WAYNE	511035M	REECK RD.	0.0360	0.0678
S-020	MI	WAYNE	511037B	LONDON RD	0.0265	0.0505
S-020	MI	WAYNE	511039P	CHAMPAIGNE	0.0923	0.1421
S-020	MI	WAYNE	511816U	WILL CARLETON RD	0.0246	0.0476
TOTAL					**0.6651**	**1.1870**

Attachment B-8

Pre-Acquisition Conrail/CSX/NS Safety History

Attachment B-8
Pre-Acquisition Conrail/CSX/NS Safety History

In evaluating the safety history, SEA found that CSX and NS have had the lowest accident rates of all Class I railroads for the 1994 through 1996 period. Their rates have been lower than the Class I railroads as a whole, as indicated in Table B8-1. Conrail has an accident rate higher that both CSX and NS, however it has been below or at the Class I accident rate average for the 1994 through 1996 period.

Table B8-1
Conrail/CSX/Norfolk Southern Accident History [1]

Railroad	Year			Average
	1994	1995	1996	
Conrail	3.69	3.31	3.89	3.63
CSX	1.91	1.90	2.25	2.02
Norfolk Southern	1.97	1.93	2.56	2.15
National Average Class I Railroads	3.81	3.71	3.69	3.74

[1] Accident rate per million train miles as reported in the Federal Railroad Administration Accident/Incident Bulletin, 1996. Accidents are defined by the FRA as an incident involving damage of more than $6,300 to equipment or track, or causing casualties or occupational illness.

Accident rates reflect both a railroad's intrinsic characteristics (geographic environment, track configuration, equipment, track condition, and control systems, for example), and its corporate safety culture (such as operating procedures, maintenance practices, and employee training). The data in B8-1 indicate that CSX and NS statistics are well below the industry average. The relatively low accident rates for CSX and NS suggest that these two railroads have historically implemented a vigorous safety program and procedures.

To put these statistics in perspective, SEA assumed that either the CSX or NS could sustain an average accident rate of approximately 2.0 accidents per million train-miles after the Acquisition. On average, any single segment of rail line could accumulate approximately 500,000 train-miles between reportable accidents. For a segment 100 miles long, this would correspond to an increase of 14 trains per day for the entire year.

Hazardous Material Release Incident History

SEA examined historical data for each of the three railroads involved in the proposed Acquisition to characterize the frequency and nature of past spills of hazardous materials. The U.S. Department of Transportation (DOT) Hazardous Materials Incident Reporting System (HMIRS) is a database that contains hazardous materials spill incidents on the right-of-way reported to DOT since 1971. This database includes spills that are not reportable under FRA criteria. SEA obtained the database for the states affected by the proposed Acquisition and examined it to characterize the frequency and nature of spills of hazardous materials. SEA used details from the last five years (1992 through 1996) to identify the location, source, and size of spills on the rights-of-way, reported to DOT by Conrail, CSX, and NS. SEA selected the last five years because these data are most representative of the current transportation environment and railroad spill response and remediation practices.

Conrail, CSX, and NS reported 1,918 rail incidents involving hazardous materials from 1992 through 1996 for the states affected by the Acquisition (see Table B8-2). CSX accounted for about half of these incidents; Conrail and NS accounted for approximately one-quarter each. Over the five-year period, Conrail showed an annual increase in the number of incidents reported, with a substantial increase occurring in 1994, when the number of incidents rose from 65 to 92. CSX and NS showed an overall decrease in the number of incidents reported from 1992 to 1996. CSX reported 276 incidents in 1992 compared to 167 in 1996; NS reported 102 incidents in 1992 compared to 90 in 1996. The Conrail-CSX-NS system-wide incidents reported for 1992 to 1996 decreased from 439 to 358.

Table B8-2
Total Incidents Reported by Conrail, CSX, and NS for the Years 1992 - 1996

Carrier	1992	1993	1994	1995	1996	Total
Conrail	61	65	92	97	101	416
CSX	276	203	161	187	167	994
NS	102	104	111	101	90	508
Total Per Year	439	372	364	385	358	1,918

Source: FRA, HMIRS, 1997.

Table B8-3 lists the total incidents reported by Conrail, CSX, and NS in 1992 through 1996 by the state where the incident occurred. System-wide, the railroads reported the highest number of incidents in Ohio (295), and Georgia and North Carolina (160 each). In general, the number of incidents reported in each state reflects the individual railroad's level of activity in that 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 yards and terminals).

Table B8-3
Summary of Incidents Reported by Conrail, CSX, and NS
1992 through 1996

State	Conrail	CSX	NS	Applicant Total
Alabama	0	62	67	129
Connecticut	2	0	0	2
Delaware	6	1	0	7
District of Columbia	0	0	0	0
Florida	0	104	9	113
Georgia	0	117	43	160
Illinois	18	42	70	130
Indiana	40	29	5	74
Kentucky	0	36	39	75
Louisiana	0	62	4	66
Massachusetts	7	0	0	7
Maryland	11	38	0	49
Michigan	12	70	5	87
Missouri	0	0	32	32
Mississippi	0	2	2	4
North Carolina	0	108	52	160
New Jersey	58	0	0	58
New York	80	0	1	81
Ohio	80	144	71	295
Pennsylvania	92	21	0	113
Rhode Island	0	0	0	0
South Carolina	0	38	10	48
Tennessee	0	51	32	83
Virginia	0	46	53	99
West Virginia	10	23	13	46
Totals	416	994	508	1,918

Source: FRA, HMIRS, 1997.

For each of the 1,918 hazardous materials incidents reported in 1992 through 1996, one of the following four causes was cited: human error; package failure; vehicle-train accident or derailment; or other. A summary of accidents by general cause is presented as Table B8-4. The category 'other' includes vandalism, pressure release or venting incidents, and incidents with unreported causes. The report attributed greater than 95 percent (1,829) of the 1,918 incidents to human error, package failure, or other. The report identified vehicle-train accident or derailment as the cause for only 4.6 percent (89) of the 1,918 incidents. Thirty-one of these 89 incidents resulted from only ten separate vehicle-train accidents or derailments, because the railroads filed a separate report (identified as a multiple in the HMIRS) for each hazardous material involved in the accident or derailment. In other words, 68 of these 89 incidents were separate accidents or derailments. Conrail reported vehicle accident or derailment as the cause

in 9.6 percent (40) of the 416 hazardous materials incidents in 1992 through 1996. CSX and NS listed vehicle-train accident or derailment as the cause of approximately three percent of their respective 994 and 508 incidents reported in 1992 through 1996.

Table B8-4
Reported Causes of Incidents Involving Hazardous Materials by Conrail, CSX, and NS 1992 through 1996

Cause	Conrail	CSX	NS	Total
Human Error	188	452	210	850
Package Failure	173	482	276	931
Vehicle-Train Accident/Derailment	40	31	18	89
Other	15	29	4	48
Total	416	994	508	1,918

Source: FRA, HMIRS, 1997.

Conrail, CSX, and NS reported hazardous materials released quantities in gallons for liquid releases and pounds or cubic feet for solid releases. The single largest hazardous liquid release for the five-year period; a 30,000 gallon methanol release. CSX's largest hazardous liquid release for the period was 23,000 gallons of vinylidene chloride inhibitor. NS's largest reported hazardous liquid release for the period was 27,910 gallons of methylethylketone (MEK). Vehicle-train accident or derailment caused all three of these incidents. CSX reported the single largest hazardous solid release (and largest hazardous material release) for 1992 through 1996, a 197,000 pound ammonium nitrate-inorganic release. Conrail's largest hazardous solid release for the period was 90,000 pounds of alkyl phenols solid NOS. NS's largest reported hazardous solid release was 100,000 pounds of ammonium nitrate (less than 0.2 percent). Vehicle-train accident or derailment also caused all three of these incidents.

Table B8-5 presents the total incidents by cause for various ranges of released quantity. Ninety-four percent (1,804) of the 1,918 incidents in 1992 through 1996 had release quantities of 100 (gallons, pounds, or cubic feet) or less. The FRA HMIRS report attributed greater than 97 percent (1,760) of these 1,804 incidents to human error, package failure, or other causes. Forty-eight (84 percent) of the 57 incidents with a quantity released between 100 and 1,000 (gallons, pounds, or cubic feet) were due to human error, package failure, or other causes. Vehicle-train accident or derailment caused the other nine incidents (16 percent). Three percent (57) of the 1,918 incidents in 1992 through 1996 reported a released quantity greater than 1,000 (gallons, pounds, or cubic feet). Vehicle-train accident or derailment caused 36 (63 percent) of these 57 incidents. In general, SEA determined that vehicle-train accidents or derailments resulted in larger releases than the incidents caused by human error, package failure, or other causes.

Based on the report forms, SEA found that the number of deaths, major injuries, and environmental impacts resulting from each incident were low. In 1,918 incidents, there were 14 major injuries reported: nine for Conrail, five for CSX, and none for NS. Eight incident reports noted environmental impacts: four for Conrail, four for NS, and none for CSX.

Table B8-5
Quantity of Hazardous Material Released By Cause of Incident as Reported by Conrail, CSX, and NS - 1992 through 1996

Carrier	Cause	Released Quantity Range (units reported in gallons, pounds, or cubic ft.)				Total Incidents
		<1	1 to 100	>100 to 1,000	> 1,000	
Conrail	Human Error	93	86	8	1	188
	Package Failure	86	78	6	3	173
	Vehicle-Train Accident/ Derailment	18	9	4	9	40
	Other	9	5	1	0	15
CSX	Human Error	125	316	6	5	452
	Package Failure	154	305	16	7	482
	Vehicle-Train Accident/ Derailment	2	9	4	16	31
	Other	14	13	2	0	29
NS	Human Error	95	110	4	1	210
	Package Failure	117	150	5	4	276
	Vehicle-Train Accident/ Derailment	3	3	1	11	18
	Other	1	3	0	0	4
Totals for Each Release Quantity Range		717	1,087	57	57	1,918

Source: FRA, HMIRS, 1997.

Attachment B-9

Railroad Safety Programs

Attachment B-9
Railroad Safety Programs

This section describes existing safety measures for hazardous materials handling and storage that are specific to either CSX or NS.

CSX Emergency Plans

SEA reviewed the CSX emergency response plans and found that emergency preparedness, prevention, and response plans identify procedures and resources available to respond to a potential accident involving hazardous materials. The CSX plans identify individual responsibilities and specific notification and resource mobilization actions in case of a derailment, hazardous materials spill, or collision. These plans are backed up by periodic employee training.

CSX has been involved in the Transportation Community Awareness and Emergency Response (TRANSCAER) Program since 1988. Under this program, CSX holds training sessions which include local emergency response units. CSX informs these units about its response programs and policies and seeks to form cooperative working agreements. This program would be expanded to include the post-Acquisition areas.

Additional emergency response resources include private, on-call contractors, who provide supplemental hazardous materials handling knowledge, personnel, and equipment. These resources are located strategically throughout the CSX system, and can be at an incident to support railroad personnel and local police and fire departments within an average of two to three hours.

NS Emergency Plans

NS has two types of plans that address incidents on rail facilities: *Emergency Action Plans for Hazardous Material Incidents* and *Division Emergency Action Plans for Hazardous Material Incidents*. Both of these stress finding and fixing; containing and controlling; identifying and notifying; and cleaning up and restoring. These plans are updated as necessary.

NS defines three incident levels:

Level I: No Significant Exposure Concerns - These are minor or low risk events that can be readily contained and controlled with available local resources. They have no significant environmental impacts. They include releases from valve or fittings that can be tightened, replaced, or plugged to stop the leak.

Level II: Large Releases/ Low Risk Materials or Small Releases/High Risk Materials - These more serious incidents can be controlled only by qualified emergency response contractors.

Examples of Level II Incidents include releases from multiple sources, tank failures, or releases that cannot be readily stopped. They are a potential threat to the environment or long-term public health.

Level III: Large Amounts of Highly Dangerous Materials Released or Possibly Can Be Released - These incidents cannot be controlled and require special resources to limit potential safety and environmental impacts. Examples include punctures of rail cars containing anhydrous ammonia, chlorine, or liquefied petroleum gas; poisons or pesticides in water, and rupture of a container of highly flammable liquids.

NS conducts an annual training program, which is required for all personnel involved with the transportation of hazardous materials. NS also uses Hazardous Materials Audits to evaluate emergency response plans and hazardous materials training programs. NS, under Corporate Policy Number 605, ensures compliance with DOT regulations and NS procedures, reduces company and employee risk, and detects and corrects problems.

Additional NS Safety Programs

NS's Environmental Protection department is headquartered in Roanoke, Virginia, with six field offices throughout the system. The Environmental Department is divided into four major sections: environmental operation, remediation and design, audits and programs, and hazardous materials and industrial hygiene.

Additional emergency response resources include private, on-call contractors, who provide supplemental hazardous materials handling knowledge, personnel, and equipment. These resources are located strategically throughout the NS system, and are available to support railroad personnel and local police and fire departments during incidents. NS received the Harriman Gold Safety Award (first place) in its class for the past eight consecutive years.

Third-Party Safety Programs

CSX and NS are both members of the Chemical Manufacturers Association (CMA) Responsible Care® partnership program. This program focuses on prevention of accidents by adopting a code of management practices the CMA established for the safer transport and handling of chemicals. The program calls for the commitment to, and continuous improvement of chemicals distribution safety. The following elements are included in the program:

- Chemical transport risk management.
- Compliance review and training.
- Railroad carrier safety performance reviews and recommendations.
- Handling and storage practices.
- Emergency preparedness procedures.

Incorporation of the above elements provides an additional mechanism for strengthening the railroad's own safety and environmental programs.

The Association of American Railroads, the CMA, and the Railway Progress Institute formed the Inter-Industrial Rail Safety Task Force (IIRSTF) in 1989. This group reviewed risk management and public communications requirements associated with the movement of hazardous materials. IIRSTF then issued the following recommendations:

- Designation of key trains - trains that carry a specified amount of hazardous materials have certain restrictions, including maximum speeds and procedures for safely passing other trains. A more detailed discussion of key trains follows.
- Designation of key routes - rail segments that carry traffic containing hazardous materials have minimum track maintenance requirements and maximum distances between wayside safety sensors that monitor performance of passing train cars, including such items as wheels and brake systems. A more detailed discussion of key routes follows.
- Rail yard operating practices - these establish safe train switching procedures and limit the number of cars containing certain commodities that can be cut-off.
- Storage distances - these define minimum distances from the mainline tracks with passenger train operation to areas where hazardous materials are stored and handled. For example, it is recommended that unloading or loading flammable gases occur no closer than 100 feet from the mainline, and furthermore, that the tracks utilized for loading and unloading of hazardous materials be bonded and grounded to prevent static electrical spark ignition.
- Maintenance and inspection - these define routine practices for maintaining and inspecting infrastructure and transportation equipment.
- Risk assessment - this provides a methodology for conducting a quantitative risk assessment of individual risk reduction options, such as train placement and train speed.

SEA found that CSX and NS have adopted many of these recommendations to strengthen their own operating policies and procedures.

Key Train and Key Routes

SEA evaluated pre-Acquisition key train and key route information for Conrail, NS, and CSX. The railroads define "key trains" as any train with five or more carloads of materials classified as poison inhalation hazards; or a combination of twenty or more carloads containing explosives, flammable gasses, poison inhalation hazard commodities, or environmentally sensitive chemicals. The train crews identify key trains from their waybills or other train consist information, or as determined by the conductor. Key trains have restrictions such as a 50 miles per hour maximum speed and constraints for meeting and passing trains (one train must be stopped).

Key trains travel on routes designated as "key routes." Key routes are any track with an annual volume of 10,000 car loads or intermodal tank loads of any hazardous materials. Key routes have track maintenance requirements, and have a maximum allowable distance of 40 miles between track-side detectors. Table B9-1 summarizes the pre-Acquisition key routes of the three railroads.

Table B9-1
Summary of Pre-Acquisition Key Routes in the States Affected by the Proposed Acquisition

	Annual Carloads of Hazardous Materials						
	NS			CSX	Conrail		
States	10,000 - 20,000	20,000 - 30,000	> 30,000	>10,000	5,000 - 8,000	8,000 - 10,000	> 10,000
Alabama	X		X	X			
Delaware							
Florida		X		X			
Georgia	X	X	X	X			
Illinois	X			X	X	X	X
Indiana	X	X	X	X	X	X	X
Kentucky	X	X	X	X			
Louisiana		X					
Maryland			X	X	X		
Massachusetts					X		
Michigan			X	X	X		
Missouri			X				

Table B9-1
Summary of Pre-Acquisition Key Routes in the States Affected by the Proposed Acquisition

States	Annual Carloads of Hazardous Materials						
	NS			CSX	Conrail		
	10,000 - 20,000	20,000 - 30,000	> 30,000	>10,000	5,000 - 8,000	8,000 - 10,000	> 10,000
Mississippi	X			X			
New York					X	X	X
North Carolina		X	X	X			
New Jersey					X	X	
Ohio	X	X	X	X	X	X	X
Pennsylvania				X	X	X	X
South Carolina	X		X				
Tennessee	X	X		X			
Virginia	X	X	X	X			
West Virginia			X	X	X		
District of Columbia				X	X		

The primary reason for most of the releases in the HMIRS database being non-reportable is their small size. Table B9-2 shows the differences in terms of the median release quantities as indicated in the HMIRS database.

Table B9-2
Comparison of Railroad Hazardous Materials Release Quantities by Reportability

Type of Hazardous Material	Unit of Measurement	Median Value for Reportable Releases (50th percentile)	Median Value for Non-Reportable Releases
Gas	cubic feet	2,870	0.67
Liquid	gallons	800	2
Solids	pounds	20,000	50

NORFOLK SOUTHERN

Norfolk Southern Corporation
1500 K Street, N.W., Suite 375
Washington, D. C. 20005
202 383-4166
202 383-4425 (Direct)
202 383-4018 (Fax)

Bruno Maestri
System Director
Environmental Protection

RECEIVED NOV 2 5 1997

Washington D.C. - November 25, 1997

BY HAND

Mr. Michael Dalton
Surface Transportation Board
Section of Environmental Analysis ("SEA")
1925 K Street, NW
Washington, D.C. 20423-0001

Re: Finance Docket No 33388: CSX and NS — Control and Acquisition of Conrail

Subject: Norfolk Southern Definition and Requirements for Hazardous Materials Key Routes

Dear Mr. Dalton:

This letter responds to a request from SEA for a written explanation of Norfolk Southern's definition and requirements for "key routes" for hazardous materials traffic. The Inter-Industry Task Force established a rail industry standard definition of a key route as any route with hazardous materials traffic exceeding 10,000 carloads annually. A hazardous materials load is any load which meets the DOT definition of a hazardous material. This includes all loads with 48 or 49 STCC codes, including some mixed freight loads, only a portion of which is hazardous materials. This key route definition is included in the OT-55 specifications.

In order to provide an extra measure of safety and control, NS defines a key route as any route with hazardous materials traffic exceeding 9,000 carloads annually. This is reported on page 97 of the Norfolk Southern - CSXT Environmental Report ("ER") - Volume 6A of the Primary Application. The attached NS Hazardous Materials Bulletin provides specific information on NS's key route criteria.

Please note that NS policy is to provide annual training for employees handling hazardous materials shipment; this is more frequent than the DOT requirement for such training every three years.

Also attached is a copy of the "Prevention" section from our System Emergency Action Plan ("EAP") which addresses the NS criteria for key routes from preparedness perspective. Please note that the EAP specifies that NS has adopted OT-55 as part of our operating policy, except that NS criteria are more stringent than those of OT-55, using 9,000 rather than 10,000 HazMat loads as the key route threshold. A copy of OT-55 is Appendix B of the System EAP and is also attached.

A copy of NS Hazardous Materials Timetable Instructions regarding inspections of hazardous materials cars is also attached to this submittal.

Please contact me if you require additional information or if I can be of further assistance.

Sincerely,

Bruno Maestri
System Director
Environmental Protection

NS Hazardous Materials Bulletin

Norfolk Southern Hazardous Materials Key Routes

Application: NS definitions and requirements for Hazardous Materials Key Routes

Objective: Safe transportation of hazardous materials traffic.

Background: Norfolk Southern Corporation and its railroad operating subsidiaries have adopted OT-55 guidelines as part of our operating policy. The OT-55 guidelines were prepared by the Inter-Industry Rail Safety Task Force. Norfolk Southern has also adopted a more restrictive definition of a Key Route than OT-55 specifies. These requirements are summarized below.

Definitions:

Key Route - Norfolk Southern defines a Key Route as any route with hazardous materials traffic exceeding 9,000 carloads annually, or any route exceeding 4,000 carloads annually of Key Train commodities..

Hazardous Materials Load - A hazardous materials load is any load which meets the DOT definition of a hazardous material. This includes all loads with 48 or 49 STCC codes.

Key Route Requirements:

1. Wayside defective bearing detectors shall be placed a maximum of 40 miles apart on "Key Routes", or an equivalent level of protection may be installed based on improvement in technology.

2. Main Track on "Key Routes" must be inspected by rail defect detection and track geometry inspection cars or any equivalent level of inspection no less than two times each year; and sidings must be similarly inspected no less than one time each year.

3. Any track used for meeting and passing "Key Trains" must be Class 2 or better. If a meet or pass must occur on less than Class 2 track due to an emergency, one of the trains must be stopped before the other train passes.

4. Training of employees who handle shipments of hazardous materials on a "Key Route" must be conducted on an annual basis.

Prevention Section
of the NS Emergency Action Plan

PREVENTION:

A. OVERVIEW:

Norfolk Southern has transported over 200,000 loads of hazardous materials annually for the last several years. This traffic amounts to about 5% of the 3.8 to 4.0 million total carloads of traffic handled each year. However, hazardous material shipments tend to increase each year, and this means that our overall exposure to hazardous materials incidents also increase (see Appendix C). It logically follows that we must continue to be vigilant in our efforts to manage risk and reduce potential liabilities.

PREVENTION is the primary challenge and a key component of the Norfolk Southern Risk Management Program for Hazardous Materials. Prevention means minimizing risks while maximizing employee safety and protection of the environment. It can be achieved through effective training, regulatory and rules compliance, equipment and right-of-way maintenance, and risk assessment.

This section explains each part of the PREVENTION component:

- **Hazardous Materials Training**
- **Regulatory and Rules Compliance**
- **Industry Recommended Operating Practices (OT-55)**
- **Maintenance**
- **Risk Assessment**

B. HAZARDOUS MATERIALS TRAINING:

Effective employee training is an integral part of incident prevention. Training in hazardous materials is necessary, but all aspects of rail operations (i.e., annual operating rules classes, safety, etc.) must be addressed.

In 1993 in order to ensure compliance with DOT requirements for the training of all personnel involved in the transportation of hazardous materials (as mandated in the Final Rule on Docket HM-126F), Norfolk Southern developed a hazardous materials training program consisting of six modules. All employees (including supervisors) were required to complete Modules 1 and 2 on the recognition and identification of hazardous materials and safety training and emergency response, respectively. The four remaining modules were function specific and were taken by employees based on their job responsibilities.

Module 3 was established for train and engine crews and dispatchers; Module 4 was intended for clerical workers; Module 5 was primarily for mechanical employees; and Module 6 addressed transporting hazardous materials in company vehicles.

Approximately 20,000 Norfolk Southern employees participated in this 4-hour training program during 1993. Since then, hazardous materials recurrent training has been conducted annually even though federal regulations only require this training every other year. Environmental Awareness Training is also conducted for all employees on a regular basis.

C. REGULATORY AND RULES COMPLIANCE:

Complying with federal regulations and railroad operating rules (i.e., speed limits, signal aspects, etc.) are very important elements in preventing accidents. Many of the applicable regulations and railroad practices have been incorporated into Corporate Policies, Operating Rules, Safety and General Conduct Rules, and Division Timetables. All Division Timetables include instructions for handling hazardous materials (see Appendix I).

Transportation employees are taught a great deal of this information during annual operating rules classes conducted on each division. Compliance is verified by a comprehensive Operating Rules Checks Procedure, conducted by front line supervisors. Other departments conduct training through regular safety rules classes and special programs.

D. INDUSTRY RECOMMENDED OPERATING PRACTICES (OT-55):

In 1989, the Inter-Industry Rail Safety Task Force (IIRSTF), was formed to review both the risk management and public communication requirements associated with the rail movement of hazardous materials. This group consisted of the Association of American Railroads, the Chemical Manufacturer's Association, and the Railway Progress Institute. Group I of the IIRSTF developed a series of recommended rail operating practices for transporting hazardous materials.

These recommendations were issued in AAR Circular OT-55 under six main areas:

- Key Trains
- Key Routes
- Yard Operating Practices
- Storage Distances
- Training
- TRANSCAER®

Compliance with each of these areas is totally voluntary. It is not required by government regulations. However, Norfolk Southern has adopted OT-55 as part of its operating policy and practices.

Training has been discussed as a separate element of the Prevention component, and emergency response training and TRANSCAER® are addressed in the following section dealing with the Preparedness component. The remaining four elements - Key Trains, Key Routes, Yard Operating Practices, and Storage Distances - all deal directly with incident prevention and are discussed briefly in the following sections:

1. KEY TRAINS:

A "Key Train" is any train with five or more carloads of materials classified as a Poison Inhalation Hazard (Zone A or B); or a combination of twenty or more carloads containing Division 1.1 or 1.2 (Explosives), Division 2.1 (Flammable Gases), Poison Inhalation Hazard (Zone A or B) commodities, or Environmentally Sensitive Chemicals. Key Trains are identified on the train crew's shipping documents or determined by the conductor. Key Trains have certain restrictions such as maximum speed of 50 MPH and constraints related to meeting and passing other trains (see Appendix I, Timetable Rule D).

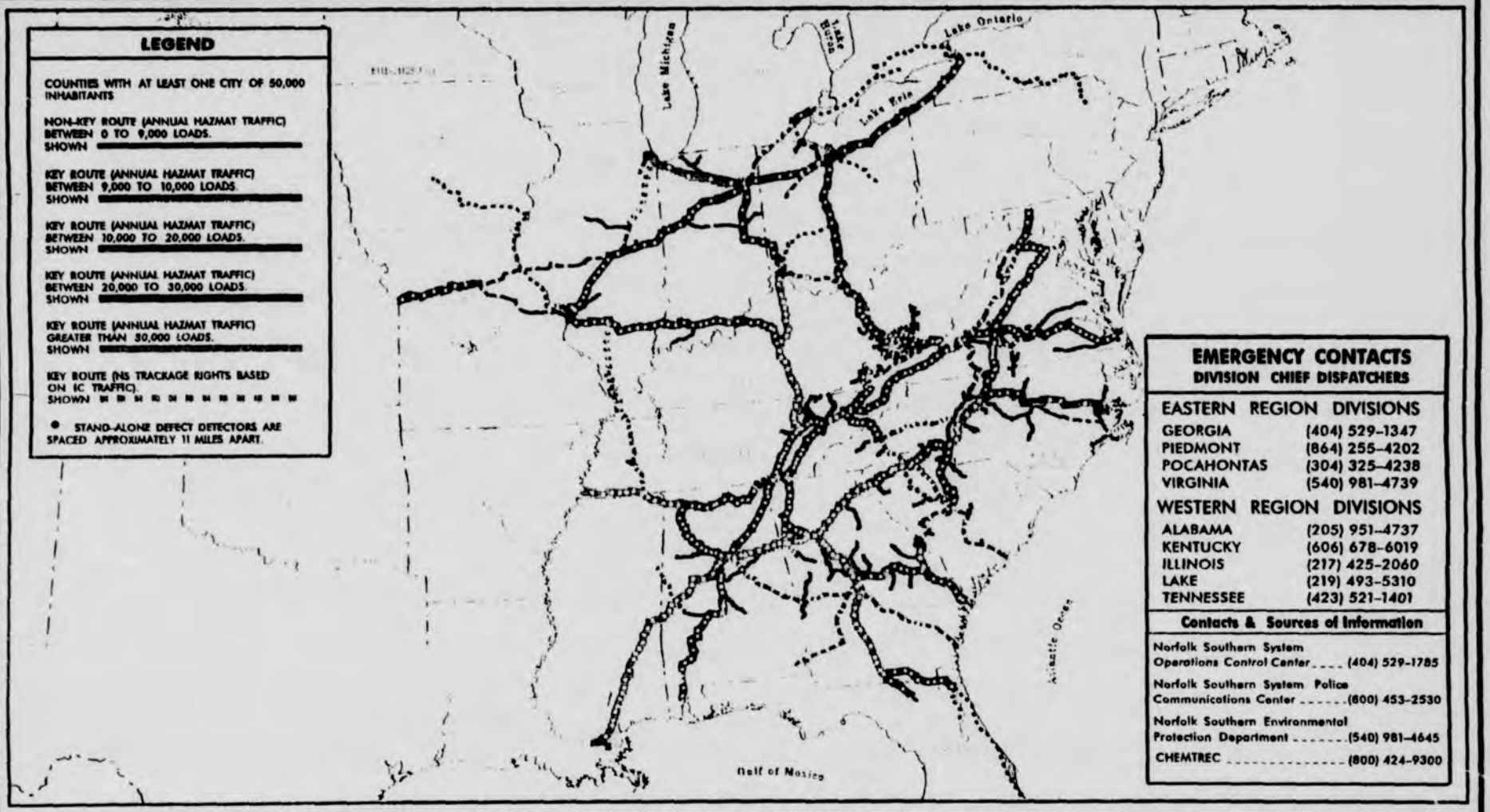
2. KEY ROUTES:

AAR Circular OT-55 defines a "Key Route" as any track with an annual volume of 10,000 car loads or intermodal tank loads of any hazardous materials. In May 1992, NS lowered the criterion to 9,000 loads to account for "border line" routes. Key routes are subject to minimum track maintenance requirements and maximum distances of 40 miles between track-side analyzers. Track-side analyzer separations average only 11-15 miles over the entire Norfolk Southern system.

Key Route maps are prepared annually by NS. These maps are color coded to show Key Routes and point out locations of wayside defective bearing detectors or track-side analyzers. There were a total of 5,492 Key Route miles over the system in 1995. The figure increased to 6,322 Key Route miles in 1996. A copy of the NS Key Route map based on 1996 hazardous materials traffic is shown on the next page.

NORFOLK SOUTHERN

RBDJR 4/1/1997



254,924 HAZMAT LOADS SYSTEMWIDE IN 1996

EXPLOSIVE (1.1-1.6)	=0.15%						
FLAMMABLE GASES (2.1)	=7.82%	FLAMMABLE / COMBUSTIBLE (3)	=16.47%	POISON (6.1)	=2.48%	MISC. DANGEROUS GOODS (9)	=15.13%
NON-FLAMMABLE GASES (2.2)	=6.10%	FLAMMABLE SOLIDS (4.1-4.3)	=2.95%	RADIOACTIVE (7)	=0.09%	HAZARDOUS WASTE	= 1.10%
POISON GASES (2.3)	=4.32%	OXIDIZERS / PEROXIDES (5.1-5.2)	=3.49%	CORROSIVE MATERIALS (8)	=23.13%	F.A.K./MIXED LOADS	=17.86%

KEY ROUTE DEFINITION: A KEY ROUTE IS WHERE MORE THAN 10,000 CARLOADS OF HAZMAT OR 4,000 CARLOADS "P.I.M.", FLAMMABLE GAS, DIVISION 1.1 OR 1.2 EXPLOSIVES, OR ENVIRONMENTALLY SENSITIVE CHEMICALS MOVE EACH YEAR.

DIRECTORY: new/hazmat
FILE: printfile.dgn
REF. FILE: system.dgn

INDEX :
NORFOLK SOUTHERN CORP. SHOWN
FOREIGN RAILROADS SHOWN

TITLE :

KEY ROUTES - SYSTEM OVERVIEW

3. **YARD OPERATING PRACTICES:**

Some recommended practices deal with rail car switching operations that are more restrictive than certain federal regulations, in limiting the number of cars containing certain commodities that can be cut-off.

Norfolk Southern has even tighter restrictions by prohibiting any tank cars containing Flammable Gas from being cut-off in motion (see NS Switching Chart in Appendix I).

Another operating practice is limiting loaded placarded tank cars coupling speeds not to exceed 4 MPH. Slower coupling speeds prevent damage to cars, as well as reducing the number of "Non-Accident" hazardous materials releases, especially those resulting from ruptured frangible disks. The Norfolk Southern "Go For Four Program" has been very successful in reducing the number of overspeed couplings.

4. **STORAGE DISTANCES:**

Norfolk Southern has a general policy against transloading hazardous materials on company property. It is permitted only on an approval basis, and then must be covered under a lease agreement that includes spill containment measures, environmental protective language, and other requirements.

OT-55 defines the minimum distances from railroad mainline tracks for storage and handling of hazardous materials. For example, when a shipper/consignee loads or unloads Flammable Gas, it is recommended that this activity should occur no closer than 100 feet from the mainline. On Norfolk Southern, when storage or transloading of hazardous materials is permitted, 100 feet is the preferred distance from the mainline regardless of the hazardous commodity involved.

E. MAINTENANCE:

Maintenance of the railroad infrastructure (track, bridges, signals, etc.) and transportation equipment is an extremely important element of the Prevention process. Large annual expenditures are made to keep our rails in "tip-top" shape, to ensure the safest travel possible for all traffic, including hazardous materials. Although most tank cars are privately owned and Norfolk Southern is not responsible for their maintenance other than ensuring safe running gear, derailment of hazardous materials cars can result from a derailment caused by other cars in the train. Therefore, Norfolk Southern has an effective maintenance and inspection program in place to keep all railroad owned equipment up to the required standards of safety.

F. RISK ASSESSMENT:

Risk Assessment is a method of evaluating an organization's risk, benchmarking current practices, prioritizing where safety improvements are needed, and identifying potential risk reduction strategies. Group III of the IIRSTF has developed a Quantitative Risk Assessment (QRA) Model, which should be capable of analyzing individual risk reduction options such as train placement, train speed, etc. This model and various other risk assessment models will be evaluated and utilized as part of an ongoing program.

OT-55

ASSOCIATION
OF AMERICAN
RAILROADS

C. E. Dettmann
Vice President

October 19, 1993

CIRCULAR No. OT-55-B

RECOMMENDED RAILROAD OPERATING PRACTICES

FOR TRANSPORTATION OF HAZARDOUS MATERIALS

TO THE MEMBERS:

Based on recommendations of the Inter-Industry Task Force on the safe transportation of hazardous materials by rail, the O-T General Committee and the AAR Board of Directors approved for immediate publication the following recommended operating practices for the transportation of hazardous materials.

Road Operating Practices

I. Industrywide Implementation of "Key Trains"

A. Definition: Any train with five tank car loads of poison inhalation hazard (Hazard zone A or B) or 20 car loads or intermodal portable tank loads of a combination of PIH (Hazard zone A or B), flammable gas, Class 1.1 or 1.2 explosives (Class A), and environmentally sensitive chemicals shall be called a "Key Train". Attached as Appendix A is a list of PIH (Hazard zone A or B) and environmentally sensitive chemicals with 49 STCCs.

B. Restrictions:

1. Maximum speed – "Key Train" - 50 MPH.

2. Unless siding or auxiliary track meets FRA Class 2 standards, a Key Train will hold main track at meeting or passing points, when practicable.

3. After 12/31/93 no cars with friction bearings will be permitted in any "Key Train". The AAR will initiate the process of amending the Interchange Rules to require that all cars with friction bearings be eliminated from interchange service by 12/31/93 rather than the current date of 12/31/94.

Operations and Maintenance Department,
50 F Street, N.W., Washington, D.C. 20001-1564 (202)639-2200 FAX No. (202)639-2930

4. When a moving "Key Train" is stopped by any emergency brake application, or by some unknown cause, the train must be inspected for derailed or defective cars. If the train is stopped at a place where it cannot be safely inspected (e.g. bridge), the train may be moved if conditions permit to the nearest place where it can be safely inspected.

5. If a defect in a "Key Train" journal is reported by a wayside detector, but a visual inspection fails to confirm evidence of a defect, the train will not exceed 30 MPH until it has passed over the next wayside detector. If the same car again sets off the next detector, it must be set out from the train.

II. Industrywide Designation of "Key Routes"

A. Definition: Any track with a combination of 10,000 car loads or intermodal portable tank loads of hazardous materials, or a combination of 4,000 car loadings of PIH (Hazard zone A or B), flammable gas, Class 1.1 or 1.2 explosives (Class A), and environmentally sensitive chemicals, over a period of one year.

B. Requirements:

1. Wayside defective bearing detectors shall be placed a maximum of 40 miles apart on "Key Routes", or equivalent level of protection may be installed based on improvement in technology.

2. Main Track on "Key Routes" must be inspected by rail defect detection and track geometry inspection cars or any equivalent level of inspection no less than two times each year; and sidings must be similarly inspected no less than one time each year.

3. Any track used for meeting and passing "Key Trains" must be Class 2 or better. If a meet or pass must occur on less than Class 2 track due to an emergency, one of the trains must be stopped before the other train passes.

III. Yard Operating Practices

A. Maximum reasonable efforts will be made to achieve coupling of loaded placarded tank cars at speeds not to exceed 4 MPH.

B. Loaded placarded tank cars of PIH (Hazard zone A or B) or flammable gas which are cut off in motion for coupling must be handled in not more than 2-car cuts; and cars cut off in motion to be coupled directly to a loaded placarded tank car of PIH (Hazard zone A or B) or flammable gas must also be handled in not more than 2-car car cuts.

IV. STORAGE

Separation Distance For New Facilities
Loaded Tank Cars and Storage Tanks from Mainline Class II Track or Better

ACTIVITY	COMBUSTIBLE LIQUID, CORROSIVE MATERIAL AND ORM'S	PIH (HAZARD ZONE A OR B), FLAMMABLE LIQUID, FLAMMABLE GAS, NON-FLAMMABLE GAS AND ALL OTHER HAZARD CLASSES
LOADING AND UNLOADING	50 FEET	100 FEET
STORAGE OF LOADED TANK CARS	25 FEET	50 FEET
STORAGE IN TANKS	50 FEET	100 FEET

With regard to existing facilities, maximum reasonable effort should be made to conform to this standard taking into consideration cost, physical and legal constraints.

The proposals apply to storage on railroad property and on chemical company property located close to railroad mainline.

V. TRAINING OF TRANSPORTATION EMPLOYEES

Implementation of Railroad Industry Training Objectives for Railroad Operating Employees

The following objectives should be met in every railroad's program for training operating employees (non-emergency responders) who handle hazardous materials in transportation:

A. Employees (including supervisors) who handle shipments of hazardous materials in rail transportation should learn to perform the following tasks as they apply to their assigned duties:

1. Comply with the requirements for hazardous materials shipping data in rail transportation of hazardous materials;

2. Recognize markings and placards that indicate the presence of hazardous materials;

3. When required by regulation, inspect the external conditions of placarded hazardous materials shipments to assure that they are properly prepared for transportation;

4. Switch placarded hazardous material shipments in compliance with applicable rules and regulations; and

5. Place placarded hazardous material shipments in a train in compliance with applicable rules and regulations.

B. Employees (including supervisors) who handle shipments of hazardous materials in rail transportation should learn to perform the following tasks in hazardous materials incidents:

1. Make the appropriate identifications and notifications and provide the appropriate information as required by railroad operating rules and instructions for handling hazardous materials;

2. Take appropriate action to protect self and others on the scene; and

3. Provide assistance to the local emergency response agencies in the form of identification of the hazardous materials and their location(s) on the train.

C. The training objectives set out in paragraphs A and B (above) should apply to and meet the specific requirements of particular crafts, for example: train crews, inspectors, and clerks who prepare consist information.

D. The objectives set out in paragraphs A and B (above) cover a basic training program for employees (including supervisors). Frequency of training in this category should be consistent with the timing of existing railroad re-examination programs.

E. Training of employees (including supervisors) who handle shipments of hazardous materials on a "Key Route" (as defined in Part II above) should be conducted on an annual basis. This training should meet the objectives set out in paragraphs A and B (above), but should also cover additional subject matter, including special hazardous material operating requirements for the route, yard emergency plans and practices in those plans, and basic chemical characteristics. Each of these employees should demonstrate proficiency by passing a written examination or by other means such as a successful work practices audit.

F. All training should be recorded. It will suffice if the individual carries a card indicating that he meets certain requirements or if his personnel record indicates the date and level of training received.

VI. TRANSCAER

Transportation Community Awareness and Emergency Response
(Endorsed by AAR and CMA)

Implementation of Transcaer

Railroads will implement a national community outreach program to improve community awareness, emergency planning and incident response for the transportation of hazardous materials. The objectives of TRANSCAER are as follows:

- Demonstrate the continuing commitment of chemical manufacturers and transporters to the safe transportation of hazardous materials;

- Improve the relationship between manufacturers, carriers and local officials of communities through which hazardous materials are transported;

- Inform Local Emergency Planning Committees (LEPC's) about hazardous materials moving through their communities and the safeguards that are in place to protect against unintentional releases;

- Assist LEPC's in developing emergency plans to cope with hazardous materials transportation incidents; and

- Assist community response organizations in preparations for responding to hazardous materials incidents.

An important product of the TRANSCAER program will be to overcome the widespread belief that every local firefighter and policeman must have the expert skills and equipment to respond personally to any hazardous materials emergency. Through the awareness training and contingency planning provided through TRANSCAER, states and local communities will be able to pool their expertise and resources with those of industry to provide for a more coordinated and better managed emergency response system.

TRANSCAER must be highly publicized to produce the maximum desirable enhancement of public awareness.

To ensure the success of TRANSCAER, railroads must be prepared to focus training and assistance in contingency planning for all local communities on Key Routes (as defined in Part II above) and also to assist any other community on a rail line upon request. TRANSCAER should be highly publicized to produce the maximum desirable enhancement of public awareness, recognizing that once this occurs, there will be inevitable immediate requests for assistance from many communities, even those which we believe are at low risk. There will also be requests for assistance in "skills" training to which we must be prepared to respond in a prudent and effective way. An AAR and CMA Task Group is currently developing resource material to assist in this community outreach program.

Each AAR member will commit without reservation to comply with these recommendations/standards on its operations within the United States of America.

On behalf of the Operations General Committee.

Very truly yours,

C. E. Dettmann

Attachment

Supercedes Circular No. OT-55-A dated March 9, 1992.

Appendix A to
Circular OT-55-B

July 1, 1995

Poisonous Inhalation Hazard Liquids

Acetone cyanohydrin, stabilized	4921401
Acrolein, inhibited	4927007
Allyl alcohol	4807425/4921019
Allylamine	4921004
Allyl chloroformate	4930001/4923[illegible]
~~Ally isothiocyanate, stabilized~~	~~4921001~~
Arsenic trichloride	4923209
Boron tribromide	4932010
Bromine or Bromine solutions	4936110
Bromine trifluoride	4918507
Bromine pentafluoride	4918505
Bromoacetone	4921727
n-Butyl chloroformate	4921730
sec-Butyl chloroformate	4921207
n-Butyl isocyanate	4907415/4927027
tert-Butyl isocyanate	4907485/4927026
~~Chloroacetaldehyde~~	~~4921402~~
Chloroacetone, stabilized	4921558
Chloroacetonitrile	4921009
Chloroacetyl chloride	4931210/4923117
Chloropicrin	4921414
2-Chloroethanal	4921402
Chloropivaloyl chloride	4921746
Chlorosulfonic acid	4930204
Crotonaldehyde, stabilized	4909137/4921248
Cyclohexyl isocyanate	4921010
3, 5 Dichloro-2, 4, 6 trifluoropyridine	4921741
Diketene, inhibited	4912433/4921254
Dimethylhydrazine, symmetrical	4909352/4921251
Dimethylhydrazine, unsymmetrical	4921202
Dimethyl sulfate	4921405
Ethyl chloroformate	4921020
Ethyl chlorothioformate	4933327
Ethyldichloroarsine	4921404
Ethylene chlorohydrin	4921420
Ethylene dibromide	4921497
Ethyleneimine, inhibited	4927006
Ethyl isocyanate	4907434
Ethyl phosphonothioic dichloride, anhydrous	4921745
Ethyl phosphonous dichloride, anhydrous	4921742
Ethyl phosphorodichloridate	4921744
Hexachlorocyclopentadiene	4821722/4921722
Hydrocyanic acid aqueous solution or hydrogen cyanide, aqueous solutions	4921028
Hydrogen cyanide, ~~anhydrous,~~ stabilized	4927014
Iron pentacarbonyl	4927004
Isobutyl chloroformate	4921211
Isobutyl isocyanate	4907409
Isopropyl chloroformate	4907628/4921252

Isopropyl isocyanate	4909306
Methacrylonitrile, inhibited	4910370
Methyl isothiocyanate	4907453
Methoxymethyl isocyanate	4909307
Methyl bromide and ethylene dibromide,mixture	4921438
Methyl chloroformate	4927008
Methylchloromethyl ether	4927012
Methyldichloroarsine	4921275
Methylhydrazine	4927011
Methyl iodide	4921304
Methyl isocyanate	4927009
Methyl orthosilicate	4907452/4921255
Methyl phosphonic dichloride	4921695
Methyl phosphonous dichloride	4921008
Nickel carbonyl	4927010
Nitric acid, red fuming	4931201
tert-Octylmercaptan	4921731
Pentaborane	4916138
Perchloromethylmercaptan	4921473
Phenylcarbylamine chloride	4921587
Phenyl isocyanate	4921216
Phenyl mercaptan	4921413
Phosphorus oxychloride	4932352
Phosphorus trichloride	4832359/4932359
Poisonous liquids, corrosive, n.o.s. (antimony pentachloride, arsenic trichloride	4821269/4921269
Poisonous liquids, corrosive, n.o.s. (sulfur chloride)	4921276
Poisonous liquids, corrosive, n.o.s. (vanadium oxytrichloride and titanium tetrachloride)	4921262
Poisonous liquids, corrosive, n.o.s. (sulfur dichloride)	4921223
n-Propyl chloroformate	4921756
n-Propyl isocyanate	4907458/4927025
Sulfur Chloride	4930260
~~Sulfuryl Chlorides~~	~~4936395~~
Sulfuric acid, fuming	4830030/4930030
Sulfur trioxide, inhibited	4930050/4936565
Sulfur trioxide, uninhibited 4930051	
Tetranitromethane	4918180
Thiophosgene	4923298
Titanium tetrachloride	4932385
Toxic liquid, inorganic, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927020
[inhalation hazard, Packing Group I Zone B]	4921234
Toxic liquid, corrosive, inorganic, n.o.s. [inhalation hazard, Packing Group I Zone A]	4927021
[inhalation hazard, Packing Group I Zone B]	4921237

Toxic liquids, corrosive, organic, n.o.s.	
(inhalation hazard, Packing Group I, Zone A)	4927005
(inhalation hazard, Packing Group I, Zone B)	4921270
Toxic liquids, corrosive, organic, n.o.s.	
(bis(2-chloroethyl) sulfide and dimethyl sulfate)	4921263
Toxic liquids, flammable, organic, n.o.s.	
(inhalation hazard, Packing Group I, Zone A)	4927001
(inhalation hazard, Packing Group I, Zone B)	4921271
Toxic liquids, flammable, organic, n.o.s.	
(chloropicrin)	4921015
Toxic liquids, organic, n.o.s.	
(inhalation hazard, Packing Group I, Zone A)	4927002
(inhalation hazard, Packing Group I, Zone B)	4921272
Toxic liquids, oxidizing, n.o.s.	
(inhalation hazard, Packing Group I, Zone A)	4927003
(inhalation hazard, Packing Group I, Zone B)	4921273
Toxic liquids, water-reactive, n.o.s.	
(inhalation hazard, Packing Group I, Zone A)	4927030
(inhalation hazard, Packing Group I, Zone B)	4921256
Trichloroacetyl chloride	4935231
Trimethyloxysilane	4921213
Trimethylacetyl chloride	4931745

Poisonous Inhalation Hazard Gases - Hazard Zones A & B

Arsine	4920135
Boron trifluoride	4920522
Bromine chloride	4920715
Carbonyl fluoride	4920559
Chlorine	4920523
Chlorine pentafluoride	4920189
Chlorine trifluoride	4920352
Chloropicrin and methyl bromide mixtures	4920547/4920516
Chloropicrin and methyl chloride mixtures	4920392
Compressed or liquefed gas, flammable, toxic,n.o.s	
[inhalation hazard Zone A]	4920165
[inhalation hazard Zone B]	4920396
Compressed or liquified gas, toxic, n.o.s.	
[inhalation hazard] Zone A]	4920181
[inhalation hazard] Zone B]	4920570
Cyanogen chloride, inhibited	4920178
Cyanogen, liquified	4920395
Diborane	4920107
Dichlorosilane	4920398
Dinitrogen tetroxide, liquefied	4920174
Fluorine, compressed	4920180
Germane	4920354
Hexafluoroacetone	4920528
Hydrogen selenide, anhydrous	4920122
Hydrogen sulfide, liquefied	4920513
Liquefed gas, toxic, flammable, n.o.s	
[inhalation hazard Zone A]	4920164
[inhalation hazard Zone B]	4920382
Liquified gas, toxic, n.o.s.	
[inhalation hazard] Zone A]	4920195
[inhalation hazard] Zone B]	4920571
Methylchlorosilane	4920394
Nitric oxide	4920112
Nitric oxide and dinitrogen tetroxide mixtures	4920113
Nitrogen dioxide	4920174
Nitrogen trioxide	4920175
Oxygen difluoride	4920173
Perchloryl fluoride	4920356
Phosgene	4920184
Phosphine	4920160
Phosphorus pentafluoride	4920183
Silicon Tetrafluoride	4920357
Selenium hexafluoride	4920106
Stibine	4920167
Sulfur tetrafluoride	4920187
Tellurium hexafluoride	4920188
~~Tetraethyl dithiopyrophosphate and gases in solution [LC50 ≤ 200 ppm]~~	~~4920185~~
~~Tetraethyl pyrophosphate and compressed gas mixtures [LC50 ≤ 200 ppm]~~	~~4920186~~
Trifluoroaceetylchloride	4920347

Environmentally Sensitive Chemicals

Allyl Chloride	4907412
Carbon Tetrachloride	4921830/4921831
Chlorobenzene	4909153
Chloroform	4925224/4925225
o-Dichlorobenzene	4921767/4921769
Dichloropropane (Propylene dichloride)	4925203
Dichloropropane/Dichloropropene mixture	4909269
Dichloropropene	4910234
Ethyl Chloride	4909255
Ethylene Dibromide (already listed as PIH)	4905712/4908162
Ethylene Dibromide and Methyl Bromide Mixtures (already listed as PIH)	
Ethylene Dichloride	4909166/4912081
Epichlorohydrin	4921005
Methyl Chloroform (1,1,1 Trichloroethane)	4925182
Methylene Chloride (Dichloromethane)	4925131
Methylene chloride/chloroform mixture	4960150
Perchloroethylene (Tetrachlorothylene)	4840355/4925202
Perchloroethylene/Trichloroethylene mixture	4940373
Trichloroethylene	4925181

NS Hazardous Materials Timetable Instructions
regarding inspections of hazardous materials cars

Conductors will ascertain that a copy is on the controlling unit at the start of each trip or tour of duty [172.602].

F. INSPECTION:

1. Rail cars carrying hazardous materials and each rail car immediately adjacent thereto, must be inspected before acceptance at originating point, when received in interchange, and at any point where a train is required to be inspected (including the point where the car is placed in the train). The cars may continue in transit only when the inspection indicates that the cars are in safe condition for transportation [174.9].

2. Before coupling to a placarded tank car, employees must by observation from the ground determine:
   - that there is no visible or detectable leak;
   - that all loading and unloading lines are disconnected;
   - that all platforms are raised or in the clear; and
   - that manway cover bolts, valve housing covers, bottom outlet caps, and plugs or caps on other openings are in their proper places.

3. Before any closed (box or hopper) car containing hazardous materials is coupled into or moved, the crew must determine that the doors are closed and securely fastened [174.104].

4. DOT specification tank cars not equipped with top and bottom shelf couplers will not be accepted in interchange, placed or pulled at industrial tracks, or moved in a train. The Mechanical Department must be notified of such cars when offered in interchange or when released from industries. This restriction applies to (1) all DOT specification tank cars; and (2) both loaded and empty cars.

5. Check to make sure the safety valve and tank test due dates are current (a car is within test until the last day of the month or year shown). These will appear on the right-hand side of the car under the specification marking. If they are not in date, notify your supervisor.

6. Intermodal tanks containing hazardous materials must not be accepted in interchange, pulled at an industrial track, or moved in a train, unless the DOT Proper Shipping Name of the material is legibly marked on two opposing sides of the tank, and this DOT Proper Shipping Name matches the one shown on the hazardous materials shipping paper for the tank [172.326(a)].

Attachment B-10

Circular No. OT-55-B
Association of American Railroads

Recommended Railroad Operating Practices for Transportation of Hazardous Materials

CSX TRANSPORTATION

Carl A. Gerhardstein, P.E.
Director Environmental Engineering

CENTRAL ADMINISTRATIVE UNIT
REC'D: 11/26/97
DOCUMENT # 11/26/97 1:49:21PM

1331 Pennsylvania Avenue, NW, Ste. 560
Washington, DC 20004-1703
(202) 783-8124
(FAX) (202) 783-2603

November 24, 1997

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BY FAX DELIVERY

Mr. Michael Dalton
Surface Transportation Board
Section of Environmental Analysis
1925 K Street NW
Washington, DC 20005

FINANCE DOCKET NO. 33388: CSX AND NS
CONTROL AND ACQUISITION OF CONRAIL
KEY ROUTE STANDARDS

Dear Mr. Dalton:

Reference your request for information concerning CSX's standards for determining Key Route and Key Train status. CSX meets or exceeds the AAR Circular No. OT-55-B Recommended Railroad Operating Practices for Transportation of Hazardous Materials (copy attached). One area in which CSX differs from the AAR Circular is in defect detectors. CSX normally spaces defective bearing detectors every 20 - 25 miles and the AAR recommends spacing of 40 miles for defect detectors.

Please contact me if you have any questions about this submittal or need additional information.

Sincerely,

Carl A. Gerhardstein

attachment

ASSOCIATION
OF AMERICAN
RAILROADS

C. E. Dettmann
Vice President

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NOV 25 1997
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MANAGEMENT
STB

October 19, 1993

T-841/47.24

Chief Operating Officers

Gentlemen:

Ref: Circular No. OT-55-B

Attached is Circular OT-55-B which replaces OT-55-A. I have also included the current version of Appendix A issued September 29, 1993. OT-55-B reflects changes to "Part IV. Storage."

This change was coordinated with you in my letter of June 21, 1993. I did not receive any negative reviews regarding this change.

Sincerely,

C. E. Dettmann

attachment

Operations and Maintenance Department,
50 F Street, N.W., Washington, D.C. 20001-1564 (202)639-2200 FAX No. (202)639-2930

ASSOCIATION
OF AMERICAN
RAILROADS

C. E. Dettmann
Vice President

October 19, 1993

CIRCULAR No. OT-55-B

RECOMMENDED RAILROAD OPERATING PRACTICES FOR TRANSPORTATION OF HAZARDOUS MATERIALS

TO THE MEMBERS:

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1. Maximum speed -- "Key Train" - 50 MPH.

2. Unless siding or auxiliary track meets FRA Class 2 standards, a Key Train will hold main track at meeting or passing points, when practicable.

3. After 12/31/93 no cars with friction bearings will be permitted in any "Key Train". The AAR will initiate the process of amending the Interchange Rules to require that all cars with friction bearings be eliminated from interchange service by 12/31/93 rather than the current date of 12/31/94.

Operations and Maintenance Department,
50 F Street, N.W., Washington, D.C. 20001-1564 (202)639-2200 FAX No. (202)639-2930

4. When a moving "Key Train" is stopped by any emergency brake application, or by some unknown cause, the train must be inspected for derailed or defective cars. If the train is stopped at a place where it cannot be safely inspected (e.g. bridge), the train may be moved if conditions permit to the nearest place where it can be safely inspected.

5. If a defect in a "Key Train" journal is reported by a wayside detector, but a visual inspection fails to confirm evidence of a defect, the train will not exceed 30 MPH until it has passed over the next wayside detector. If the same car again sets off the next detector, it must be set out from the train.

II. Industrywide Designation of "Key Routes"

A. Definition: Any track with a combination of 10,000 car loads or intermodal portable tank loads of hazardous materials, or a combination of 4,000 car loadings of PIH (Hazard zone A or B), flammable gas, Class 1.1 or 1.2 explosives (Class A), and environmentally sensitive chemicals, over a period of one year.

B. Requirements:

1. Wayside defective bearing detectors shall be placed a maximum of 40 miles apart on "Key Routes", or equivalent level of protection may be installed based on improvement in technology.

2. Main Track on "Key Routes" must be inspected by rail defect detection and track geometry inspection cars or any equivalent level of inspection no less than two times each year; and sidings must be similarly inspected no less than one time each year.

3. Any track used for meeting and passing "Key Trains" must be Class 2 or better. If a meet or pass must occur on less than Class 2 track due to an emergency, one of the trains must be stopped before the other train passes.

III. Yard Operating Practices

A. Maximum reasonable efforts will be made to achieve coupling of loaded placarded tank cars at speeds not to exceed 4 MPH.

B. Loaded placarded tank cars of PIH (Hazard zone A or B) or flammable gas which are cut off in motion for coupling must be handled in not more than 2-car cuts; and cars cut off in motion to be coupled directly to a loaded placarded tank car of PIH (Hazard zone A or B) or flammable gas must also be handled in not more than 2-car car cuts.

IV. STORAGE

Separation Distance For New Facilities
Loaded Tank Cars and Storage Tanks from Mainline Class II Track or Better

ACTIVITY	COMBUSTIBLE LIQUID, CORROSIVE MATERIAL AND ORM'S	PIH (HAZARD ZONE A OR B), FLAMMABLE LIQUID, FLAMMABLE GAS, NON FLAMMABLE GAS AND ALL OTHER HAZARD CLASSES
LOADING AND UNLOADING	50 FEET	100 FEET
STORAGE OF LOADED TANK CARS	25 FEET	50 FEET
STORAGE IN TANKS	50 FEET	100 FEET

With regard to existing facilities, maximum reasonable effort should be made to conform to this standard taking into consideration cost, physical and legal constraints.

The proposals apply to storage on railroad property and on chemical company property located close to railroad mainline.

V. TRAINING OF TRANSPORTATION EMPLOYEES

Implementation of Railroad Industry Training Objectives for Railroad Operating Employees

The following objectives should be met in every railroad's program for training operating employees (non-emergency responders) who handle hazardous materials in transportation:

A. Employees (including supervisors) who handle shipments of hazardous materials in rail transportation should learn to perform the following tasks as they apply to their assigned duties:

1. Comply with the requirements for hazardous materials shipping data in rail transportation of hazardous materials;

2. Recognize markings and placards that indicate the presence of hazardous materials;

3. When required by regulation, inspect the external conditions of placarded hazardous materials shipments to assure that they are properly prepared for transportation;

4. Switch placarded hazardous material shipments in compliance with applicable rules and regulations; and

5. Place placarded hazardous material shipments in a train in compliance with applicable rules and regulations.

B. Employees (including supervisors) who handle shipments of hazardous materials in rail transportation should learn to perform the following tasks in hazardous materials incidents:

1. Make the appropriate identifications and notifications and provide the appropriate information as required by railroad operating rules and instructions for handling hazardous materials;

2. Take appropriate action to protect self and others on the scene; and

3. Provide assistance to the local emergency response agencies in the form of identification of the hazardous materials and their location(s) on the train.

C. The training objectives set out in paragraphs A and B (above) should apply to and meet the specific requirements of particular crafts, for example: train crews, inspectors, and clerks who prepare consist information.

D. The objectives set out in paragraphs A and B (above) cover a basic training program for employees (including supervisors). Frequency of training in this category should be consistent with the timing of existing railroad re-examination programs.

E. Training of employees (including supervisors) who handle shipments of hazardous materials on a "Key Route" (as defined in Part II above) should be conducted on an annual basis. This training should meet the objectives set out in paragraphs A and B (above), but should also cover additional subject matter, including special hazardous material operating requirements for the route, yard emergency plans and practices in those plans, and basic chemical characteristics. Each of these employees should demonstrate proficiency by passing a written examination or by other means such as a successful work practices audit.

F. All training should be recorded. It will suffice if the individual carries a card indicating that he meets certain requirements or if his personnel record indicates the date and level of training received.

VI. TRANSCAER

Transportation Community Awareness and Emergency Response
(Endorsed by AAR and CMA)

Implementation of Transcaer

Railroads will implement a national community outreach program to improve community awareness, emergency planning and incident response for the transportation of hazardous materials. The objectives of TRANSCAER are as follows:

- Demonstrate the continuing commitment of chemical manufacturers and transporters to the safe transportation of hazardous materials;

- Improve the relationship between manufacturers, carriers and local officials of communities through which hazardous materials are transported;

- Inform Local Emergency Planning Committees (LEPC's) about hazardous materials moving through their communities and the safeguards that are in place to protect against unintentional releases;

- Assist LEPC's in developing emergency plans to cope with hazardous materials transportation incidents; and

- Assist community response organizations in preparations for responding to hazardous materials incidents.

An important product of the TRANSCAER program will be to overcome the widespread belief that every local firefighter and policeman must have the expert skills and equipment to respond personally to any hazardous materials emergency. Through the awareness training and contingency planning provided through TRANSCAER, states and local communities will be able to pool their expertise and resources with those of industry to provide for a more coordinated and better managed emergency response system.

TRANSCAER must be highly publicized to produce the maximum desirable enhancement of public awareness.

To ensure the success of TRANSCAER, railroads must be prepared to focus training and assistance in contingency planning for all local communities on Key Routes (as defined in Part II above) and also to assist any other community on a rail line upon request. TRANSCAER should be highly publicized to produce the maximum desirable enhancement of public awareness, recognizing that once this occurs, there will be inevitable immediate requests for assistance from many communities, even those which we believe are at low risk. There will also be requests for assistance in "skills" training to which we must be prepared to respond in a prudent and effective way. An AAR and CMA Task Group is currently developing resource material to assist in this community outreach program.

Each AAR member will commit without reservation to comply with these recommendations/standards on its operations within the United States of America.

On behalf of the Operations General Committee.

Very truly yours,

C. E. Dettmann

Attachment

Supercedes Circular No. OT-55-A dated March 9, 1992.

Appendix A to
Circular OT-55-B

September 29, 1993

PIH (PG I) Liquids per HM-181 Final Rule

Acetone cyanohydrin, stabilized	4921401
Acrolein, inhibited	4927007
Allyl alcohol	4921019
Allylamine	4921004
Allyl chloroformate	4930001
Ally isothiocyanate, stabilized	4921001
Arsenic trichloride	4923209
Boron tribromide	4932010
Bromine	4936110
Bromine trifluoride	4918507
Bromine pentafluoride	4918505
Bromoacetone	4921727
n-Butylchloroformate	4921730
sec-Butylchloroformate	4921207
n-Butyl isocyanate	4907415
tert-Butyl isocyanate	4907485
Chloroacetaldehyde	4921402
Chloroacetone, stabilized	4921558
Chloroacetonitrile	4921009
Chloroacetyl chloride	4931210
Chloropicrin	4921414
Chloropivaloyl chloride	4921746
Chlorosulfonic acid	4930204
Crotonaldehyde, stabilized	4909137
Cyclohexyl isocyanate	4921010
3, 5 Dichloro-2, 4, 6 trifluoropyridine	4921741
Diketene, inhibited	4915333
Dimethyhydrazine, symmetrical	4909352
Dimethyhydrazine, unsymmetrical	4921202
Dimethyl sulfate	4921405
Ethyl chloroformate	4921020
Ethyl chlorothioformate	4933327
Ethyldichloroarsine	4921404
Ethylene chlorohydrin	4921420
Ethylene dibromide	4921497
Ethyleneimine, inhibited	4927006
Ethyl isocyanate	4907434
Ethyl phosphonothioic dichloride, anhydrous	4921745
Ethyl phosphonous dichloride, anhydrous	4921742
Ethyl phosphorodichloridate	4921744
Hexachlorocyclopentadiene	4921722
Hydrocyanic acid aqueous solution	4921028
Hydrogen cyanide, anhydrous, stabilized	4927014
Iron pentacarbonyl	4927004
Isobutyl chloroformate	4921211
Isobutyl isocyanate	4907409
Isopropyl chloroformate	4907628
Isopropyl isocyanate	4909306
Methoxymethyl isocyanate	4909307

Methyl bromide and ethylene dibromide,mixture	4921438
Methyl chloroformate	4927008
Methylchloromethyl ether	4927012
Methyldichloroarsine	4921275
Methylhydrazine	4921017
Methyl iodide	4921304
Methyl isocyanate	4927009
Methyl isothiocyanate	4907453
Methyl orthosilicate	4907452
Methyl phosphonic dichloride	4921695
Methyl phosphonous dichloride	4921008
Nickel carbonyl	4927010
Nitric acid, red fuming	4931201
tert-Octylmercaptan	4921731
Pentaborane	4916138
Perchloromethylmercaptan	4921473
Phenylcarbylamine chloride	4921587
Phenyl isocyanate	4921216
Phenyl mercaptan	4921413
Phosphorus oxychloride	4932352
Phosphorus trichloride	4932359
Poisonous liquids, corrosive, n.o.s. [inhalation hazard, Packing Group I	
Zone A ---	4927005
Zone B ---	4921270
Poisonous liquids, flammable, n.o.s. [inhalation hazard, Packing Group I	
Zone A ---	4927001
Zone B ---	4921271
Poisonous liquids, n.o.s. [inhalation hazard, Packing Group I	
Zone A ---	4927002
Zone B ---	4921272
Poisonous liquids, oxidizing, n.o.s. [inhalation hazard, Packing Group I	
Zone A ---	4927003
Zone B ---	4921273
n-Propyl chloroformate	4921756
n-Propyl isocyanate	4907458
Sulfuryl Chloride	4930260
Sulfuric acid, fuming	4930030
Sulfur trioxide, inhibited	4930050/4936565
Sulfur trioxide, uninhibited	4930051
Tetranitromethane	4918180
Thionyl chloride	4930060
Thiophosgene	4923298
Titanium tetrachloride	4932385
Trichloroacetyl chloride	4935231
Trimethyloxysilane	4921213
Trimethylacetyl chloride	4931745

PIH Gases per HM-181 Final Rule

Arsine	4920135
Boron trifluoride	4920522
Bromine chloride	4920715
Carbonyl fluoride	4920559
Chlorine	4920523
Chlorine pentafluoride	4920189
Chlorine trifluoride	4920182
Chloropicrin and methylbromide mixtures	4920547
Chloropicrin and methylchloride mixtures	4920392
Compressed or liquefed gas,flammable,toxic,n.o.s [inhalation hazard]	
Zone A ---	4920165
Zone B ---	4920396
Compressed or liquified gas, toxic, n.o.s. [inhalation hazard]	
Zone A ---	4920181
Zone B ---	4920570
Cyanogen chloride, inhibited	4920178
Cyanogen, liquified	4920395
Diborane	4920377
Dichlorosilane	4920398
Dinitrogen tetroxide, liquefied	4920174
Fluorine, compressed	4920180
Germane	4920120
Hexafluoroacetone	4920528
Hydrogen selenide, anhydrous	4920122
Hydrogen sulfide, liquefied	4920513
Methylchlorosilane	4920394
Nitric oxide	4920330
Nitric oxide and dinitrogen tetroxide mixtures	4920370
Nitrogen dioxide	4920174
Nitrogen trioxide	4920175
Oxygen difluoride	4920173
Perchloryl fluoride	4920345
Phosgene	4920184
Phosphine	4920160
Phosphorus pentafluoride	4920183
Silicon Tetrafluoride	4920507
Selenium hexafluoride	4920376
Stibine	4920167
Sulfur tetrafluoride	4920187
Tellurium hexafluoride	4920188
Tetraethyl dithiopyrophosphate and gases in solution [LC50 ≤ 200 ppm]	4920185
Tetraethyl dithiopyrophosphate and gases mixture [LC50 ≤ 200 ppm]	4920185
Tetraethyl pyrophosphate and compressed gas mixtures [LC50 ≤ 200 ppm]	4920186

Environmentally Sensitive Chemicals

Allyl Chloride	4907412
Carbon Tetrachloride	4940320/4921830/4921831
Chlorobenzene	4909153
Chloroform	4940310/4940311
	4921767/4921769
Dichlorobenzene	4941127/4925203
Dichloropropane	4909269
Dichloropropane/Dichloropropene mixture	4907640
Dichloropropene	4909255
Ethyl Chloride	4908162
Ethylene Dibromide (already listed as PIH)	
Ethylene Dibromide and Methyl Bromide Mixtures (already listed as PIH)	
Ethylene Dichloride	4909166
Epichlorohydrin	4907420/4921005
Methyl Chloroform	4941176/4925182
Methylene Chloride/1,1,Trichloroethane	4941132/4925131
Perchloroethylene	4940355/4925202
Perchloroethylene/Trichloroethylene mixture	4940373
Trichloroethylene	4941171/4925181

NS Hazardous Materials Timetable Instructions
regarding inspections of hazardous materials cars

Norfolk Southern Hazardous Materials Key Routes

Application: **NS definitions and requirements for Hazardous Materials Key Routes**

Objective: **Safe transportation of hazardous materials traffic.**

Background: Norfolk Southern Corporation and its railroad operating subsidiaries have adopted OT-55 guidelines as part of our operating policy. The OT-55 guidelines were prepared by the Inter-Industry Rail Safety Task Force. Norfolk Southern has also adopted a more restrictive definition of a Key Route than OT-55 specifies. These requirements are summarized below.

Definitions:

Key Route - Norfolk Southern defines a Key Route as any route with hazardous materials traffic exceeding 9,000 carloads annually, or any route exceeding 4,000 carloads annually of Key Train commodities..

Hazardous Materials Load - A hazardous materials load is any load which meets the DOT definition of a hazardous material. This includes all loads with 48 or 49 STCC codes.

Key Route Requirements:

1. Wayside defective bearing detectors shall be placed a maximum of 40 miles apart on "Key Routes", or an equivalent level of protection may be installed based on improvement in technology.

2. Main Track on "Key Routes" must be inspected by rail defect detection and track geometry inspection cars or any equivalent level of inspection no less than two times each year; and sidings must be similarly inspected no less than one time each year.

3. Any track used for meeting and passing "Key Trains" must be Class 2 or better. If a meet or pass must occur on less than Class 2 track due to an emergency, one of the trains must be stopped before the other train passes.

4. Training of employees who handle shipments of hazardous materials on a "Key Route" must be conducted on an annual basis.

Prevention Section
of the NS Emergency Action Plan

PREVENTION:

A. OVERVIEW:

Norfolk Southern has transported over 200,000 loads of hazardous materials annually for the last several years. This traffic amounts to about 5% of the 3.8 to 4.0 million total carloads of traffic handled each year. However, hazardous material shipments tend to increase each year, and this means that our overall exposure to hazardous materials incidents also increase (see Appendix C). It logically follows that we must continue to be vigilant in our efforts to manage risk and reduce potential liabilities.

PREVENTION is the primary challenge and a key component of the Norfolk Southern Risk Management Program for Hazardous Materials. Prevention means minimizing risks while maximizing employee safety and protection of the environment. It can be achieved through effective training, regulatory and rules compliance, equipment and right-of-way maintenance, and risk assessment.

This section explains each part of the PREVENTION component:

- **Hazardous Materials Training**
- **Regulatory and Rules Compliance**
- **Industry Recommended Operating Practices (OT-55)**
- **Maintenance**
- **Risk Assessment**

B. HAZARDOUS MATERIALS TRAINING:

Effective employee training is an integral part of incident prevention. Training in hazardous materials is necessary, but all aspects of rail operations (i.e., annual operating rules classes, safety, etc.) must be addressed.

In 1993 in order to ensure compliance with DOT requirements for the training of all personnel involved in the transportation of hazardous materials (as mandated in the Final Rule on Docket HM-126F), Norfolk Southern developed a hazardous materials training program consisting of six modules. All employees (including supervisors) were required to complete Modules 1 and 2 on the recognition and identification of hazardous materials and safety training and emergency response, respectively. The four remaining modules were function specific and were taken by employees based on their job responsibilities.

Module 3 was established for train and engine crews and dispatchers; Module 4 was intended for clerical workers; Module 5 was primarily for mechanical employees; and Module 6 addressed transporting hazardous materials in company vehicles.

Approximately 20,000 Norfolk Southern employees participated in this 4-hour training program during 1993. Since then, hazardous materials recurrent training has been conducted annually even though federal regulations only require this training every other year. Environmental Awareness Training is also conducted for all employees on a regular basis.

C. REGULATORY AND RULES COMPLIANCE:

Complying with federal regulations and railroad operating rules (i.e., speed limits, signal aspects, etc.) are very important elements in preventing accidents. Many of the applicable regulations and railroad practices have been incorporated into Corporate Policies, Operating Rules, Safety and General Conduct Rules, and Division Timetables. All Division Timetables include instructions for handling hazardous materials (see Appendix I).

Transportation employees are taught a great deal of this information during annual operating rules classes conducted on each division. Compliance is verified by a comprehensive Operating Rules Checks Procedure, conducted by front line supervisors. Other departments conduct training through regular safety rules classes and special programs.

D. INDUSTRY RECOMMENDED OPERATING PRACTICES (OT-55):

In 1989, the Inter-Industry Rail Safety Task Force (IIRSTF), was formed to review both the risk management and public communication requirements associated with the rail movement of hazardous materials. This group consisted of the Association of American Railroads, the Chemical Manufacturer's Association, and the Railway Progress Institute. Group I of the IIRSTF developed a series of recommended rail operating practices for transporting hazardous materials.

These recommendations were issued in AAR Circular OT-55 under six main areas:

- **Key Trains**
- **Key Routes**
- **Yard Operating Practices**
- **Storage Distances**
- **Training**
- **TRANSCAER®**

Compliance with each of these areas is totally voluntary. It is not required by government regulations. However, Norfolk Southern has adopted OT-55 as part of its operating policy and practices.

Training has been discussed as a separate element of the Prevention component, and emergency response training and TRANSCAER® are addressed in the following section dealing with the Preparedness component. The remaining four elements - Key Trains, Key Routes, Yard Operating Practices, and Storage Distances - all deal directly with incident prevention and are discussed briefly in the following sections:

1. KEY TRAINS:

A "Key Train" is any train with five or more carloads of materials classified as a Poison Inhalation Hazard (Zone A or B); or a combination of twenty or more carloads containing Division 1.1 or 1.2 (Explosives), Division 2.1 (Flammable Gases), Poison Inhalation Hazard (Zone A or B) commodities, or Environmentally Sensitive Chemicals. Key Trains are identified on the train crew's shipping documents or determined by the conductor. Key Trains have certain restrictions such as maximum speed of 50 MPH and constraints related to meeting and passing other trains (see Appendix I, Timetable Rule D).

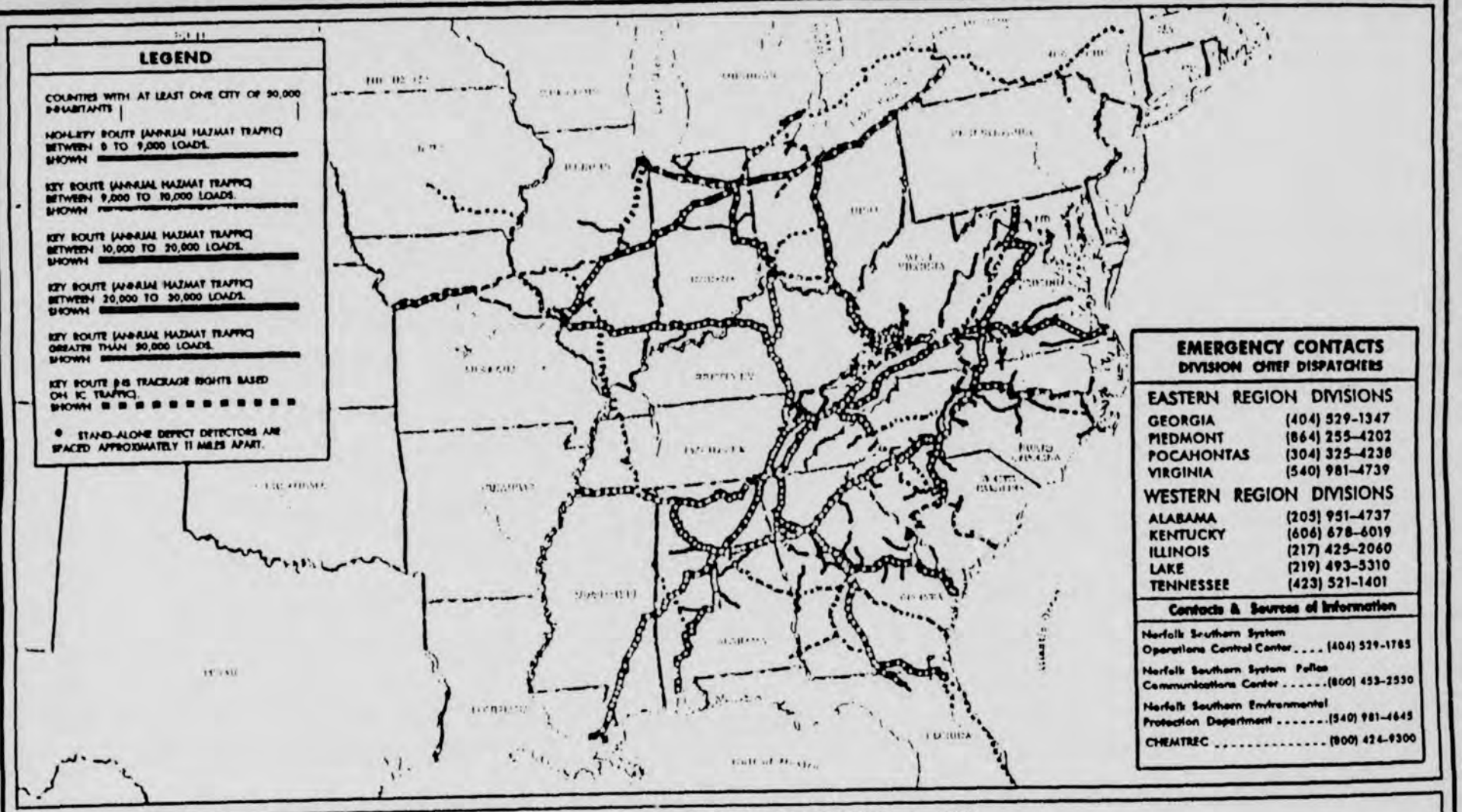
2. KEY ROUTES:

AAR Circular OT-55 defines a "Key Route" as any track with an annual volume of 10,000 car loads or intermodal tank loads of any hazardous materials. In May 1992, NS lowered the criterion to 9,000 loads to account for "border line" routes. Key routes are subject to minimum track maintenance requirements and maximum distances of 40 miles between track-side analyzers. Track-side analyzer separations average only 11-15 miles over the entire Norfolk Southern system.

Key Route maps are prepared annually by NS. These maps are color coded to show Key Routes and point out locations of wayside defective bearing detectors or track-side analyzers. There were a total of 5,492 Key Route miles over the system in 1995. The figure increased to 6,322 Key Route miles in 1996. A copy of the NS Key Route map based on 1996 hazardous materials traffic is shown on the next page.

NORFOLK SOUTHERN

RBDJR 4/1/1997



254,924 HAZMAT LOADS SYSTEMWIDE IN 1996

EXPLOSIVE (1.1-1.6)	=0.15%	FLAMMABLE / COMBUSTIBLE (3)	=16.47%	POISON (6.1)	=2.48%	MISC. DANGEROUS GOODS (9)	=15.13%
FLAMMABLE GASES (2.1)	=7.82%	FLAMMABLE SOLIDS (4.1-4.3)	=2.95%	RADIOACTIVE (7)	=0.09%	HAZARDOUS WASTE	= 1.10%
NON-FLAMMABLE GASES (2.2)	=6.10%	OXIDIZERS / PEROXIDES (5.1-5.2)	=3.49%	CORROSIVE MATERIALS (8)	=23.13%	F.A.K./MIXED LOADS	=17.86%
POISON GASES (2.3)	=4.32%						

KEY ROUTE DEFINITION: A KEY ROUTE IS WHERE MORE THAN 10,000 CARLOADS OF HAZMAT OR 4,000 CARLOADS 'P.I.M.', FLAMMABLE GAS, DIVISION 1.1 OR 1.2 EXPLOSIVES, OR ENVIRONMENTALLY SENSITIVE CHEMICALS MOVE EACH YEAR.

DIRECTORY: new/hazmat
FILE: pr' tfile.dgn
REF. FIL' /stem.dgn

INDEX :
NORFOLK SOUTHERN CORP. SHOWN
FOREIGN RAILROADS SHOWN

TITLE :

KEY ROUTES - SYSTEM OVERVI'

3. YARD OPERATING PRACTICES:

Some recommended practices deal with rail car switching operations that are more restrictive than certain federal regulations, in limiting the number of cars containing certain commodities that can be cut-off.

Norfolk Southern has even tighter restrictions by prohibiting any tank cars containing Flammable Gas from being cut-off in motion (see NS Switching Chart in Appendix I).

Another operating practice is limiting loaded placarded tank cars coupling speeds not to exceed 4 MPH. Slower coupling speeds prevent damage to cars, as well as reducing the number of "Non-Accident" hazardous materials releases, especially those resulting from ruptured frangible disks. The Norfolk Southern "Go For Four Program" has been very successful in reducing the number of overspeed couplings.

4. STORAGE DISTANCES:

Norfolk Southern has a general policy against transloading hazardous materials on company property. It is permitted only on an approval basis, and then must be covered under a lease agreement that includes spill containment measures, environmental protective language, and other requirements.

OT-55 defines the minimum distances from railroad mainline tracks for storage and handling of hazardous materials. For example, when a shipper/consignee loads or unloads Flammable Gas, it is recommended that this activity should occur no closer than 100 feet from the mainline. On Norfolk Southern, when storage or transloading of hazardous materials is permitted, 100 feet is the preferred distance from the mainline regardless of the hazardous commodity involved.

E. MAINTENANCE:

Maintenance of the railroad infrastructure (track, bridges, signals, etc.) and transportation equipment is an extremely important element of the Prevention process. Large annual expenditures are made to keep our rails in "tip-top" shape, to ensure the safest travel possible for all traffic, including hazardous materials. Although most tank cars are privately owned and Norfolk Southern is not responsible for their maintenance other than ensuring safe running gear, derailment of hazardous materials cars can result from a derailment caused by other cars in the train. Therefore, Norfolk Southern has an effective maintenance and inspection program in place to keep all railroad owned equipment up to the required standards of safety.

F. RISK ASSESSMENT:

Risk Assessment is a method of evaluating an organization's risk, benchmarking current practices, prioritizing where safety improvements are needed, and identifying potential risk reduction strategies. Group III of the IIRSTF has developed a Quantitative Risk Assessment (QRA) Model, which should be capable of analyzing individual risk reduction options such as train placement, train speed, etc. This model and various other risk assessment models will be evaluated and utilized as part of an ongoing program.

Conductors will ascertain that a copy is on the controlling unit at the start of each trip or tour of duty [172.602].

F. INSPECTION:

1. Rail cars carrying hazardous materials and each rail car immediately adjacent thereto, must be inspected before acceptance at originating point, when received in interchange, and at any point where a train is required to be inspected (including the point where the car is placed in the train). The cars may continue in transit only when the inspection indicates that the cars are in safe condition for transportation [174.9].

2. Before coupling to a placarded tank car, employees must by observation from the ground determine:
   - that there is no visible or detectable leak;
   - that all loading and unloading lines are disconnected;
   - that all platforms are raised or in the clear; and
   - that manway cover bolts, valve housing covers, bottom outlet caps, and plugs or caps on other openings are in their proper places.

3. Before any closed (box or hopper) car containing hazardous materials is coupled into or moved, the crew must determine that the doors are closed and securely fastened [174.104].

4. DOT specification tank cars not equipped with top and bottom shelf couplers will not be accepted in interchange, placed or pulled at industrial tracks, or moved in a train. The Mechanical Department must be notified of such cars when offered in interchange or when released from industries. This restriction applies to (1) all DOT specification tank cars; and (2) both loaded and empty cars.

5. Check to make sure the safety valve and tank test due dates are current (a car is within test until the last day of the month or year shown). These will appear on the right-hand side of the car under the specification marking. If they are not in date, notify your supervisor.

6. Intermodal tanks containing hazardous materials must not be accepted in interchange, pulled at an industrial track, or moved in a train, unless the DOT Proper Shipping Name of the material is legibly marked on two opposing sides of the tank, and this DOT Proper Shipping Name matches the one shown on the hazardous materials shipping paper for the tank [172.326(a)].

CSX CORPORATION

CENTRAL ADMINISTRATIVE UNIT
REC'D: 11/26/97
DOCUMENT # 11/26/97 10:08:02 PM

Suite 560, National Place
1331 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 783-8124

ENVIRONMENTAL DOCUMENT

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November 24, 1997

Elaine K. Kaiser, Chief
Section of Environmental Analysis
Surface Transportation Board
1925 K Street, N.W.
Washington, D.C. 20423-0001

Re: Finance Docket No. 33388/CSX
Post-Transaction Hazardous Materials Volumes

Dear Ms. Kaiser:

Pursuant to a request from the Section of Environmental Analysis ("SEA"), CSX provided SEA with information relating to the volumes and routing of hazardous materials on the pre-transaction CSX and Conrail systems. CSX also attempted to isolate the volumes and routings of hazardous materials on the post-transaction expanded CSX system within the traffic studies conducted for the Application, and provided SEA with these results.

When one compares the base and the estimated post-transaction volumes of hazardous materials provided by CSX, one finds some significant increases on certain line segments. This increase was surprising to CSX as CSX does not anticipate diverting significant volumes of hazardous materials from truck to rail, and does not anticipate major rerouting of existing traffic over the line segments where the greatest increases appear. Consequently, CSX undertook further analysis of the data.

Our reanalysis of the hazardous materials movements expected to be transported on the expanded CSX system after the transaction has revealed that the post-transaction numbers we provided to the SEA are overstated. Although our reanalysis is not yet complete, the overstatement appears to be in the range of 20 percent, or even greater. This overstatement appears to have resulted primarily from the fact that all movements of certain categories of commodities were presumed to be hazardous, even though only a small percentage of the movements were actually hazardous.

For example, all movements of motor vehicle body parts (STCC Code 37-14790) were counted as hazardous in the post-transaction traffic volumes, even though only a very small percentage of such parts are actually hazardous.

This overstatement occurred because the traffic files used for the traffic studies that estimated the post-transaction movements underlying the Operating Plan characterized movements according to their STCC commodity code, and not by their STCC transportation hazard code (STCC codes 48 and 49). This is the first time that SEA has required applicants to conduct a detailed analysis of post-transaction movements of hazardous materials, and the traffic studies that support the Application and the CSX Operating Plan were not designed with all of the information required for this purpose.

CSX is reviewing its hazardous materials analysis using a more refined method for translating STCC commodity codes into STCC transportation hazard codes. We anticipate that another two to three weeks is required to reanalyze the data and translate the information into traffic volumes by line segments. We regret that this overstatement occurred and will submit the revised information to SEA as soon as it is completed.

Sincerely,

Peter J. Shudtz mkt

Peter J. Shudtz

APPENDIX C
Traffic and Transportation

STB FD 33388 12-12-97 K 28629V5A 5/11

APPENDIX C
Traffic and Transportation

In June 1997, CSX Corporation (CSX) and Norfolk Southern Corporation (NS), together with Conrail Inc., filed a joint application with the Surface Transportation Board (Board) seeking authority for CSX and NS to acquire control of Conrail. As part of this Acquisition, CSX and NS would divide Conrail's assets between the two companies. The proposed transaction involves over 44,000 miles of rail lines and related facilities extending over a large portion of the eastern United States. CSX and NS have stated that the transaction would increase service capabilities, improve operating efficiency, and promote competition.

The proposed transaction would result in a rerouting of train traffic that would generate increases and decreases in traffic along some rail line segments and in some rail yards. The proposed diversion of highway truck shipments to the expanded CSX and NS systems could result in increased local truck traffic in and around intermodal facilities and a corresponding decrease in long-haul truck traffic. In addition, the rerouting and consolidation activities associated with the proposed Acquisition would involve some rail line abandonment and construction projects and expansion of some rail yards and intermodal facilities.

The Board has prepared an Environmental Impact Statement (EIS) to evaluate potential impacts that may result from the proposed Acquisition. As part of the EIS preparation process, a multi-disciplinary team conducted a comprehensive analysis of impacts to safety, traffic and transportation, energy, air quality, noise, cultural resources, hazardous materials, natural resources, land use/socioeconomics, and environmental justice. This Appendix contains SEA's approach to traffic and transportation issues, including:

- Effects on the regional and national roadway system resulting from diversion of freight from truck transport to rail transport.
- Effects on passenger rail traffic from increased freight train activity.
- Effect on the local roadway system resulting from increases in rail traffic on rail line segments, additional activity at intermodal facilities, new rail line connections and rail line abandonments.
- Effects on navigation.

SEA based its analysis on extensive field reconnaissance, and literature research. SEA conducted the evaluation according to accepted engineering procedures consistent with those used in other studies involving railroad mergers and acquisitions.

C.1 REGULATIONS AND GUIDANCE FOR IMPACT ANALYSIS

SEA performed analyses in accordance with the Board's regulations in 49 CFR 1105.7 (e) (2), which require a description of the effects of the proposed Acquisition on the local, regional and national transportation system.

C.2 SCREENING PROCESS

One of the first steps in developing the environmental analysis for the proposed Acquisition was to identify areas of potential impact through a threshold screening process. SEA identified rail line segments by applying the Board's air quality threshold standards of three additional freight trains per day in air quality nonattainment and eight additional freight trains per day in air quality attainment areas. SEA analyzed the effect on emergency vehicle response at those locations that specifically raised the issue and that met the air quality threshold standards. SEA identified intermodal facilities for analysis by using the Board's threshold standard of an increase of 50 or more trucks per day. SEA studied all new constructions and rail line abandonments proposed as part of the Conrail Acquisition.

C.3 DATA SOURCES AND TYPES

Data Sources and Types for Transportation Effects at Highway/Rail At-Grade Crossings

SEA obtained data for the identification and evaluation of highway/rail at-grade crossings from available Federal Railroad Administration (FRA) location and inventory databases. This data included the following factors for analysis:

- State.
- County.
- FRA crossing identification number.
- Number of trains.
- Average daily vehicular traffic.
- Train speed.

SEA supplemented the FRA database with field observations and information supplied by various state and local officials.

Data Sources and Types for Intermodal Facilities

SEA obtained data for the identification and evaluation of intermodal facilities from the railroads, which provided information regarding the levels of activity at the intermodal facilities. The railroads also provided ADT volumes along various roadways that would experience additional truck traffic. SEA supplemented ADT information provided by the railroads with data from state and local transportation and planning agencies. SEA conducted traffic counts along roadways where ADT information was not available.

Data Sources and Types for New Constructions and Rail Line Abandonments

SEA obtained data for the identification and evaluation of new constructions from the railroads, which provided descriptions of the new facilities; FRA databases, which provided information concerning affected highway/rail at-grade crossings; and state and local transportation and planning agencies which provided roadway ADT volumes.

C.4 ASSUMPTIONS, EVALUATION CRITERIA AND ANALYSIS

SEA also evaluated the increase in truck traffic resulting from additional activity at intermodal facilities, new constructions, and rail line abandonments.

C.4.1 System-Wide Truck to Rail Diversions

SEA analyzed the system-wide effect of the Conrail Acquisition on the diversion of freight from truck to rail. For this analysis, SEA used information provided by the railroads in the Environmental Report. SEA reviewed this information to verify its reasonableness.

Both CSX and NS estimated system-wide reductions in truck traffic resulting from the proposed Acquisition. The reductions are identified by the type of merchandise and by major highway corridor that would be served by rail as a result of the proposed Acquisition.

SEA reviewed the figures provided by the railroads and determined they are reasonable. SEA based their determination on review of the methodology, the current freight transport levels, the highway corridors that would be affected, and the relative attractiveness of freight rail transport compared to truck freight transport. SEA notes that, since CSX and NS independently developed their estimates of truck-to-rail diversions, there may be some double counting. However, given the volume of available truck traffic, the double counting, if it exists, would be minor and would not influence the analysis.

C.4.2 Passenger Rail Transportation Effects Analysis

SEA identified and evaluated the impacts of the proposed Acquisition on passenger rail operations, including both intercity rail (Amtrak) and commuter rail, that occur on the same rail line segments as freight rail operations. Specifically, SEA evaluated the ability of existing and future levels of passenger rail to continue operating after the Acquisition.

SEA evaluated all rail line segments that have passenger train traffic and would experience any increase in freight train traffic due to the proposed Acquisition. SEA assumed that the existing levels of freight and rail activity on specific rail line segments operate in a satisfactory manner. SEA also assumed that freight train traffic is scattered over the entire 24-hour period because freight trains operate with no fixed schedule.

SEA evaluated the impact of additional freight trains on intercity and commuter rail operations based upon present passenger train volumes and any planned additional passenger trains on the affected segments. In performing its analysis, SEA used the existing passenger rail schedules (both intercity and commuter rail). SEA also considered the following rail line segment factors in the evaluation:

- Number of tracks.
- Type of signaling.
- Passing siding capacity.
- Spacing of stations.
- Times and frequency of local freight service.

After reviewing the Operating Plans, operating agreements, physical characteristics, and train volumes and schedules, SEA generated a quantitative assessment of the capacity of the rail line segments that were identified for analysis through the screening process. SEA calculated the hourly capacity, expressed as trains per hour, of the affected rail line segments. SEA then added the increases in freight trains resulting from the proposed Acquisition to determine the ability of the rail line segments to accommodate the additional train traffic volumes. SEA considered the potential effect of the proposed Acquisition on planned passenger rail service increases on the affected segments. SEA also evaluated the potential effects of any Acquisition-related construction on passenger train operations.

Criteria of Significance for Transportation Effects to Passenger Rail Service

Based on the comparison of the increased train volumes and the capacity of the rail line segments, SEA determined the ability of the rail line segments to accommodate the higher volumes. SEA established a threshold of significance for potential impacts of freight operations on passenger rail service. SEA determined that a significant impact would occur if the increase in freight operations would result in the necessity of reducing passenger service by one or more trains per day. If the analysis showed that the rail line segments could accommodate the higher train volumes, SEA concluded that there will be no adverse impact on passenger train operations.

SEA found that current operating agreements between the passenger service operators and the freight railroads preclude the reduction in passenger service. Therefore, SEA assumed any significant impact resulting from increased post-Acquisition freight operations could occur only

following expiration of the current agreement. Section 3.6.4, Potential Mitigation Strategies for Passenger Rail Service, discusses potential measures to mitigate significant impacts.

Amtrak Intercity Service

Amtrak operates intercity passenger service on certain of the Applicants' rail lines, as well as on Amtrak-owned routes, in all states served by the Applicants. Attachment C-1 includes the line segments owned by the Applicants which Amtrak utilizes. This attachment presents the information in descending order of change in freight activity for those segments analyzed in connection with the Acquisition. The principal line segments owned by Amtrak are the 456-mile Northeast Corridor (jointly owned in two segments with the Metro-North Commuter Railroad and Massachusetts Bay Transportation Authority, respectively) between Boston, MA and Washington, DC, and the Michigan Line between Kalamazoo, MI and Porter, IN. The Northeast Corridor (NEC) includes the 104-mile branch from Philadelphia, PA to Harrisburg, PA and the 62-mile branch from New Haven, CT to Springfield, MA. Amtrak trains on the Northeast Corridor carry approximately 35,000 passengers per day.

Post Acquisition, the Applicants' routes utilized by Amtrak total 7,169 route miles. Of these route miles, 45% would have an increase of one or more freight trains per day, as indicated in Table C-1. For analysis purposes, SEA defines an increase as 1.0 or more freight trains per day post Acquisition.

Table C-1
Applicants' Route Miles Utilized by Amtrak
Post Acquisition Change in
Freight Trains per Day

Owner	Route Miles	Percent Increase	Percent Decrease/ No Change
CSX	4,983	49	51
NS	2,186	37	63
Total	7,169	45	55

Norfolk Southern and CSX, respectively, will assume responsibilities for services previously provided by Conrail in its Operating Agreement with Amtrak. CSX will replace Conrail's service to Amtrak on rail line segments primarily in New York State (Empire Service), Massachusetts and the District of Columbia. Norfolk Southern will replace Conrail's service to Amtrak on rail line segments primarily west of Harrisburg to Chicago via Alliance, OH and Cleveland, OH, as well as Detroit, MI - Chicago, IL. Norfolk Southern will assume the densest Amtrak segment on Conrail, the 39-mile Porter, IN - Chicago (21st Street) segment with 16

Amtrak trains. Post Acquisition, NS proposes approximately 6 fewer freight trains per day between Porter, IN and Chicago, IL.

Even with this reduction, there will be nearly 63 freight trains per day on this segment. While the segment has between two and four main tracks, with a maximum authorized speed of 79 mph for passenger trains, the segment requires skillful dispatching to minimize delays to passenger trains. East of Porter, IN, to Cleveland OH, the number of passenger trains decreases to four per day, the Lakeshore Limited and the Capitol Limited.

Conrail presently owns and operates approximately 794 route miles utilized by Amtrak trains and assigned to CSX in the proposed Acquisition. Of these route miles, about 327 miles or 41% are proposed to have an increase of at least one freight train per day. The largest proposed increase in freight trains per day on Conrail lines assigned to CSX and utilized by Amtrak is on the 2.2 mile segment in Washington, DC, where the increase is 10.7 freight trains per day. Of the 793 Conrail route miles utilized by Amtrak and assigned to CSX, only 46 miles (6%) also have commuter service trains. These commuter operators are the Massachusetts Bay Transportation Authority service to Worcester on Conrail's Boston Line, and Virginia Railway Express trains on Conrail's Landover Line (CP-RO and CP-Virginia Avenue, 2.2 miles) in the District of Columbia. The subsection "Commuter Service Operations" below discusses these two commuter train and Amtrak segments assigned to CSX in the proposed Acquisition.

Conrail presently owns and operates approximately 875 route miles utilized by Amtrak trains and assigned to Norfolk Southern in the proposed transaction. Of these route miles, approximately 263 miles, or 30%, are proposed to have an increase of at least one freight train per day, as summarized in Table C-2.

Table C-2
Conrail Route Miles Utilized by Amtrak
With a Post Acquisition Increase in
Freight Trains per Day

Post Acquisition Owner	Route Miles Utilized by Amtrak	Route Miles with an Increase in Freight Trains per Day	Percent of Route Miles with an Increase
CSX	794	327	41
NS	875	263	30
Total	1,669	590	35

CSX and Norfolk Southern in the proposed Acquisition would be assuming Conrail's Operating Agreement with Amtrak dated April 14, 1996 for a period of ten years, with a year-to-year extension until a new contract is entered into. This Operating Agreement requires that Conrail

make all reasonable effort to avoid delays to Amtrak trains and to deliver each train to all scheduled stations in accordance with its timetable. This contract provision entitles Conrail to earn incentive performance payments for Amtrak trains operating above 80% on-time at checkpoints in a given month. On-time performance below 70% will result in financial penalties.

As an indicator of extent of impact on the Amtrak route system operated on the Applicants post Acquisition, SEA established a standard to more closely assess those rail line segments in which Amtrak operates more than four trains per day, including commuter trains (Monday thru Friday) on six such joint segments, and the proposed increase is two or more freight trains per day. The result of this analysis is that about 20% of Amtrak route miles on CSX would be in this category, with about 8% for NS. Table C-3 lists these rail line segments.

Table C-3
Amtrak Route Miles With More Than Four Trains Per Day and A Proposed Increase of Two or More Freight Trains Per Day

Segment	Owner	Miles	Amtrak Trains	Freight Trains	Incr
Washington, DC-Alexandria, VA	CSX	9	42.4	28.6	10.7
Alexandria, VA - Fredericksburg, VA	CSX	46	28.0	23.4	7.1
Fredericksburg, VA-Richmond, VA	CSX	54	16.0	24.8	7.0
Richmond, VA - Selma, NC	CSX	168	10	25.5	5.9
Dillon, SC - Savannah, GA	CSX	226	6	20.6	3.9
Savannah, GA - Jessup, GA	CSX	52	8	22.8	5.5
Washington, DC-Point of Rocks, MD	CSX	43	20	30.8	7.0
Point of Rocks - Harpers Ferry, WV	CSX	13	20	41.6	8.3
Harpers Ferry, WV - Cherry Run, WV	CSX	32	12	40.6	7.3
Hoffmans, NY - Syracuse, NY	CSX	117	7.4	44.8	6.5
Syracuse, NY - Fairport, NY	CSX	73	7.1	45.1	5.3
Fairport, NY - Frontier Yard, NY	CSX	74	7.1	36.9	3.5
West Detroit, MI - Jackson, MI	NS	73	6	12.1	9.2
Jackson, MI - Kalamazoo, MI	NS	68	8	12.0	6.6
CP 501 - Indiana Harbor, IN	NS	2	14	60.3	16.9
Alexandria, VA - Manassas, VA	NS	26	16.3	13.3	2.0

Commuter Service Operations

SEA analyzed certain commuter train segments in connection with the Conrail Acquisition. Table C-4 summarizes these segments. The general basis for selection was whether the rail line segment was utilized for through freight train operations by the Applicants. This analysis did not generally include a rail line segment with only a local freight train service, based on the assumption that the Acquisition does not alter such operations in terms of commuter service. The commuter service operator, in many instances controls dispatching, maintenance, and other functions, on these rail lines. Freight service on such commuter rail lines is in accordance with the operating agreement providing trackage rights and freight train easement. Commuter authorities in Boston, New York, and Philadelphia purchased most of these rail lines directly from the Penn Central Estate in the early 1970's, or from Conrail in accordance with provisions of the Regional Rail Reorganization Act of 1973. Many such rail line segments no longer have direct rail-served freight service customers and, consequently, the commuter rail line has no freight service on all or part of the rail line. Amtrak is not a commuter operator, as construed in the Rail Passenger Service Act of 1970.

Table C-4
Commuter Rail Service Segments Included in Conrail Acquisition Analysis by SEA

Commuter Operator	Commuter Rail Line	Owner	Note
Massachusetts Bay Transportation Authority (MBTA)	Worcester	Conrail	Amtrak service also
	Northeast Corridor	MBTA/ Amtrak	Conrail local service only to MA/RI State Line; no Conrail service in RI.
	Old Colony	MBTA	Conrail local service only
Metro-North Commuter Railroad (MNCR)	New Haven	MNCR	Amtrak NEC operating on MNCR, New Rochelle, NY - New Haven, CT; Conrail local service only.
	Harlem	MNCR	Conrail limited local service (MO - White Plains, NY)
	Hudson	MNCR	Conrail through freight service to Oak Point, NY; Amtrak Empire Service route also.
	Port Jervis, NY	Conrail	Conrail Southern Tier Line

Table C-4
Commuter Rail Service Segments Included in Conrail Acquisition Analysis by SEA

Commuter Operator	Commuter Rail Line	Owner	Note
New Jersey Transit (NJT)	Northeast Corridor	Amtrak	Lane, NJ - Trenton, NJ NEC freight service segment
	North Jersey Coast	NJT	
	Raritan Valley	NJT/Conrail	Conrail Lehigh Line on NJT Raritan Valley route between NK - Aldene (5.5 Miles)
	Bergen/Port Jervis (Incl. Pascack Valley)	NJT in NJ, CR in NY	Conrail Southern Tier Line (Croxton, NJ-Port Jervis)
	Atlantic City	Amtrak/NJT	NEC segment Morrisville - Zoo and Delair Bridge
Southeastern Pennsylvania Transportation Authority (SEPTA)	Trenton, NJ - Newark, DE	Amtrak	NEC
	West Trenton	SEPTA/ Conrail	SEPTA dispatches segment on Conrail Trenton Line
	Downingtown	Amtrak	Conrail local service only
	Norristown	SEPTA	SEPTA dispatches interlocking at Norristown
	Fox Chase	SEPTA/ Conrail	Newtown Jct. - Cheltenham, Jct. Line segment owned by Conrail, dispatched by SEPTA on Conrail Trenton Line
	Lansdale	SEPTA	effect on Stoney Creek Branch freight service
Maryland rail commuter system (MARC)	Penn	Amtrak	NEC (Perryville- Baltimore-Washington, DC)
	Camden	CSX	
	Brunswick	CSX	Amtrak route also - (Capitol Limited)
Virginia Railway Express (VRE)	Fredericksburg	Conrail/CSX	Amtrak route also
	Manassas	Conrail/CSX/NS	Amtrak route also

Table C-4
Commuter Rail Service Segments Included in Conrail Acquisition Analysis by SEA

Commuter Operator	Commuter Rail Line	Owner	Note
Tri-County Commuter Rail Authority (Tri-Rail)	Miami	FL DOT, with CSX operational control	Mangonia Park - Miami
Northeast Illinois Railroad Corporation (Metra)	Orland Park (Southwest)	Metra/NS	6 interlockings, 5 of which not controlled by Metra

C.4.3 Transportation Effects at Highway/Rail At-Grade Crossings

Traffic delays at highway/rail at-grade crossings increase in direct proportion to increases in train volumes if other factors remain the same. SEA developed methods to quantify traffic delays at highway/rail at-grade crossings due to increased freight train traffic on existing rail line segments. For this analysis, SEA further refined the initial screening because some highway/rail at-grade crossings experience very low traffic volumes. SEA determined that the potential impact of freight train increases would be experienced by very few drivers at low-volume highway/rail at-grade crossings. For this reason, SEA eliminated roadways with average daily traffic (ADT) volumes below 5,000 vehicles from further study.

SEA estimated vehicular traffic delay at highway/rail at-grade crossings with 5,000 ADT or greater. Factors in the vehicle delay analysis included:

- The number of trains per day.
- The time it takes for a train to pass the highway/rail at-grade crossing.
- The roadway traffic volumes.

SEA calculated several values for each highway/rail at-grade crossing included in the analysis. SEA examined pre-Acquisition and post-Acquisition conditions for the following:

- Blocked crossing time per train.
- Crossing delay per stopped vehicle.
- Number of vehicles delayed per day.
- Maximum vehicle queue.

- Average delay for all vehicles.
- Traffic level of service (LOS).

The following sections describe the methods used to measure vehicle delay at highway/rail at-grade crossings.

Blocked Crossing Time per Train. SEA estimated the time required for a train to pass by the intersecting roadway. SEA called this the "blocked crossing time." SEA used this measurement in later calculations to determine the length of time drivers wait when trains pass an highway/rail at-grade crossing. SEA used the following equation, developed by SRI,[1] to estimate blocked crossing time for the highway/rail at-grade crossings:

$$Dc = \frac{L}{Vx88} + 0.50$$

where:

Dc = Time required for the train to pass the highway/rail at-grade crossing expressed in minutes. It includes time for gate closing and opening and is also referred to as the total time the crossing indication is activated.

L = Length of the train expressed in feet. SEA assumed train lengths: 5,600 feet for Conrail; 6,000 and 6,200 feet for CSX for pre- and post-Acquisition, respectively; and 4,869 and 5,000 feet for NS for pre- and post-Acquisition, respectively.

V = Train speed, in miles per hour.

88 = Conversion factor from miles per hour to feet per minute.

0.50 = Time in minutes for gate closing and opening prior to and after the passage of the train.

Crossing Delay per Stopped Vehicle. The "crossing delay per stopped vehicle" is the average amount of time a driver would have to wait at an highway/rail at-grade crossing when traffic is stopped to let a train pass. SEA assumed that drivers arrive at a crossing in a uniformly

[1] Stanford Research Institute. Prepared for the Federal Railroad and Highway Administration August 1974, RP-31, Volume 3, Appendix C.

distributed manner. SEA calculated the delay using the following equation from the *Transportation and Traffic Engineering Handbook*: [2]

$$D_A = D_C \times (Sc/Sc\text{-}Sq)$$

where:

D_A = Crossing delay per stopped vehicle, in minutes.

Dc = Time required for the train to pass the highway/rail at-grade crossing, including time for gate closing and opening, in minutes.

Sc = Capacity of uninterrupted flow (vehicles/minute).

Sq = Average arrival rate of traffic (vehicles/minute).

Number of Vehicles Delayed Per Day. The "number of vehicles delayed per day" represents the number of drivers in a 24-hour period that would be stopped for trains at highway/rail at-grade crossings. SEA estimated the number of vehicles delayed per day from the following equation:

$$T_D = \frac{Dc}{1,440} \times N \times ADT$$

where:

T_D = Number of vehicles delayed per day.

Dc = Time required for the train to pass the highway/rail at-grade crossing, including time for gate closing and opening, in minutes.

1,440 = Minutes per day.

N = Number of trains per day.

ADT = Average daily traffic from FRA database for highway/rail at-grade crossings.

Maximum Vehicle Queue. The "maximum vehicle queue" is the estimated longest line of autos, trucks, and buses that would occur if the Acquisition were approved. SEA assumed this would occur during the peak hour of roadway traffic. SEA estimated the maximum vehicle queue from the following equation:

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

$$Q = ADT \times 0.1 \times \frac{0.6}{60} \times \frac{Dc}{NL/2}$$

where:

Q = Maximum vehicle queue in peak hour (number of vehicles).

ADT = Average daily traffic from FRA database for highway/rail at-grade crossings.

0.1 = Ten percent factor to convert ADT to peak-hour traffic.

0.6 = Sixty percent factor to convert two-way traffic to peak-direction traffic.

60 = Factor to convert traffic volume per hour to traffic volume per minute.

Dc = Time required for the train to pass the highway/rail at-grade crossing, including time for gate closing and opening, in minutes.

NL = Number of highway lanes at the highway/rail at-grade crossing as reported by the FRA database.

2 = Factor to convert total number of roadway lanes to number of lanes in peak direction.

Blocked crossing time per train, delay per stopped vehicle, and maximum vehicle queue are single train values or events and the likelihood of additional events would increase with additional trains.

Average Delay for All Vehicles. The "average delay for all vehicles" is the estimated average delay experienced by all drivers at the affected highway/rail at-grade crossing. The average delay includes both drivers who would and would not be delayed by trains. SEA estimated the average delay for all vehicles from the following equation:

$$D_v = Dc \times N \times D_A \times \frac{24}{1{,}440} \times 0.0833$$

where:

D_v = Average delay for all vehicles, in minutes per vehicle.

Dc = Time required for the train to pass the crossing, including time for gate closing and opening, in minutes.

D_A = Crossing delay per stopped vehicle, in minutes.

N = Number of trains per day.

24 = Number of hours per day (constant).

1,440 = Number of minutes per day (constant).

0.0833 = Double the uniform hourly traffic as a proportion of daily traffic. This doubling factor results in a conservative estimate of vehicle delay.

Traffic Level of Service. Level of service (LOS) is a measure of the operational efficiency of the highway/rail at-grade crossing using procedures contained in the *Highway Capacity Manual*.[3] It is expressed as letter grades ranging from levels of service A (free flowing) to F (severely congested) and is measured by the average delay for all vehicles. The relationship of levels of service to the ranges of average delay is shown below.

Level of Service	Average Delay per Vehicle (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

Criteria of Significance for Transportation Effects at Highway/Rail At-Grade Crossings

SEA established criteria of significance for vehicular delay at highway/rail at-grade crossings based on the increase in crossing delay per vehicle and the increase in average delay for all vehicles.

For crossing delay per vehicle, SEA determined that a significant impact would occur if vehicle delay at highway/rail at-grade crossings increased by 30 seconds. This figure represents a driver tolerance threshold above which the driver perceives added delay for an intermittent blocked crossing event. The crossing delay per vehicle is not directly related to level of service since this delay represents only those individual drivers stopped at the highway/rail at-grade crossing.

SEA converted average delay for all vehicles directly to levels of service and established level of service C or better as satisfactory. SEA determined that a significant impact would result if the increase in average delay per vehicle resulted in (1) a post-Acquisition level of service E or F no matter the pre-Acquisition condition or (2) a reduction from a pre-Acquisition level of service C or better to a post-Acquisition level of service D or worse.

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[3] Transportation Research Board. *Highway Capacity Manual*. Special Report 209, Third Edition, updated 1994.

Criteria for Consideration of Separated Grade Crossings

SEA developed measures to identify the highway/rail at-grade crossings where a separated grade crossing would be warranted. SEA selected criteria to identify grade crossings where there would be a significant degradation in level of service as a result of the proposed Conrail Acquisition as well as added delay impacts as a result of significant increases in proposed train traffic. The option of mitigating these conditions through increased train speeds need also be unfeasible for consideration of grade separations.

The specific criteria that SEA determined must all be met to warrant a separated grade crossing are as follows:

1. Post-Acquisition roadway traffic level of service would decrease at least one LOS grade and the Post-Acquisition level of service would be at LOS E or F.

2. Acquisition-related train traffic would increase by at least eight trains per day.

3. Increased train speeds would appear not to be feasible or sufficient to mitigate Acquisition-related traffic delay impacts.

Emergency Vehicle Response

In many communities, response to emergency incidents by fire, police, and emergency medical service (EMS) vehicles require crossing railroad tracks at an highway/rail at-grade crossing. The potential exists for the crossing to be blocked by a train, delaying the emergency vehicle.

The evaluation of the effect of the Acquisition on emergency vehicle response involves the measurement of increased vehicle delay. SEA measured vehicle delay in two ways. One measure is the crossing delay per stopped vehicle. The second measure is the total daily crossing blockage time. The following sections describe the methods used to measure emergency vehicle delay at highway/rail at-grade crossings.

Crossing Delay Per Stopped Vehicle. The "crossing delay per stopped vehicle" is the average amount of time a driver would have to wait at an highway/rail at-grade crossing when traffic is stopped to let a train pass. This is described earlier in Section C.4.3 of this Appendix.

Total Daily Blocked Crossing Time. Total daily blocked crossing time is an indicator of the risk of delay since it indirectly measures the probability that an highway/rail at-grade crossing would be blocked at the time that an emergency vehicle would need to cross the tracks. SEA developed the total daily blocked crossing time by multiplying the blocked crossing time per train by the number of daily trains, as shown with the following equation.

$$D_B = N \times \left[\frac{L}{V \times 88} + 0.50 \right]$$

where:

D_B = Total daily blocked highway/rail at-grade crossing time, in minutes.

L = Length of train, expressed in feet.

N = Number of trains per day.

V = Train speed, in miles per hour.

88 = Conversion factor from miles per hour to feet per minute.

0.50 = Time in minutes for gate closing and opening prior to and after the passage of the train.

Note that the expression $\frac{L}{V \times 88} + 0.50$ represents the blocked crossing time per train, expressed in minutes.

For the system-wide analysis presented in Chapter 4, SEA described (1) the sensitivity of blocked crossing time to train speed and train length, and (2) the sensitivity of total daily blocked crossing times to train speed and number of trains per day for different train lengths.

Table C-5 shows the variation of average delay per stopped vehicle with changes in train length and train speed for various roadway ADT volumes and number of roadway travel lanes.

Table C-5
Blocked Crossing Times (in minutes)

ADT	Train Speed (mph)	Train Lengths (in feet)				
		4,869	5,000	5,600	6,000	6,200
Number of Lanes = 2						
5,000	10	6.39	6.55	7.27	7.75	8.00
	20	3.46	3.54	3.90	4.14	4.26
	30	2.48	2.54	2.78	2.94	3.02
	40	2.00	2.04	2.22	2.34	2.40
	50	1.70	1.73	1.88	1.97	2.02
10,000	10	6.80	6.97	7.73	8.25	8.50
	20	3.68	3.76	4.15	4.41	4.53
	30	2.64	2.70	2.95	3.12	3.21
	40	2.12	2.16	2.36	2.48	2.55
	50	1.81	1.84	2.00	2.10	2.15
15,000	10	7.26	7.44	8.26	8.81	9.08
	20	3.93	4.02	4.43	4.70	4.84
	30	2.82	2.88	3.15	3.34	3.43

Table C-5
Blocked Crossing Times (in minutes)

ADT	Train Speed (mph)	Train Lengths (in feet)				
		4,869	5,000	5,600	6,000	6,200
	40	2.27	2.31	2.52	2.65	2.72
	50	1.93	1.97	2.13	2.24	2.30
25,000	10	8.40	8.60	9.55	10.19	10.50
	20	4.55	4.65	5.12	5.44	5.60
	30	3.26	3.33	3.65	3.86	3.96
	40	2.62	2.67	2.91	3.07	3.15
	50	2.24	2.28	2.47	2.59	2.66
Number of Lanes = 4						
5,000	10	6.21	6.36	7.06	7.53	7.76
	20	3.36	3.44	3.79	4.02	4.14
	30	2.41	2.46	2.70	2.85	2.93
	40	1.94	1.98	2.15	2.27	2.33
	50	1.65	1.68	1.82	1.92	1.96
10,000	10	6.39	6.55	7.27	7.75	8.00
	20	3.46	3.54	3.90	4.14	4.26
	30	2.48	2.54	2.78	2.94	3.02
	40	2.00	2.04	2.22	2.34	2.40
	50	1.70	1.73	1.88	1.97	2.02
15,000	10	6.59	6.75	7.50	7.99	8.24
	20	3.57	3.65	4.02	4.27	4.39
	30	2.56	2.61	2.86	3.03	3.11
	40	2.06	2.10	2.28	2.41	2.47
	50	1.75	1.79	1.94	2.04	2.09
25,000	10	7.02	7.19	7.99	8.52	8.78
	20	3.80	3.89	4.28	4.55	4.68
	30	2.73	2.79	3.05	3.23	3.32
	40	2.19	2.24	2.43	2.57	2.63
	50	1.87	1.90	2.06	2.17	2.22

Table C-5 shows that along a roadway with an ADT volume of 5,000 and a train speed of 30 mph, average stopped delay per vehicle would increase from 2.48 minutes to 3.02 minutes, or by 0.54 minutes, if train length were increased from a pre-Acquisition length of 4,869 feet to a post-Acquisition length of 6,200 feet. If train speed increased to 40 mph as a result of a mitigation strategy, the same post-Acquisition 6,200-foot-long train would result in an average stopped delay per vehicle of 2.40 minutes, which would be less than the pre-Acquisition condition.

Table C-6 shows the variations in total daily blocked crossing time to train speed and number of trains per day for different train lengths.

Table C-6
Total Daily Blocked Times (min.)

TRAIN LENGTH = 4,869 feet

Train Speed	Number of Trains Per Day											
	5	10	15	20	25	30	35	40	45	50	55	60
10	30.16	60.33	90.49	120.66	150.82	180.99	211.15	241.32	271.48	301.65	331.81	361.98
20	16.33	32.66	49.00	65.33	81.66	97.99	114.33	130.66	146.99	163.32	179.66	195.99
30	11.72	23.44	35.16	46.89	58.61	70.33	82.05	93.77	105.49	117.22	128.94	140.66
40	9.42	18.83	28.25	37.66	47.08	56.50	65.91	75.33	84.75	94.16	103.58	112.99
50	8.03	16.07	24.10	32.13	40.16	48.20	56.23	64.26	72.30	80.33	88.36	96.40

TRAIN LENGTH = 5,000 feet

Train Speed	Number of Trains Per Day											
	5	10	15	20	25	30	35	40	45	50	55	60
10	30.91	61.82	92.73	123.64	154.55	185.45	216.36	247.27	278.18	309.09	340.00	370.91
20	16.70	33.41	50.11	66.82	83.52	100.23	116.93	133.64	150.34	167.05	183.75	200.45
30	11.97	23.94	35.91	47.88	59.85	71.82	83.79	95.76	107.73	119.70	131.67	143.64
40	9.60	19.20	28.81	38.41	48.01	57.61	67.22	76.82	86.42	96.02	105.62	115.23
50	8.18	16.36	24.55	32.73	40.91	49.09	57.27	65.45	73.64	81.82	90.00	98.18

TRAIN LENGTH = 6,000 feet

Train Speed	Number of Trains Per Day											
	5	10	15	20	25	30	35	40	45	50	55	60
10	36.59	73.18	109.77	146.36	182.95	219.55	256.14	292.73	329.32	365.91	402.50	439.09
20	19.55	39.09	58.64	78.18	97.73	117.27	136.82	156.36	175.91	195.45	215.00	234.55
30	13.86	27.73	41.59	55.45	69.32	83.18	97.05	110.91	124.77	138.64	152.50	166.36
40	11.02	22.05	33.07	44.09	55.11	66.14	77.16	88.18	99.20	110.23	121.25	132.27
50	9.32	18.64	27.95	37.27	46.59	55.91	65.23	74.55	83.86	93.18	102.50	111.82

TRAIN LENGTH = 6,200 feet

Train Speed	Number of Trains Per Day											
	5	10	15	20	25	30	35	40	45	50	55	60
10	37.73	75.45	113.18	150.91	188.64	226.36	264.09	301.82	339.55	377.27	415.00	452.73
20	20.11	40.23	60.34	80.45	100.57	120.68	140.80	160.91	181.02	201.14	221.25	241.36
30	14.24	28.48	42.73	56.97	71.21	85.45	99.70	113.94	128.18	142.42	156.67	170.91
40	11.31	22.61	33.92	45.23	56.53	67.84	79.15	90.45	101.76	113.07	124.38	135.68
50	9.55	19.09	28.64	38.18	47.73	57.27	66.82	76.36	85.91	95.45	105.00	114.55

Table C-6 indicates that total daily blocked crossing time would increase from 23.94 minutes to 47.88 minutes where the number of trains per day increase from 10 to 20, remain at 5,000 feet in length, and continue to operate at 30 mph. If the train length were to increase from 5,000 to 6,000 feet with the 20 trains per day, the total daily blocked crossing time would increase from 23.94 minutes to 55.45 minutes. SEA also estimated that if the train speed were increased to 40 mph with the 20 trains per day and 6,000 feet in length, the total daily blocked crossing time would increase from 23.94 minutes to 44.09 minutes.

SEA compared the pre-Acquisition and post-Acquisition vehicle delays for affected rail line segments and facilities and considered possible mitigation measures. This information is presented in Chapter 5 in the appropriate state discussions.

C.4.4 Intermodal Facilities Transportation Effects Analysis

This section describes the methods SEA used to analyze the effects of the proposed Acquisition on the local transportation system due to increased intermodal facility activity. SEA found that rail and truck activity at several intermodal facilities would increase due to Acquisition-related activities including truck-to-rail diversions, extended haul, and single-line service.

SEA used the Applicant's estimated annual increases or decreases in "lift" activity for each intermodal facility to project increased truck activity for each facility. Each lift represents one intermodal trailer or container lifted onto or off a flat car or Triple Crown Service wheel set. SEA used a conversion factor to equate the number of lifts to trucks. For CSX and Conrail facilities, CSX developed a conversion factor of 1.55 lifts per truck, based on system-wide averages. NS developed a conversion factor for NS facilities of 1.50 lifts per truck through their detailed analysis of Inman Yard intermodal facility in Atlanta, Georgia. NS determined that this facility was representative of their intermodal facilities, and SEA used the 1.50 factor for all NS facilities. The conversion factors developed by the railroads account for situations where trucks may enter or leave a facility without a load.

SEA divided the annual number of "lifts per year" by 365 days to convert to "lifts per day." SEA assumed that intermodal facilities never close and that the daily lift estimate directly correlates to the number of trucks. SEA also assumed each additional truck corresponds to two truck trips that would be added to the ADT volume of the access roadway. Therefore, SEA found that truck traffic volume changes on access roadways are directly related to the change in lift activity at each facility.

SEA performed an initial screening based on their calculations of increased lift activity. For the impact analysis, SEA evaluated intermodal facilities projected to have an increase of 50 trucks per day at the facility and an increase of 10 percent or more in ADT resulting from additional truck traffic along roadways leading to and from the facility.

SEA visited all intermodal facilities identified by the railroads that are expected to experience an increase of 50 or more trucks per day. SEA confirmed site conditions and identified the most probable access routes that truck drivers use between the facility and the nearest interstate or

other major highway through observations and discussions with local site operating personnel. SEA estimated the percentage of trucks that would follow the different routes and roadways to and from the facility if more than one potential route was identified. Where only a single route was available, SEA assumed all trucks would use that route. SEA obtained roadway ADT information from the ER and supplemented it with data from state and local transportation and planning agencies. SEA conducted traffic counts at roadway locations where ADT information was not available. Traffic volume and ADT sources are identified in the discussion for each site in Chapter 5.

SEA calculated a percentage increase in ADT for each access roadway based on the projected additional daily truck trips on each roadway using the following equation.

$$I = N / ADT$$

where:

I = Percent increase in the access roadway ADT.

N = Number of additional daily truck trips using the access roadway.

ADT = Access roadway ADT.

A discussion of traffic impacts due to increased truck activity for each intermodal facility SEA analyzed is presented in Chapter 5.

Criteria of Significance for Transportation Effects of Intermodal Facilities

Because of the many variations, SEA did not establish specific criteria to identify significant impacts resulting from activity increases at intermodal facilities. Rather, SEA considered each facility on a case-by-case basis. SEA's site-specific analysis used the increase of average daily traffic and the traffic volume capacity of the affected roadway to determine the ability or inability of the roadway to accommodate the additional traffic and whether mitigation would be recommended.

C.4.5 New Construction Transportation Effects Analysis

CSX and NS have planned several construction projects in order to provide efficient routing for train traffic. The two primary types of construction projects proposed as part of the proposed Acquisition are new rail connections between existing rail lines and new facilities, including fueling and intermodal facilities. Transportation impacts of new rail connections are related to highway/rail at-grade crossings. New rail connections can result in either physical changes to existing highway/rail at-grade crossings or construction of new highway/rail at-grade crossings. The physical changes to existing crossings involve adjusting locations of grade crossing warning devices and do not involve adding new track to the crossing. Since new rail connections have effects on highway/rail at-grade crossings that are similar to crossings along rail line segments, SEA used the same analytical methods for both. These methods are described in Section B.4.3

of Appendix B, "Safety," and in Section C.4.2 of this Appendix. SEA evaluated all new highway/rail at-grade crossings for vehicle delay and level of service. SEA used the same screening process for the evaluation of new highway/rail at-grade crossings along rail line segments.

SEA found that all of these construction projects are different and require different transportation analysis methods. For instance, the new rail connections may be (1) between existing rail lines at points where rail lines now intersect; (2) where existing rail lines are in proximity to each other; or (3) where double tracking is desired. Additionally, each construction project has unique site characteristics that SEA considered in the transportation analysis. For example, a new rail connection may actually require a new highway/rail at-grade crossing, widening of an existing grade crossing, or an upgrade of the crossing device (possibly to a grade separated condition).

SEA first visited the new construction sites to understand the type of construction proposed, verify the location and surrounding characteristics, and identify how and which transportation systems or elements may be affected. With this information, SEA determined the type and degree of potential impact to the local or regional transportation system. SEA reviewed potential mitigation options for feasibility relative to the construction project site to determine which strategies are most appropriate to minimize the transportation-related impact of the construction.

Since the primary impacts of new fueling and intermodal facility construction projects relate to railroad truck activities, SEA used the same analysis methods as those used for existing intermodal facilities with increased activity. (See Section C.4.3 of this Appendix.) Both fueling and intermodal facilities typically generate vehicular traffic. For this reason, SEA used the technical analysis approach for both facility types.

Criteria of Significance for New Constructions

SEA applied the same criteria of significance for new construction facilities as those used to determine significant impacts at intermodal facilities with increased vehicular traffic.

C.4.6 Rail Line Abandonments Transportation Effects Analysis

SEA determined that the primary traffic issue related to a rail line abandonment is the diversion of traffic from rail to truck transportation. A secondary issue is the elimination of highway/rail at-grade crossings.

Rail-to-Truck Diversions

The Applicants propose to abandon three rail line segments with a total length of 58.2 miles. Abandonment of rail lines typically causes the freight hauled on those rail lines to be trucked on highways. SEA evaluated rail line abandonments that met the energy analysis criteria of 49 CFR 1105.7 (e)(4). The criteria specify diversions from rail to motor carriage (trucks) of more than 1,000 rail car loads a year or an average of 50 rail car loads per mile per year for any part of the affected rail line.

CSX and NS identified the number of freight car loads that would be diverted to trucks for each rail line segment proposed for abandonment. SEA estimated freight car loads at four trucks per rail car load, a factor provided by the railroads. Using these numbers, SEA determined the number of additional truck trips per year on the local transportation system in the area. SEA then converted the additional yearly truck trips to additional daily trips to determine whether the truck trip increase would have a measurable effect on the daily traffic patterns on nearby roads.

Elimination of Highway/Rail At-Grade Crossings

When a rail line is abandoned and track removed, highway/rail at-grade crossings, with their associated vehicular delays and accident risk, are also eliminated. SEA calculated the reductions in vehicular delay and highway/rail at-grade crossing accident risk for all highway/rail at-grade crossings that would be eliminated. SEA used the same analytical methods as described in Section B.4.3 of Appendix B, "Safety," and Section C.4.2 of this Appendix for crossing safety and vehicular delays, respectively. Elimination of vehicular delays at highway/rail at-grade crossings are described individually for each rail line abandonment in Chapter 5.

Criteria of Significance for Abandonments

In their evaluation of abandonments, SEA determined that, by definition, rail line abandonments result in decreases in traffic. Thus, SEA did not develop or apply criteria of significance for proposed abandonment activities.

C.4.7 Navigation Effects Analysis

SEA reviewed the proposed activities that could affect navigable waters of the United States and thus be subject to regulations of the U.S. Coast Guard (Coast Guard) and/or the U.S. Army Corps of Engineers (ACOE). Any new bridge or alterations to an existing bridge over navigable waters must be approved by the U.S. Coast Guard. Permits would be required from the Corps of Engineers for any fill placed in waters of the U.S. or work that may affect navigation in connection with such activities. Additionally, increased operations of movable bridges could have a potential effect on navigation.

SEA obtained data from the Federal Railroad Administration (FRA) on all existing railroad bridges over navigable waters and within the jurisdiction of the Coast Guard. SEA identified 181 movable bridges on CSX, NS, and Conrail lines. SEA then compared the locations of these bridges with those rail line segments which would meet or exceed the Board's threshold of an increase of more than three trains per day, or a 50 percent changes in tonnage as a result of the proposed Acquisition.

SEA considered activity changes on rail line segments and also proposed abandonments in determining this potential effect. This screening resulted in SEA identifying 13 bridges on 10 segments and one abandonment that warranted further analysis. These 13 bridges are located in six states and the District of Columbia. Table C-7 describes the locations and attributes of these bridges.

Table C-7
Bridges Evaluated for Navigation Effects

SEA I.D. No.	Segment Name	Waterway	City	State	Current Railroad	FRA Record No.	River Mile	Bridge Type	Increase in Trains	% Change Mgmt.
Rail Line Segments										
C-001	Anacostia-Virginia Ave.	Anacostia River	Washington	DC	CR	34	3.4	VL	9.3	12
C-023	Pine Jct.-Barr Yd.	Grand Calumet	Hammond	IN	CSX	583	10.7	B	5.7	58
C-023	Pine Jct.-Barr Yd.	Indiana Harbor	East Chicago	IN	CSX	691	301		5.7	58
C-040	Carlton-Toledo	Maumee River	Toledo	OH	CSX	850	1.1	SW	11.2	61
C-090	Amqui-Nashville	Cumberland River	Nashville	TN	CSX	413	190.4	SW	7.6	30
C-103	S. Richmond-Weldon, NC	Appomattox River	Hopewell	VA	CSX	45	2.5	SW	4.6	18
N-050	Ridgewood Jct.-Croxton	Hackensack Ri er	Secaucus	NJ	CR*	**		D	3.2	
N-075	Cleveland-Ashtabula	Cuyahoga River	Cleveland	OH	NS	424	3.3	VL	23.6	213
N-080	Vermillion-Cleveland	Black River	Lorain	OH	NS	126	1.2	VL	20.6	81
N-086	Miami-Airline	Maumee River	Toledo	OH	CR	852	5.9	SW	8.6	10
S-032	PN-Bayway	Elizabeth River	Elizabeth	NJ	CR	485	0.7	FB	5.3	62
S-042	South Philadelphia-Field	Schuylkill River	Philadelphia	PA	CR	91594	5.5	SW	12.9	303
S-042	South Philadelphia-Field	Schuylkill River	Philadelphia	PA	CR	91317	5.5	SW	12.9	303
Rail Line Abandonments										
	Toledo Pivot Bridge	Maumee River	Maumee	OH	CSX	851	1.9	SW	n/a	na

Bridge Type: VL = Vertical lift. B=Basque. SW = Swing. D = Draw. FB = Fixed Bascule.
*Operated by NJ Transit
** Not in FRA database

SEA reviewed the Applicants' Operating Plans and proposed improvements plans, and contacted the appropriate district office of the Coast Guard to determine if any alterations or modifications to the structures would be necessary in order to accommodate the proposed increases in railroad operations. SEA also reviewed the Operating Plans to assess if the Applicants' proposed any changes in rail service to ports.

Criteria of Significance for Transportation Effects to Navigation

Because Coast Guard rules determine that waterborne navigation has the right-of-way at movable bridges, there would be no impact on waterborne navigation from Acquisition-related changes in train traffic. Therefore, SEA did not establish criteria of significance.

Attachment C-1

Rail Line Segments with Passenger Service, in Descending Order of Change in Freight Activity

Attachment C-1

Rail Line Segments with Passenger Service, in Descending Order of Change in Freight Activity

SEG ID	OWNERSHIP		SEGMENT DESCRIPTION				SEG LENGTH (mi.)	PSGR & FRT TRAIN DATA						
								1995 BASE			POST ACQ			
	PRE ACQ	POST ACQ	BETWEEN		AND			PSGR TRN	FRT TRN	TOTAL	PSGR TRN	FRT TRN	TOTAL	Δ
C-066	CSX	CSX	Deshler	OH	Willow Creek	IN	174	2.0	21.4	23.4	2.0	47.7	49.7	26.3
C-068	CSX	CSX	Greenwich	OH	Willard	OH	12	2.0	32.5	34.5	2.0	55.2	57.2	22.7
C-075	CSX	CSX	Willard	OH	Fostoria	OH	37	2.0	32.5	34.5	2.0	54.0	56.0	21.5
N-081	CR	NS	White	OH	Cleveland	OH	11	2.0	12.5	14.5	2.0	29.7	31.7	17.2
N-042	CR	NS	Control Pt 501	IN	Indiana Hbr	IN	1	14.0	43.4	57.4	14.0	60.3	74.3	16.9
C-027	CSX	CSX	Willow Creek	IN	Pine Jct	IN	12	2.0	20.1	22.1	2.0	36.6	38.6	16.5
N-077	CR	NS	Oak Harbor	OH	Miami	OH	22	4.0	48.0	52.0	4.0	61.5	65.5	13.5
C-002	CR	CSX	Virginia Ave	DC	Potomac Yard	VA	6	44.5	17.9	62.4	44.5	28.6	73.1	10.7
C-086	CSX	CSX	Sinns	PA	Rankin Jct	PA	9	2.0	30.8	32.8	2.0	40.2	42.2	9.4
N-121	CR	NS	West Detroit	MI	Jackson	MI	74	6.0	2.9	8.9	6.0	12.1	18.1	9.2
N-086	CR	NS	Miami	OH	Airline	OH	2	4.0	55.4	59.4	4.0	64.0	68.0	8.6
C-036	CSX	CSX	Pt of Rocks	MD	Harpers Ferry	WV	13	25.0	33.3	58.3	25.0	41.6	66.6	8.3
S-040	AMTK	AMTK	Arsenal	PA	Davis	DE	25	131.0	2.3	133.3	131.0	10.5	141.5	8.2
S-001	AMTK	AMTK	Davis	DE	Perryville	MD	21	73.0	4.5	77.5	73.0	12.4	85.4	7.9
S-030	AMTK	AMTK	Lane	NJ	Union	NJ	7	277.0	3.4	280.4	277.0	11.0	288.0	7.6
S-031	AMTK	AMTK	Midway	NJ	Morrisville	PA	17	175.0	3.4	178.4	175.0	11.0	186.0	7.6
S-033	AMTK	AMTK	Union	NJ	Midway	NJ	22	189.0	3.4	192.4	189.0	11.0	200.0	7.6
C-202	CSX	CSX	Harpers Ferry	WV	Cherry Run	WV	32	12.0	33.3	45.3	12.0	40.6	52.6	7.3
C-101	CSX	CSX	Fredericksburg	VA	Potomac Yard	VA	49	30.0	16.3	46.3	30.0	23.4	53.4	7.1
C-003	CSX	CSX	Washington	DC	Pt of Rocks	MD	43	20.0	23.8	43.8	20.0	30.8	50.8	7.0
C-081	CSX	CSX	New Castle	PA	Youngstown	OH	18	2.0	32.6	34.6	2.0	39.6	41.6	7.0
C-102	CSX	CSX	Richmond	VA	Doswell	VA	24	18.0	17.8	35.8	18.0	24.8	42.8	7.0
C-031	CSX	CSX	Alexandria Jct	MD	Washington	DC	5	22.0	23.9	45.9	22.0	30.8	52.8	6.9
N-092	CR	NS	Harrisburg	PA	Marysville	PA	9	4.0	42.4	46.4	4.0	49.1	53.1	6.7
C-100	CSX	CSX	Doswell	VA	Fredericksburg	VA	37	18.0	16.2	34.2	18.0	22.6	40.8	6.6
C-736	CR	CSX	Syracuse	NY	Syracuse Jct	NY	6	9.0	40.0	49.0	9.0	46.6	55.6	6.6
C-737	CR	CSX	Syracuse Jct	NY	Solvay	NY	2	9.0	38.2	47.2	9.0	44.8	53.8	6.6
N-120	CR	NS	Jackson	MI	Kalamazoo	MI	67	8.0	5.4	13.4	8.0	12.0	20.0	6.6
C-053	CR	CSX	Hoffmans	NY	Utica	NY	66	7.4	38.3	45.7	7.4	44.8	52.2	6.5
C-735	CR	CSX	Utica	NY	Syracuse	NY	51	9.0	36.9	45.9	9.0	43.4	52.4	6.5
N-497	CR	NS	Kalamazoo	MI	Porter	IN	97	8.0	0.7	8.7	8.0	7.0	15.0	6.3
S-011	AMTK	AMTK	Bowie	MD	Landover	MD	8	117.0	3.2	120.2	117.0	9.3	126.3	6.1
C-060	CR	CSX	Ashtabula	OH	Quaker	OH	47	2.0	48.3	50.3	2.0	54.2	56.2	5.9
C-334	CSX	CSX	Weldon	NC	Rocky Mt	NC	37	10.0	19.6	29.6	10.0	25.5	35.5	5.9
C-346	CSX	CSX	Savannah	GA	Jesup	GA	52	8.0	17.3	25.3	8.0	22.8	30.8	5.5
C-051	CR	CSX	Chili	NY	Frontier	NY	51	7.1	40.6	47.7	7.1	45.9	53.0	5.3
C-738	CR	CSX	Solvay	NY	Lyons	NY	42	9.0	39.5	48.5	9.0	44.8	53.8	5.3
C-739	CR	CSX	Lyons	NY	Fairport	NY	23	9.0	39.8	48.8	9.0	45.1	54.1	5.3
S-010	AMTK	AMTK	Baltimore	MD	Bowie	MD	29	117.0	2.4	119.4	117.0	7.7	124.7	5.3
C-033	CSX	CSX	Cumberland	MD	Sinns	PA	133	2.0	27.4	29.4	2.0	32.5	34.5	5.1
C-740	CR	CSX	Fairport	NY	Rochester	NY	11	9.0	31.8	40.8	9.0	36.5	45.5	4.7
C-103	CSX	CSX	S Richmond	VA	Weldon	NC	82	10.0	18.4	28.4	10.0	23.0	33.0	4.6
N-344	NS	NS	Meridian	MS	Oliver Jct	LA	194	2.0	9.1	11.1	2.0	13.5	15.5	4.4
N-317	NS	NS	Montview	VA	Altavista	VA	21	2.0	15.4	17.4	2.0	19.6	21.6	4.2
N-047	CR	NS	Indiana Harbor	IN	South Chgo	IL	8	16.0	41.1	57.1	16.0	45.2	61.2	4.1
N-063	CR	NS	Campbell Hall	NY	Port Jervis	NY	30	18.0	7.9	25.9	18.0	12.0	30.0	4.1
C-037	CSX	CSX	Relay	MD	Jessup	MD	7	22.0	33.1	55.1	22.0	37.0	59.0	3.9
C-206	CSX	CSX	Fostoria	OH	Deshler	OH	26	2.0	34.0	36.0	2.0	37.9	39.9	3.9
C-341	CSX	CSX	Florence	SC	Lane	SC	49	6.0	12.7	18.7	6.0	16.6	22.6	3.9
C-344	CSX	CSX	Ashley Jct	SC	Yemassee	SC	54	6.0	16.7	22.7	6.0	20.6	26.6	3.9
C-345	CSX	CSX	Yemassee	SC	Savannah	GA	47	6.0	12.2	18.2	6.0	16.1	22.1	3.9
C-343	CSX	CSX	St Stephen	SC	Ashley Jct	SC	39	6.0	12.7	18.7	6.0	16.5	22.5	3.8
N-263	CR	NS	Pitcairn	PA	Jacks Run	PA	18	4.0	32.3	36.8	4.0	36.6	40.6	3.8
C-034	CSX	CSX	Jessup	MD	Alexandria Jct	MD	17	22.0	33.4	55.4	22.0	37.1	59.1	3.7
C-342	CSX	CSX	Lane	SC	St Stephen	SC	8	6.0	16.2	22.2	6.0	19.9	25.9	3.7
N-084	CR	NS	Alliance	OH	White	OH	46	2.0	26.4	28.4	2.0	30.1	32.1	3.7
S-041	AMTK	AMTK	Morrisville	PA	Zoo	PA	29	145.0	3.4	148.4	145.0	7.1	152.1	3.7
C-741	CR	CSX	Rochester	NY	Chili	NY	13	9.0	33.4	42.4	9.0	36.9	45.9	3.5
C-340	CSX	CSX	Dillon	SC	Florence	SC	31	6.0	15.6	21.6	6.0	19.0	25.0	3.4
N-050	CR	NS	Croxton	NJ	Ridgewood Jct	NJ	17	64.0	4.7	68.7	64.0	7.9	71.9	3.2
N-498	NS	NS	IC 95th St	IL	Gibson City	IL	99	4.0	2.0	6.0	4.0	5.2	9.2	3.2
C-032	CSX	CSX	Baltimore	MD	Relay	MD	7	22.0	39.6	61.6	22.0	42.7	64.7	3.1
C-063	CSX	CSX	Cincinnati	OH	Hamilton	OH	21	1.0	28.2	29.2	1.0	31.2	32.2	3.0
N-062	CR	NS	Suffern	NY	Campbell Hall	NY	35	18.0	4.7	22.7	18.0	7.7	25.7	3.0
N-064	CR	NS	Ridgewood Jct	NJ	Suffern	NY	11	94.0	7.6	101.6	94.0	10.6	104.6	3.0
C-336	CSX	CSX	Contentnea	NC	Selma	NC	22	10.0	18.2	28.2	10.0	21.0	31.0	2.8
C-087	CR	CSX	Buffalo	NY	Draw	NY	2	2.0	55.8	57.8	2.0	58.5	60.5	2.7
C-335	CSX	CSX	Rocky Mt	NC	Contentnea	NC	19	10.0	19.6	29.6	10.0	22.1	32.1	2.5
C-381	CSX	CSX	Jesup	GA	Folkston	GA	54	8.0	10.3	18.3	8.0	12.4	20.4	2.1

Δ = Projected change as a result of the proposed merger

Attachment C-1
Rail Line Segments with Passenger Service, in Descending Order of Change in Freight Activity

C-387	CSX	CSX	Mobile	AL	New Orleans	LA	143	0.8	20.6	21.4	0.8	22.7	23.5	2.1
C-203	CSX	CSX	Cherry Run	WV	Cumberland	MD	65	2.0	29.0	31.0	2.0	31.0	33.0	2.0
C-258	CSX	CSX	Hamilton	OH	Indianapolis	IN	99	0.9	3.0	3.9	0.9	5.0	5.9	2.0
C-674	CR	CSX	Indianapolis	IN	Kraft	IN	3	1.4	7.8	9.2	1.4	9.8	11.2	2.0
C-675	CR	CSX	Kraft	IN	Avon	IN	6	1.4	9.6	11.0	1.4	11.6	13.0	2.0
C-235	CSX	CSX	St Albans	WV	Barboursville	WV	29	0.9	10.9	11.8	0.9	12.8	13.7	1.9
N-315	NS	NS	Alexandria	VA	Manassas	VA	22	16.7	7.8	24.5	16.7	9.6	26.3	1.8
S-210	CR	SHARED	West Detroit	MI	Dearborn	MI	5	6.0	1.6	7.6	6.0	3.4	9.4	1.8
C-236	CSX	CSX	Barboursville	WV	Huntington	WV	10	0.9	13.4	14.3	0.9	14.9	15.8	1.5
C-339	CSX	CSX	Pembroke	NC	Dillon	SC	21	6.0	15.7	21.7	6.0	17.2	23.2	1.5
C-382	CSX	CSX	Jacksonville	FL	Baldwin	FL	18	2.8	21.9	24.7	2.8	23.3	26.1	1.4
C-385	CSX	CSX	Pensacola	FL	Flomaton	AL	43	0.8	9.9	10.7	0.8	11.3	12.1	1.4
C-400	CSX	CSX	Orlando	FL	Auburndale	FL	51	4.0	7.7	11.7	4.0	9.1	13.1	1.4
C-401	CSX	CSX	Auburndale	FL	Lakeland	FL	12	4.0	7.2	11.2	4.0	8.6	12.6	1.4
C-204	CSX	CSX	Youngstown	OH	Sterling	OH	79	2.0	32.6	34.6	2.0	33.9	35.9	1.3
C-237	CSX	CSX	Huntington	WV	Kenova	WV	8	0.9	15.5	16.4	0.9	16.8	17.7	1.3
C-402	CSX	CSX	Lakeland	FL	Winston	FL	4	4.0	17.6	21.6	4.0	18.9	22.9	1.3
C-403	CSX	CSX	Winston	FL	Plant City	FL	5	4.0	9.8	13.8	4.0	11.1	15.1	1.3
N-316	NS	NS	Manassas	VA	Montview	VA	142	2.2	13.7	15.9	2.2	15.0	17.2	1.3
S-238	AMTK	AMTK	Perryville	MD	Baltimore	MD	32	88.0	14.3	102.3	88.0	15.6	103.6	1.3
C-337	CSX	CSX	Selma	NC	Fayetteville	NC	49	6.0	20.4	26.4	6.0	21.6	27.6	1.2
C-234	CSX	CSX	Clifton Forge	VA	St Albans	WV	195	0.9	9.8	10.7	0.9	10.9	11.8	1.1
C-242	CSX	CSX	NJ Cabin	KY	Covington	KY	121	0.9	7.5	8.4	0.9	8.6	9.5	1.1
N-227	CR	NS	Frankfrd Jct	PA	Pavonia	NJ	4	26.0	4.7	32.7	28.0	5.7	33.7	1.0
C-238	CSX	CSX	Kenova	WV	Big Sandy Jct	WV	1	0.9	32.5	33.4	0.9	33.2	34.1	0.7
C-386	CSX	CSX	Flomaton	AL	Mobile	AL	59	0.8	25.1	25.9	0.8	25.8	26.6	0.7
C-389	CSX	CSX	Folkston	GA	Callahan	FL	22	8.0	43.9	51.9	8.0	44.6	52.6	0.7
C-690	CR	CSX	Buff Seneca	NY	Ashtabula	OH	123	2.0	50.1	52.1	2.0	50.8	52.8	0.7
N-318	NS	NS	Altavista	VA	Greensboro	NC	86	2.0	15.9	17.9	2.0	16.6	18.6	0.7
N-322	NS	NS	Austell	GA	Howell	GA	16	2.0	49.7	51.7	2.0	50.4	52.4	0.7
C-391	CSX	CSX	Baldwin	FL	Starke	FL	26	2.0	22.7	24.7	2.0	23.3	25.3	0.6
C-394	CSX	CSX	Plant City	FL	Uceta Yard	FL	17	4.0	9.1	13.1	4.0	9.6	13.6	0.5
C-205	CSX	CSX	Sterling	OH	Greenwich	OH	37	2.0	32.5	34.5	2.0	32.9	34.9	0.4
N-262	CR	NS	Marysville	PA	Pitcairn	PA	227	4.0	42.5	46.5	4.0	42.8	46.8	0.3
C-338	CSX	CSX	Fayetteville	NC	Pembroke	NC	31	6.0	22.1	28.1	6.0	22.2	28.2	0.1
C-676	CR	CSX	Avon	IN	Clermont	IN	4	1.4	8.8	10.2	1.4	8.9	10.3	0.1
C-677	CR	CSX	Clermont	IN	Crawfordsville	IN	34	1.4	7.4	8.8	1.4	7.5	8.9	0.1
N-308	CR	NS	Porter	IN	Control Pt 501	IN	20	14.0	69.4	83.4	14.0	69.5	83.5	0.1
N-347	NS	NS	Greensboro	NC	Raleigh Yd	NC	83	4.0	5.0	9.0	4.0	5.1	9.1	0.1
C-240	CSX	CSX	Ashland	KY	Russell	KY	4	0.9	32.5	33.4	0.9	32.5	33.4	0.0
C-253	CSX	CSX	Charlottesville	VA	Clifton Forge	VA	103	0.9	1.9	2.8	0.9	1.9	2.8	0.0
C-254	CSX	CSX	Munster	IN	Monon	IN	62	1.4	2.5	3.9	1.4	2.5	3.9	0.0
C-255	CSX	CSX	Monon	IN	Lafayette	IN	30	1.4	3.0	4.4	1.4	3.0	4.4	0.0
C-256	CSX	CSX	Lafayette	IN	Crawfordsville	IN	29	1.4	7.6	9.0	1.4	7.6	9.0	0.0
C-358	CSX	CSX	Mcbee	SC	Columbia	SC	108	2.0	4.4	6.4	2.0	4.4	6.4	0.0
C-392	CSX	CSX	Starke	FL	Vitis	FL	126	2.0	19.3	21.3	2.0	19.3	21.3	0.0
C-396	CSX	CSX	Jacksonville	FL	Palatka	FL	54	6.8	8.3	15.1	6.8	8.3	15.1	0.0
C-397	CSX	CSX	Palatka	FL	Sanford	FL	68	6.8	6.6	13.4	6.8	6.6	13.4	0.0
C-399	CSX	CSX	Sanford	FL	Orlando	FL	22	4.8	8.0	12.8	4.8	8.0	12.8	0.0
C-404	CSX	CSX	Auburndale	FL	Sebring	FL	47	6.0	11.3	17.3	6.0	11.3	17.3	0.0
C-405	CSX	CSX	Sebring	FL	W. Palm Bch	FL	103	6.0	15.6	21.6	6.0	15.6	21.6	0.0
C-406	CSX	CSX	W. Palm Bch	FL	Miami	FL	70	34.0	6.7	40.7	34.0	6.7	40.7	0.0
C-411	CSX	CSX	Rankin Jct	PA	Willow Grove	PA	11	2.0	1.7	3.7	2.0	1.7	3.7	0.0
C-466	CSX	CSX	Raleigh	NC	Hamlet	NC	97	2.0	8.2	10.2	2.0	8.2	10.2	0.0
C-623	CSX	CSX	Vitis	FL	Lakeland	FL	19	2.0	16.4	18.4	2.0	16.4	18.4	0.0
C-697	CR	CSX	Readville	MA	Boston	MA	9	150.0	0.1	150.1	150.0	0.1	150.1	0.0
C-698	CR	CSX	Mansfield	MA	Readville	MA	16	84.0	4.0	88.0	84.0	4.0	88.0	0.0
C-699	CR	CSX	Attleboro	MA	Mansfield	MA	7	48.0	4.0	52.0	48.0	4.0	52.0	0.0
C-700	CR	CSX	MA-RI State Line	RI	Attleboro	MA	6	26.0	2.0	28.0	26.0	2.0	28.0	0.0
C-701	CR	CSX	Bridgeport	CT	New Haven	CT	16	102.0	3.0	105.0	102.0	3.0	105.0	0.0
C-702	CR	CSX	Norwalk	CT	Bridgeport	CT	16	92.0	2.0	94.0	92.0	2.0	94.0	0.0
C-703	CR	CSX	New Rochelle	NY	Norwalk	CT	25	225.0	5.0	230.0	225.0	5.0	230.0	0.0
C-704	CR	CSX	Woodlawn	NY	New Rochelle	NY	5	212.0	2.0	214.0	212.0	2.0	214.0	0.0
C-705	CR	CSX	MO	NY	Woodlawn	NY	6	332.0	2.0	334.0	332.0	2.0	334.0	0.0
C-707	CR	CSX	Readville	MA	Walpole	MA	10	38.0	6.0	44.0	38.0	6.0	44.0	0.0
C-708	CR	CSX	Walpole	MA	Franklin	MA	9	32.0	2.0	34.0	32.0	2.0	34.0	0.0
C-709	CR	CSX	Transfer	MA	Tower	MA	10	46.0	2.0	48.0	46.0	2.0	48.0	0.0
C-729	CR	CSX	MO	NY	Poughkeepsie	NY	70	154.0	6.0	160.0	154.0	6.0	160.0	0.0
C-730	CR	CSX	Poughkeepsie	NY	Stuyvesant	NY	50	22.0	4.0	26.0	22.0	4.0	26.0	0.0
C-731	CR	CSX	Stuyvesant	NY	Rensselaer	NY	16	22.0	1.0	23.0	22.0	1.0	23.0	0.0
C-733	CR	CSX	Rensselaer	NY	W Albany	NY	4	14.0	3.4	17.4	14.0	3.4	17.4	0.0
C-734	CR	CSX	W Albany	NY	Hoffmans	NY	23	7.4	0.1	7.5	7.4	0.1	7.5	0.0
C-747	CR	CSX	Buffalo	NY	Black Rock	NY	7	7.0	1.6	8.6	7.0	1.6	8.6	0.0

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Rail Line Segments with Passenger Service, in Descending Order of Change in Freight Activity

C-760	CR	CSX	Newtown Jct	PA	Quakertown	PA	36	164.0	1.6	165.6	164.0	1.6	165.6	0.0
C-761	CR	CSX	Glenside	PA	Warminster	PA	8	42.0	1.6	43.6	42.0	1.6	43.6	0.0
C-762	CR	CSX	Jenkintown	PA	Neshaminy Falls	PA	10	48.0	1.6	49.6	48.0	1.6	49.6	0.0
C-763	CR	CSX	Lansdale	PA	Doylestown	PA	10	34.0	1.6	35.6	34.0	1.6	35.6	0.0
N-343	NS	NS	Burstal	AL	Meridian	MS	140	2.0	16.2	18.2	2.0	16.2	18.2	0.0
N-352	NS	NS	Raleigh Jct	NC	Goldsboro	NC	50	4.0	1.6	5.6	4.0	1.6	5.6	0.0
S-213	NJT	SHARED	Aldene	NJ	High Bridge	NJ	39	56.0	1.6	57.6	56.0	1.6	57.6	0.0
S-214	NJT	SHARED	Union	NJ	Red Bank	NJ	16	88.0	1.6	89.6	88.0	1.6	89.6	0.0
C-357	CSX	CSX	Hamlet	NC	Mcbee	SC	50	2.0	3.4	5.4	2.0	3.3	5.3	-0.1
C-359	CSX	CSX	Columbia	SC	Fairfax	SC	76	2.0	3.9	5.9	2.0	3.7	5.7	-0.2
C-725	CR	CSX	Springfield	MA	Westfield	MA	11	2.0	22.3	24.3	2.0	22.1	24.1	-0.2
C-726	CR	CSX	Westfield	MA	Selkirk	NY	85	2.0	24.3	26.3	2.0	24.1	26.1	-0.2
C-395	CSX	CSX	Callahan	FL	Jacksonville	FL	16	8.0	23.5	31.5	8.0	23.2	31.2	-0.3
C-723	CR	CSX	Worcester	MA	Palmer	MA	39	4.0	20.3	24.3	4.0	19.9	23.9	-0.4
C-724	CR	CSX	Palmer	MA	Springfield	MA	15	6.0	22.3	28.3	6.0	21.9	27.9	-0.4
N-324	NS	NS	Hayne Yd	SC	Howell	GA	181	2.0	16.9	18.9	2.0	16.5	18.5	-0.4
C-383	CSX	CSX	Baldwin	FL	Chattahoochee	FL	189	0.8	11.7	12.5	0.8	11.1	11.9	-0.6
C-384	CSX	CSX	Chattahoochee	FL	Pensacola	FL	161	0.8	10.3	11.1	0.8	9.7	10.5	-0.6
C-720	CR	CSX	Boston Beacon Park	MA	Framingham	MA	18	41.0	9.3	50.3	41.0	8.7	49.7	-0.6
C-767	CR	CSX	CP Newtown Jct	PA	CP Wood	PA	21	48.0	12.0	60.0	48.0	11.4	59.4	-0.6
N-264	CR	NS	Jacks Run	PA	Conway East	PA	16	4.0	50.4	54.4	4.0	49.8	53.8	-0.6
C-360	CSX	CSX	Fairfax	SC	Savannah	GA	62	2.0	12.4	14.4	2.0	11.6	13.6	-0.8
C-721	CR	CSX	Framingham	MA	Westboro	MA	12	14.0	15.3	29.3	14.0	14.4	28.4	-0.9
C-722	CR	CSX	Westboro	MA	Worcester	MA	11	14.0	15.3	29.3	14.0	14.4	28.4	-0.9
C-232	CSX	CSX	Hampton	VA	Rivanna Jct	VA	80	4.0	9.6	13.6	4.0	8.6	12.6	-1.0
C-748	CR	CSX	Black Rock	NY	Niagara Falls	NY	21	7.0	23.0	30.0	7.0	22.0	29.0	-1.0
N-320	NS	NS	Linwood	NC	Salisbury	NC	9	6.0	24.7	30.7	6.0	23.3	29.3	-1.4
N-323	NS	NS	Beaumont	SC	Hayne Yd	SC	2	2.0	19.2	21.2	2.0	17.6	19.6	-1.6
N-319	NS	NS	Greensboro	NC	Linwood	NC	41	6.0	20.2	26.2	6.0	18.3	24.3	-1.9
C-217	CSX	CSX	Waverly	MI	Porter	IN	110	2.0	4.8	6.8	2.0	2.8	4.8	-2.0
C-239	CSX	CSX	Big Sandy Jct	KY	Ashland	KY	6	0.9	32.5	33.4	0.9	30.5	31.4	-2.0
C-241	CSX	CSX	Russell	KY	NJ Cabin	KY	19	0.9	20.8	21.7	0.9	18.8	19.7	-2.0
N-342	NS	NS	Birmingham 50th St	AL	Burstal	AL	16	2.0	27.8	29.8	2.0	25.8	27.8	-2.0
N-303	CR	NS	Airline	OH	Butler	IN	68	4.0	50.4	54.4	4.0	48.2	52.2	-2.2
N-345	NS	NS	Oliver Jct	LA	KCS Shrewsbury	LA	11	2.0	17.1	19.1	2.0	14.9	16.9	-2.2
C-290	CSX	CSX	Cincinnati	OH	Covington	KY	6	0.9	35.9	36.8	0.9	33.6	34.5	-2.3
N-321	NS	NS	Salisbury	NC	Charlotte	NC	50	6.0	21.1	27.1	6.0	18.1	24.1	-3.0
N-338	NS	NS	Norris Yd	AL	Birmingham 50th St	AL	5	2.0	37.4	39.4	2.0	34.3	36.3	-3.1
C-688	CR	CSX	Draw	NY	Buff Crk Jct	NY	1	2.0	55.8	57.8	2.0	52.5	54.5	-3.3
C-689	CR	CSX	Buff Crk Jct	NY	Buff Seneca	NY	3	2.0	55.8	57.8	2.0	52.5	54.5	-3.3
C-742	CR	CSX	Frontier	NY	Buffalo	NY	4	9.0	52.8	61.8	9.0	49.5	58.5	-3.3
C-216	CSX	CSX	Grand Rapids	MI	Waverly	MI	26	2.0	8.2	10.2	2.0	4.5	6.5	-3.7
N-322	NS	NS	Charlotte	NC	Beaumont	SC	70	2.0	18.1	20.1	2.0	14.0	16.0	-4.1
C-768	CR	CSX	CP Wood	PA	Trenton	NJ	6	48.0	14.3	62.3	48.0	10.0	58.0	-4.3
N-337	NS	NS	Norris Yd	AL	Austell	GA	142	2.0	19.1	21.1	2.0	14.5	16.5	-4.6
N-294	CR	NS	Vermilion	OH	Oak Harbor	OH	43	4.0	48.3	52.3	4.0	41.4	45.4	-6.9
N-307	CR	NS	Elkhart	IN	Porter	IN	61	4.0	53.0	57.0	4.0	45.2	49.2	-7.8
N-275	CR	NS	Conway East	PA	Rochester	PA	5	4.0	57.1	61.1	4.0	48.7	52.7	-8.4
N-200	CR	NS	Oak Island	NJ	Aldene	NJ	8	56.0	21.5	77.5	56.0	12.5	68.5	-9.0
S-230	CR	SHARED	NK	NJ	Boundbrook	NJ	22	56.0	36.0	92.0	56.0	25.5	81.5	-10.5
N-285	CR	NS	Rochester	PA	Alliance	OH	57	2.0	37.9	39.9	2.0	26.3	28.3	-11.6
N-304	CR	NS	Butler	IN	Elkhart	IN	63	4.0	51.1	55.1	4.0	39.3	43.3	-11.8
N-293	CR	NS	Cleveland	OH	Vermilion (2)	OH	43	4.0	48.4	52.4	4.0	32.9	36.9	-15.5
N-309	CR	NS	South Chgo	IL	Ashland Ave	IL	9	16.0	28.5	44.5	16.0	12.3	28.3	-16.2
C-691	CR	CSX	Quaker	OH	Drawbridge	OH	8	2.0	53.4	55.4	2.0	12.9	14.9	-40.5

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APPENDIX D
Energy

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Energy

In June 1997, CSX Corporation (CSX) and Norfolk Southern Corporation (NS), together with Conrail Inc., filed a joint application with the Surface Transportation Board (Board) seeking authority for CSX and NS to acquire control of Conrail. As part of this Acquisition, CSX and NS would divide Conrail's assets between the two companies. The proposed transaction involves more than 44,000 miles of rail lines and related facilities extending over a large portion of the eastern United States. CSX and NS have stated that the transaction would increase service capabilities, improve operating efficiency, and promote competition.

The proposed transaction would result in a rerouting of train traffic that would generate increases and decreases in traffic along some rail line segments and in some rail yards. The proposed diversion of highway truck shipments to the expanded CSX and NS systems could result in increased local truck traffic in and around intermodal facilities and a corresponding decrease in long-haul truck traffic. In addition, the rerouting and consolidation activities associated with the proposed Acquisition would involve some rail line abandonment and construction projects and expansion of some rail yards and intermodal facilities.

The Board's Section of Environmental Analysis (SEA) has prepared an Environmental Impact Statement (EIS) to evaluate potential impacts that may result from the proposed Acquisition. As part of the EIS preparation process, a multi-disciplinary team conducted a comprehensive analysis of impacts to safety, traffic and transportation, energy, air quality, noise, cultural resources, hazardous materials, natural resources, land use/socioeconomics, and environmental justice. This Appendix focuses on SEA's approach to energy. SEA addressed the following major areas regarding energy:

- System-wide changes in fuel consumption.
- Effect of the proposed Acquisition on the transportation of energy resources.
- Effect of the proposed Acquisition on recyclable commodities.

D.1 OVERVIEW

The following sections discuss the process by which SEA identified and evaluated potential impacts to energy. This includes a discussion of applicable Federal and state regulations for impact analysis, the screening process, the types of data collected, and the assumptions and criteria applied to the data to determine if impacts resulting from the proposed Acquisition would be significant.

D.2 REGULATIONS AND GUIDANCE FOR IMPACT ANALYSIS

This energy impact analysis is based upon the Board's regulations (49 CFR 1105.7(e)(4)) which require descriptions of the following:

- The effect of the proposed action on transportation of energy resources.
- The effect of the proposed action on recyclable commodities.
- Whether the proposed action would result in an increase or decrease in overall energy efficiency.
- The change in energy consumption resulting from rail-to-truck diversions.

D.3 SCREENING PROCESS

The first step in the environmental analysis for the proposed Acquisition was to identify areas of potential impact through the threshold screening process.

The Board regulations set a threshold for the energy analysis for rail-to-truck diversions at 49 CFR 1105.7(4)(iv). If the proposed action would cause diversions from rail to truck of more than 1,000 rail carloads per year, or an average of 50 rail carloads per mile per year for any part of the affected line, Board regulations require that the resulting change in energy consumption be quantified. Board regulations also require providing the data and methods used for this calculation.

The only rail-to-truck diversions attributable to the proposed Acquisition are those associated with the NS abandonments, estimated to be 90 carloads per year, or less than two carloads per year on the affected lines. These diversions do not meet the thresholds for analysis as stipulated in the Board regulations. Therefore, SEA did not assess the energy effects of rail-to-truck diversions.

D.4 DATA SOURCES AND TYPES

SEA used the following reference sources as part of the evaluation process:

- Proposed CSX and NS operating plans and traffic studies.
- Verified Statements relating to traffic diversions and coal transportation in Volume 2 of the Railroad Control Application.
- CSX and NS fuel consumption and gross ton-mile data from 1995 and 1996.
- CSX and NS estimates of truck-to-rail diversions.

- Estimated fuel efficiency factor for trucks of 140 gross ton-miles per gallon.

D.5 ASSUMPTIONS, EVALUATION CRITERIA AND ANALYSIS

The overall goal of the energy analysis was to verify the energy analysis that was done for the initial Environmental Report (ER) in the Application and provide an overview of the system-wide changes in energy consumption that would result from the proposed Acquisition. SEA refined and expanded on the analyses that the Applicants presented in the ER to adequately verify their ER findings.

After verifying that the Board threshold screening was appropriately and accurately conducted, SEA estimated the change in system-wide energy consumption.

D.5.1 Overview of Energy Verification Process

SEA verified the following information contained in the Application's original Environmental Report (ER).

Transportation of Energy Resources

Numerous energy-producing materials are transported by rail including: coal, fuel oil, liquefied gases, wood products, chemical products, and various petroleum-based products. Of these materials, coal is the dominant energy resource CSX and NS transport.

SEA reviewed the CSX and NS operating plans and verified statements pertaining to the movement of coal to qualitatively assess if the proposed Acquisition would result in changes in the quantities of coal transported.

Recyclable Commodities

CSX and NS state in the ER that the proposed Acquisition would increase efficiency and competition which would enhance the transportation of recyclable commodities such as aluminum alloy scrap, iron or steel scrap, and waste paper. SEA reviewed the CSX and NS operating plans regarding potential changes in quantities of recyclable commodities transported, as well as any particular plans specifically affecting the transport of recyclable commodities.

Overall Energy Efficiency

In the ER, CSX and NS state that anticipated changes in fuel consumption from truck-to-rail diversions would result in a large overall reduction in the consumption of diesel fuel, and that changes from sources other than truck-to-rail diversions would be insignificant. SEA estimated the fuel consumption changes from types of actions other than truck-to-rail diversions to verify that the CSX and NS assumptions were valid. Specifically, SEA estimated changes from anticipated operational changes at rail yards and intermodal facilities. SEA did not evaluate rail-to-truck diversion because they did not meet the Board's threshold for analysis.

D.5.2 Environmental Impact Statement Energy Analysis

For the environmental impact statement, SEA estimated the system-wide change in fuel consumption due to anticipated truck-to-rail diversions and changes in operations at rail yards and intermodal facilities. SEA then compared the estimates to determine if changes in fuel consumption from sources other than truck-to-rail diversions were insignificant. SEA also considered the energy effects of anticipated vehicle delays at highway/rail at-grade crossings.

Energy Changes Resulting from Truck-to-Rail Diversions

The primary energy resource used when either truck or freight rail move is diesel fuel. Both modes use fuel at different rates and carry freight at different rates. To compare the fuel efficiency in terms of freight-carrying capacity, SEA used CSX and NS estimates of truck-to-rail diversions to estimate pre- and post-Acquisition fuel consumption changes attributable to these diversions. SEA quantified changes as gallons of diesel fuel consumed. SEA derived the fuel consumption estimates by the following processes:

Change in Annual Diesel Fuel Consumption by Rail (Diverted from Trucks)

Fuel efficiency for rail. SEA used CSX and NS fuel consumption and gross ton-mile data from 1995 and 1996 to estimate a fuel efficiency factor for the CSX and NS systems. SEA used a fuel efficiency factor of 726.8 GTM/gallon for the expanded CSX system and 702.9 GTM/gallon for the expanded NS system.

Gross ton-miles diverted to rail. SEA used estimates of gross ton-miles diverted from truck to rail derived from CSX and NS traffic models. With these data, SEA estimated the post-Acquisition fuel consumption for freight traffic diverted to rail (in gallons of diesel fuel) using the following formula:

$$\text{Fuel use by rail} = \frac{\text{Gross ton-miles diverted to rail}}{\text{Average fuel efficiency for rail system}}$$

Change in Annual Diesel Fuel Consumption by Trucks (Diverted to Rail)

Fuel efficiency for trucks. SEA applied an estimated fuel efficiency factor of 140 gross ton-miles per gallon which represents an average value for trucks involved in medium and long-distance hauls of various commodities.[1]

Gross ton-miles diverted from trucks. SEA used estimates of gross ton-miles diverted from truck to rail derived from CSX and NS traffic models. With these data, SEA estimated the post-Acquisition fuel consumption for rail traffic diverted from trucks (in gallons of diesel fuel) using the following formula:

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[1] Abacus Technology Corporation, 1991.

$$\text{Fuel use by trucks} = \frac{\text{Gross ton-miles diverted from truck}}{\text{Average fuel efficiency for trucks}}$$

With these calculations, SEA estimated the change in fuel consumption resulting from truck-to-rail diversions for each system using the following formula:

Change in fuel consumption = (Fuel use by rail) - (Fuel use by trucks)

SEA then calculated the total fuel consumption change from truck-to-rail diversions by summing the changes in fuel consumption attributable to each expanded railroad system.

Energy Changes from Operational Changes at Rail Yards

SEA estimated changes in diesel fuel consumption at all rail yards affected by the proposed Acquisition (not only those that met the Board's thresholds for analysis). SEA used the following data and assumptions (based on information CSX and NS provided and SEA's field observations) to estimate fuel consumption changes at rail yards:

- At CSX yards, 18.75 rail cars are switched per switch engine hour; at NS yards, 22.5.
- Rail yards operate 362 days per year.
- Switch engine locomotives consume 7.0 gallons of diesel fuel per hour.

SEA estimated annual fuel consumption from changes in rail yard operations using the following formula:

$$\text{Fuel consumption} = \frac{\text{rail cars switched (increase)}}{\text{day}} \times \frac{\text{switch engine hours}}{\text{rail car}} \times \frac{\text{362 days}}{\text{year}} \times \frac{\text{7.0 gallons}}{\text{hour}}$$

Energy Changes from Operational Changes at Intermodal Facilities

SEA estimated changes in diesel fuel consumption at all intermodal facilities affected by the proposed Acquisition (not only those that met the Board's thresholds for analysis). SEA used the following data and assumptions (based on information CSX and NS provided and SEA field observations) to estimate fuel consumption changes at intermodal facilities:

Changes in energy consumption at intermodal facilities come from four different types of activities:

- Over the Road (OTR) trucks.
- Lift equipment.
- Yard trucks.

- Switch engines.

Based on field observations, SEA estimated that switch engines would operate for about one hour per train processed and, therefore, would represent an insignificant change in fuel consumption. SEA estimated fuel consumption from anticipated changes in OTR truck, lift equipment, and yard truck activities at intermodal facilities.

OTR Trucks

SEA used the following data and assumptions (based on information CSX and NS provided and SEA's field observations) to estimate OTR trucks' fuel consumption at intermodal facilities:

- CSX and NS estimates of changes in OTR trucks per day at intermodal facilities.
- The average time a road truck is in an intermodal facility is 45 minutes.
- OTR trucks use 1.75 gallons per hour while in an intermodal facility.
- Intermodal facilities operate 362 days per year.

SEA estimated annual OTR truck fuel consumption using the following formula:

$$\text{Truck fuel consumption} = \frac{\text{change in trucks}}{\text{day}} \times \frac{\text{362 days}}{\text{year}} \times \frac{\text{45 minutes}}{\text{truck}} \times \frac{\text{1.75 gallons}}{\text{hour}} \times \frac{\text{hour}}{\text{60 min.}}$$

Lift Equipment

SEA used the following data and assumptions (based on information CSX and NS provided and SEA's field observations) to estimate lift equipment fuel consumption at intermodal facilities:

- CSX and NS estimates of changes in lifts at intermodal facilities.
- CSX facility lift equipment averages 0.38 gallons of diesel fuel per lift; NS facility lift equipment averages 0.54 gallons per lift.

SEA estimated annual intermodal facility lift equipment fuel consumption using the following formula:

$$\text{Lift equipment fuel consumption} = \frac{\text{changes in lifts}}{\text{year}} \times \frac{\text{gallons}}{\text{lift}}$$

Yard Trucks

SEA used the following data and assumptions (based on information CSX and NS provided and SEA's field observations) to estimate yard truck fuel consumption at intermodal facilities:

- CSX and NS estimates of changes in lifts at intermodal facilities.
- CSX facility yard trucks average 0.34 gallons of diesel fuel per lift; NS facility yard trucks average 0.20 gallons per lift.

SEA estimated annual yard truck fuel consumption using the following formula:

$$\text{Yard truck fuel consumption} = \frac{\text{changes in lifts}}{\text{year}} \times \frac{\text{gallons}}{\text{lift}}$$

Energy Consumption Changes from Highway/Rail At-Grade Crossing Delays

SEA estimated changes in fuel consumption from increased delays at highway/rail at-grade crossings with average daily traffic (ADT) greater than 5,000 vehicles on rail line segments that met the Board's thresholds for environmental analysis. These are the same at-grade crossings that SEA is analyzing for air quality. The estimate, while not in gallons of diesel fuel, allowed SEA to compare the scope and magnitude of the change in fuel consumption from crossing delays to other energy effects. Thus, SEA could consider the potential significance of the fuel consumption changes at highway/rail at-grade crossings.

SEA estimated a fuel consumption factor for idling vehicles of 0.65 gallons/hour.[2] The factor is a composite of idle fuel consumption rates for a representative variety of gasoline powered vehicles. SEA used the following formula to estimate the change in fuel consumption (in gallons of gasoline) from vehicles at highway/rail at-grade crossings which met the criteria discussed above:

Fuel consumption = Total increased delay (in hours) x delay fuel consumption factor (in gallons per hour)

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

D.6 MITIGATION

Since rail transport of freight is more fuel efficient than truck transport and the Acquisition is projected to result in a substantial shift of freight transport from truck to rail, no mitigation is necessary for energy use.

APPENDIX E
Air Quality

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Air Quality

In June 1997, CSX Corporation (CSX) and Norfolk Southern Corporation (NS), together with Conrail Inc., filed a joint application with the Surface Transportation Board (Board) seeking authority for CSX and NS to acquire control of Conrail. As part of this Acquisition, CSX and NS would divide Conrail's assets between the two companies. The proposed transaction involves over 44,000 miles of rail lines and related facilities extending over a large portion of the eastern United States. CSX and NS have stated that the transaction would increase service capabilities, improve operating efficiency, and promote competition.

The proposed transaction would result in a rerouting of train traffic that would generate increases and decreases in traffic along some rail line segments and in some rail yards. The proposed diversion of highway truck shipments to the expanded CSX and NS systems could result in increased local truck traffic in and around intermodal facilities and a corresponding decrease in long-haul truck traffic. In addition, the rerouting and consolidation activities associated with the proposed Acquisition would involve some rail line abandonment and construction projects and expansion of some rail yards and intermodal facilities.

The Board has prepared an Environmental Impact Statement (EIS) to evaluate potential impacts that may result from the proposed Acquisition. As part of the EIS preparation process, a multi-disciplinary team conducted a comprehensive analysis of impacts to safety, traffic and transportation, energy, air quality, noise, cultural resources, hazardous materials, natural resources, land use/socioeconomics, and environmental justice. This Appendix focuses on the STB Section of Environmental Analysis (SEA)'s approach to the air quality analysis. SEA addressed the following major areas:

- Changes in freight train engine emissions that result from operational changes on rail line segments.
- Changes in freight train, truck and heavy equipment emissions that result from operational changes at intermodal facilities.
- Changes in emissions from switch locomotives at rail yards.
- Changes in emissions resulting from diversion of freight from truck to rail.
- Changes in emissions resulting from idling motor vehicles at highway/rail at-grade crossings.

E.1 OVERVIEW

The following sections discuss the process by which SEA identified and evaluated potential impacts on air quality. This includes a discussion of applicable federal and state regulations, the screening process, the types of data collected, and the assumptions and criteria applied to the data to determine if impacts resulting from the proposed Acquisition would be significant.

E.2 REGULATIONS AND GUIDANCE FOR IMPACT ANALYSIS

The Clean Air Act (CAA), as amended, required the U.S. Environmental Protection Agency (EPA) to established National Ambient Air Quality Standards (NAAQS) for several air pollutants. EPA did this by reviewing health and welfare effects for each of the pollutants and publishing "criteria" documents that provide the basis for standards for each pollutant. The "criteria" pollutants, as they are known, for which NAAQS have been established, are carbon monoxide (CO), lead (Pb), nitrogen oxides (NOx), ozone (O_3, which is affected by emissions of volatile organic compounds or VOC and nitrogen oxides), particulate matter with a diameter of 10 microns or less (PM_{10}), and sulfur dioxide (SO_2).

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 (SIPs) that describe the measures that they will implement to attain and maintain compliance, at a minimum with NAAQS.

SEA considered the existing air quality of an area in determining whether emissions in a particular area could cause or contribute to air quality problems.

Compliance with NAAQS is typically established on a county or independent jurisdictional basis. The level of NAAQS compliance or noncompliance categorized by EPA is as follows:

- Attainment: currently meets NAAQS.
- Maintenance: currently meets NAAQS, but has previously been out of compliance.
- Nonattainment: currently does not meet NAAQS.

Nonattainment areas are further categorized by EPA according to the severity of their violation of NAAQS. This is the case for all ozone and for some PM_{10} and CO nonattainment areas in the study area.

For this study, the SEA used the attainment/maintenance/nonattainment area status through June 23, 1997, the date of application for the proposed Acquisition of Conrail by CSX and NS. Attachment E-1 provides a listing of all counties or jurisdictions in potentially affected states that had either a maintenance or nonattainment status for any pollutant on this date.

E.3 EVALUATION APPROACH

SEA evaluated the potential for air quality impacts for system-wide, regional, and county (or other independent jurisdictional) areas, using estimated air pollutant emissions increases (or decreases) for each of these geographic areas of interest.

At the county/jurisdiction level, SEA used the attainment/maintenance/nonattainment status of the area, together with the levels of emissions increase, to assess the significance of emissions increases. For jurisdictions where emissions would increase above screening levels, SEA compared changes in emissions due to the proposed Acquisition with existing emissions levels in the areas of interest, in order to assess the possible significance of the emissions increase.

SEA did not evaluate all counties or jurisdictions expected to be affected by the proposed Acquisition, but rather performed a screening process to identify those jurisdictions with emissions levels of potential concern. The screening process selected only counties/areas with substantial increases in railroad activities and emissions, and did not account for decreases in emissions due to factors such as rail-to-rail or truck-to-rail freight transfer.

SEA then performed a more detailed emission inventory analysis in the counties selected through the screening analysis. The detailed analysis considered both emissions increases and decreases in the counties selected for analysis, and thus is referred to here as a "netting" analysis, because it estimated the net emissions change (+/-) expected to result from the proposed Acquisition. The county screening process and emissions netting process is described in detail in Section E.6.

E.4 SYSTEM-WIDE EMISSIONS ESTIMATION

SEA based the system-wide emissions assessment on the following information:

- System-wide freight rail fuel use increases (provided by the railroads).
- System-wide truck freight fuel use decreases (provided by the railroads).
- Summation of emissions changes (+/-) calculated for every rail yard.
- Summation of emissions changes (+/-) calculated for every intermodal facility.
- Summation of emissions from highway/rail at-grade crossings with over 5000 vehicles/day and which cross a rail line segment on which activity changes would exceed Board thresholds.

In general, CSX and NS provided the projected activity level changes used for estimating emissions changes due to each of the above components. SEA then multiplied the respective activity levels by emission factors, which are defined as an amount of pollutant emitted per unit activity (e.g. per gallon of fuel burned, per unit time of operation, etc.), to obtain annual emissions estimates. SEA reviewed emission factors submitted by CSX and NS and emissions

factors available in EPA literature. SEA developed additional emission factors, where necessary, in selecting the most appropriate factors for use in this study.

Emissions factors used or developed for each of the above components are provided in Section E.7.

E.5 REGIONAL EMISSIONS ESTIMATION

SEA estimated net NOx (the pollutant of greatest concern) emissions for the Northeast Ozone Transport Region (OTR). The OTR consists of the northern counties of Virginia which are designated non-attainment for ozone, plus the entire states of Delaware, Maryland, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine. Emissions in the OTR were estimated by summing the following:

- Net emissions changes from all counties in the region that were analyzed in the detailed netting analysis (see Section E.6).
- Additional truck diversion emissions decreases in other counties in these states (based on estimated county-by-county truck miles avoided, provided by CSX and NS, and emission factors for truck freight diversion, provided in Section E.7).

E.6 COUNTY EMISSIONS ESTIMATION

E.6.1 Screening Process

The first step in developing the air quality analysis for the proposed Acquisition was to identify areas of potential impact through a screening process. This process allowed SEA to narrow down the 44,000 miles of track with their associated facilities in 24 states to a smaller group of rail line segments, rail yards, and intermodal facilities (facilities where freight is transferred between trains and trucks).

SEA based the screening process on analysis thresholds set by the Board (49 CFR 1105.7). Table E-1 shows the Board thresholds used to identify areas of potential air quality impact. Since the majority of potential air quality effects of the Acquisition are a result of either changes in traffic on the local road system or changes in train operations, Board thresholds were based on these factors.

Table E-1
Surface Transportation Board's Thresholds for Air Quality Analysis

Activity Site	Attainment Areas	Nonattainment or PSD Class I[a] Areas
Rail Line Segments	Increase of 8 trains per day or 100% increase in annual gross ton miles.	Increase of 3 trains per day or 50% increase in annual gross ton miles.
Rail Yards	Increase of 100% in carload activity per day.	Increase of 20% in carload activity per day.
Intermodal Facilities	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.	Increase of 50 trucks per day or 10% increase in average daily traffic volume on any affected road segment.

[a] Prevention of Significant Deterioration (PSD) Class 1 areas are EPA-designated locations, such as certain national parks, in which pristine air quality is considered to be a significant feature of the area, and regulations preventing air quality degradation are relatively stringent.

SEA estimated air pollutant emissions for any of the above activities that exceeded a threshold as appropriate to the attainment or nonattainment area in which the activity occurred. SEA based activity levels on the Operations Plans and supplemental information provided by CSX and NS as part of the application for the Conrail Acquisition. SEA found no PSD Class I areas to be affected by any rail activity increases. Attachment E-2 provides a listing, by state and county, of all of the above types of activities that are projected to exceed one or more of the Board's thresholds, and provides the calculated increases in emissions for each activity, based on activity levels provided by the Applicants and the emission factors shown in Section E.7.

SEA summed the emissions for each county or jurisdiction to provide total emissions for these "threshold" activities. SEA then compared these emissions totals to the emissions screening levels to determine whether a more detained emissions analysis should be conducted in each county with some "threshold" activity. SEA selected the emissions screening levels as the lower of either EPA New Source Review permitting thresholds (40 CFR 51.165 and 40 CFR 52.21), Title V operating permit thresholds (40 CFR 70), or General Conformity thresholds (40 CFR 51, Subpart W and 40 CFR 93, Subpart B). Table E-2 presents the selected county/jurisdiction emissions screening levels.

Table E-2
County/Jurisdiction Emissions Screening Levels

Pollutant	Area Designation[a]	Emission Screening Threshold (and Basis)[b]
Nitrogen Oxides (NO_x)	NO_2 Attainment/Maintenance or Ozone Marginal/Moderate NAA[a] Outside OTR [a]	100 (GC, TV)
	O_3 Serious NAA or Marg./Mod. NAA Inside OTR	50 (GC, TV)
	O_3 Severe NAA	25 (GC, TV)
Volatile Organic Compounds	O_3 Att./Maint. Outside OTR, or O_3 Marg./Mod. NAA Outside OTR	100 (GC, TV)
	O_3 Att./Maint. Inside OTR, or O_3 Marg./Mod. NAA Inside OTR, or O_3 Serious NAA	50 (GC, TV)
	O_3 Severe NAA	25 (GC, TV)
Carbon Monoxide	CO Att./Maint. or CO Marg./Mod. NAA	100 (GC, TV)
	CO Serious NAA	50 (TV)
Particles < 10 Microns (PM_{10})	PM_{10} Att./Maint. or Mod. NAA	100 (GC, TV)
	PM_{10} Serious NAA	70 (GC, TV)
Sulfur Dioxide	SO_2 Att. or NAA	100 (GC, TV)
Lead	Lead Att. or NAA	0.6 (NSR)

[a] OTR means Ozone Transport Region.
NAA means Nonattainment Area.

[b] 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

E.6.2 Emissions Screening Results

SEA compared the emissions screening levels in Table E-2 with the total emissions for each county/jurisdiction as shown in Attachment E-2 and found that 98 counties or jurisdictions

would exceed the applicable emissions screening level for NOx and three (3) of these 98 counties would also exceed the emissions screening level for CO (100 tons/year).

Attachment E-3 provides a listing of all counties where a projected activity increase exceeded a Board analysis threshold shown in Table E-1, with total county emissions ranked in descending order of NOx emissions. Attachment E-3 also shows the NOx emissions screening level applicable to each county. The estimated emissions increases are shown in bold for counties where the emissions increase exceeded the NOx or CO screening.

E.6.3 Detailed Emissions Netting Analysis

Emissions of pollutants other than NOx and CO did not exceed a screening level in any county or jurisdiction, and therefore, SEA did not perform a detailed emissions netting analysis for any pollutants other than NOx and CO. SEA completed a detailed NOx emissions analysis for 98 counties, and a detailed CO emissions analysis for the three counties that exceeded the CO screening level.

SEA analyzed county NOx and CO emissions based on the emission factors provided in Section E.7, activity levels and other basic information provided in the Environmental Report (ER), and supplements provided by the railroads. An exception to this was necessary for the analysis of rail line segment emissions. While the railroads provided basic information on rail line segment lengths within each county for those segments exceeding Board thresholds, they did not provide these data for the non-threshold rail line segments.

To perform a complete emissions analysis, SEA needed the lengths of the non-threshold segments as well as their changes (+/-) in annual gross tons. The railroads provided the changes in annual gross tons for all segments (threshold and non-threshold) in the Operating Plans submitted with the ER. For the 98 counties analyzed, SEA obtained the lengths of segments within county borders for the non-threshold segments by identifying them on county maps, and then by measuring the lengths within the county using a map wheel. These lengths were multiplied by the corresponding annual gross tons, and then by a fuel efficiency (gross ton miles/gallon, or GTM/gal.) and by an emission factor (lb/gallon) to obtain emissions estimates for each segment (see Section E.7.1). Attachment E-4 shows the information used and results obtained in calculating total rail segment emissions in each of the 98 counties and jurisdictions analyzed.

E.7 EMISSION FACTORS

E.7.1 Rail Line Segments

Operational changes on rail lines will result in changes in emissions due to combustion of diesel fuel by locomotive engines. The changes in emissions are directly related to changes in the amount of fuel burned, which is dependent on the change in amount of freight hauled.

For each county analyzed, SEA calculated the change in freight hauled for each rail line segment by multiplying the annual gross ton change expected on each segment by the length of the segment in each county to provide the change in annual gross ton-miles (GTM). Next, SEA obtained the change in total gallons of diesel fuel consumed for each segment by dividing the annual gross ton-mile change by the fuel efficiency factor in gross ton-miles per gallon. SEA estimated corresponding annual emission changes by multiplying the annual fuel consumption for each rail line segment by average emission factors. For NOx, PM_{10}, VOC and CO, these factors were developed by EPA[1] for the existing locomotive fleet. The factors for SO_2 and Pb are based on mass balance calculations. Table E-3 lists the emission factors that were used; SEA converted these emission factors to units of pounds of pollutant per 1,000 gallons of fuel consumed (lb/Kgal).

SEA used the following typical data in the emission calculations:

- A fuel efficiency factor of 726.8 GTM/gal on the CSX system, 702.9 GTM/gal on the NS system, and 719.2 GTM/gal on the Shared Areas.
- Conversion of emission factor units from grams/hp-hr to lb/Kgal used a fuel efficiency factor of 0.37 pounds of fuel per horsepower hour (per communication from Mike Rush, American Association of Railroads to Juanita Feigenbaum, Dames & Moore, and documented in letter dated August 12, 1997, to David Ernst, KM Chng Environmental).
- The density of diesel fuel is 7.05 pounds per gallon.
- The sulfur content by weight of the locomotive diesel fuel is 0.26 percent.
- For purposes of calculating lead emission factors, the heat content of diesel fuel is 140,000 British thermal units (Btu) per gallon.

[1] Emission Standards for Locomotives and Locomotive Engines, Proposed Rule. 40 CFR Parts 85, 89 and 92. U.S. Environmental Protection Agency. Washington, D.C., February 11, 1997.

Table E-3
Emission Factors for Rail Line Segments

Pollutant	Emission Factor (g/hp-hr)	Emission Factor (lb/Kgal)
CO	1.5	62.9
Lead[2]	3.0×10^{-5}	0.0012
NOx	13.5	566.4
PM_{10}	0.34	14.3
SO_2	0.873	36.7
VOC	0.5	21.0

The emission factor for PM_{10} is based on the EPA emission factor for particulate matter, assuming conservatively that all particulate matter is PM_{10}. The emission factor for VOC is based on the EPA emission factor for hydrocarbons, assuming conservatively that all hydrocarbons are VOC.

E.7.2 Rail Yards

Rail yards emit air pollutants primarily from switch locomotive engines. The annual amounts of emissions are a function of the number of rail cars switched annually by the rail yard.

SEA calculated the change in emissions for each rail yard by dividing the change in rail cars switched by the average number of rail cars switched per hour of locomotive operation, to give the change in operating hours per year. The locomotive operating hours were multiplied by the hourly diesel fuel consumption rate to provide the change in annual diesel fuel consumption. SEA multiplied annual fuel consumption by emission factors to give the annual emission change.

Table E-4 lists the emission factors that were used, converted to units of pounds of pollutant per 1,000 gallons of fuel consumed (lb/Kgal). The SO_2 and lead emission factors are the same as for line haul locomotives, since they are directly dependent on the amount of fuel burned. The other factors were developed by EPA.[3]

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2 Compilation of Air Pollutant Emission Factors. Report No. AP-42, Table 1.3-11, January 1995. U.S. Environmental Protection Agency, Research Triangle Park, NC. Lead emission factor based on value of 8.9 lb lead/10^{12} Btu.

3 *Emission Standards for Locomotives and Locomotive Engines, Proposed Rule.* 40 CFR Parts 85, 89 and 92. U.S. Environmental Protection Agency. Washington, D.C., February 11, 1997.

Table E-4
Emission Factors for Yard Locomotives

Pollutant	Emission Factor (g/hp-hr)	Emission Factor (lb/Kgal)
CO	2.4	100.7
Lead[4]	3.0×10^{-5}	0.0012
NOx	19.8	830.7
PM_{10}	0.41	17.2
SO_2	0.873	36.7
VOC	1.1	46.2

SEA used the following typical data in the emission calculations:

- The average number of rail cars switched per hour of locomotive operation is 18.75 on the CSX system and 22.5 on the NS system.
- The hourly diesel fuel consumption rate is seven gallons per switch engine hour.

All other assumptions and data were the same as used in the calculations for rail line segments.

Attachment E-5 provides emissions changes calculated for all rail yards in the Conrail, CSX, and NS systems that are expected to have changes in activity levels.

E.7.3 Intermodal Facilities

SEA identified four possible types of emissions sources at intermodal facilities:

- Heavy duty diesel (HDD) and dray trucks.
- Lift equipment, such as rubber-tired gantry (RTG) cranes, reach packers, overhead loaders, and chassis stackers.
- Yard trucks (also known as hostels, yard tractors or lift trucks).
- Switch locomotives.

SEA considered intermodal transfers involving rail and truck modes. SEA did not consider transfers involving waterborne vessels because negligible changes at such facilities are expected due to the proposed Acquisition.

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[4] Compilation of Air Pollutant Emission Factors. Report No. AP-42, Table 1.3-11, January 1995. U.S. Environmental Protection Agency, Research Triangle Park, NC. Lead emission factor based on value of 8.9 lb lead/10^{12} Btu.

SEA summed emissions changes from each of the above intermodal facility activities to obtain net emissions changes at each intermodal facility. The method for estimating emissions from each activity is provided below.

HDD and Dray Trucks

SEA calculated changes in emissions from HDD and dray trucks by multiplying the number of trucks (expressed as gate moves) per day by the average amount of time a truck is in the facility to obtain the daily change in truck operating hours. SEA did not include truck operations on roadways outside the facility due to the infeasibility of projecting potential changes in truck routes and trip lengths, if any, due to the Acquisition. SEA multiplied the average length of time in the facility by the number of operating days per year to obtain the change in annual truck hours. Finally, the number of hours was multiplied by an emission factor for each pollutant in grams per vehicle-hour (g/veh-hr) for heavy duty diesel trucks.

SEA used the EPA MOBILE5A model[5] to calculate CO, NOx, and VOC emission factors in grams per vehicle-mile. SEA used the EPA PART5 model[6] to calculate PM_{10} and SO_2 emission factors in grams per vehicle-mile. The emissions factor calculations were based on 1998 national fleet average data. SEA converted the calculated factors to idling emission factors in g/veh-hr assuming a speed of 2.5 miles per hour in accordance with EPA guidance.[7] Lead emissions were determined to be negligible. Table E-5 lists the emission factors used by SEA.

Table E-5
Emission Factors for Idling HDD & Dray Trucks

Pollutant	Emission Factor (g/veh-hr)
CO	94.60
Lead	negligible
NOx	53.13
PM10	2.81
SO_2	1.29

5 User's Guide to MOBILE5A (Mobile Source Emissions Factor Model), EPA-AA-AQAB-94-01, U.S. Environmental Protection Agency, Office of Air Quality and Radiation, Office of Mobile Sources, Ann Arbor, MI, July 1994.

6 Draft User's Guide to PART5: A Program for Calculating Particle Emissions from Motor Vehicles, EPA-AA-AQAB-94-2, U.S. Environmental Protection Agency, Office of Mobile Sources, Ann Arbor, MI, February 1995.

7 MOBILE5 Information Sheet #2: Estimating Idle Emission Factors Using MOBILE5. U.S. Environmental Protection Agency, Office of Mobile Sources, NVFEL, AQAB, Ann Arbor, Michigan, July 30, 1993.

Table E-5
Emission Factors for Idling HDD & Dray Trucks

Pollutant	Emission Factor (g/veh-hr)
VOC	12.65

$$HDD\ truck\ emissions\left(\frac{tons}{year}\right) = \left(\frac{trucks\ (change)}{day}\right) \times \left(\frac{operating\ days}{year}\right) \times \left(\frac{minutes}{truck}\right)$$
$$\times \left(\frac{1\ hour}{60\ minutes}\right) \times \left(\frac{grams\ pollutant}{hour}\right) \times \left(\frac{pound}{454\ grams}\right) \times \left(\frac{1\ ton}{2000\ pounds}\right)$$

The following equation summarizes the calculation procedure for emissions from HDD trucks: SEA used the following typical data in the emission calculations:

- Intermodal facilities typically operate 362 days/year.
- The density of diesel fuel is 7.05 pounds per gallon.
- The sulfur content by weight of the transportation diesel fuel used by HDD trucks is 0.034 percent (national average used by PART5 model).
- The average fuel consumption rate for an HDD truck at idle is 1.75 gallons per hour.
- For purposes of calculating lead emission factors, the heat content of diesel fuel is 140,000 Btu per gallon.
- The average truck time in the facility is 45 minutes.

Average truck time requires a brief explanation. It is a composite of truck movement within the facility, actual loading and unloading operations, and waiting time in one or more queues. Times are highly variable between facilities and between different types of intermodal transfers within a facility, and are affected by facility capacity constraints. SEA developed an average delay time based on site visit observations[8] and industry average data. Industry data include such factors as the size (acres), trailer-on-flat-car/container-on-flat-car (TOFC/COFC) capacity, and number of pieces of lift equipment. SEA correlated site visit observations of truck times in the facility with the industry data for the facilities observed in order to develop a single average time of 45 minutes. SEA applied this average time for HDD truck operations to all intermodal facilities.

Lift Equipment

[8] Personal site visits conducted at representative facilities during July 1997.

The activity level of an intermodal facility is defined by the number of lifts, where a lift is an intermodal trailer or container lifted onto or off a rail car. Site visit observations indicate that a lift may actually involve handling the trailer or container multiple times. For example, the trailer or container may be moved to a storage area before it is loaded onto the outgoing truck or rail car, or other containers in a stack may be moved to access the desired container. For this reason, the change in activity level or number of lifts for intermodal facilities is expressed as the number of lifts (trailers or containers processed) per year, multiplied by the average number of times each trailer or container is moved. The factor for the average number of moves per lift was 2.7, which was developed using site visit observations and industry data in a manner similar to the development of truck idling times for HDD and dray trucks (see above).

SEA calculated the annual change in hours of activity due to the change in moves/year by dividing the moves/year by the average operating rate (20 moves per hour) for a piece of lift equipment, multiplied by the average number of moves per lift (2.7) for lift equipment. This calculation results in the change in hours of activity per year. SEA calculated the annual change in emissions by multiplying the changes in hours of activity by emission factors in units of g/hp-hr.

Emission factors for lift equipment were based on the EPA factors developed for non-road vehicles.[9] SEA converted emission factors expressed in g/hp-hr to emission rates expressed in g/hr based on the average equipment horsepower (hp) observed for lift equipment at selected intermodal facilities of the affected railroads.

While HDD trucks are assumed to spend most of their time idling while at the facility, field observations indicate that lift equipment operates at average power levels above idle. The operating power level affects the relative emission rates of the various pollutants in ways not accounted for by the fuel consumption rates. Therefore, SEA adjusted the emission factors using EPA data for non-road equipment engines to derive emission rates for lift equipment at typical power levels. As with the HDD trucks, lead emissions are negligible for lift equipment. However, SEA used a typical fuel sulfur content of 0.26 percent to obtain the SO_2 emission factor. Table E-6 lists the emission rates used by SEA.

9 Nonroad Engine and Vehicle Emission Study - Report EPA-460/3-91-02, U.S. Environmental Protection Agency, Office of Air and Radiation, Washington, D.C., November 1991.

Table E-6
Emission Rates for Lift Equipment

Pollutant	Emission Rate (g/hr)
CO	451.5
Lead	negligible
NOx	1107
PM10	154.8
SO_2	100.0
VOC	139.0

The following equation illustrates the emissions calculation procedure for lift equipment:

$$\textit{Lift equipment emissions}\left(\frac{tons}{year}\right) = \left(\frac{lifts\ (change)}{year}\right) \times \left(\frac{moves}{lift}\right) \times \left(\frac{hours}{move}\right) \times \left(\frac{grams}{hour}\right) \times$$
$$\times \left(\frac{pound}{454\ grams}\right) \times \left(\frac{1\ ton}{2000\ pounds}\right)$$

Yard Trucks

SEA calculated the emissions from yard trucks (or yard hostels, lift trucks and yard tractors) at intermodal facilities by multiplying the annual increase in diesel fuel consumed by emission factors expressed in units of grams per gallon. SEA calculated the annual increase in fuel consumption by multiplying the annual increase in lifts by the yard truck fuel consumption rate per lift (0.34 gal/lift on the CSX system, and 0.2 gal/lift on the NS system). The emission factors, shown in Table E-7, are based on EPA data for non-road vehicles.[10]

Table E-7
Emission Factors for Yard Trucks

Pollutant	Emission Rate (g/gal)
CO	229.38
Lead	negligible
NOx	186.09
PM10	31.72

[10] Nonroad Engine and Vehicle Emission Study - Report EPA-460/3-91-02, U.S. Environmental Protection Agency, Office of Air and Radiation, Washington, D.C., November 1991.

Table E-7
Emission Factors for Yard Trucks

Pollutant	Emission Rate (g/gal)
SO_2	14.53
VOC	39.27

Switch Locomotives

Switch locomotives (or line haul locomotives used in switching mode) are used at intermodal facilities to move trains into and out of the facility and to position rail cars within the facility for optimum access by lift equipment. SEA calculated emissions from switch locomotives used at intermodal facilities using the same procedure as described in Section E.7.2 for switch locomotives at rail yards. The number of rail cars processed was estimated by multiplying the number of lifts by 0.5, reflecting an assumption based on field observation[11] that a rail car typically carries two containers or trailers.

Attachment E-6 shows emissions changes calculated for all intermodal facilities in the Conrail, CSX, and NS systems that are expected to have changes in activity levels.

E.7.4 Truck-to-Rail and Rail-to-Truck Diversions

Local (county) emissions calculations for truck diversion were obtained by multiplying the change in county vehicle-miles traveled (VMT) by heavy duty diesel trucks by the emission factors below. SEA calculated the emission factors with the MOBILE5A and PART5 models using national fleet average data for 1998; SEA adjusted the data for the appropriate load factor in brake horsepower per mile, for an average speed of 50 miles per hour, and for an average fuel economy. SEA converted the grams/vehicle-mile values (from MOBILE5A and PART5) to lb/Kgal by multiplying them by a fuel economy of 4.375 miles per gallon. This fuel economy value reflects the railroads' estimates of truck fuel efficiency of 140 gross ton miles/gallon and an average truck weight of 32 gross tons. The emission factors are shown in Table E-8.

Attachment E-7 is a listing of counties for which SEA calculated emissions decreases, based on county estimates of avoided truck vehicle-miles traveled (VMT) due to truck-to-rail freight diversion. CSX and NS provided the county VMT estimates.

SEA obtained system-wide estimated emissions decreases due to truck-to-rail diversion by multiplying the average HDD emission factors in Table E-8 by the system-wide truck fuel decrease provided by each railroad for their projected freight diversions to rail.

[11] Personal site visits conducted at representative facilities during July 1997.

Table E-8
Emission Factors for HDD Trucks on Highways

Pollutant	Emission Factor (g/veh-mile)	Emission Factor (lb/Kgal)
CO	8.63	83.2
Lead	0.0001	0.001
NOx	19.68	189.8
PM10	1.13	10.9
SO_2	0.51	5.0
VOC	1.71	16.5

There are expected to be only two small abandonments resulting in rail-to-truck freight diversions due to the Acquisition. SEA calculated the resulting emission changes at the local or county level using the g/veh-mile emission factors in Table E-8. SEA assumed that a rail car load is equivalent to four truck loads and that the truck trip distance for an abandonment diversion will equal the distance between intermodal facilities nearest the endpoints of the segments to be abandoned. Attachment E-8 shows the estimated emissions increases for each of the two counties affected by these diversions.

E.7.5 Grade Crossings

Selection of Grade Crossings to be Analyzed

Thousands of grade crossings exist in the project area. Analysis of emissions from all grade crossings would not be feasible, and most grade crossings are expected to produce negligible emissions from queued vehicles because of very low volumes of road traffic, rail traffic, or both. The analysis focuses only on impacts resulting from the proposed Acquisition, not all pre-existing conditions.

For system-wide analysis, SEA screened all grade crossings to determine if they would be affected by the proposed Acquisition. Grade crossings on rail line segments not meeting or exceeding the Board thresholds were immediately screened from the analysis. A second screening eliminated those highway/rail at-grade crossings which would experience minimal (negligible) emissions changes, namely those with estimated traffic volumes of less than 5,000 vehicles per day. This highway traffic volume benchmark establishes a reasonable screening level to balance the goals of computational feasibility and significance of emissions. For example, for a 5,000-foot-long train traveling 20 miles per hour, a grade crossing with a change of three trains per day and 5,000 vehicles per day (expressed as average daily traffic or ADT) would have a change in emissions of approximately 0.005 tons per year of NOx, 0.03 tons per year of VOC, and 0.2 tons per year of CO.

Based on the relatively low emissions for a typical grade crossing, it is expected that such emissions will not be a significant portion of total county-wide emissions changes for any county affected by the proposed Acquisition. To determine the maximum extent of potential county-wide emissions, SEA compared increased train traffic and existing motor vehicle traffic at higher volume crossings (over 5,000 vehicles/day) for counties affected by the Acquisition. From this comparison, it was evident that Cuyahoga County, Ohio (Cleveland area) had the greatest potential for increased vehicle delay emissions due to a combination of high train traffic increases and high vehicle traffic volumes for highway/rail at-grade crossings. Therefore, SEA selected Cuyahoga County for a detailed analysis of emissions (increases and decreases) caused by rail traffic changes at affected crossings, including those with volumes over 5,000 vehicles/day and those with under 5,000 vehicles/day.

Emissions from Grade Crossing Delays

SEA calculated the change in emissions at grade crossings due to the proposed Acquisition by determining the delay for each crossing in units of vehicle-hours per day (see Appendix B for delay calculation methods). SEA then multiplied the delay by motor vehicle fleet average emission factors in units of grams/vehicle-hour.

SEA computed emission factors (EF) for the analysis year (1997) using the MOBILE5A (for VOC, NOx, and CO) and PART5 (for PM and SO_2) models. SEA used national average data for vehicle ages, types, and operating conditions in these computations.

SEA developed two sets of emission factors to obtain CO, NOx, and VOC composite factors for use in the EIS; one set for northern tier states and one set for southern tier states. SEA developed northern tier emission factors using minimum/maximum temperature data for the Chicago area as provided by the Illinois Environmental Protection Agency. Southern tier emissions were developed using minimum/maximum temperatures for the Atlanta area as provided by the Southeast Regional Climate Center. Summer and winter emission rates are provided for volatile organic compound (VOC), nitrogen oxides (NOx), and carbon monoxide (CO) emissions.

SEA used MOBILE5A national default values for the vehicle-miles traveled, vehicle mix, registration/mileage accumulation, and tampering rates. Program runs assumed there were no inspection/maintenance (I/M) or anti-tampering programs in place. Additionally, SEA did not consider the effects of oxygenated fuel and reformulated gasoline. Reid Vapor Pressure values were set at 9.0 psi. SEA used default operating modes.

SEA calculated idle emission factors consistent with the methods described in U.S. EPA MOBILE5 Information Sheet #2, July 30, 1993. SEA multiplied emission rates (grams/mile) for 2.5 miles per hour by 2.5 to obtain grams/hour emission rates.

These emission factors are very conservative (high) numbers because I/M programs and use of oxygenated fuels and reformulated gasoline would decrease winter CO and summer VOC/NOx emissions. For VOC, CO, and NO_x, SEA averaged the four emission factors to produce a single

motor vehicle idling emission factor for use in estimating annual emissions due to delays at highway/rail at-grade crossings.

SEA used the EPA PART5 model to estimate vehicle exhaust particulate matter and SO_2 emissions. SEA specified a default vehicle mix, mileage accumulation and registration in the PART5 input, along with no inspection-maintenance programs or reformulated fuel.

Table E-9 provides idle emission factors calculated with the MOBILE5A and PART5 models.

Table E-9
MOBILE5A Composite Emission Factors

Region	2.5 MPH (g/veh-mile)	Idle (g/hour)
Northern Tier - Summer		
VOC	25.64	64.1
CO	138.7	346.7
NOx	3.735	9.3
Northern Tier - Winter		
VOC	18.40	46.0
CO	226.7	567.0
NOx	4.560	11.4
Southern Tier - Summer		
VOC	20.10	50.3
CO	131.5	328.8
NOx	3.735	9.3
Southern Tier - Winter		
VOC	16.03	40.1
CO	186.5	466.4
NOx	4.265	10.7
Average		
VOC	20.04	50.1
CO	170.9	427.2
NOx	4.074	10.2

PART5 Emission Factors

	2.5 MPH (g/veh-mile)	Idle (g/hour)
Exhaust PM	0.075	0.188
SO_2	0.114	0.285

Attachment E-9 shows the estimated highway/rail at-grade crossing emissions for all crossings system-wide that have existing traffic levels over 5,000 vehicles/day and which are along a rail line segment that exceeded a Board air quality analysis threshold.

Attachment E-10 shows the estimated highway/rail at-grade crossing emissions for Cuyahoga County, Ohio, with subtotals for the crossings with over 5000 vehicles/day on Board threshold rail line segments, and for all crossings in the county with any projected change (+/-) in rail traffic due to the Acquisition.

E.7.6 Constructions and Abandonments

Constructions and abandonments can result in emissions from fugitive dust, construction equipment exhaust, and excess motor vehicle exhaust due to traffic disruptions at highway/rail at-grade crossings or site accesses from roadways. The assessment of potential impacts from these emission sources was qualitative and focused on mitigation measures that can be applied generally, based on proposed activities and equipment requirements.

PM_{10} is the pollutant of primary concern from construction activity, and is usually caused by earthmoving activity or vehicle traffic on unpaved roads. SEA expects the railroads to use their current best management practices to mitigate any such temporary emissions. Such practices usually consist of application of water or other dust suppression materials to dry exposed soil materials. Given the ease of mitigating such emissions, SEA did not attempt to estimate these emissions using available EPA emission factors.

E.8 MITIGATION

E.8.1 System-Wide and Regional Mitigation

Because the proposed Conrail Acquisition is estimated to result in substantial system-wide emissions decreases of most air pollutants, SEA did not consider mitigation measures on a system-wide basis. SEA also considered mitigation on a regional level for the Northeast Ozone Transport Region (OTR) to be unnecessary because emissions of NOx, the important pollutant for ozone formation, are expected to decrease in this region.

E.8.2 Local Mitigation

Local mitigation measures for air quality should consist of adherence by the railroads to best management practices to minimize temporary fugitive dust (PM_{10}) emissions that may result from construction and associated activities.

While NOx emissions increases in some local areas may be perceived as significant, the recent findings of the Ozone Transport Assessment Group (OTAG) indicate that local control of NOx is generally unproductive, since it is a regional problem. Because NOx emissions are expected to decrease at the system-wide level and over the Northeast OTR, no local mitigation options for NOx are proposed.

LIST OF APPENDIX E ATTACHMENTS

E-1 Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

E-2 Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

E-3 County Total Emissions Increases for Threshold Activities, in Decreasing Order of Total NOx (Prior to Netting Analysis)

E-4 Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

E-5 Emissions Changes for Rail Yards

E-6 Emissions Changes for Intermodal Facilities

E-7 Emissions Decreases for Truck-to-Rail Diversions in Counties Analyzed

E-8 Emissions Increases for Rail-to-Truck Diversions in Counties Analyzed

E-9 Emissions Increases for Highway/Rail At-Grade Crossings >5,000 Vehicles/Day System-Wide

E-10 Emissions for All Affected Highway/Rail At-Grade Crossings in Cuyahoga County, Ohio

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Location	Pollutant					
	NOx	SO2	CO	O3	PM-10/TSP	Pb
ALABAMA						
Etowah County					Part-NC (TSP)	
Jefferson County				Mar	Part-NC (TSP)	Part-Maint
Shelby County				Mar		
CONNECTICUT						
Fairfield County			Part-NC Part-Mod	Part-Ser Part-Sev		
Hartford County			Part-Maint	Ser		
Litchfield County			Part-NC Part-Mod	Part-Ser Part-Sev		
Middlesex County				Ser		
New Haven County			NC	Ser	Part-NC	
New London County				Ser		
Tolland County				Ser		
Windham County				Ser		
DELAWARE						
Kent County				Sev		
New Castle County				Sev		
Sussex County				Mar		
DISTRICT OF COLUMBIA						
Washington			Maint	Sev		
FLORIDA						
Broward County				Maint		
Dade County				Maint		
Duval County				Maint		
Hillsborough County				Maint		
Palm Beach County				Maint		
Pinellas County				Maint		
GEORGIA						
Cherokee County				Ser		
Clayton County				Ser		
Cobb County				Ser		
Coweta County				Ser		
De Kalb County				Ser		
Douglas County				Ser		
Fayette County				Ser		
Forsyth County				Ser		
Fulton County				Ser		
Gwinnett County				Ser		
Henry County				Ser		
Muscogee County						Part-NC
Paulding County				Ser		
Rockdale County				Ser		
ILLINOIS						
Cook County				Sev	Part - Mod	
Du Page County				Sev		
Grundy County				Part-Sev		
Jersey County				Maint		
Kane County				Sev		
Kendall County				Part-Sev		
Lake County				Sev		
Madison County				Mod	Part-Mod	
McHenry County				Sev		
Monroe County				Mod		
Peoria County		Part-Maint				
St. Clair County				Mod		
Tazewell County		Part-Maint				
Will County				Sev		
INDIANA						
Clark County				Mod		
Elkhart County				Maint		
Floyd County				Mod		

Part = Part of County
Maint = Maintenance Area
Nonattainment Area: Sev=Severe, Ser=Serious, Mod=Moderate, Mar=Marginal, NC=Not Classified for Severity, IC=Incomplete Data to determine severity, Trans=Tansitional.

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Location	Pollutant					
	NOx	SO2	CO	O3	PM-10/TSP	Pb
Lake County		Part-NC	Part-NC	Sev	Part-Mod	
Marion County			Part-NC	Maint		Part-NC
Porter County				Sev		
St. Joseph County				Maint		
Vanderburgh County				Mar		
Vermillion County					Part-Mod	
KENTUCKY						
Boone County				Mod		
Boyd County		Part-NC		Maint		
Bullitt County				Part-Mod		
Campbell County				Mod		
Daviess County				Maint		
Edmonson County				Maint		
Fayette County				Maint		
Greenup County				Part-Maint		
Hancock County				Part-Maint		
Jefferson County				Mod		
Kenton County				Mod		
Livingston County				Part-Maint		
Marshall County				Maint		
Oldham County				Part-Mod		
Scott County				Maint		
LOUISIANA						
Ascension Parish				Ser		
Beauregard Parish				Maint		
Calcasieu Parish				Maint		
East Baton Rouge Parish				Ser		
Grant Parish				Maint		
Iberville Parish				Ser		
Jefferson Parish				Maint		
Lafayette Parish				Maint		
Lafourche Parish				Maint		
Livingston Parish				Ser		
Orleans Parish				Maint		
Pointe Coupee Parish				Maint		
St. Bernard Parish				Maint		
St. Charles Parish				Maint		
St. James Parish				Maint		
St. Mary Parish				Maint		
West Baton Rouge Parish				Ser		
MARYLAND						
Anne Arundel County				Sev	NC (TSP)	
Baltimore City (independent jurisdiction)				Sev		
Baltimore County				Sev	NC (TSP)	
Calvert County				Ser		
Carroll County				Sev		
Cecil County				Sev		
Charles County				Ser		
Frederick County				Ser		
Harford County				Sev		
Howard County				Sev		
Kent County				Mar		
Montgomery County				Ser		
Prince George's County				Ser		
Queen Anne's County				Mar		
MASSACHUSETTS						
Barnstable County				Ser		
Berkshire County				Ser	NC (TSP)	
Bristol County				Ser	NC (TSP)	

Part = Part of County
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Nonattainment Area: Sev=Severe, Ser=Serious, Mod=Moderate, Mar=Marginal, NC=Not Classified for Severity, IC=Incomplete Data to determine severity, Trans=Tansitional.

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Location	Pollutant					
	NOx	SO2	CO	O3	PM-10/TSP	Pb
Dukes County				Ser		
Essex County				Ser	NC (TSP)	
Franklin County				Ser		
Hampden County			Part-NC	Ser	NC (TSP)	
Hampshire County				Ser		
Middlesex County			Part-NC	Ser	NC (TSP)	
Nantucket County				Ser		
Norfolk County			Part-Maint	Ser	NC (TSP)	
Plymouth County				Ser		
Suffolk County			Part-Maint	Ser	NC (TSP)	
Worcester County			Part-NC	Ser	NC (TSP)	
MICHIGAN						
Bay County				IC		
Genesse County				Trans		
Kent County				Maint		
Livingston County				Maint		
Macomb County			Part-NC	Maint		
Midland County				IC		
Monroe County				Maint		
Muskegon County				Mod		
Oakland County			Part-NC	Maint		
Ottawa County				Maint		
Saginaw County				IC		
St. Clair County				Maint		
Washtenaw County				Maint		
Wayne County			Part-NC	Maint		
MISSISSIPPI						
All counties are in attainment						
MISSOURI						
Clay County				Maint		
Franklin County				Mod		
Iron County						Part-NC
Jackson County				Maint		
Jefferson County				Mod		Part-NC
Platte County				Maint		
St. Charles County				Mod		
St. Louis City (independent jurisdiction)			NC	Mod		
St. Louis County			Part-NC	Mod		
NEW JERSEY						
Atlantic County				Mod		
Bergen County			Mod	Sev		
Burlington County				Sev		
Camden County			Maint	Sev		
Cape May County				Mod		
Cumberland County				Sev		
Essex County			Mod	Sev		
Gloucester County				Sev		
Hudson County			Mod	Sev		
Hunterdon County				Sev		
Mercer County				Sev		
Middlesex County				Sev		
Monmouth County				Sev		
Morris County				Sev		
Ocean County				Sev		
Passaic County			Part-Mod	Sev		
Salem County				Sev		
Somerset County				Sev		

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Nonattainment Area: Sev=Severe, Ser=Serious, Mod=Moderate, Mar=Marginal, NC=Not Classified for Severity, IC=Incomplete Data to determine severity, Trans=Tansitional.

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Location	Pollutant					
	NOx	SO2	CO	O3	PM-10/TSP	Pb
Sussex County				Sev		
Union County			Mod	Sev		
Warren County		Part-NC		Mar		
NEW YORK						
Albany County				Mar		
Bronx County			Mod	Sev		
Dutchess County				Mod		
Erie County				Mar		
Essex County				Part-Mar		
Green County				Mar		
Jefferson County				Mar		
Kings County			Mod	Sev		
Montgomery County				Mar		
Nassau County			Mod	Sev		
New York County			Mod	Sev	Mod	
Niagara County				Mar		
Onondaga County			Maint			
Orange County				Part-Sev Part-Mod		
Putnam County				Mod		
Queens County			Mod	Sev		
Rensselaer County				Mar		
Richmond County			Mod	Sev		
Rockland County				Sev		
Saratoga County				Mar		
Schenectady County				Mar		
Suffolk County				Sev		
Westchester County			Mod	Sev		
NORTH CAROLINA						
Davidson County				Maint		
Davie County				Part-Maint		
Durham County			Maint	Maint		
Forsyth County			Maint	Maint		
Gaston County				Maint		
Granville County				Part-Maint		
Guilford County				Maint		
Mecklenburg County			Maint	Maint		
Wake County			Maint	Maint		
OHIO						
Ashtabula County				Maint		
Butler County				Mod		
Clark County				Maint		
Clermont County				Mod		
Clinton County				Maint		
Columbiana County				Maint		
Coshocton County		Part-NC				
Cuyahoga County		Part-NC	Maint	Maint	Mod	
Delaware County				Maint		
Franklin County				Maint		
Gallia County		Part-NC				
Geauga County				Maint		
Greene County				Maint		
Hamilton County				Mod		
Jefferson County		Part-NC		Maint	Part-Mod	
Lake County		Part-NC		Maint		
Licking County				Maint		
Lorain County		Part-NC		Maint		
Lucas County		Part-NC		Maint		
Mahoning County				Maint		
Medina County				Maint		
Miami County				Maint		
Montgomery County				Maint		
Portage County				Maint		
Preble County				Maint		

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Maint = Maintenance Area
Nonattainment Area: Sev=Severe, Ser=Serious, Mod=Moderate, Mar=Marginal, NC=Not Classified for Severity, IC=Incomplete Data to determine severity, Trans=Tansitional.

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Location	Pollutant					
	NOx	SO2	CO	O3	PM-10/TSP	Pb
Stark County				Maint		
Summit County				Maint		
Trumbull County				Maint		
Warren County				Mod		
Wood County				Maint		
PENNSYLVANIA						
Adams County				Mar		
Alleghany County		Part-NC	Part-NC	Mod	Part-Mod	
Armstrong County		Part-NC		Mod		
Beaver County				Mod		
Berks County				Maint		
Blair County				Mar		
Bucks County				Sev		
Butler County				Mod		
Cambria County				Mar		
Carbon County				Mar		
Chester County				Sev		
Columbia County				Mar		
Crawford County				IC		
Cumberland County				Mar		
Dauphin County				Mar		
Delaware County				Sev		
Erie County				Mar		
Fayette County				Mod		
Franklin County				IC		
Greene County				IC		
Juniata County				IC		
Lackawanna County				Mar		
Lancaster County				Mar		
Lawrence County				IC		
Lebanon County				Mar		
Lehigh County				Mar		
Luzerne County				Mar		
Mercer County				Mar		
Monroe County				Mar		
Montgomery County				Sev		
Northhampton County				Mar		
Northumberland County				IC		
Perry County				Mar		
Philadelphia County			Part-Maint	Sev		
Pike County				IC		
Schuylkill County				IC		
Snyder County				IC		
Somerset County				Mar		
Susquehanna County				IC		
Warren County		Part-NC		IC		
Washington County				Mod		
Wayne County				IC		
Westmoreland County				Mod		
Wyoming County				Mar		
York County				Mar		
RHODE ISLAND						
Bristol County				Ser		
Kent County				Ser		
Newport County				Ser		
Providence County				Ser	Part-NC (TSP)	
Washington County				Ser		
SOUTH CAROLINA						
Charleston County					Part-NC (TSP)	
Cherokee County				Maint		
TENNESSEE						
Benton County		Part-NC				

Part = Part of County
Maint = Maintenance Area
Nonattainment Area: Sev=Severe, Ser=Serious, Mod=Moderate, Mar=Marginal, NC=Not Classified for Severity, IC=Incomplete Data to determine severity, Trans=Tansitional.

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Location	Pollutant					
	NOx	SO2	CO	O3	PM-10/TSP	Pb
Davidson County				Maint	Part-NC (TSP)	
Fayette County						Part-Maint
Hamilton County					Part-NC (TSP)	
Humphreys County		Part-NC				
Knox County				Maint		
Polk County		NC				
Rutherford County				Maint		
Shelby County			Maint	Maint		Part-NC
Sumner County				Maint		
Williamson County				Maint		Part-NC
Wilson County				Maint		
VIRGINIA						
Alexandria (independent jurisdiction)			Maint	Ser		
Arlington County			Maint	Ser		
Charles City County				Part-NC		
Chesapeake (independent jurisdiction)				Mar		
Chesterfield County				Mod		
Colonial Heights (independent jurisdiction)				Mod		
Fairfax (independent jurisdiction)				Ser		
Fairfax County				Ser		
Falls Church (independent jurisdiction)				Ser		
Hampton (independent jurisdiction)				Mar		
Hanover County				Mod		
Henrico County				Mod		
Hopewell (independent jurisdiction)				Mod		
James City County				Mar		
Loudoun County				Ser		
Manassas (independent jurisdiction)				Ser		
Manassas Park (independent jurisdiction)				Ser		
Newport News (independent jurisdiction)				Mar		
Norfolk (independent jurisdiction)				Mar		
Poquoson (independent jurisdiction)				Mar		
Portsmouth (independent jurisdiction)				Mar		
Prince William County				Ser		
Richmond (independent jurisdiction)				Mod		
Smyth County				Mar		
Stafford County				Ser		
Suffolk (independent jurisdiction)				Mar		
Virginia Beach (independent jurisdiction)				Mar		
Williamsburg (independent jurisdiction)				Mar		
York County				Mar		
WEST VIRGINIA						
Brooke County					Part-Mod	
Cabell County				Maint		
Greenbrier County				Maint		

Part = Part of County
Maint = Maintenance Area
Nonattainment Area: Sev=Severe, Ser=Serious, Mod=Moderate, Mar=Marginal, NC=Not Classified for Severity, IC=Incomplete Data to determine severity, Trans=Tansitional.

Attachment E-1

Nonattainment or Maintenance Areas in Potentially Affected States as of June 23, 1997

Location	Pollutant					
	NOx	SO2	CO	O3	PM-10/TSP	Pb
Hancock County		Part-NC			Part-Mod	
Kanawha County				Maint		
Putnam County				Maint		
Wayne County				Maint		
Wood County				Maint		

NOTES:
Attainment status obtained from 40 CFR Part 81, as updated by Federal Registers through June 23, 1997.
In states that do not list PM-10 specifically in their attainment status listing, areas that are in nonattainment for TSP were included (and noted in the summary).
Blank indicates county in attainment for that pollutant.

Part = Part of County
Maint = Maintenance Area
Nonattainment Area: Sev=Severe, Ser=Serious, Mod=Moderate, Mar=Marginal, NC=Not Classified for Severity, IC=Incomplete Data to determine severity, Trans=Tansitional.

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
ALABAMA										
ALABAMA	Etowah	RLS	NS	Norris Yard, AL to Attalla, AL	8.74	0.97	0.32	0.57	0.22	0.0000180
ALABAMA	Etowah	RLS	NS	Wauhatchie TN to Attala AL	20.61	2.29	0.76	1.34	0.52	0.0000437
ALABAMA	TOTAL FOR ETOWAH COUNTY				29.35	3.26	1.08	1.91	0.74	0.0000617
ALABAMA	Jefferson	RY	CSX	Boyles	11.00	1.30	0.60	0.50	0.20	0.0000160
ALABAMA	Jefferson	RLS	NS	Norris Yard, AL to Attalla, AL	18.06	2.01	0.67	1.17	0.46	0.0000380
ALABAMA	TOTAL FOR JEFFERSON COUNTY				29.06	3.31	1.27	1.67	0.66	0.0000540
ALABAMA	Madison	RY	NS	Huntsville	0.75	0.09	0.04	0.03	0.02	0.0000011
DISTRICT OF COLUMBIA										
DISTRICT OF COLUMBIA	Washington DC	RLS	CSX	Anacostia, DC to Virginia Ave, DC	4.80	0.50	0.20	0.30	0.10	0.0000100
DISTRICT OF COLUMBIA	Washington DC	RLS	CSX	Virginia Ave, DC to Potomac Yd, DC	8.30	0.90	0.30	0.50	0.20	0.0000200
DISTRICT OF COLUMBIA	Washington DC	RLS	CSX	Washington, DC to Pt of Rocks, MD	15.10	1.70	0.60	1.00	0.40	0.0000320
DISTRICT OF COLUMBIA	Washington DC	RLS	CSX	Alexandria Jct, MD to Washington, DC	11.00	1.20	0.40	0.70	0.30	0.0000230
DISTRICT OF COLUMBIA	Washington DC	RLS	CSX	Landover, MD to Anacostia, DC	3.90	0.40	0.10	0.30	0.10	0.0000083
DISTRICT OF COLUMBIA	TOTAL FOR WASHINGTON DC				43.10	4.70	1.60	2.80	1.10	0.0000933
DELAWARE										
DELAWARE	New Castle	RLS	CSX	RG, PA to Wilsmere, DE	39.30	4.40	1.50	2.50	1.00	0.0000830
DELAWARE	New Castle	RLS	NS	Edgemoor, DE to Bell, DE	3.08	0.34	0.11	0.20	0.08	0.0000065
DELAWARE	New Castle	RLS	SA/NEC	Arsenal, PA to Davis, DE	102.40	11.40	3.80	6.60	2.60	0.0002200
DELAWARE	New Castle	RLS	SA/NEC	Davis, DE to Perryville, MD	73.20	8.10	2.70	4.70	1.80	0.0001600
DELAWARE	TOTAL FOR NEW CASTLE COUNTY				217.98	24.24	8.11	14.00	5.48	0.0004695
GEORGIA										
GEORGIA	Clayton	RLS	NS	Spring, GA to Scherer Coal, GA	15.93	1.77	0.59	1.03	0.41	0.0000350
GEORGIA	Cobb	RLS	NS	Cohutta GA to Austell GA	14.83	1.65	0.55	0.96	0.37	0.0000314
GEORGIA	DeKalb	RLS	NS	Spring, GA to Scherer Coal, GA	11.06	1.23	0.41	0.72	0.28	0.0000240
GEORGIA	DeKalb	RY	NS	Doraville, GA	2.25	0.27	0.13	0.10	0.05	0.0000033
GEORGIA	TOTAL FOR DEKALB COUNTY				13.31	1.50	0.54	0.82	0.33	0.0000273
GEORGIA	Fulton	IMF	CSX	Atlanta	16.85	10.34	2.28	1.22	1.89	0.0000685
GEORGIA	Fulton	IMF	NS	Atlanta - Inman	23.30	13.82	3.10	1.68	2.56	0.0001050
GEORGIA	Fulton	RY	NS	Inman Yd	8.90	1.08	0.49	0.39	0.18	0.0000129
GEORGIA	Fulton	RLS	NS	Howell, GA to Spring, GA	5.21	0.58	0.19	0.34	0.13	0.0001100
GEORGIA	Fulton	RLS	NS	Spring, GA to Scherer Coal, GA	12.59	1.40	0.47	0.82	0.32	0.0000280
GEORGIA	TOTAL FOR FULTON COUNTY				66.85	27.22	6.53	4.45	5.08	0.0003244
GEORGIA	Henry	RLS	NS	Spring, GA to Scherer Coal, GA	64.00	7.12	2.37	4.14	1.63	0.0001400

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
GEORGIA	Monroe	RLS	NS	Spring, GA to Scherer Coal, GA	25.77	2.87	0.96	1.67	0.66	0.0000570
GEORGIA	Paulding	RLS	NS	Cohutta GA to Austell GA	34.66	3.85	1.28	2.25	0.88	0.0000734
GEORGIA	Wilkinson	RY	NS	Gordon	3.77	0.46	0.21	0.17	0.08	0.0000055
ILLINOIS										
ILLINOIS	Champaign	RLS	NS	Tilton, IL to Decatur, IL	216.44	24.04	8.02	14.02	5.46	0.0004500
ILLINOIS	Christian	RLS	NS	Taylorsville, IL to Granite City, IL	3.65	0.35	0.17	0.17	0.17	0.0000090
ILLINOIS	Cook	IMF	CSX	Chicago-59th Street	155.52	97.82	21.27	11.14	17.35	0.0006620
ILLINOIS	Cook	RLS	CSX	Barr Yard, IL to Blue Island Jct, IL	37.80	4.20	1.40	2.40	1.00	0.0000800
ILLINOIS	Cook	RLS	CSX	Blue Island Jct, IL to 59th Street, IL	53.30	5.90	2.00	3.50	1.30	0.0001100
ILLINOIS	Cook	RLS	CSX	Pine Jct, IN to Barr Yard, IL	102.00	11.30	3.80	6.60	2.60	0.0002200
ILLINOIS	Cook	IMF	NS	Chicago-47th Street	33.25	19.72	4.43	2.40	3.65	0.0001500
ILLINOIS	Cook	IMF	NS	Chicago-Landers	15.40	9.14	2.05	1.11	1.69	0.0000693
ILLINOIS	Cook	RLS	NS	Calumet Park, IL to Colehour, IL	9.05	1.00	0.35	0.60	0.30	0.0000190
ILLINOIS	Cook	RLS	NS	IC 95th Street, IL to Pullman Jct, IL	3.12	0.35	0.12	0.20	0.08	0.0000066
ILLINOIS	Cook	RLS	NS	Indiana Harbor, IN to S. Chicago, IL	18.71	2.08	0.69	1.21	0.47	0.0000396
ILLINOIS	Cook	RY	NS	Colehour	0.94	0.11	0.05	0.04	0.02	0.0000014
ILLINOIS	TOTAL FOR COOK COUNTY				429.09	151.61	36.16	29.20	28.45	0.0013579
ILLINOIS	Macon	RLS	NS	Tilton, IL to Decatur, IL	74.84	8.31	2.77	4.85	1.09	0.0001600
ILLINOIS	Macoupin	RLS	NS	Taylorsville, IL to Granite City, IL	0.71	0.08	0.02	0.05	0.02	0.0000020
ILLINOIS	Madison	RLS	NS	Taylorsville, IL to Granite City, IL	13.44	1.34	0.34	1.01	0.34	0.0000300
ILLINOIS	Montgomery	RLS	NS	Taylorsville, IL to Granite City, IL	3.98	0.36	0.18	0.18	0.18	0.0000090
ILLINOIS	Piatt	RLS	NS	Tilton, IL to Decatur, IL	118.28	13.14	4.39	7.66	2.99	0.0002500
ILLINOIS	Vermilion	RLS	NS	Tilton, IL to Decatur, IL	126.09	14.00	4.67	8.17	3.18	0.0002700
ILLINOIS	Vermilion	RLS	NS	Lafayette, IN to Tilton, IL	85.72	9.52	3.18	5.55	2.16	0.0001800
ILLINOIS	TOTAL FOR VERMILION COUNTY				211.81	23.52	7.85	13.72	5.34	0.0004500
INDIANA										
INDIANA	Allen	RLS	CSX	Adams, IN to Ft. Wayne, IN	30.10	3.30	1.10	2.00	0.80	0.0000640
INDIANA	Allen	RLS	CSX	Bucyrus, OH to Adams, IN	87.00	9.70	3.20	5.60	2.20	0.0001800
INDIANA	Allen	RLS	CSX	Ft. Wayne, IN to Warsaw, IN	115.10	12.80	4.30	7.50	2.90	0.0002400
INDIANA	Allen	RLS	NS	Fort Wayne, IN to Peru, IN	96.18	10.68	3.57	6.23	2.43	0.0002000

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
INDIANA	Allen	RLS	NS	Butler, IN to Fort Wayne, IN	129.75	14.41	4.81	8.41	3.28	0.0000275
INDIANA	Allen	RLS	NS	Ft Wayne TC, IN to Ft Wayne Yd, IN	3.30	0.37	0.12	0.21	0.08	0.0000070
INDIANA	Allen	RY	NS	Fort Wayne	14.03	1.70	0.78	0.62	0.29	0.0000200
INDIANA	TOTAL FOR ALLEN COUNTY				475.46	52.96	17.88	30.57	11.98	0.0007385
INDIANA	Carroll	RLS	NS	Peru, IN to Lafayette, IN	194.87	21.64	7.23	12.63	4.92	0.0004100
INDIANA	Cass	RLS	NS	Peru, IN to Lafayette, IN	187.91	20.87	6.97	12.18	4.74	0.0004000
INDIANA	DeKalb	RLS	CSX	Deshler, OH to Willow Creek, IN	420.80	46.70	15.60	27.30	10.60	0.0008900
INDIANA	DeKalb	RLS	NS	Butler, IN to Fort Wayne, IN	81.53	9.05	3.02	5.28	2.06	0.0001727
INDIANA	TOTAL FOR DEKALB COUNTY				502.33	55.75	18.62	32.58	12.66	0.0010627
INDIANA	Delaware	RLS	NS	Alexandria, IN to Muncie, IN	85.32	9.48	3.16	5.53	2.15	0.0001800
INDIANA	Fountain	RLS	NS	Lafayette, IN to Tilton, IL	88.85	9.87	3.29	5.76	2.24	0.0001900
INDIANA	Gibson	RLS	CSX	Vincennes, IN to Evansville, IN	317.70	35.30	11.80	20.60	8.00	0.0006700
INDIANA	Huntington	RLS	NS	Fort Wayne, IN to Peru, IN	178.17	19.79	6.61	11.54	4.50	0.0003800
INDIANA	Knox	RLS	CSX	Vincennes, IN to Evansville, IN	175.70	19.50	6.50	11.40	4.40	0.0003700
INDIANA	Kosciusko	RLS	CSX	Warsaw, IN to Tolleston, IN	74.50	8.30	2.80	4.80	1.90	0.0001600
INDIANA	Kosciusko	RLS	CSX	Deshler, OH to Willow Creek, IN	415.70	46.20	15.40	26.90	10.50	0.0008800
INDIANA	TOTAL FOR KOSCIUSKO COUNTY				490.20	54.50	18.20	31.70	12.40	0.0010400
INDIANA	Lake	RLS	CSX	Willow Creek, IN to Pine Jct, IN	70.00	7.80	2.60	4.50	1.80	0.0001500
INDIANA	Lake	RLS	NS	CP 501, IN to Indiana Harbor, IN	17.32	1.92	0.64	1.12	0.44	0.0000370
ILLINOIS	Lake	RLS	NS	Indiana Harbor, IN to S. Chicago, IL	68.90	7.65	2.55	4.46	1.74	0.0001460
INDIANA	Lake	RY	CSX	Curtis	2.00	0.20	0.10	0.10	0.04	0.0000029
INDIANA	Lake	RLS	CSX	Pine Jct IN to Barr Yd IL	72.01	8.00	2.67	4.67	1.82	0.0001526
INDIANA	TOTAL FOR LAKE COUNTY				230.23	25.57	8.56	14.85	5.84	0.0004885
INDIANA	LaPorte	RLS	CSX	Deshler, OH to Willow Creek, IN	419.80	46.60	15.60	27.20	10.60	0.0008900
INDIANA	Madison	RLS	NS	Alexandria, IN to Muncie, IN	39.85	4.43	1.48	2.58	1.01	0.0000840
INDIANA	Marshall	RLS	CSX	Warsaw, IN to Tolleston, IN	79.00	8.80	2.90	5.10	2.00	0.0001700
INDIANA	Marshall	RLS	CSX	Deshler, OH to Willow Creek, IN	414.40	46.00	15.40	26.90	10.50	0.0008800
INDIANA	TOTAL FOR MARSHALL COUNTY				493.40	54.80	18.30	32.00	12.50	0.0010500
INDIANA	Miami	RLS	NS	Fort Wayne, IN to Peru, IN	68.95	7.66	2.56	4.47	1.74	0.0001500

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
INDIANA	Miami	RLS	NS	Peru, IN to Lafayette, IN	55.93	6.21	2.07	3.62	1.41	0.0001200
INDIANA	TOTAL FOR MIAMI COUNTY				124.88	13.87	4.63	8.09	3.15	0.0002700
INDIANA	Noble	RLS	CSX	Deshler, OH to Willow Creek, IN	484.10	53.80	18.00	31.40	12.20	0.0010000
INDIANA	Porter	RLS	CSX	Willow Creek, IN to Pine Jct, IN	97.80	10.90	3.60	6.30	2.50	0.0002100
INDIANA	Porter	RLS	CSX	Deshler, OH to Willow Creek, IN	196.10	21.80	7.30	12.70	5.00	0.0004200
INDIANA	TOTAL FOR PORTER COUNTY				293.90	32.70	10.90	19.00	7.50	0.0006300
INDIANA	St. Joseph	RLS	CSX	Deshler, OH to Willow Creek, IN	55.30	6.10	2.10	3.60	1.40	0.0001200
INDIANA	Starke	RLS	CSX	Tolleston, IN to Clark Jct, IN	18.60	2.10	0.70	1.20	0.50	0.0000390
INDIANA	Starke	RLS	CSX	Warsaw, IN to Tolleston, IN	34.10	3.80	1.30	2.20	0.90	0.0000720
INDIANA	TOTAL FOR STARKE COUNTY				52.70	5.90	2.00	3.40	1.40	0.0001110
INDIANA	Tippecanoe	RLS	NS	Lafayette, IN to Tilton, IL	138.71	15.40	5.14	8.99	3.50	0.0002900
INDIANA	Tippecanoe	RLS	NS	Peru, IN to Lafayette, IN	136.13	15.12	5.05	8.82	3.44	0.0002900
INDIANA	TOTAL FOR TIPPECANOE COUNTY				274.84	30.52	10.19	17.81	6.94	0.0005800
INDIANA	Vanderburgh	RLS	CSX	Evansville, IN to Amqui, TN	93.40	10.30	3.50	6.00	2.40	0.0001900
INDIANA	Vanderburgh	RLS	CSX	Vincennes, IN to Evansville, IN	202.70	22.50	7.50	13.10	5.10	0.0004300
INDIANA	TOTAL FOR VANDERBURGH COUNTY				296.10	32.80	11.00	19.10	7.50	0.0006200
INDIANA	Wabash	RLS	NS	Fort Wayne, IN to Peru, IN	156.48	17.38	5.80	10.14	3.95	0.0003300
INDIANA	Warren	RLS	NS	Lafayette, IN to Tilton, IL	156.46	17.38	5.80	10.14	3.95	0.0003300
INDIANA	Whitley	RLS	CSX	Ft. Wayne, IN to Warsaw, IN	9.00	1.00	0.30	0.60	0.20	0.0000190
INDIANA	Whitley	RLS	CSX	Warsaw, IN to Tolleston, IN	61.20	6.80	2.30	4.00	1.50	0.0001300
INDIANA	TOTAL FOR WHITLEY COUNTY				70.20	7.80	2.60	4.60	1.70	0.0001490
KENTUCKY										
KENTUCKY	Christian	RLS	CSX	Evansville, IN to Amqui, TN	280.70	31.20	10.40	18.20	7.10	0.0005900
KENTUCKY	Henderson	RLS	CSX	Evansville, IN to Amqui, TN	126.60	14.00	4.70	8.20	3.20	0.0002700
KENTUCKY	Hopkins	RLS	CSX	Evansville, IN to Amqui, TN	237.40	26.40	8.80	15.40	6.00	0.0005000
KENTUCKY	Todd	RLS	CSX	Evansville, IN to Amqui, TN	101.10	11.20	3.70	6.60	2.60	0.0002100
KENTUCKY	Webster	RLS	CSX	Evansville, IN to Amqui, TN	109.80	12.20	4.10	7.10	2.80	0.0002300
LOUISIANA										

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
LOUISIANA	Orleans	IMF	NS	New Orleans	8.83	5.23	1.18	0.64	0.97	0.0000397
MARYLAND										
MARYLAND	Anne Arundel	RLS	CSX	Jessup, MD to Alexandria Jct, MD	38.50	4.30	1.50	2.50	1.00	0.0000810
MARYLAND	Anne Arundel	RLS	CSX	Relay, MD to Jessup, MD	17.90	2.00	0.60	1.10	0.50	0.0000380
MARYLAND	Anne Arundel	RLS	SA/NEC	Baltimore, MD to Bowie, MD	41.50	4.60	1.50	2.70	1.00	0.0000880
MARYLAND	TOTAL FOR ANNE ARUNDEL COUNTY				97.90	10.90	3.60	6.30	2.50	0.0002070
MARYLAND	Baltimore	RLS	CSX	Baltimore, MD to Relay, MD	7.70	0.90	0.30	0.50	0.20	0.0000160
MARYLAND	Baltimore	RLS	CSX	Relay, MD to Jessup, MD	7.80	0.90	0.30	0.50	0.20	0.0000170
MARYLAND	Baltimore	RLS	SA/NEC	Baltimore, MD to Bowie, MD	22.20	2.50	0.80	1.40	0.60	0.0000470
MARYLAND	TOTAL FOR BALTIMORE COUNTY				37.70	4.30	1.40	2.40	1.00	0.0000800
MARYLAND	Baltimore City	RLS	CSX	Baltimore, MD to Relay, MD	10.80	1.20	0.40	0.70	0.30	0.0000230
MARYLAND	Baltimore City	IMF	NS	Baltimore	10.81	6.41	1.44	0.78	1.19	0.0000486
MARYLAND	Baltimore City	RLS	SA/NEC	Baltimore, MD to Bowie, MD	44.60	5.00	1.70	2.90	1.10	0.0000940
MARYLAND	TOTAL FOR BALTIMORE CITY				66.21	12.61	3.54	4.38	2.59	0.0001656
MARYLAND	Cecil	RLS	SA/NEC	Davis, DE to Perryville, MD	84.60	9.40	3.10	5.50	2.10	0.0001800
MARYLAND	Frederick	RLS	CSX	Pt of Rocks, MD to Harpers Ferry, WV	131.40	14.60	4.90	8.50	3.30	0.0002800
MARYLAND	Howard	RLS	CSX	Jessup, MD to Alexandria Jct, MD	7.00	0.80	0.30	0.50	0.20	0.0000150
MARYLAND	Howard	RLS	CSX	Relay, MD to Jessup, MD	7.10	0.80	0.30	0.50	0.20	0.0000150
MARYLAND	Howard	RLS	SA/NEC	Baltimore, MD to Bowie, MD	12.10	1.30	0.40	0.80	0.30	0.0000260
MARYLAND	TOTAL FOR HOWARD COUNTY				26.20	2.90	1.00	1.80	0.70	0.0000560
MARYLAND	Montgomery	RLS	CSX	Pt of Rocks, MD to Harpers Ferry, WV	0.10	0.01	0.00	0.00	0.00	0.0000001
MARYLAND	Montgomery	RLS	CSX	Washington DC to Pt of Rocks, MD	267.50	29.70	9.90	17.30	6.80	0.0005700
MARYLAND	TOTAL FOR MONTGOMERY COUNTY				267.60	29.71	9.90	17.30	6.80	0.0005701
MARYLAND	Prince Georges	RLS	CSX	Jessup, MD to Alexandria Jct, MD	98.40	10.90	3.70	6.40	2.50	0.0002100
MARYLAND	Prince Georges	RLS	CSX	Landover, MD to Anacostia DC	8.40	0.90	0.30	0.50	0.20	0.0000180
MARYLAND	Prince Georges	RLS	CSX	Washington DC to Pt of Rocks, MD	22.30	2.50	0.80	1.40	0.60	0.0000470
MARYLAND	Prince Georges	RLS	CSX	Alexandria Jct, MD to Benning, MD	25.70	2.90	1.00	1.70	0.70	0.0000550
MARYLAND	Prince Georges	RLS	CSX	Alexandria Jct, MD to Washington DC	31.10	3.40	1.20	2.00	0.80	0.0000660
MARYLAND	Prince Georges	RLS	SA/NEC	Bowie, MD to Landover, MD	47.40	5.30	1.80	3.10	1.20	0.0001000
MARYLAND	Prince Georges	RLS	SA/NEC	Baltimore, MD to Bowie, MD	14.80	1.60	0.50	1.00	0.40	0.0000310
MARYLAND	TOTAL FOR PRINCE GEORGES COUNTY				248.10	27.50	9.30	16.10	6.40	0.0005270
MARYLAND	Washington	RLS	CSX	Pt of Rocks, MD to Harpers Ferry, WV	36.00	4.00	1.30	2.30	0.90	0.0000760
MARYLAND	Washington	RLS	NS	Harrisburg, PA to Riverton Jct., VA	140.32	15.58	5.20	9.09	3.54	0.0003000
MARYLAND	TOTAL FOR WASHINGTON COUNTY				176.32	19.58	6.50	11.39	4.44	0.0003760

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
MICHIGAN										
MICHIGAN	Calhoun	RLS	NS	Jackson, MI to Kalamazoo, MI	2.54	0.28	0.09	0.16	0.06	0.0000060
MICHIGAN	Jackson	RLS	NS	Jackson, MI to Kalamazoo, MI	1.37	0.15	0.05	0.09	0.03	0.0000030
MICHIGAN	Jackson	RLS	NS	W. Detroit, MI to Jackson MI	1.09	0.12	0.04	0.07	0.03	0.0000020
MICHIGAN	TOTAL FOR Jackson COUNTY				2.46	0.27	0.09	0.16	0.06	0.0000050
MICHIGAN	Kalamazoo	RLS	NS	Jackson, MI to Kalamazoo, MI	1.16	0.13	0.04	0.08	0.03	0.0000030
MICHIGAN	Monroe	RLS	CSX	Carleton, MI to Toledo, OH	109.80	12.20	4.10	7.10	2.80	0.0002300
MICHIGAN	Monroe	RLS	SA	Carleton, MI to Ecorse, MI	21.70	2.40	0.80	1.40	0.50	0.0000460
MICHIGAN	TOTAL FOR MONROE COUNTY				131.50	14.60	4.90	8.50	3.30	0.0002760
MICHIGAN	Wayne	RY	CSX	Rougemere	14.00	1.70	0.80	0.60	0.30	0.0000200
MICHIGAN	Wayne	RLS	NS	W. Detroit, MI to Jackson, MI	2.20	0.24	0.08	0.14	0.06	0.0000050
MICHIGAN	Wayne	RLS	SA	Carleton, MI to Ecorse, MI	88.70	9.80	3.30	5.70	2.20	0.0001900
MICHIGAN	Wayne	RLS	SA	West Detroit, MI to North Yard, MI	19.50	2.20	0.70	1.30	0.50	0.0000410
MICHIGAN	Wayne	RLS	SA	West Detroit, MI to Delray, MI	5.70	0.60	0.20	0.40	0.10	0.0000120
MICHIGAN	TOTAL FOR WAYNE COUNTY				130.10	14.54	5.08	8.14	3.16	0.0002680
MICHIGAN	Washtenaw	RLS	NS	W. Detroit, MI to Jackson, MI	2.76	0.31	0.10	0.18	0.07	0.0000060
MISSOURI										
MISSOURI	Clay	IMF	NS	Voltz TCS	10.47	6.21	1.39	0.76	1.15	0.0000471
MISSOURI	St. Louis City	IMF	NS	Luther	27.39	16.25	3.65	1.98	3.01	0.0001230
MISSOURI	St. Louis City	RY	NS	Luther	4.12	0.50	0.23	0.18	0.09	0.0000060
MISSOURI	TOTAL FOR ST. LOUIS COUNTY				31.51	16.75	3.88	2.16	3.10	0.0001290
NEW JERSEY										
NEW JERSEY	Bergen	IMF	CSX	Little Ferry	26.79	17.47	3.72	1.89	2.96	0.0001220
NEW JERSEY	Bergen	RLS	NS	Ridgewood Jct, NJ to Croxton, NJ	43.30	4.81	1.61	2.81	1.09	0.0000920
NEW JERSEY	Bergen	RLS	NS	Suffern, NY to Ridgewood Jct, NJ	25.56	3.28	1.10	1.92	0.75	0.0000630
NEW JERSEY	TOTAL FOR BERGEN COUNTY				95.65	25.56	6.43	6.62	4.80	0.0002770
NEW JERSEY	Essex	RLS	SA/NEC	Lane, NJ to Union, NJ	23.00	2.50	0.90	1.50	0.60	0.0000490
NEW JERSEY	Essex	RLS	SA	PN, NJ to Bayway, NJ	9.90	1.10	0.40	0.60	0.30	0.0000210
NEW JERSEY	TOTAL FOR ESSEX COUNTY				32.90	3.60	1.30	2.10	0.90	0.0000700
NEW JERSEY	Hudson	IMF	NS	Croxton - NJIT	14.98	8.88	1.99	1.08	1.64	0.0000674
NEW JERSEY	Hudson	IMF	NS	E-Rail	54.51	32.33	7.26	3.94	5.99	0.0002450
NEW JERSEY	Hudson	IMF	CSX	South Kearny	14.27	8.97	1.95	1.02	1.59	0.0000607

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
NEW JERSEY	Hudson	RLS	NS	Ridgewood Jct, NJ to Croxton, NJ	7.96	0.88	0.29	0.52	0.20	0.0000170
NEW JERSEY	Hudson	RLS	SA/NEC	Lane, NJ to Union, NJ	20.20	2.20	0.70	1.30	0.50	0.0000430
NEW JERSEY	TOTAL FOR HUDSON COUNTY				111.92	53.26	12.19	7.86	9.92	0.0004331
NEW JERSEY	Mercer	RLS	SA/NEC	Midway, NJ to Morrisville, PA	65.70	7.30	2.40	4.30	1.70	0.0001400
NEW JERSEY	Middlesex	RLS	SA/NEC	Union, NJ to Midway, NJ	100.70	11.20	3.70	6.50	2.50	0.0002100
NEW JERSEY	Middlesex	RLS	SA/NEC	Midway, NJ to Morrisville, PA	46.80	5.20	1.70	3.00	1.20	0.0000990
NEW JERSEY	TOTAL FOR MIDDLESEX COUNTY				147.50	16.40	5.40	9.50	3.70	0.0003090
NEW JERSEY	Union	RLS	SA/NEC	Lane, NJ to Union, NJ	4.40	0.50	0.20	0.30	0.10	0.0000093
NEW JERSEY	Union	RLS	SA/NEC	Union, NJ to Midway, NJ	43.90	4.90	1.60	2.80	1.10	0.0000930
NEW JERSEY	Union	RLS	SA	PN, NJ to Bayway, NJ	12.30	1.40	0.50	0.80	0.30	0.0000260
NEW JERSEY	TOTAL FOR UNION COUNTY				60.60	6.80	2.30	3.90	1.50	0.0001283
NEW YORK										
NEW YORK	Albany	RLS	CSX	Selkirk, NY to Hoffmans, NY	50.00	5.50	1.90	3.20	1.30	0.0001100
NEW YORK	Chautauqua	RLS	NS	Ashtabula, OH to Buffalo, NY	346.78	38.51	12.86	22.47	8.76	0.0007400
NEW YORK	Chemung	RLS	NS	Corning, NY to Geneva, NY	1.76	0.20	0.07	0.11	0.04	0.0000037
NEW YORK	Erie	RLS	CSX	Buffalo, NY to CP Sycamore, NY	3.60	0.40	0.10	0.20	0.10	0.0000077
NEW YORK	Erie	RLS	CSX	Chili, NY to Front er, NY	80.10	8.90	3.00	5.20	2.00	0.0001700
NEW YORK	Erie	RLS	CSX	CP Sycamore, NY to Black Rock, NY	25.20	2.80	0.90	1.60	0.60	0.0000530
NEW YORK	Erie	RLS	NS	Ashtabula, OH to Buffalo, NY	234.84	26.08	8.71	15.22	5.93	0.0005000
NEW YORK	Erie	RLS	NS	Ebenezer Jct, NY to Buffalo, NY	45.18	5.04	1.68	2.94	1.14	0.0000960
NEW YORK	Erie	RLS	NS	Corning, NY to Buffalo, NY	34.97	3.88	1.30	2.27	0.88	0.0000741
NEW YORK	Erie	RY	NS	Buffalo Jct, NY	13.24	1.60	0.74	0.58	0.27	0.0000190
NEW YORK	TOTAL FOR ERIE COUNTY				437.13	48.70	16.43	28.01	10.92	0.0009198
NEW YORK	Montgomery	RLS	CSX	Hoffmans, NY to Utica, NY	198.80	22.10	7.40	12.90	5.00	0.0004200
NEW YORK	Orange	RLS	NS	Suffern, NY to Campbell Hall, NY	91.44	10.18	3.37	5.91	2.30	0.0002500
NEW YORK	Orange	RLS	NS	Campbell Hall, NY to Port Jervis, NY	96.70	10.70	3.60	6.30	2.40	0.0002000
NEW YORK	Orange	RLS	NS	Port Jervis NY to Binghampton NY	9.55	1.06	0.35	0.62	0.24	0.0000202
NEW YORK	TOTAL FOR ORANGE COUNTY				197.69	21.94	7.32	12.83	4.94	0.0004702
NEW YORK	Rensselaer	RLS	CSX	Selkirk, NY to Hoffmans, NY	10.00	1.10	0.40	0.60	0.30	0.0000210
NEW YORK	Rockland	RLS	NS	Suffern, NY to Campbell Hall, NY	19.96	2.22	0.73	1.29	0.50	0.0000540
NEW YORK	Rockland	RLS	NS	Suffern, NY to Ridgewood Jct, NY	3.33	0.37	0.12	0.22	0.08	0.0000071
NEW YORK	TOTAL FOR ROCKLAND COUNTY				23.29	2.59	0.85	1.51	0.58	0.0000611

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
NEW YORK	Schenectady	RLS	CSX	Hoffmans, NY to Utica, NY	2.60	0.30	0.10	0.20	0.10	0.0000055
NEW YORK	Schenectady	RLS	CSX	Selkirk, NY to Hoffmans, NY	29.60	3.30	1.10	1.90	0.70	0.0000630
NEW YORK	TOTAL FOR SCHENECTADY COUNTY				32.20	3.60	1.20	2.10	0.80	0.0000685
NEW YORK	Schuyler	RLS	NS	Corning, NY to Geneva, NY	5.27	0.58	0.20	0.34	0.13	0.0000110
NEW YORK	Seneca	RLS	NS	Corning, NY to Geneva, NY	2.74	0.30	0.10	0.18	0.07	0.0000058
NEW YORK	Stuben	RLS	NS	Corning, NY to Geneva, NY	2.42	0.27	0.09	0.16	0.06	0.0000051
NEW YORK	Yates	RLS	NS	Corning, NY to Geneva, NY	8.09	0.90	0.30	0.52	0.20	0.0000170
OHIO										
OHIO	Allen	RLS	CSX	Bucyrus, OH to Adams, IN	151.70	16.80	5.60	9.60	3.80	0.0003200
OHIO	Ashtabula	RLS	NS	Cleveland, OH to Ashtabula, OH	221.36	24.59	8.20	14.34	5.59	0.0004400
OHIO	Ashtabula	RLS	NS	Ashtabula, OH to Buffalo, NY	128.00	14.22	4.75	8.29	3.23	0.0002700
OHIO	Ashtabula	RLS	NS	Youngstown, OH to Ashtabula, OH	136.54	15.24	4.98	8.79	3.52	0.0002900
OHIO	Ashtabula	RY	NS	Conneaut	2.06	0.25	0.11	0.09	0.04	0.0000030
OHIO	TOTAL FOR ASHTABULA COUNTY				487.96	54.30	18.04	31.51	12.38	0.0010030
OHIO	Butler	RLS	CSX	Cincinnati, OH to Hamilton, OH	15.50	1.70	0.60	1.00	0.40	0.0000330
OHIO	Butler	RLS	NS	Dayton, OH to Ivorydale, OH	33.17	3.69	1.16	2.13	0.78	0.0000780
OHIO	TOTAL FOR BUTLER COUNTY				48.67	5.39	1.76	3.13	1.18	0.0001110
OHIO	Crawford	RLS	CSX	Bucyrus, OH to Adams, IN	42.50	4.70	1.60	2.80	1.10	0.0000900
OHIO	Crawford	RLS	CSX	Crestline, OH to Bucyrus, OH	70.90	7.90	2.60	4.60	1.80	0.0001500
OHIO	Crawford	RLS	CSX	Greenwich, OH to Crestline, OH	19.30	2.10	0.70	1.30	0.50	0.0000410
OHIO	Crawford	RLS	NS	Bellevue, OH to Bucyrus, OH	112.57	12.50	4.17	7.29	2.84	0.0002400
OHIO	Crawford	RLS	NS	Bucyrus, OH to Fairgrounds, OH	75.60	8.40	2.80	4.90	1.91	0.0001600
OHIO	TOTAL FOR CRAWFORD COUNTY				320.87	35.60	11.87	20.89	8.15	0.0006810
OHIO	Cuyahoga	RLS	CSX	Ashtabula, OH to Quaker, OH	14.10	1.60	0.50	0.90	0.40	0.0000300
OHIO	Cuyahoga	RLS	CSX	Berea, OH to Greenwich, OH	102.40	11.40	3.80	6.60	2.60	0.0002200
OHIO	Cuyahoga	RLS	CSX	Marcy, OH to Short, OH	238.10	26.40	8.80	15.40	6.00	0.0005000
OHIO	Cuyahoga	RLS	CSX	Mayfield, OH to Marcy, OH	108.00	12.00	4.00	7.00	2.70	0.0002300
OHIO	Cuyahoga	RLS	CSX	Quaker, OH to Mayfield, OH	189.80	21.10	7.00	12.30	4.80	0.0004000
OHIO	Cuyahoga	RLS	CSX	Short, OH to Berea, OH	135.00	15.00	5.00	8.80	3.40	0.0002900
OHIO	Cuyahoga	RLS	NS	Alliance, OH to White, OH	2.19	0.29	0.10	0.19	0.10	0.0000048
OHIO	Cuyahoga	RLS	NS	Cleveland, OH to Ashtabula, OH	262.04	29.11	9.71	16.98	6.62	0.0005200
OHIO	Cuyahoga	RLS	NS	Vermilion, OH to Cleveland, OH	39.66	4.42	1.47	2.55	0.94	0.0000800
OHIO	Cuyahoga	RLS	NS	White, OH to Cleveland, OH	150.70	16.72	5.61	9.79	3.85	0.0003200

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
OHIO	Cuyahoga	RLS	NS	Cleveland, OH to Shortline Jct, OH	30.45	3.36	1.12	1.96	0.84	0.0000630
OHIO	TOTAL FOR CUYAHOGA COUNTY				1272.44	141.40	47.11	82.47	32.25	0.0026578
OHIO	Defiance	RLS	CSX	Deshler, OH to Willow Creek, OH	588.70	65.40	21.80	38.10	14.90	0.0012000
OHIO	Delaware	RLS	NS	Bucyrus, OH to Fairgrounds, OH	199.39	22.14	7.39	12.92	5.03	0.0004200
OHIO	Erie	RLS	NS	Bellevue, OH to Sandusky Dock, OH	41.95	4.69	1.52	2.76	1.10	0.0000880
OHIO	Erie	RLS	NS	Vermilion, OH to Cleveland, OH	1.40	0.15	0.05	0.10	0.03	0.0000030
OHIO	Erie	RLS	NS	Bellevue, OH to Vermilion, OH	178.61	19.93	6.56	11.66	4.62	0.0003900
OHIO	TOTAL FOR ERIE COUNTY				221.96	24.77	8.13	14.52	5.75	0.0004810
OHIO	Franklin	RLS	NS	Bucyrus, OH to Fairgrounds, OH	77.21	8.57	2.86	5.00	1.95	0.0001600
OHIO	Franklin	IMF	NS	Columbus-Discovery Park	8.59	5.10	1.14	0.62	0.94	0.0000387
OHIO	TOTAL FOR FRANKLIN COUNTY				85.80	13.67	4.00	5.62	2.89	0.0001987
OHIO	Hamilton	RLS	CSX	Cincinnati, OH to Hamilton, OH	56.90	6.30	2.10	3.70	1.40	0.0001200
OHIO	Hamilton	RLS	NS	Ivorydale, OH to Cincinnati RH, OH	35.70	3.96	1.32	2.31	0.90	0.0000500
OHIO	Hamilton	RLS	NS	Dayton, OH to Ivorydale, OH	0.84	0.09	0.03	0.05	0.02	0.0000020
OHIO	TOTAL FOR HAMILTON COUNTY				93.44	10.35	3.45	6.06	2.32	0.0001720
OHIO	Hancock	RLS	CSX	Marion, OH to Fostoria, OH	0.90	0.10	0.03	0.10	0.02	0.0000019
OHIO	Hardin	RLS	CSX	Bucyrus, OH to Adams, IN	120.10	13.30	4.50	7.80	3.00	0.0002500
OHIO	Hardin	RLS	CSX	Marion, OH to Ridgeway, OH	41.70	4.60	1.50	2.70	1.10	0.0000880
OHIO	TOTAL FOR HARDIN COUNTY				161.80	17.90	6.00	10.50	4.10	0.0003380
OHIO	Henry	RLS	CSX	Deshler, OH to Toledo, OH	116.60	12.90	4.30	7.60	2.90	0.0002500
OHIO	Henry	RLS	CSX	Deshler, OH to Willow Creek, OH	357.70	39.70	13.30	23.20	9.00	0.0007600
OHIO	TOTAL FOR HENRY COUNTY				474.30	52.60	17.60	30.80	11.90	0.0010100
OHIO	Huron	RLS	CSX	Berea, OH to Greenwich, OH	348.70	38.70	12.90	22.60	8.80	0.0007400
OHIO	Huron	RLS	CSX	Greenwich, OH to Crestline, OH	42.90	4.80	1.60	2.80	1.10	0.0000910
OHIO	Huron	RLS	CSX	Greenwich, OH to Willard, OH	242.40	26.90	9.00	15.70	6.10	0.0005100
OHIO	Huron	RLS	CSX	Willard, OH to Fostoria, OH	123.00	13.70	4.60	8.00	3.10	0.0002600
OHIO	Huron	RLS	NS	Bellevue, OH to Sandusky Dock, OH	0.31	0.04	0.01	0.02	0.01	0.0000007
OHIO	Huron	RLS	NS	Bellevue, OH to Bucyrus, OH	5.04	0.56	0.19	0.33	0.13	0.0000100
OHIO	Huron	RLS	NS	Bellevue, OH to Vermilion, OH	0.87	0.10	0.03	0.05	0.02	0.0000020
OHIO	Huron	RLS	NS	Oak Harbor, OH to Bellevue, OH	1.11	0.12	0.04	0.07	0.03	0.0000024
OHIO	TOTAL FOR HURON COUNTY				764.33	84.92	28.37	49.57	19.29	0.0016161
OHIO	Lake	RLS	CSX	Ashtabula, OH to Quaker, OH	54.60	6.10	2.00	3.60	1.40	0.0001200
OHIO	Lake	RLS	NS	Cleveland, OH to Ashtabula, OH	510.17	56.67	18.91	33.06	12.89	0.0010000

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
OHIO	TOTAL FOR LAKE COUNTY				564.97	62.77	20.91	36.66	14.29	0.0011200
OHIO	Lorain	RLS	CSX	Berea, OH to Greenwich, OH	816.60	90.70	30.30	52.90	20.60	0.0017000
OHIO	Lorain	RLS	NS	Vermilion, OH to Cleveland, OH	101.34	11.24	3.82	6.57	2.54	0.0002100
OHIO	TOTAL FOR LORAIN COUNTY				917.94	101.94	34.12	59.47	23.14	0.0019100
OHIO	Lucas	RLS	CSX	Carleton, MI to Toledo, OH	45.70	5.10	1.70	3.00	1.20	0.0000970
OHIO	Lucas	RY	CSX	Stanley	22.80	2.80	1.30	1.00	0.50	0.0000330
OHIO	Lucas	RY	NS	Airline	24.32	2.95	1.35	1.07	0.50	0.0000350
OHIO	Lucas	RLS	NS	Miami, OH to Airline, OH	8.20	0.92	0.30	0.54	0.20	0.0000180
OHIO	Lucas	RLS	NS	Oak Harbor, OH to Miami, OH	14.24	1.56	0.52	0.91	0.39	0.0000260
OHIO	Lucas	RY	NS	Homestead	6.69	0.81	0.37	0.30	0.14	0.0000097
OHIO	TOTAL FOR LUCAS COUNTY				121.95	14.14	5.54	6.82	2.93	0.0002187
OHIO	Mahoning	RLS	NS	Youngstown, OH to Ashtabula, OH	1.84	0.20	0.07	0.10	0.03	0.0000041
OHIO	Marion	RLS	CSX	Marion, OH to Fostoria, OH	72.30	8.00	2.70	4.70	1.80	0.0001500
OHIO	Marion	RLS	CSX	Marion, OH to Ridgeway, OH	68.80	7.60	2.60	4.50	1.70	0.0001500
OHIO	Marion	RLS	NS	Bucyrus, OH to Fairgrounds, OH	179.10	19.89	6.64	11.61	4.52	0.0003800
OHIO	TOTAL FOR MARION COUNTY				320.20	35.49	11.94	20.81	8.02	0.0006800
OHIO	Montgomery	RLS	NS	Dayton, OH to Ivorydale, OH	21.24	2.33	0.78	1.40	0.47	0.0000470
OHIO	Ottawa	RLS	NS	Oak Harbor, OH to Miami, OH	33.90	3.80	1.30	2.20	0.90	0.0000700
OHIO	Ottawa	RLS	NS	Oak Harbor, OH to Bellevue, OH	49.42	5.49	1.83	3.20	1.25	0.0001100
OHIO	TOTAL FOR OTTAWA COUNTY				83.32	9.29	3.13	5.40	2.15	0.0001800
OHIO	Portage	RLS	NS	Alliance, OH to White, OH	10.51	1.24	0.41	0.62	0.21	0.0000250
OHIO	Richland	RLS	CSX	Greenwich, OH to Crestline, OH	163.60	18.20	6.10	10.60	4.10	0.0003500
OHIO	Sandusky	RLS	NS	Bellevue, OH to Bucyrus, OH	6.75	0.75	0.25	0.44	0.17	0.0000140
OHIO	Sandusky	RLS	NS	Oak Harbor, OH to Bellevue, OH	260.32	28.91	9.65	16.87	6.57	0.0005500
OHIO	TOTAL FOR SANDUSKY COUNTY				267.07	29.66	9.90	17.31	6.74	0.0005640
OHIO	Seneca	RLS	CSX	Willard, OH to Fostoria, OH	651.90	72.40	24.20	42.20	16.50	0.0014000
OHIO	Seneca	RLS	CSX	Marion, OH to Fostoria, OH	46.20	5.10	1.70	3.00	1.20	0.0000980
OHIO	Seneca	RLS	NS	Bellevue, OH to Bucyrus, OH	164.54	18.27	6.10	10.66	4.15	0.0003500
OHIO	TOTAL FOR SENECA COUNTY				862.64	95.77	32.00	55.86	21.85	0.0018480
OHIO	Stark	RLS	NS	Alliance, OH to White, OH	0.50	0.05	0.02	0.05	0.01	0.0000009
OHIO	Summit	RLS	NS	Alliance, OH to White, OH	3.16	0.34	0.11	0.23	0.11	0.0000068

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
OHIO	Trumbull	RLS	NS	Youngstown, OH to Ashtabula, OH	110.46	12.10	3.95	7.10	2.89	0.0002300
OHIO	Van Wert	RLS	CSX	Bucyrus, OH to Adams, IN	149.80	16.60	5.60	9.70	3.80	0.0003200
OHIO	Warren	RLS	NS	Dayton, OH to Ivorydale, OH	1.18	0.15	0.04	0.07	0.04	0.0000026
OHIO	Wood	RLS	CSX	Deshler, OH to Toledo, OH	575.40	63.90	21.30	37.30	14.50	0.0012000
OHIO	Wood	RLS	CSX	Marion, OH to Fostoria, OH	13.90	1.50	0.50	0.90	0.30	0.0000290
OHIO	Wood	RLS	CSX	Carleton, MI to Toledo, OH	0.40	0.04	0.01	0.02	0.01	0.0000008
OHIO	Wood	RLS	NS	Oak Harbor, OH to Miami, OH	10.34	1.16	0.39	0.66	0.28	0.0000220
OHIO	TOTAL FOR WOOD COUNTY				600.04	66.60	22.20	38.88	15.09	0.0012518
OHIO	Wyandot	RLS	CSX	Bucyrus, OH to Adams, IN	118.40	13.20	4.40	7.70	3.00	0.0002500
OHIO	Wyandot	RLS	CSX	Marion, OH to Fostoria, OH	84.50	9.40	3.10	5.50	2.10	0.0001800
OHIO	TOTAL FOR WYANDOT COUNTY				202.90	22.60	7.50	13.20	5.10	0.0004300
PENNSYLVANIA										
PENNSYLVANIA	Allegheny	RLS	CSX	Rankin, Jct, PA to New Castle, PA	134.50	14.90	5.00	8.70	3.40	0.0002900
PENNSYLVANIA	Allegheny	RLS	CSX	Sinns, PA to Brownsville, PA	210.90	23.40	7.80	13.70	5.30	0.0004500
PENNSYLVANIA	Allegheny	RLS	CSX	Sinns, PA to Rankin Jct, PA	109.50	12.20	4.10	7.10	2.80	0.0002300
PENNSYLVANIA	Allegheny	RLS	CSX	Cumberland, MD to Sinns, PA	68.10	7.60	2.50	4.40	1.70	0.0001400
PENNSYLVANIA	Allegheny	IMF	NS	Pittsburgh-Pitcairn	18.55	11.00	2.47	1.34	2.04	0.0000835
PENNSYLVANIA	TOTAL FOR ALLEGHENY COUNTY				541.55	69.10	21.87	35.24	15.24	0.0011935
PENNSYLVANIA	Beaver	RLS	CSX	Rankin, Jct, PA to New Castle, PA	116.70	13.00	4.30	7.60	2.90	0.0002500
PENNSYLVANIA	Beaver	RLS	NS	Rochester, PA to Youngstown, OH	9.93	1.09	0.41	0.68	0.27	0.0000200
PENNSYLVANIA	TOTAL FOR BEAVER COUNTY				126.63	14.09	4.71	8.28	3.17	0.0002700
PENNSYLVANIA	Bucks	IMF	NS	Morrisville (Philadelphia)	21.49	12.74	2.86	1.55	2.36	0.0000967
PENNSYLVANIA	Bucks	RLS	SA/NEC	Morrisville, PA to Zoo, PA	34.50	3.80	1.30	2.20	0.90	0.0000730
PENNSYLVANIA	Bucks	RLS	SA/NEC	Midway, NJ to Morrisville, PA	3.30	0.40	0.10	0.20	0.10	0.0000070
PENNSYLVANIA	TOTAL FOR BUCKS COUNTY				59.29	16.94	4.26	3.95	3.36	0.0001767
PENNSYLVANIA	Cumberland	RLS	NS	Harrisburg, PA to Riverton Jct., VA	234.14	26.00	8.68	15.17	5.91	0.0005000
PENNSYLVANIA	Cumberland	RLS	NS	Harrisburg, PA to Marysville, PA	0.25	0.03	0.01	0.02	0.01	0.0000005
PENNSYLVANIA	TOTAL FOR CUMBERLAND COUNTY				234.39	26.03	8.69	15.19	5.92	0.0005005
PENNSYLVANIA	Dauphin	RLS	NS	Harrisburg, PA to Rutherford, PA	37.51	4.17	1.39	2.43	0.95	0.0000790
PENNSYLVANIA	Dauphin	RLS	NS	Harrisburg, PA to Marysville, PA	48.64	5.46	1.76	3.19	1.26	0.0001000
PENNSYLVANIA	Dauphin	RLS	NS	Harrisburg, PA to Riverton Jct., VA	13.96	1.55	0.52	0.90	0.35	0.0000300
PENNSYLVANIA	Dauphin	RLS	NS	Harrisburg, PA to Shocks, PA	13.60	1.50	0.54	0.82	0.41	0.0000270
PENNSYLVANIA	Dauphin	RLS	NS	WM Jct, PA to Rutherford, PA	3.63	0.39	0.10	0.20	0.10	0.0000078

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
PENNSYLVANIA	Dauphin	RY	NS	Harrisburg	6.03	0.73	0.34	0.27	0.12	0.0000087
PENNSYLVANIA	TOTAL FOR DAUPHIN COUNTY				123.37	13.80	4.65	7.81	3.19	0.0002525
PENNSYLVANIA	Delaware	RLS	CSX	RG, PA to Wilsmere, DE	39.70	4.40	1.50	2.60	1.00	0.0000840
PENNSYLVANIA	Delaware	RLS	SA/NEC	[illegible]al, PA to Davis, DE	74.80	8.30	2.80	4.80	1.90	0.0001600
PENNSYLVANIA	Delaware	RLS	SA/NEC	Morrisville, PA to Zoo, PA	15.00	1.70	0.60	1.00	0.40	0.0000320
PENNSYLVANIA	TOTAL FOR DELAWARE COUNTY				129.50	14.40	4.90	8.40	3.30	0.0002760
PENNSYLVANIA	Erie	RLS	NS	Ashtabula, OH to Buffalo, NY	375.16	41.66	13.91	24.31	9.47	0.0008000
PENNSYLVANIA	Fayette	RLS	CSX	Sinns, PA to Brownsville, PA	44.60	5.00	1.70	2.90	1.10	0.0000950
PENNSYLVANIA	Fayette	RLS	CSX	Cumberland, MD to Sinns, PA	164.10	18.20	6.10	10.60	4.10	0.0003500
PENNSYLVANIA	TOTAL FOR FAYETTE COUNTY				208.70	23.20	7.80	13.50	5.20	0.0004450
PENNSYLVANIA	Franklin	RLS	NS	Harrisburg, PA to Riverton Jct., VA	158.83	17.64	5.89	10.29	4.00	0.0003400
PENNSYLVANIA	Lancaster	RLS	NS	Harrisburg, PA to Shocks, PA	5.12	0.59	0.17	0.34	0.17	0.0000110
PENNSYLVANIA	Lawrence	RLS	CSX	New Castle, PA to Youngstown, OH	37.40	4.20	1.40	2.40	0.90	0.0000790
PENNSYLVANIA	Lawrence	RLS	CSX	Rankin, Jct, PA to New Castle, PA	182.80	20.30	6.80	11.80	4.60	0.0003900
PENNSYLVANIA	Lawrence	RLS	NS	Rochester, PA to Youngstown, OH	17.93	2.20	0.73	1.10	0.37	0.0000380
PENNSYLVANIA	TOTAL FOR LAWRENCE COUNTY				238.13	26.70	8.93	15.30	5.87	0.0005070
PENNSYLVANIA	Lebanon	RLS	NS	WM Jct, PA to Rutherford, PA	19.78	2.30	0.69	1.38	0.46	0.0000410
PENNSYLVANIA	Northampton	IMF	NS	Allentown	13.78	8.17	1.83	1.00	1.51	0.0000620
PENNSYLVANIA	Philadelphia	RLS	CSX	Field, PA to Belmont, PA	13.90	1.50	0.50	0.90	0.30	0.0000290
PENNSYLVANIA	Philadelphia	RLS	CSX	RG, PA to Field, PA	12.90	1.40	0.50	0.80	0.30	0.0000270
PENNSYLVANIA	Philadelphia	RLS	CSX	RG, PA to Wilsmere, DE	15.30	1.70	0.60	1.00	0.40	0.0000320
PENNSYLVANIA	Philadelphia	IMF	CSX	Philadelphia-Greenwich	51.85	32.61	7.09	3.72	5.78	0.0002210
PENNSYLVANIA	Philadelphia	RLS	SA/NEC	Morrisville, PA to Zoo, PA	43.70	4.90	1.60	2.80	1.10	0.0000930
PENNSYLVANIA	Philadelphia	RLS	CSX	South Philadelphia, PA to Field, PA	37.40	4.10	1.40	2.40	0.90	0.0000790
PENNSYLVANIA	Philadelphia	RY	SA	Greenwich	13.23	1.60	0.74	0.58	0.27	0.0000191
PENNSYLVANIA	TOTAL FOR PHILADELPHIA COUNTY				188.28	47.81	12.43	12.20	9.05	0.0005001
PENNSYLVANIA	Pike	RLS	NS	Port Jervis, NY to Binghampton NY	78.30	8.70	2.90	5.07	1.98	0.0001659
PENNSYLVANIA	Somerset	RLS	CSX	Cumberland, MD to Sinns, PA	241.00	26.80	8.90	15.60	6.10	0.0005100
PENNSYLVANIA	Susquehana	RLS	NS	Port Jervis, NY to Binghampton NY	45.83	5.09	1.70	2.97	1.16	0.0000971
PENNSYLVANIA	Washington	RLS	CSX	Sinns, PA to Brownsville, PA	7.20	0.80	0.30	0.50	0.20	0.0000150

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
PENNSYLVANIA	Westmoreland	RLS	CSX	Sinns, PA to Brownsville, PA	52.90	5.90	2.00	3.40	1.30	0.0001100
PENNSYLVANIA	Westmoreland	RLS	CSX	Cumberland, MD to Sinns, PA	87.10	9.70	3.20	5.60	2.20	0.0001800
PENNSYLVANIA	TOTAL FOR WESTMORELAND COUNTY				140.00	15.60	5.20	9.00	3.50	0.0002900
PENNSYLVANIA	York	RLS	NS	Harrisburg, PA to Riverton Jct., VA	14.50	1.61	0.54	0.94	0.37	0.0000310
TENNESSEE										
TENNESSEE	Davidson	RLS	CSX	Evansville, IN to Amqui, TN	143.10	15.90	5.30	9.30	3.60	0.0003000
TENNESSEE	Hamilton	RLS	NS	Citico Jct TN to Ooltewah TN	53.22	5.91	1.97	3.45	1.34	0.0001127
TENNESSEE	Hamilton	RLS	NS	Wauhatchie TN to Attala AL	3.59	0.40	0.13	0.23	0.09	0.0000076
TENNESSEE	TOTAL FOR HAMILTON COUNTY				56.81	6.31	2.10	3.68	1.43	0.0001203
TENNESSEE	Montgomery	RLS	CSX	Evansville, IN to Amqui, TN	38.00	4.20	1.40	2.50	1.00	0.0000810
TENNESSEE	Robertson	RLS	CSX	Evansville, IN to Amqui, TN	228.50	25.40	8.50	14.80	5.80	0.0004800
TENNESSEE	Shelby	RY	CSX	Leewood	1.90	0.20	0.10	0.10	0.04	0.0000027
TENNESSEE	Shelby	IMF	NS	Memphis	12.38	7.34	1.65	0.89	1.36	0.0000557
TENNESSEE	TOTAL FOR SHELBY COUNTY				14.28	7.54	1.75	0.99	1.40	0.0000584
TENNESSEE	Sumner	RLS	CSX	Amqui, TN to Nashville, TN	4.60	0.50	0.20	0.30	0.10	0.0000097
TENNESSEE	Sullivan	RY	NS	Bristol - Frisco	0.34	0.04	0.02	0.02	0.01	0.0000005
VIRGINIA										
VIRGINIA	Alexandria	RLS	CSX	Fredericksburg, VA to Potomac Yd, VA	34.20	3.80	1.30	2.20	0.80	0.0001000
VIRGINIA	Arlington	RLS	CSX	Fredericksburg, VA to Potomac Yd, VA	5.00	0.60	0.20	0.30	0.10	0.0000100
VIRGINIA	Arlington	RLS	CSX	Virginia Ave, DC to Potomac Yd, VA	8.30	0.90	0.30	0.50	0.20	0.0000200
VIRGINIA	TOTAL FOR ARLINGTON COUNTY				13.30	1.50	0.50	0.80	0.30	0.0000300
VIRGINIA	Augusta	RLS	NS	Riverton Jct., VA to Roanoke, VA	293.57	32.60	10.88	19.02	7.41	0.0006200
VIRGINIA	Botetourt	RLS	NS	Riverton Jct., VA to Roanoke, VA	209.98	23.32	7.79	13.61	5.30	0.0004500
VIRGINIA	Buena Vista	RLS	NS	Riverton Jct., VA to Roanoke, VA	21.48	2.39	0.80	1.39	0.54	0.0000460
VIRGINIA	Chesterfield	RLS	CSX	S. Richmond, VA to Weldon, NC	42.60	4.70	1.60	2.80	1.10	0.0000900
VIRGINIA	Clarke	RLS	NS	Harrisburg, PA to Riverton Jct., VA	99.65	11.07	3.69	6.46	2.52	0.0002100

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
VIRGINIA	Colonial Heights	RLS	CSX	S. Richmond, VA to Weldon, NC	8.30	0.90	0.30	0.50	0.20	0.0000180
VIRGINIA	Fairfax	RLS	CSX	Fredericksburg, VA to Potomac Yd, VA	59.80	6.60	2.20	3.90	1.50	0.0001300
VIRGINIA	Hanover	RLS	CSX	Doswell, VA to Fredericksburg, VA	33.60	3.70	1.20	2.20	0.80	0.0000710
VIRGINIA	Hanover	RLS	CSX	Richmond, VA to Doswell, VA	24.50	2.70	0.90	1.60	0.60	0.0000520
VIRGINIA	TOTAL FOR HANOVER COUNTY				58.10	6.40	2.10	3.80	1.40	0.0001230
VIRGINIA	Henrico	RLS	CSX	Richmond, VA to Doswell, VA	26.10	2.90	1.00	1.70	0.70	0.0000550
VIRGINIA	Page	RLS	NS	Riverton Jct., VA to Roanoke, VA	240.85	26.75	8.93	15.61	6.08	0.0005100
VIRGINIA	Prince William	RLS	CSX	Fredericksburg, VA to Potomac Yd, VA	46.80	5.20	1.70	3.00	1.20	0.0000990
VIRGINIA	Richmond City	RLS	CSX	Richmond, VA to Doswell, VA	40.60	4.50	1.50	2.60	1.00	0.0000860
VIRGINIA	Richmond City	RLS	CSX	S. Richmond, VA to Weldon, NC	8.20	0.90	0.30	0.50	0.20	0.0000170
VIRGINIA	TOTAL FOR RICHMOND CITY				48.80	5.40	1.80	3.10	1.20	0.0001030
VIRGINIA	Roanoke	RLS	NS	Riverton Jct., VA to Roanoke, VA	19.13	2.12	0.71	1.24	0.48	0.0000410
VIRGINIA	Roanoke City	RLS	NS	Riverton Jct., VA to Roanoke, VA	19.92	2.21	0.74	1.29	0.50	0.0000400
VIRGINIA	Rockbridge	RLS	NS	Riverton Jct., VA to Roanoke, VA	264.28	29.35	9.80	17.12	6.67	0.0005600
VIRGINIA	Rockingham	RLS	NS	Riverton Jct., VA to Roanoke, VA	164.60	18.28	6.10	10.67	4.16	0.0003500
VIRGINIA	Stafford	RLS	CSX	Fredericksburg, VA to Potomac Yd, VA	74.90	8.30	2.80	4.90	1.90	0.0001600
VIRGINIA	Warren	RLS	NS	Riverton Jct., VA to Roanoke, VA	103.85	11.53	3.85	6.73	2.62	0.0002200
VIRGINIA	Warren	RLS	NS	Harrisburg, PA to Riverton Jct., VA	42.88	4.76	1.59	2.78	1.08	0.0000910
VIRGINIA	TOTAL FOR WARREN COUNTY				146.73	16.29	5.44	9.51	3.70	0.0003110
VIRGINIA	Waynesboro	RLS	NS	Riverton Jct., VA to Roanoke, VA	27.27	3.03	1.01	1.77	0.69	0.0000580
WEST VIRGINIA										
WEST VIRGINIA	Berkeley	RLS	CSX	Pt of Rocks, MD to Harpers Ferry, WV	5.80	0.60	0.20	0.40	0.10	0.0000120
WEST VIRGINIA	Fayette	RLS	NS	Elmore, WV to Deepwater, WV	67.48	7.49	2.50	4.37	1.70	0.0001400
WEST VIRGINIA	Fayette	RLS	NS	Fola Mine, WV to Deepwater, WV	27.45	3.05	1.02	1.78	0.69	0.0000580
WEST VIRGINIA	TOTAL FOR FAYETTE COUNTY				94.93	10.54	3.52	6.15	2.39	0.0001980
WEST VIRGINIA	Jefferson	RLS	CSX	Pt of Rocks, MD to Harpers Ferry, WV	86.70	9.60	3.20	5.60	2.20	0.0001800
WEST VIRGINIA	Jefferson	RLS	NS	Harrisburg, PA to Riverton Jct., VA	111.34	12.36	4.13	7.21	2.81	0.0002400

Attachment E-2

Emissions Increases for Rail Activities Projected to Exceed Board Analysis Thresholds

(Tons/Year)

	COUNTY	FACILITY	OPERATOR	NAME	NOx	CO	VOC	SO2	PM	Pb
WEST VIRGINIA	TOTAL FOR JEFFERSON COUNTY				198.04	21.96	7.33	12.81	5.01	0.0004200
WEST VIRGINIA	Kanawha	RLS	NS	Elmore, WV to Deepwater, WV	7.35	0.82	0.27	0.48	0.19	0.0000160
WEST VIRGINIA	Marion	RLS	CSX	WD Tower, WV to Rivr sville, WV	6.00	0.70	0.20	0.40	0.20	0.0000130
WEST VIRGINIA	Raleigh	RLS	NS	Elmore, WV to Deepwater, WV	44.91	4.99	1.66	2.91	1.13	0.0000950
WEST VIRGINIA	Wyoming	RLS	NS	Elmore, WV to Deepwater, WV	17.52	1.95	0.65	1.14	0.44	0.0000370

Attachment E-3

County Total Emissions Increases for Threshold Activities, In Decreasing Order of Total NOx (Prior to Netting Analysis)

Attachment E-3

County Total Emissions Increases for Threshold Activities, in Decreasing Order of Total NOx (Prior to Netting Analysis)

State	County	NOx Screening Level (ton/yr)	NOx (ton/yr)	CO (ton/yr)	VOC (ton/yr)	SO2 (ton/yr)	PM (ton/yr)
Ohio	Cuyahoga	100	1,272	141	47	82	32
Ohio	Lorain	100	918	102	34	59	23
Ohio	Seneca	100	863	96	32	56	22
Ohio	Huron	100	764	85	28	50	19
Ohio	Wood	100	600	67	22	39	15
Ohio	Defiance	100	589	65	22	38	15
Ohio	Lake	100	565	63	21	37	14
Pennsylvania	Allegheny	100	542	69	22	35	15
Indiana	De Kalb	100	502	56	19	33	13
Indiana	Marshall	100	493	55	18	32	13
Indiana	Kosciusko	100	490	55	18	32	12
Ohio	Ashtabula	100	488	54	18	32	12
Indiana	Noble	100	484	54	18	31	12
Indiana	Allen	100	475	53	18	31	12
Ohio	Henry	100	474	53	18	31	12
New York	Erie	100	437	49	16	28	11
Illinois	Cook	25	429	152	36	29	28
Indiana	LaPorte	100	420	47	16	27	11
Pennsylvania	Erie	100	375	42	14	24	9
New York	Chautauqua	100	347	39	13	22	9
Ohio	Crawford	100	321	36	12	21	8
Ohio	Marion	100	320	35	12	21	8
Indiana	Gibson	100	318	35	12	21	8
Indiana	Vanderburgh	100	296	33	11	19	8
Indiana	Porter	25	294	33	11	19	8
Virginia	Augusta	100	294	33	11	19	7
Kentucky	Christian	100	281	31	10	18	7
Indiana	Tippecanoe	100	275	31	10	18	7
Maryland	Montgomery	50	268	30	10	17	7
Ohio	Sandusky	100	267	30	10	17	7
Virginia	Rockbridge	100	264	29	10	17	7
Maryland	Prince George's	50	248	28	9	16	6
Pennsylvania	Somerset	100	241	27	9	[illegible]	6
Pennsylvania	Lawrence	100	238	27	9	[illegible]	6
Kentucky	Hopkins	100	237	26	9	15	6
Pennsylvania	Cumberland	100	234	26	9	15	6
Indiana	Lake	25	230	26	9	15	6
Tennessee	Robertson	100	229	25	9	15	6
Ohio	Erie	100	222	25	8	15	6
Delaware	New Castle	25	218	24	8	14	5
Illinois	Champaign	100	216	24	8	14	5
Illinois	Vermilion	100	212	24	8	14	5
Virginia	Botetourt	100	210	23	8	14	5
Pennsylvania	Fayette	100	209	23	8	14	5
Ohio	Wyandot	100	203	23	8	13	5
Ohio	Delaware	100	199	22	7	13	5
New York	Montgomery	100	199	22	7	13	5
West Virginia	Jefferson	100	198	22	7	13	5
New York	Orange	25/100	198	22	7	13	5
Indiana	Carroll	100	195	22	7	13	5
Pennsylvania	Philadelphia	25	188	48	12	12	9
Indiana	Cass	100	188	21	7	12	5
Indiana	Huntington	100	178	20	7	12	5
Maryland	Washington	100	176	20	7	11	4
Indiana	Knox	100	176	20	7	11	4
Virginia	Rockingham	100	165	18	6	11	4
Ohio	Richland	100	164	18	6	11	4
Ohio	Hardin	100	162	18	6	11	4
Pennsylvania	Franklin	100	159	18	6	10	4
Indiana	Wabash	100	156	17	6	10	4
Indiana	Warren	100	156	17	6	10	4
Ohio	Allen	100	152	17	6	10	4
Ohio	Van Wert	100	150	17	6	10	4
New Jersey	Middlesex	25	148	16	5	10	4

Attachment E-3

County Total Emissions Increases for Threshold Activities, in Decreasing Order of Total NOx (Prior to Netting Analysis)

State	County	NOx Screening Level (ton/yr)	NOx (ton/yr)	CO (ton/yr)	VOC (ton/yr)	SO2 (ton/yr)	PM (ton/yr)
Virginia	Warren	100	147	16	5	10	4
Tennessee	Davidson	100	143	16	5	9	4
Pennsylvania	Westmoreland	100	140	16	5	9	4
Michigan	Monroe	100	132	15	5	9	3
Maryland	Frederick	50	131	15	5	9	3
Michigan	Wayne	100	130	15	5	8	3
Pennsylvania	Delaware	25	130	14	5	8	3
Pennsylvania	Beaver	100	127	14	5	8	3
Kentucky	Henderson	100	127	14	5	8	3
Indiana	Miami	100	125	14	5	8	3
Pennsylvania	Dauphin	100	123	14	5	8	3
Ohio	Lucas	100	122	14	6	7	3
Illinois	Piatt	100	118	13	4	8	3
New Jersey	Hudson	25	112	53	12	8	10
Ohio	Trumbull	100	110	12	4	7	3
Kentucky	Webster	100	110	12	4	7	3
Kentucky	Todd	100	101	11	4	7	3
Virginia	Clarke	100	100	11	4	6	3
Maryland	Anne Arundel	25	98	11	4	6	3
New Jersey	Bergen	25	96	26	6	7	5
West Virginia	Fayette	100	95	11	4	6	2
Ohio	Hamilton	100	93	10	3	6	2
Indiana	Fountain	100	89	10	3	6	2
Ohio	Franklin	100	86	14	4	6	3
Indiana	Delaware	100	85	9	3	6	2
Maryland	Cecil	25	85	9	3	6	2
Ohio	Ottawa	100	83	9	3	5	2
Pennsylvania	Pike	100	78	9	3	5	2
Virginia	Stafford	50	75	8	3	5	2
Illinois	Macon	100	75	8	3	5	2
Indiana	Whitley	100	70	8	3	5	2
Georgia	Fulton	50	67	27	7	4	5
Maryland	Baltimore City	25	66	13	4	4	3
New Jersey	Mercer	25	66	7	2	4	2
Georgia	Henry	50	64	7	2	4	2
New Jersey	Union	25	61	7	2	4	2
Virginia	Fairfax	50	60	7	2	4	2
Pennsylvania	Bucks	25	59	17	4	4	3
Virginia	Hanover	100	58	6	2	4	1
Tennessee	Hamilton	100	57	6	2	4	1
Indiana	St. Joseph	100	55	6	2	4	1
Indiana	Starke	100	53	6	2	3	1
New York	Albany	100	50	6	2	3	1
Virginia	Richmond City	100	49	5	2	3	1
Ohio	Butler	100	49	5	2	3	1
Virginia	Prince William	25	47	5	2	3	1
Pennsylvania	Susquehana	100	46	5	2	3	1
West Virginia	Raleigh	100	45	5	2	3	1
District of Columbia	District of Columbia	25	43	5	2	3	1
Virginia	Chesterfield	100	43	5	2	3	1
Indiana	Madison	100	40	4	1	3	1
Tennessee	Montgomery	100	38	4	1	3	1
Maryland	Baltimore	25	38	4	1	2	1
Georgia	Paulding	50	35	4	1	2	1
Virginia	Alexandria	50	34	4	1	2	1
New Jersey	Essex	25	33	4	1	2	1
New York	Schenectady	100	32	4	1	2	1
Missouri	St. Louis City	100	32	17	4	2	3
Alabama	Etowah	100	29	3	1	2	1
Virginia	Waynesboro	100	27	3	1	2	1
Maryland	Howard	25	26	3	1	2	1
Virginia	Henrico	100	26	3	1	2	1
Georgia	Monroe	100	26	3	1	2	1
New York	Rockland	25	23	3	1	2	1

Attachment E-3

County Total Emissions Increases for Threshold Activities, in Decreasing Order of Total NOx (Prior to Netting Analysis)

State	County	NOx Screening Level (ton/yr)	NOx (ton/yr)	CO (ton/yr)	VOC (ton/yr)	SO2 (ton/yr)	PM (ton/yr)
Virginia	Buena Vista	100	21	2	1	1	1
Ohio	Montgomery	100	21	2	1	1	0
Virginia	Roanoke City	100	20	2	1	1	1
Pennsylvania	Lebanon	100	20	2	1	1	0
Virginia	Roanoke	100	19	2	1	1	0
West Virginia	Wyoming	100	18	2	1	1	0
Georgia	Clayton	50	16	2	1	1	0
Georgia	Cobb	50	15	2	1	1	0
Pennsylvania	York	100	15	2	1	1	0
Tennessee	Shelby	100	14	8	2	1	1
Pennsylvania	Northampton	100	14	8	2	1	2
Illinois	Madison	100	13	1	0	1	0
Georgia	De Kalb	50	13	2	1	1	0
Virginia	Arlington	50	13	2	1	1	0
Alabama	Jefferson	100	11	1	1	1	0
Ohio	Portage	100	11	1	0	1	0
Missouri	Clay	100	10	6	1	1	1
New York	Rensselaer	100	10	1	0	1	0
Louisiana	Orleans	100	9	5	1	1	1
Virginia	Colonial Heights	100	8	1	0	1	0
New York	Yates	100	8	1	0	1	0
West Virginia	Kanawha	100	7	1	0	0	0
Pennsylvania	Washington	100	7	1	0	1	0
West Virginia	Marion	100	6	1	0	0	0
West Virginia	Berkeley	100	6	1	0	0	0
New York	Schuyler	100	5	1	0	0	0
Pennsylvania	Lancaster	100	5	1	0	0	0
Tennessee	Sumner	100	5	1	0	0	0
Illinois	Montgomery	100	4	0	0	0	0
Georgia	Wilkinson	100	4	0	0	0	0
Illinois	Christian	100	4	0	0	0	0
Ohio	Summit	100	3	0	0	0	0
Michigan	Washtenaw	100	3	0	0	0	0
New York	Seneca	100	3	0	0	0	0
Michigan	Calhoun	100	3	0	0	0	0
Michigan	Jackson	100	2	0	0	0	0
New York	Steuben	100	2	0	0	0	0
Ohio	Mahoning	100	2	0	0	0	0
New York	Chemung	100	2	0	0	0	0
Ohio	Warren	100	1	0	0	0	0
Michigan	Kalamazoo	100	1	0	0	0	0
Ohio	Hancock	100	1	0	0	0	0
Alabama	Madison	100	1	0	0	0	0
Illinois	Macoupin	100	1	0	0	0	0
Ohio	Stark	100	1	0	0	0	0
Tennessee	Sullivan	100	0	0	0	0	0

NOTES:
Bold denotes the county total for the pollutant is greater than the applicable threshold value.
The threshold values for CO, VOC, SO2, and PM are 100 ton/yr for all counties.

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
DE	New Castle	CSX	RG, PA to Wilsmere, DE	26.0	10.8	3.5	9.0	726.8	37.87	
DE	New Castle	CSX	Wilsmere, DE to Baltimore, MD	68.0	10.6	1.9	6.0	726.8	24.78	
DE	New Castle	SA	Arsenal, PA to Davis, DE	25.0	19.9	8.2	18.0	719.2	141.05	
DE	New Castle	SA	Davis, DE to Perryville, MD	21.1	3.2	7.9	19.0	719.2	23.94	
DE	New Castle	CR/NS	Bell, DE to Edgemoor, DE	1.0	1.0	6.8	8.4	702.9	3.38	
DE	New Castle	CR/NS	Newark, DE to Harrington, DE	56.0	27.7	1.4	0.7	702.9	7.81	
								TOTALS	**238.84**	
DE	**New Castle**									
DC	Washington	CR/CSX	Anacostia, DC to Virginia Ave, DC	2.5	2.5	9.3	5.0	726.8	4.87	
DC	Washington	CR/CSX	Virginia Ave, DC to Potomac Yd, VA	6.0	2.8	10.7	8.0	726.8	8.73	
DC	Washington	CR/CSX	Landover, MD to Anacostia, DC	5.4	3.1	5.7	6.0	726.8	7.25	
DC	Washington	CSX	Washington, DC to Pt of Rocks, MD	43.0	5.1	7.0	18.0	726.8	35.77	
DC	Washington	CSX	Alexandria Jct, MD to Washington, DC	5.0	2.6	6.9	21.0	726.8	21.28	
DC	Washington	CR/CSX	Alexandria Jct, MD to Benning, DC	6.0	2.6	5.6	11.0	726.8	11.14	
								TOTALS	**89.04**	
DC	**Washington**									
GA	Fulton	NS	Austell, GA to Howell, GA	16.0	6.2	0.7	3.7	702.9	9.24	
GA	Fulton	NS	Howell, GA to Spring, GA	1.0	1.0	7.1	13.9	702.9	5.60	
GA	Fulton	NS	Spring, GA to Scherer Coal, GA	65.0	6.1	5.7	6.9	702.9	16.96	
GA	Fulton	NS	Spring, GA to East Point, GA	6.0	6.0	-0.7	-3.5	702.9	-8.46	
GA	Fulton	NS	Industry Yd, GA to Edgewood, GA	95.0	5.0	0.0	0.2	702.9	0.40	
GA	Fulton	NS	Hayne Yd, SC to Howell, GA	181.0	7.3	-0.4	4.1	702.9	12.06	
GA	Fulton	CSX	Cartersville, GA to Atlanta, GA	46.0	6.8	-1.1	-3.0	726.8	-7.95	
GA	Fulton	CSX	Atlanta, GA to Manchester, GA	78.0	23.4	-2.6	-1.0	726.8	-9.12	
GA	Fulton	CSX	Athens, GA to Atlanta, GA	69.0	2.8	2.3	5.0	726.8	5.46	
GA	Fulton	CSX	Atlanta, GA to LaGrange, GA	70.0	24.8	1.2	2.0	726.8	19.33	
GA	Fulton	CSX	Carnak, GA to Atlanta, GA	126.0	2.8	-0.4	-2.0	726.8	-2.18	
								TOTALS	**41.33**	
GA	**Fulton**									
GA	Henry	NS	Spring, GA to Scherer Coal, GA	65.0	23.5	5.7	6.9	702.9	65.33	
GA	Henry	NS	Industry Yd, GA to Edgewood, GA	95.0	6.9	0.0	0.2	702.9	0.56	
								TOTALS	**65.89**	
GA	**Henry**									
IL	Champaign	NS	Tilton, IL to Decatur, IL	71.0	28.7	16.4	18.7	702.9	216.16	
IL	Champaign	NS	Gibson City, IL to Bement, IL	41.0	6.5	1.6	5.4	702.9	14.14	
								TOTALS	**230.30**	
IL	**Champaign**									
IL	Cook	CSX	Barr Yd, IL to Blue Island Jct, IL	3.0	3.0	15.9	33.0	726.8	38.58	4.28
IL	Cook	CSX	Blue Island Jct, IL to 59th Street, IL	10.1	10.1	3.4	10.0	726.8	39.35	4.37
IL	Cook	CSX	Pine Jct, IN to Barr Yd, IL	11.0	5.9	5.7	24.0	726.8	55.36	6.15
IL	Cook	CSX	Dolton, IL to Danville, IL	106.0	11.8	1.4	9.0	726.8	41.38	4.60
IL	Cook	CSX	Blue Island Jct, IL to Clearing, IL	15.0	15.0	0.4	2.0	726.8	11.69	1.30
IL	Cook	CSX	Pine Jct, IN to Rock Island Jct, IL	10.0	1.7	0.0	0.0	726.8	0.00	0.00
IL	Cook	CSX	Dolton, IL to 75th Street, IL	9.4	9.4	-0.4	-3.0	726.8	-10.99	-1.22
IL	Cook	CR/NS	Indiana Harbor, IN to South Chicago, IL	8.0	1.4	4.1	32.7	702.9	18.71	2.08
IL	Cook	CR/NS	South Chicago, IL to Ashland Ave, IL	9.0	9.0	-16.2	-31.0	702.9	-112.41	-12.48

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
IL	Cook	CR/NS	Colehour, IL to Calumet Park, IL	7.0	5.0	1.4	4.5	702.9	9.07	1.01
IL	Cook	NS	Hammond, IN to Calumet, IL	8.0	2.6	-13.3	-27.2	702.9	-28.49	-3.16
IL	Cook	NS	IC 95 Street, IL to Pullman Jct, IL	0.9	0.9	3.9	8.6	702.9	3.12	0.35
IL	Cook	NS	Calumet, IL to Landers, IL	11.2	11.2	-5.2	9.4	702.9	42.42	4.71
IL	**Cook**							**TOTALS**	**107.78**	**11.97**
IL	Piatt	CSX	Chrisman, IL to Decatur, IL	68.5	14.8	0.3	0.0	726.8	0.00	
IL	Piatt	NS	Tilton, IL to Decatur, IL	71.0	15.7	16.4	18.7	702.9	118.14	
IL	Piatt	NS	Gibson City, IL to Bement, IL	41.0	26.0	1.6	5.4	702.9	56.65	
IL	**Piatt**							**TOTALS**	**174.79**	
IL	Vermilion	NS	Lafayette, IN to Tilton, IL	49.0	8.9	17.4	23.8	702.9	85.73	
IL	Vermilion	NS	Tilton, IL to Decatur, IL	71.0	16.7	16.4	18.7	702.9	125.90	
IL	Vermilion	CR/CSX	Chrisman, IL to Danville, IL	24.9	18.9	-1.6	-1.0	726.8	-7.36	
IL	Vermilion	CR/CSX	Danville, IL to Olin, IN	11.3	4.[illegible]	0.0	0.0	726.8	0.00	
IL	Vermilion	CSX	Danville, IL to Terre Haute, IN	57.0	5.9	1.3	12.0	726.8	27.63	
IL	Vermilion	CSX	Dolton, IL to Danville, IL	106.0	25.6	1.4	9.0	726.8	89.78	
IL	**Vermilion**							**TOTALS**	**321.67**	
IN	Allen	CR/CSX	Adams, IN to Ft Wayne, IN	5.0	5.0	8.0	16.0	726.8	31.17	
IN	Allen	CR/CSX	Bucyrus, OH to Adams, IN	113.5	14.7	8.0	15.0	726.8	85.92	
IN	Allen	NS/CSX	Ft Wayne, IN to Warsaw, IN	39.7	11.6	4.0	9.0	check RR	#VALUE!	
IN	Allen	CR/CSX	Decatur, IN to Adams, IN	16.2	8.9	0.0	0.0	726.8	0.00	
IN	Allen	NS	Butler, IN to Ft Wayne, IN	28.0	19.4	13.7	16.6	702.9	129.75	
IN	Allen	NS	Ft Wayne TC, IN to Ft Wayne Yd, IN	2.0	2.0	3.0	4.1	702.9	3.30	
IN	Allen	NS	7 mile segment in Ft Wayne, IN	7.0	7.0	15.9	23.4	702.9	66.00	
IN	Allen	NS	Ft Wayne, IN to Peru, IN	53.0	10.2	15.9	23.4	702.9	96.35	
IN	Allen	NS	Ft Wayne, IN to Hobart, IN	120.0	11.6	-0.6	-7.6	702.9	-35.52	
IN	Allen	NS	Hadley, IN to Hobart, IN	111.0	6.7	-5.9	-7.0	702.9	-18.90	
IN	Allen	NS	Ft Wayne, IN to Muncie, IN	64.0	10.8	-4.6	-7.1	702.9	-30.81	
IN	Allen	NS	Bellevue, OH to Ft Wayne, IN	120.0	20.2	4.6	2.6	702.9	21.15	
IN	**Allen**							**TOTALS**	**#VALUE!**	
IN	Carroll	NS	Peru, IN to Lafayette, IN	53.0	15.0	21.8	26.9	702.9	162.46	
IN	**Carroll**							**TOTALS**	**162.46**	
IN	Cass	NS	Peru, IN to Lafayette, IN	53.0	17.3	21.8	26.9	702.9	187.82	
IN	**Cass**							**TOTALS**	**187.82**	
IN	DeKalb	NS	Butler, IN to Ft Wayne, IN	28.0	12.2	13.7	16.6	702.9	81.53	
IN	DeKalb	NS	Oakwood, MI to Butler, IN	107.0	4.4	2.1	4.2	702.9	7.48	
IN	DeKalb	CSX	Deshler, OH to Willow Creek, IN	174.0	21.8	26.3	49.0	726.8	416.23	
IN	DeKalb	CR/NS	Airline, OH to Butler, IN	68.0	3.0	-2.2	-16.1	702.9	-19.46	
IN	DeKalb	CR/NS	Butler, IN to Elkhart, IN	63.0	16.9	-11.8	-26.0	702.9	-176.51	
IN	**DeKalb**							**TOTALS**	**309.26**	
IN	Gibson	CSX	Vincennes, IN to Evansville, IN	53.0	24.2	8.5	33.0	726.8	311.18	
IN	Gibson	NS	Louisville, KY to East St Louis, IL	263.0	25.2	-0.1	-1.1	702.9	-11.17	
IN	**Gibson**							**TOTALS**	**300.01**	
IN	Huntington	NS	Ft Wayne, IN to Peru, IN	53.0	20.5	15.9	23.4	702.9	193.27	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
IN	**Huntington**							**TOTALS**	**193.27**	
IN	Knox	CSX	Vincennes, IN to Evansville, IN	53.0	12.0	8.5	33.0	726.8	154.30	
IN	Knox	CSX	Mitchell, IN to Vincennes, IN	62.0	14.4	-6.9	-17.0	726.8	-95.39	
IN	Knox	CSX	Terre Haute, IN to Vincennes, IN	54.0	16.8	5.9	23.0	726.8	150.56	
IN	Knox	CSX	Vincennes, IN to Salem, IL	79.0	0.8	-5.1	-11.0	726.8	-3.43	
IN	**Knox**							**TOTALS**	**206.05**	
IN	Kosciusko	CSX	Deshler, OH to Willow Creek, IN	174.0	14.7	26.3	49.0	726.8	280.67	
IN	Kosciusko	NS/CSX	Ft Wayne, IN to Warsaw, IN	39.7	11.0	4.0	9.0	check RR	#VALUE!	
IN	Kosciusko	NS/CSX	Warsaw, IN to Tolleston, IN	83.1	11.0	4.0	8.0	check RR	#VALUE!	
IN	Kosciusko	NS	Ft Wayne, IN to Hobart, IN	120.0	22.0	-0.6	-7.6	702.9	-67.37	
IN	Kosciusko	NS	Hadley, IN to Hobart, IN	111.0	20.3	-5.9	-7.0	702.9	-57.25	
IN	Kosciusko	CR/NS	Goshen, IN to Alexandria, IN	99.0	28.3	2.1	6.4	702.9	72.97	
IN	**Kosciusko**							**TOTALS**	**#VALUE!**	
IN	Lake	CSX	Willow Creek, IN to Pine Jct, IN	12.0	10.2	16.5	36.0	726.8	143.08	
IN	Lake	CSX	Munster, IN to Monon, IN	62.0	27.2	0.0	1.0	726.8	10.59	
IN	Lake	CSX	Pine Jct, IN to Barr Yd, IL	11.0	7.7	5.7	24.0	726.8	72.01	
IN	Lake	CSX	Pine Jct, IN to Rock Island Jct, IL	10.0	8.1	0.0	0.0	726.8	0.00	
IN	Lake	NS	Ft Wayne, IN to Hobart, IN	120.0	1.3	-0.6	-7.6	702.9	-3.89	
IN	Lake	NS	Hobart, IN to Hammond, IN	15.7	15.7	-15.1	-25.7	702.9	-162.46	
IN	Lake	NS	Hammond, IN to Calumet, IL	8.0	0.4	-13.3	-27.2	702.9	-4.38	
IN	Lake	NS	Hadley, IN to Hobart, IN	111.0	1.3	-5.9	-7.0	702.9	-3.58	
IN	Lake	CR/NS	Control Pt 501, IN to Indiana Harbor, IN	1.6	1.6	16.9	43.1	702.9	28.13	
IN	Lake	CR/NS	Porter, IN to Control Pt 501, IN	20.0	10.4	-6.9	2.4	702.9	10.08	
IN	Lake	CR/NS	Indiana Harbor, IN to South Chicago, IL	8.0	5.2	4.1	32.7	702.9	68.90	
IN	Lake	CR/NS	Colehour, IL to Calumet Park, IL	7.0	2.0	1.4	4.5	702.9	3.63	
IN	Lake	CR/NS	Indiana Harbor, IN to Kankakee, IL	57.0	33.7	-2.6	-4.7	702.9	-63.74	
IN	Lake	CR/NS	Schneider, IN to Wheatfield Coal, IN	21.0	7.0	0.3	-0.1	702.9	-0.28	
IN	Lake	CR/CSX	Willow Creek, IN to Ivanhoe, IN	12.8	10.6	1.8	2.0	726.8	8.26	
IN	Lake	NS/CSX	Warsaw, IN to Tolleston, IN	83.1	8.7	4.0	8.0	check RR	#VALUE!	
IN	Lake	CR/CSX	Tolleston, IN to Clarke Jct, IN	3.9	3.9	5.0	12.0	726.8	18.24	
IN	**Lake**							**TOTALS**	**#VALUE!**	
IN	LaPorte	CSX	Deshler, OH to Willow Creek, IN	174.0	21.8	26.3	49.0	726.8	416.23	
IN	LaPorte	CSX	Wellsboro, IN to N Judson, IN	23.6	19.3	0.0	0.0	726.8	0.00	
IN	LaPorte	CSX	Waverly, MI to Porter, IN	110.0	9.5	-2.0	-6.0	726.8	-22.21	
IN	LaPorte	NS/CSX	Warsaw, IN to Tolleston, IN	83.1	12.0	4.0	8.0	check RR	#VALUE!	
IN	LaPorte	CR/NS	Elkhart, IN to Porter, IN	61.0	23.3	-7.8	-7.8	702.9	-73.22	
IN	LaPorte	NS	Argos, IN to Dillon, IN	22.0	3.6	-0.9	-2.3	702.9	-3.32	
IN	LaPorte	NS	Hadley, IN to Hobart, IN	111.0	11.5	-5.9	-7.0	702.9	-32.43	
IN	LaPorte	NS	Ft Wayne, IN to Hobart, IN	120.0	12.0	-0.6	-7.6	702.9	-36.74	
IN	**LaPorte**							**TOTALS**	**#VALUE!**	
IN	Marshall	CSX	Deshler, OH to Willow Creek, IN	174.0	21.5	26.3	49.0	726.8	410.50	
IN	Marshall	NS/CSX	Warsaw, IN to Tolleston, IN	83.1	21.9	4.0	8.0	check RR	#VALUE!	
IN	Marshall	NS	Argos, IN to Dillon, IN	22.0	19.5	-0.9	-2.3	702.9	-17.99	
IN	Marshall	NS	Hadley, IN to Hobart, IN	111.0	22.0	-5.9	-7.0	702.9	-62.05	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
IN	Marshall	NS	Ft Wayne, IN to Hobart, IN	120.0	21.9	-0.6	-7.6	702.9	-67.06	
IN	**Marshall**							**TOTALS**	**#VALUE!**	
IN	Miami	NS	Ft Wayne, IN to Peru, IN	53.0	7.3	15.9	23.4	702.9	69.11	
IN	Miami	NS	Peru, IN to Lafayette, IN	53.0	5.2	21.8	26.9	702.9	55.92	
IN	**Miami**							**TOTALS**	**125.03**	
IN	Noble	CSX	Deshler, OH to Willow Creek, IN	174.0	25.1	26.3	49.0	726.8	479.23	
IN	Noble	CR/NS	Butler, IN to Elkhart, IN	63.0	25.2	-11.8	-26.0	702.9	-263.98	
IN	**Noble**							**TOTALS**	**215.25**	
IN	Porter	CSX	Willow Creek, IN to Pine Jct, IN	12.0	2.2	16.5	36.0	726.8	30.86	
IN	Porter	CSX	Deshler, OH to Willow Creek, IN	174.0	14.2	26.3	49.0	726.8	271.12	
IN	Porter	CSX	Waverly, MI to Porter, IN	110.0	8.8	-2.0	-6.0	726.8	-20.60	
IN	Porter	CR/NS	Porter, IN to Control Pt 501, IN	20.0	7.9	-6.9	2.4	702.9	7.62	
IN	Porter	CR/NS	Elkhart, IN to Porter, IN	61.0	7.5	-7.8	-7.8	702.9	-23.57	
IN	Porter	CR/CSX	Porter, IN to Willow Creek, IN	6.1	6.1	-9.6	-2.1	726.8	-5.01	
IN	Porter	CR/CSX	Willow Creek, IN to Ivanhoe, IN	12.8	2.0	1.8	2.0	726.8	1.59	
IN	Porter	NS/CSX	Warsaw, IN to Tolleston, IN	83.1	16.6	4.0	8.0	check RR	#VALUE!	
IN	Porter	NS	Ft Wayne, IN to Hobart, IN	120.0	16.6	-0.6	-7.6	702.9	-50.63	
IN	Porter	NS	Hadley, IN to Hobart, IN	111.0	17.0	-5.9	-7.0	702.9	-47.95	
IN	**Porter**							**TOTALS**	**#VALUE!**	
IN	Tippecanoe	NS	Peru, IN to Lafayette, IN	53.0	14.3	21.8	26.9	702.9	154.98	
IN	Tippecanoe	NS	Lafayette, IN to Tilton, IL	49.0	12.4	17.4	23.8	702.9	118.90	
IN	Tippecanoe	NS	Lafayette Jct, IN to Alexandria, IN	67.0	12.5	1.8	2.5	702.9	12.59	
IN	Tippecanoe	CSX	Monon, IN to Lafayette, IN	30.0	12.1	0.0	1.0	726.8	4.71	
IN	Tippecanoe	CSX	Lafayette, IN to Crawfordsville, IN	29.0	13.9	0.0	1.0	726.8	5.42	
IN	**Tippecanoe**							**TOTALS**	**296.61**	
IN	Vanderburgh	CSX	Vincennes, IN to Evansville, IN	53.0	15.4	8.5	33.0	726.8	198.02	
IN	Vanderburgh	CSX	Evansville, IN to Amqui, TN	137.0	11.0	9.3	26.0	726.8	111.44	
IN	Vanderburgh	CSX	Evansville, IN to Adams, IN	9.0	5.8	0.0	0.0	726.8	0.00	
IN	**Vanderburgh**							**TOTALS**	**309.46**	
IN	Wabash	NS	Ft Wayne, IN to Peru, IN	53.0	16.6	15.9	23.4	702.9	156.79	
IN	Wabash	CR/NS	Goshen, IN to Alexandria, IN	99.0	31.8	2.1	6.4	702.9	82.00	
IN	**Wabash**							**TOTALS**	**238.78**	
IN	Warren	NS	Lafayette, IN to Tilton, IL	49.0	17.5	17.4	23.8	702.9	167.81	
IN	**Warren**							**TOTALS**	**167.81**	
KY	Christian	CSX	Evansville, IN to Amqui, TN	137.0	32.8	9.3	26.0	726.8	332.30	
KY	**Christian**							**TOTALS**	**332.30**	
KY	Henderson	CSX	Evansville, IN to Amqui, TN	137.0	15.0	9.3	26.0	726.8	151.96	
KY	Henderson	CSX	Skillman, KY to Henderson, KY	60.0	15.4	-0.3	0.0	726.8	0.00	
KY	**Henderson**							**TOTALS**	**151.96**	
KY	Hopkins	CSX	Evansville, IN to Amqui, TN	137.0	28.0	9.3	26.0	726.8	283.67	
KY	Hopkins	CSX	Atkinson, KY to Providence, KY	19.0	14.5	0.0	0.0	726.8	0.00	
KY	Hopkins	CSX	Millport, KY to Atkinson, KY	19.0	9.2	0.0	0.0	726.8	0.00	
KY	Hopkins	CSX	Morton, KY to Atkinson, KY	5.0	7.4	0.0	0.0	726.8	0.00	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
								TOTALS	283.67	
KY	**Hopkins**									
KY	Todd	CSX	Evansville, IN to Amqui, TN	137.0	11.4	9.3	26.0	726.8	115.70	
								TOTALS	115.70	
KY	**Todd**									
KY	Webster	CSX	Evansville, IN to Amqui, TN	137.0	12.4	9.3	26.0	726.8	125.62	
KY	Webster	CSX	Atkinson, KY to Providence, KY	19.0	1.2	0.0	0.0	726.8	0.00	
KY	Webster	CSX	Providence, KY to Dotiki, KY	8.4	8.4	0.0	0.0	726.8	0.00	
								TOTALS	125.62	
KY	**Webster**									
MD	Anne Arundel	CSX	Jessup, MD to Alexandria Jct, MD	17.0	5.4	3.7	22.0	726.8	46.29	
MD	Anne Arundel	CSX	Relay, MD to Jessup, MD	7.0	2.7	3.9	12.0	726.8	12.62	
MD	Anne Arundel	SA	Baltimore, MD to Bowie, MD	28.6	13.8	5.3	12.0	719.2	65.21	
								TOTALS	124.12	
MD	**Anne Arundel**									
MD	Baltimore City	CSX	Baltimore, MD to Relay, MD	7.0	3.0	3.1	6.0	726.8	7.01	
MD	Baltimore City	CSX	Wilsmere, DE to Baltimore, MD	68.0	8.1	1.9	6.0	726.8	18.94	
MD	Baltimore City	CSX	Baltimore, MD to Hanover, PA	55.0	9.6	0.0	1.0	726.8	3.74	
MD	Baltimore City	SA/NEC	Perryville, MD to Baltimore, MD	32.4	5.2	1.3	3.0	check RR	#VALUE!	
MD	Baltimore City	SA/NEC	Baltimore, MD to Bowie, MD	28.6	4.7	5.3	12.0	check RR	#VALUE!	
								TOTALS	#VALUE!	
MD	**Baltimore City**									
MD	Baltimore	CSX	Baltimore, MD to Relay, MD	7.0	2.9	3.1	6.0	726.8	6.78	
MD	Baltimore	CSX	Relay, MD to Jessup, MD	7.0	0.9	3.9	12.0	726.8	4.21	
MD	Baltimore	CSX	Wilsmere, DE to Baltimore, MD	68.0	12.0	1.9	6.0	726.8	28.06	
MD	Baltimore	CSX	Baltimore, MD to Hanover, PA	55.0	19.2	0.0	1.0	726.8	7.48	
MD	Baltimore	CSX	Relay, MD to Pt of Rocks, MD	58.0	5.2	-0.1	2.0	726.8	4.05	
MD	Baltimore	SA/NEC	Perryville, MD to Baltimore, MD	32.4	12.0	1.3	3.0	check RR	#VALUE!	
MD	Baltimore	SA/NEC	Baltimore, MD to Bowie, MD	28.6	4.0	5.3	12.0	check RR	#VALUE!	
								TOTALS	#VALUE!	
MD	**Baltimore**									
MD	Cecil	CSX	Wilsmere, DE to Baltimore, MD	68.0	18.8	1.9	6.0	726.8	43.95	
MD	Cecil	SA	Davis, DE to Perryville, MD	21.1	18.6	7.9	19.0	719.2	139.16	
MD	Cecil	SA	Perryville, MD to Baltimore, MD	32.4	0.6	1.3	3.0	719.2	0.71	
MD	Cecil	CR/NS	Wago York Haven, PA to Perryville, MD	58.0	14.2	-1.9	-8.8	702.9	-50.35	
								TOTALS	133.47	
MD	**Cecil**									
MD	Frederick	CSX	Pt of Rocks, MD to Harpers Ferry, WV	13.0	9.6	8.3	18.0	726.8	67.33	
MD	Frederick	CSX	Relay, MD to Pt of Rocks, MD	58.0	24.9	-0.1	2.0	726.8	19.37	
MD	Frederick	CSX	Washington, DC to Pt of Rocks, MD	43.0	6.0	7.0	18.0	726.8	42.08	
								TOTALS	128.78	
MD	**Frederick**									
MD	Howard	CSX	Relay, MD to Jessup, MD	7.0	4.4	3.9	12.0	726.8	20.57	
MD	Howard	CSX	Relay, MD to Pt of Rocks, MD	58.0	14.0	-0.1	2.0	726.8	10.91	
								TOTALS	31.48	
MD	**Howard**									
MD	Montgomery	CSX	Washington, DC to Pt of Rocks, MD	43.0	30.4	7.0	18.0	726.8	213.22	
								TOTALS	213.22	
MD	**Montgomery**									
MD	Prince Georges	CSX	Jessup, MD to Alexandria Jct, MD	17.0	11.6	3.7	22.0	726.8	99.44	
MD	Prince Georges	CSX	Alexandria Jct, MD to Washington, DC	5.0	1.9	6.9	21.0	726.8	15.55	
MD	Prince Georges	CSX	Alexandria Jct, MD to Benning, DC	6.0	3.4	5.6	11.0	726.8	14.57	
MD	Prince Georges	CR/CSX	Landover, MD to Anacostia, DC	5.4	2.6	5.7	6.0	726.8	6.08	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
MD	Prince Georges	CR/CSX	Bowie, MD to Brandywine, MD	24.9	24.9	0.0	0.0	726.8	0.00	
MD	Prince Georges	CR/CSX	Brandywine, MD to Morgantown, MD	20.7	3.1	0.0	0.0	726.8	0.00	
MD	Prince Georges	CR/CSX	Brandywine, MD to Chalk Pt, MD	17.3	6.0	0.0	0.0	726.8	0.00	
MD	Prince Georges	SA/NEC	Baltimore, MD to Bowie, MD	28.6	3.1	5.3	12.0	check RR	#VALUE!	
MD	Prince Georges	SA/NEC	Bowie, MD to Landover, MD	8.3	8.3	6.1	14.0	check RR	#VALUE!	
MD	**Prince Georges**							**TOTALS**	**#VALUE!**	
MD	Washington	CSX	Pt of Rocks, MD to Harpers Ferry, WV	13.0	3.2	8.3	18.0	726.8	22.44	
MD	Washington	CSX	Hagerstown, MD to Cherry Run, WV	19.0	19.0	-1.0	-4.0	726.8	-29.61	
MD	Washington	CSX	Hagerstown, MD to Lurgan, PA	34.0	6.2	0.2	-2.0	726.8	-4.83	
MD	Washington	CSX	Hanover, PA to Hagerstown, MD	57.0	16.8	0.0	0.0	726.8	0.00	
MD	Washington	CR/NS	Harrisburg, PA to Riverton Jct, VA	133.0	22.9	8.5	15.2	702.9	140.12	
MD	**Washington**							**TOTALS**	**128.12**	
MI	Monroe	CSX	Wayne, MI to Carleton, MI	15.0	2.4	2.0	13.0	726.8	12.16	
MI	Monroe	CSX	Carleton, MI to Toledo, OH	26.5	24.6	11.2	24.0	726.8	230.05	
MI	Monroe	SA	Carleton, MI to Ecorse, MI	20.0	2.9	9.2	14.0	719.2	15.99	
MI	Monroe	NS	Milan, MI to Homestead, OH	35.0	25.3	-4.1	-6.2	702.9	-63.20	
MI	Monroe	NS	Oakwood, MI to Butler, IN	107.0	6.4	2.1	4.2	702.9	10.83	
MI	Monroe	CR/NS	Airline, OH to River Rouge, MI	50.0	25.7	2.9	2.0	702.9	20.71	
MI	**Monroe**							**TOTALS**	**226.54**	
MI	Wayne	SA	Carleton, MI to Ecorse, MI	20.0	16.1	9.2	14.0	719.2	88.76	
MI	Wayne	SA	W Detroit, MI to North Yd, MI	6.7	6.7	5.3	8.0	719.2	21.11	
MI	Wayne	SA	W Detroit, MI to Delray, MI	3.8	3.8	3.8	6.0	719.2	8.98	
MI	Wayne	SA	North Yd, MI to Utica, MI	17.1	3.0	1.3	0.0	719.2	0.00	
MI	Wayne	SA	W Detroit, MI to Dearborn, MI	5.3	5.3	1.8	0.0	719.2	0.00	
MI	Wayne	SA	Delray, MI to Trenton, MI	10.2	10.2	1.7	-4.0	719.2	-16.07	
MI	Wayne	CR/NS	W Detroit, MI to Jackson, MI	74.0	24.4	9.2	15.0	702.9	147.46	
MI	Wayne	CR/NS	Airline, OH to River Rouge, MI	50.0	15.4	2.9	2.0	702.9	12.40	
MI	Wayne	CSX	Detroit, MI to Plymouth, MI	20.6	20.6	-2.8	-2.0	726.8	-16.03	
MI	Wayne	CSX	Plymouth, MI to Grand Rapids, MI	124.0	4.9	-5.0	-3.0	726.8	-5.74	
MI	Wayne	CSX	Wixom, MI to Plymouth, MI	11.5	3.8	0.7	3.0	726.8	4.47	
MI	Wayne	CSX	Plymouth, MI to Wayne, MI	8.3	8.3	2.9	2.0	726.8	6.46	
MI	Wayne	CSX	Wayne, MI to Carleton, MI	15.0	12.4	2.0	13.0	726.8	62.96	
MI	Wayne	NS	Oakwood, MI to Butler, IN	107.0	21.3	2.1	4.2	702.9	36.04	
MI	Wayne	NS	St Thomas, ON to W Detroit, MI	94.0	2.8	0.4	0.9	702.9	1.02	
MI	**Wayne**							**TOTALS**	**351.82**	
NJ	Bergen	CR/NS	Suffern, NY to Ridgewood Jct, NJ	11.0	9.9	3.0	28.6	702.9	114.08	
NJ	Bergen	CR/NS	Ridgewood Jct, NJ to Croxton, NJ	17.0	14.4	3.2	7.5	702.9	43.39	
NJ	Bergen	CR/CSX	Ridgefield Heights, NJ to Newburgh, NY	44.9	12.0	1.2	7.0	726.8	32.73	
NJ	Bergen	SA	N Bergen, NJ to Ridgefield Heights, NJ	5.6	2.9	-1.0	1.0	719.2	1.14	
NJ	**Bergen**							**TOTALS**	**191.34**	
NJ	Essex	SA/NEC	Lane, NJ to Union, NJ	7.1	0.3	7.6	17.0	check RR	#VALUE!	
NJ	Essex	SA	PN, NJ to Bayway, NJ	5.3	1.2	5.3	6.0	719.2	2.84	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
NJ	Essex	SA	NK, NJ to Bound Brook, NJ	21.7	1.2	-10.5	-3.0	719.2	-1.37	
NJ	Essex	SA	Valley, NJ to NK, NJ	0.8	0.8	-0.8	-4.0	719.2	-1.26	
NJ	Essex	SA	Kearny, NJ to Valley, NJ	3.6	3.5	-13.7	-17.0	719.2	-23.09	
NJ	Essex	SA	Green, NJ to Oak Island, NJ	1.3	0.3	0.0	3.0	719.2	0.35	
NJ	Essex	SA/NEC	Oak Island, NJ to Morrisville, PA	49.0	2.6	2.9	1.2	check RR	#VALUE!	
NJ	**Essex**							**TOTALS**	**#VALUE!**	
NJ	Hudson	CR/NS	Ridgewood Jct, NJ to Croxton, NJ	17.0	2.6	3.2	7.5	702.9	7.98	
NJ	Hudson	CR/NS	Wayne, NJ to Croxton, NJ	19.0	5.1	0.3	0.1	702.9	0.20	
NJ	Hudson	SA	Green, NJ to Oak Island, NJ	1.3	1.0	0.0	3.0	719.2	1.18	
NJ	Hudson	SA	Hack, NJ to Croxton, NJ	1.3	1.3	-9.5	-9.0	719.2	-4.61	
NJ	Hudson	SA	Croxton, NJ to N Bergen, NJ	2.7	2.7	0.1	3.0	719.2	3.19	
NJ	Hudson	SA	Nave, NJ to N Bergen, NJ	6.0	6.0	-3.0	-13.0	719.2	-30.71	
NJ	Hudson	SA	Nave, NJ to CP Green, NJ	4.2	4.2	-2.0	0.0	719.2	0.00	
NJ	Hudson	SA	Nave, NJ to Croxton, NJ	1.8	1.8	-3.0	0.0	719.2	0.00	
NJ	Hudson	SA	Waldo, NJ to Hack, NJ	1.6	1.6	-2.0	-19.0	719.2	-11.97	
NJ	Hudson	SA	Hack, NJ to Kearny, NJ	2.3	2.3	-9.2	-19.0	719.2	-17.21	
NJ	Hudson	SA	Kearny, NJ to Valley, NJ	3.6	0.2	-13.7	-17.0	719.2	-1.00	
NJ	Hudson	SA	N Bergen, NJ to Ridgefield Heights, NJ	5.6	2.1	-1.0	1.0	719.2	0.81	
NJ	**Hudson**							**TOTALS**	**-52.14**	
NJ	Mercer	SA/NEC	Midway, NJ to Morrisville, PA	17.3	11.5	7.6	17.0	check RR	#VALUE!	
NJ	Mercer	SA/NEC	Oak Island, NJ to Morrisville, PA	49.0	11.5	2.9	1.2	check RR	#VALUE!	
NJ	Mercer	CR/CSX	Trenton, NJ to CP Port Reading, NJ	24.7	12.0	-4.3	-1.0	726.8	-4.68	
NJ	Mercer	CR/CSX	CP Wood, PA to Trenton, NJ	5.7	0.6	-4.3	-1.0	726.8	-0.25	
NJ	**Mercer**							**TOTALS**	**#VALUE!**	
NJ	Middlesex	SA/NEC	Midway, NJ to Morrisville, PA	17.3	5.6	7.6	17.0	check RR	#VALUE!	
NJ	Middlesex	SA/NEC	Union, NJ to Midway, NJ	21.6	20.7	7.6	17.0	check RR	#VALUE!	
NJ	Middlesex	SA	Union, NJ to Red Bank, NJ	15.9	11.5	0.0	0.0	719.2	0.00	
NJ	Middlesex	SA	CQ, NJ to Monmouth Jct, NJ	18.8	18.8	0.0	0.0	719.2	0.00	
NJ	Middlesex	SA	Bayway, NJ to PD, NJ	5.1	2.3	1.7	3.0	719.2	2.72	
NJ	Middlesex	SA	PD, NJ to Wood, NJ	3.1	3.1	0.0	0.0	719.2	0.00	
NJ	Middlesex	SA	Jamesburg, NJ to Farmingdale, NJ	19.0	5.5	0.0	0.0	719.2	0.00	
NJ	Middlesex	SA	Pt Reading Jct, NJ to Port Reading, NJ	16.0	15.2	1.7	2.0	719.2	11.97	
NJ	Middlesex	SA	NK, NJ to Bound Brook, NJ	21.7	10.3	-10.5	-3.0	719.2	-12.17	
NJ	Middlesex	SA	Aldene, NJ to High Bridge, NJ	39.0	4.7	0.0	0.0	719.2	0.00	
NJ	Middlesex	SA/NEC	Oak Island, NJ to Morrisville, PA	49.0	26.0	2.9	1.2	check RR	#VALUE!	
NJ	**Middlesex**							**TOTALS**	**#VALUE!**	
NJ	Union	SA/NEC	Lane, NJ to Union, NJ	7.1	6.8	7.6	17.0	check RR	#VALUE!	
NJ	Union	SA	PN, NJ to Bayway, NJ	5.3	4.1	5.3	6.0	719.2	9.69	
NJ	Union	SA/NEC	Union, NJ to Midway, NJ	21.6	1.0	7.6	17.0	check RR	#VALUE!	
NJ	Union	SA	Union, NJ to Red Bank, NJ	15.9	0.9	0.0	0.0	719.2	0.00	
NJ	Union	SA	Bayway, NJ to PD, NJ	5.1	2.8	1.7	3.0	719.2	3.31	
NJ	Union	SA	NK, NJ to Bound Brook, NJ	21.7	9.7	-10.5	-3.0	719.2	-11.46	
NJ	Union	SA	Aldene, NJ to High Bridge, NJ	39.0	10.6	0.0	0.0	719.2	0.00	
NJ	Union	SA/NEC	Oak Island, NJ to Morrisville, PA	49.0	8.2	2.9	1.2	check RR	#VALUE!	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
NJ	**Union**							**TOTALS**	**#VALUE!**	
NY	Chautauqua	NS	Buffalo FW, NY to Ashtabula, OH	128.0	40.6	12.2	21.2	702.9	346.79	
NY	Chautauqua	CR/CSX	Buff Seneca, NY to Ashtabula, OH	122.8	41.0	0.7	-3.0	726.8	-47.90	
NY	**Chautauqua**							**TOTALS**	**298.88**	
NY	Erie	NS	Buffalo FW, NY to Ashtabula, OH	128.0	27.6	12.2	21.2	702.9	235.66	
NY	Erie	NS	Buffalo, NY to Black Rock, NY	7.0	7.0	-5.5	-8.3	702.9	-23.41	
NY	Erie	NS	1 mile segment in Buffalo, NY	1.0	1.0	0.0	0.0	702.9	0.00	
NY	Erie	CR/CSX	Buffalo, NY to CP Sycamore, NY	1.2	1.2	5.0	8.0	726.8	3.74	
NY	Erie	CR/CSX	Chili, NY to Frontier, NY	50.5	16.4	5.3	12.0	726.8	76.68	
NY	Erie	CR/CSX	CP Sycamore, NY to Black Rock, NY	6.0	6.0	5.0	10.0	726.8	23.38	
NY	Erie	CR/CSX	Buffalo, NY to Draw, NY	2.4	2.4	2.7	18.0	726.8	16.55	
NY	Erie	CR/CSX	Draw, NY to Buff Creek Jct, NY	0.4	0.4	-3.3	4.0	726.8	0.62	
NY	Erie	CR/CSX	Buff Creek Jct, NY to Buff Seneca, NY	3.3	3.3	-3.3	-3.0	726.8	-3.86	
NY	Erie	CR/CSX	Buff Seneca, NY to Ashtabula, OH	122.8	24.8	0.7	-3.0	726.8	-28.99	
NY	Erie	CR/CSX	Frontier, NY to Buffalo, NY	4.1	4.1	-3.3	-3.0	726.8	-4.79	
NY	Erie	CR/CSX	Buffalo, NY to Black Rock, NY	7.1	7.1	0.0	0.0	726.8	0.00	
NY	Erie	CR/CSX	Black Rock, NY to Niagara Falls, NY	21.1	5.8	-1.0	2.0	726.8	4.52	
NY	Erie	CR/NS	Ebenezer Jct, NY to Buffalo, NY	5.0	5.0	11.4	18.7	702.9	37.67	
NY	Erie	CR/NS	Keating, PA to Ebenezer Jct, NY	149.0	28.7	0.0	0.1	702.9	1.16	
NY	Erie	CR/NS	Corning, NY to Buffalo, NY	128.0	14.0	7.0	6.2	702.9	34.97	
NY	**Erie**							**TOTALS**	**373.91**	
NY	Montgomery	CR/CSX	Hoffmans, NY to Utica, NY	66.4	40.2	6.5	13.0	726.8	203.63	
NY	**Montgomery**							**TOTALS**	**203.63**	
NY	Orange	CR/CSX	Ridgefield Heights, NJ to Newburgh, NY	44.9	12.7	1.2	7.0	726.8	34.64	
NY	Orange	CR/CSX	Newburgh, NY to Selkirk, NY	80.1	7.1	1.2	6.0	726.8	16.60	
NY	Orange	CR/NS	Suffern, NY to Campbell Hall, NY	35.0	30.1	3.0	7.9	702.9	95.81	
NY	Orange	CR/NS	Campbell Hall, NY to Port Jervis, NY	30.0	30.0	4.1	8.0	702.9	96.70	
NY	Orange	CR/NS	Port Jervis, NY to Binghamton, NY	126.0	3.0	4.1	7.9	702.9	9.55	
NY	**Orange**							**TOTALS**	**253.29**	
OH	Allen	CSX	Sidney, OH to Lima, OH	35.2	6.5	-7.3	0.0	726.8	0.00	
OH	Allen	CSX	Lima, OH to Deshler, OH	33.0	11.2	-11.6	-4.0	726.8	-17.46	
OH	Allen	CR/CSX	Bucyrus, OH to Adams, IN	113.5	25.7	8.0	15.0	726.8	150.21	
OH	**Allen**							**TOTALS**	**132.75**	
OH	Ashtabula	NS	Buffalo FW, NY to Ashtabula, OH	128.0	15.0	12.2	21.2	702.9	128.04	
OH	Ashtabula	NS	Ashtabula, OH to Cleveland, OH	50.0	12.6	23.6	42.5	702.9	216.10	
OH	Ashtabula	CR/NS	Youngstown, OH to Ashtubula, OH	59.0	29.4	12.1	23.5	702.9	278.37	
OH	Ashtabula	CR/NS	Ashtabula, OH to Ashtabula Harbor, OH	3.0	3.0	-1.9	-4.1	702.9	-4.96	
OH	Ashtabula	CR/CSX	Buff Seneca, NY to Ashtabula, OH	122.8	16.0	0.7	-3.0	726.8	-18.70	
OH	Ashtabula	CR/CSX	Ashtabula, OH to Quaker, OH	46.5	12.4	5.9	5.0	726.8	24.16	
OH	**Ashtabula**							**TOTALS**	**623.00**	
OH	Crawford	CR/CSX	Galion, OH to Columbus, OH	57.7	1.2	-5.9	-17.0	726.8	-7.95	
OH	Crawford	CR/CSX	Galion, OH to Marion, OH	22.5	2.4	5.0	3.0	726.8	2.81	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
OH	Crawford	CR/CSX	Crestline, OH to Galion, OH	4.7	4.7	-1.8	-15.0	726.8	-27.47	
OH	Crawford	CR/CSX	Greenwich, OH to Crestline, OH	21.2	1.8	16.8	27.0	726.8	16.94	
OH	Crawford	CR/CSX	Crestline, OH to Bucyrus, OH	11.9	11.9	8.0	15.0	726.8	69.55	
OH	Crawford	CR/CSX	Bucyrus, OH to Adams, IN	113.5	7.2	8.0	15.0	726.8	42.08	
OH	Crawford	CR/NS	Alliance, OH to Crestline, OH	106.0	0.7	-15.0	-27.6	702.9	-7.78	
OH	Crawford	NS	Bucyrus, OH to Fairgrounds Col, OH	61.0	8.7	8.3	22.1	702.9	77.29	
OH	Crawford	NS	Bucyrus, OH to Bellevue, OH	34.0	13.3	8.6	22.9	702.9	122.25	
OH	**Crawford**							**TOTALS**	**289.71**	
OH	Cuyahoga	CSX	Lester, OH to Cleveland, OH	30.0	18.7	0.0	1.0	726.8	7.29	0.81
OH	Cuyahoga	CR/CSX	Berea, OH to Greenwich, OH	42.0	3.4	39.7	77.0	726.8	102.01	11.33
OH	Cuyahoga	CR/CSX	Ashtabula, OH to Quaker, OH	46.5	6.3	5.9	5.0	726.8	12.27	1.36
OH	Cuyahoga	CR/CSX	Quaker, OH to Drawbridge, OH	6.5	6.5	-40.5	-95.0	726.8	-240.61	-26.72
OH	Cuyahoga	CR/CSX	Quaker, OH to Mayfield, OH	3.3	3.3	37.0	84.0	726.8	108.01	11.99
OH	Cuyahoga	CR/CSX	Mayfield, OH to Marcy, OH	5.8	5.8	40.4	84.0	726.8	189.84	21.08
OH	Cuyahoga	CR/CSX	Marcy, OH to Short, OH	8.8	8.8	29.4	69.0	726.8	236.60	26.27
OH	Cuyahoga	CR/CSX	Short, OH to Berea, OH	4.0	4.0	33.9	87.0	726.8	135.60	15.06
OH	Cuyahoga	CR/NS	Alliance, OH to White, OH	46.0	7.4	3.7	2.8	702.9	8.35	0.93
OH	Cuyahoga	CR/NS	White, OH to Cleveland, OH	11.0	11.0	17.2	34.0	702.9	150.69	16.73
OH	Cuyahoga	CR/NS	Kinsman, OH to North Randall, OH	9.0	9.0	0.5	0.0	702.9	0.00	0.00
OH	Cuyahoga	CR/NS	Cleveland, OH to Shortline Jct, OH	7.0	7.0	2.2	10.8	702.9	30.46	3.38
OH	Cuyahoga	CR/NS	Cleveland, OH to Vermilion, OH	43.0	18.5	-15.5	-31.3	702.9	-233.30	-25.91
OH	Cuyahoga	NS	Ashtabula, OH to Cleveland, OH	50.0	14.8	23.6	42.5	702.9	253.43	28.14
OH	Cuyahoga	NS	Cleveland, OH to Vermilion, OH	37.0	13.4	20.6	20.7	702.9	111.76	12.41
OH	**Cuyahoga**							**TOTALS**	**872.38**	**96.88**
OH	Defiance	CSX	Deshler, OH to Willow Creek, IN	174.0	30.6	26.3	49.0	726.8	584.25	
OH	**Defiance**							**TOTALS**	**584.25**	
OH	Delaware	CSX	Columbus, OH to Marion, OH	45.4	22.3	-0.4	4.0	726.8	34.76	
OH	Delaware	NS	Bucyrus, OH to Fairgrounds Col, OH	61.0	22.9	8.3	22.1	702.9	203.82	
OH	Delaware	CR/CSX	Galion, OH to Columbus, OH	57.7	20.0	-5.9	-17.0	726.8	-132.48	
OH	**Delaware**							**TOTALS**	**106.09**	
OH	Erie	CR/NS	Cleveland, OH to Vermilion, OH	43.0	1.5	-15.5	-31.3	702.9	-18.92	
OH	Erie	CR/NS	Vermilion, OH to Oak Harbor, OH	43.0	26.6	-6.9	-18.0	702.9	-192.91	
OH	Erie	NS	Bellevue, OH to Sandusky Dock, OH	15.0	13.0	10.3	8.2	702.9	42.95	
OH	Erie	NS	Cleveland, OH to Vermilion, OH	37.0	1.6	20.6	20.7	702.9	13.34	
OH	Erie	NS	Vermilion, OH to Bellevue, OH	26.0	24.3	11.4	19.5	702.9	190.84	
OH	**Erie**							**TOTALS**	**35.30**	
OH	Hardin	CR/CSX	Marion, OH to Ridgeway, OH	23.2	8.8	15.7	12.0	726.8	41.15	
OH	Hardin	CR/CSX	Ridgeway, OH to Sidney, OH	36.3	1.8	6.8	4.0	726.8	2.81	
OH	Hardin	CR/CSX	Stanley, OH to Dunkirk, OH	57.2	2.2	-10.2	-19.0	726.8	-16.29	
OH	Hardin	CR/CSX	Dunkirk, OH to Ridgeway, OH	21.1	21.1	-11.8	-19.0	726.8	-156.21	
OH	Hardin	CR/CSX	Ridgeway, OH to Marysville, OH	22.2	0.4	-12.8	-13.0	726.8	-2.03	
OH	Hardin	CR/CSX	Bucyrus, OH to Adams, IN	113.5	20.4	8.0	15.0	726.8	119.23	
OH	**Hardin**							**TOTALS**	**-11.34**	
OH	Henry	CSX	Deshler, OH to Toledo, OH	36.0	2.4	13.6	50.0	726.8	45.98	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
OH	Henry	CSX	Deshler, OH to Willow Creek, IN	174.0	18.6	26.3	49.0	726.8	355.13	
OH	Henry	CSX	Fostoria, OH to Deshler, OH	26.0	1.2	3.9	9.0	726.8	4.21	
OH	Henry	CSX	Lima, OH to Deshler, OH	33.0	3.6	-11.6	-4.0	726.8	-5.61	
OH	**Henry**							**TOTALS**	**399.71**	
OH	Huron	CSX	Willard, OH to Fostoria, OH	36.8	5.8	21.5	54.0	726.8	122.04	
OH	Huron	CSX	Greenwich, OH to Willard, OH	11.6	11.6	22.7	53.0	726.8	239.56	
OH	Huron	CSX	Sterling, OH to Greenwich, OH	37.1	4.1	0.4	7.0	726.8	11.18	
OH	Huron	CR/CSX	Berea, OH to Greenwich, OH	42.0	11.6	39.7	77.0	726.8	348.04	
OH	Huron	CR/CSX	Greenwich, OH to Crestline, OH	21.2	4.0	16.8	27.0	726.8	42.08	
OH	Huron	NS	Bucyrus, OH to Bellevue, OH	34.0	0.6	8.6	22.9	702.9	5.44	
OH	Huron	NS	Bellevue, OH to Sandusky Dock, OH	15.0	1.2	10.3	8.2	702.9	3.96	
OH	Huron	NS	Vermilion, OH to Bellevue, OH	26.0	1.7	11.4	19.5	702.9	13.43	
OH	Huron	NS	Oak Harbor, OH to Bellevue, OH	27.0	0.1	19.5	31.8	702.9	1.28	
OH	**Huron**							**TOTALS**	**787.03**	
OH	Lake	NS	Ashtabula, OH to Cleveland, OH	50.0	29.6	23.6	42.5	702.9	507.02	
OH	Lake	CR/CSX	Ashtabula, OH to Quaker, OH	46.5	28.0	5.9	5.0	726.8	54.55	
OH	**Lake**							**TOTALS**	**561.57**	
OH	Lorain	CSX	Lester, OH to Lorain, OH	23.0	21.6	0.0	0.0	726.8	0.00	0.00
OH	Lorain	CSX	Lester, OH to Cleveland, OH	30.0	0.7	0.0	1.0	726.8	0.27	0.03
OH	Lorain	CR/CSX	Berea, OH to Greenwich, OH	42.0	27.1	39.7	77.0	726.8	813.09	90.30
OH	Lorain	CR/NS	Cleveland, OH to Vermilion, OH	43.0	20.4	-15.5	-31.3	702.9	-257.26	-28.57
OH	Lorain	NS	Cleveland, OH to Vermilion, OH	37.0	21.2	20.6	20.7	702.9	176.81	19.64
OH	Lorain	NS	Sheffield Yd, OH to South Lorain, OH	2.3	2.3	1.0	0.7	702.9	0.65	0.07
OH	**Lorain**							**TOTALS**	**733.56**	**81.46**
OH	Lucas	CSX	Carleton, MI to Toledo, OH	26.5	6.2	11.2	24.0	726.8	57.98	
OH	Lucas	CSX	Deshler, OH to Toledo, OH	36.0	5.3	13.6	50.0	726.8	103.26	
OH	Lucas	CSX	Fostoria, OH to Toledo, OH	29.0	3.6	4.1	12.0	726.8	16.65	
OH	Lucas	CR/CSX	CP Maumee, OH to Oak, OH	1.2	1.2	-11.2	-38.0	726.8	-17.47	
OH	Lucas	NS	Milan, MI to Homestead, OH	35.0	6.2	-4.1	-6.2	702.9	-15.49	
OH	Lucas	NS	Homestead, OH to Oak Harbor, OH	20.0	5.3	-2.2	-7.3	702.9	-15.59	
OH	Lucas	CR/NS	Oak Harbor, OH to Miami, OH	22.0	1.8	13.5	20.4	702.9	14.55	
OH	Lucas	CR/NS	Airline, OH to Butler, IN	68.0	15.8	-2.2	-16.1	702.9	-102.36	
OH	Lucas	CR/NS	Miami, OH to Airline, OH	2.4	2.4	8.6	10.6	702.9	10.42	
OH	Lucas	CR/NS	Airline, OH to River Rouge, MI	50.0	8.0	2.9	2.0	702.9	6.44	
OH	**Lucas**							**TOTALS**	**58.38**	
OH	Marion	CSX	Marion, OH to Fostoria, OH	40.0	9.2	9.6	23.0	726.8	82.45	
OH	Marion	CSX	Columbus, OH to Marion, OH	45.4	10.8	-0.4	4.0	726.8	16.83	
OH	Marion	CR/CSX	Galion, OH to Marion, OH	22.5	16.6	5.0	3.0	726.8	19.40	
OH	Marion	CR/CSX	Marion, OH to Ridgeway, OH	23.2	14.4	15.7	12.0	726.8	67.33	
OH	Marion	NS	Bucyrus, OH to Fairgrounds Col, OH	61.0	20.6	8.3	22.1	702.9	183.07	
OH	**Marion**							**TOTALS**	**369.09**	
OH	Richland	CR/CSX	Greenwich, OH to Crestline, OH	21.2	15.4	16.8	27.0	726.8	162.02	
OH	Richland	CR/NS	Alliance, OH to Crestline, OH	106.0	24.3	-15.0	-27.6	702.9	-270.22	
OH	**Richland**							**TOTALS**	**-108.20**	
OH	Sandusky	CR/CSX	Woodville, OH to Walbridge, OH	13.5	4.4	0.0	0.0	726.8	0.00	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
OH	Sandusky	NS	Bucyrus, OH to Bellevue, OH	34.0	0.8	8.6	22.9	702.9	7.29	
OH	Sandusky	NS	Bellevue, OH to Ft Wayne, IN	120.0	9.2	4.6	2.6	702.9	9.64	
OH	Sandusky	NS	Oak Harbor, OH to Bellevue, OH	27.0	22.6	19.5	31.8	702.9	289.69	
OH	**Sandusky**							**TOTALS**	**306.61**	
OH	Seneca	CSX	Willard, OH to Fostoria, OH	36.8	31.0	21.5	54.0	726.8	652.28	
OH	Seneca	CSX	Fostoria, OH to Deshler, OH	26.0	1.0	3.9	9.0	726.8	3.51	
OH	Seneca	CSX	Marion, OH to Fostoria, OH	40.0	11.8	9.6	23.0	726.8	105.75	
OH	Seneca	CSX	Fostoria, OH to Toledo, OH	29.0	4.3	4.1	12.0	726.8	20.11	
OH	Seneca	NS	Bucyrus, OH to Bellevue, OH	34.0	19.4	8.6	22.9	702.9	178.62	
OH	Seneca	NS	Bellevue, OH to Ft Wayne, IN	120.0	22.8	4.6	2.6	702.9	23.88	
OH	**Seneca**							**TOTALS**	**984.15**	
OH	Trumbull	CSX	Youngstown, OH to Sterling, OH	79.1	16.0	1.3	12.0	726.8	74.81	
OH	Trumbull	CR/NS	Youngstown, OH to Ashtabula, OH	59.0	26.3	12.1	23.5	702.9	249.11	
OH	Trumbull	CR/NS	Hubbard, OH to Oil City, PA	80.0	5.9	-0.1	-0.3	702.9	-0.71	
OH	Trumbull	CR/NS	Youngstown, OH to Alliance, OH	42.0	11.8	0.7	-0.3	702.9	-1.43	
OH	Trumbull	CR/NS	Latimer, OH to Warren, OH	14.8	14.8	-0.3	-1.0	702.9	-5.96	
OH	**Trumbull**							**TOTALS**	**315.82**	
OH	Van Wert	CR/CSX	Bucyrus, OH to Adams, IN	113.5	25.4	8.0	15.0	726.8	148.46	
OH	**Van Wert**							**TOTALS**	**148.46**	
OH	Wood	CSX	Deshler, OH to Toledo, OH	36.0	33.1	13.6	50.0	726.8	644.88	
OH	Wood	CSX	Fostoria, OH to Deshler, OH	26.0	18.3	3.9	9.0	726.8	64.18	
OH	Wood	CSX	Fostoria, OH to Toledo, OH	29.0	27.2	4.1	12.0	726.8	127.18	
OH	Wood	CR/NS	Oak Harbor, OH to Miami, OH	22.0	6.5	13.5	20.4	702.9	53.51	
OH	Wood	CR/CSX	Walbridge, OH to Woodville, OH	13.5	7.1	0.0	0.0	726.8	0.00	
OH	Wood	CR/CSX	Oak, OH to Walbridge, OH	2.7	2.7	-11.2	-38.0	726.8	-39.39	
OH	Wood	CR/CSX	Stanley, OH to Dunkirk, OH	57.2	31.4	-10.2	-19.0	726.8	-232.25	
OH	**Wood**							**TOTALS**	**616.11**	
OH	Wyandot	CR/CSX	Bucyrus, OH to Adams, IN	113.5	20.1	8.0	15.0	726.8	117.48	
OH	Wyandot	CSX	Marion, OH to Fostoria, OH	40.0	22.3	9.6	23.0	726.8	199.85	
OH	**Wyandot**							**TOTALS**	**317.33**	
PA	Allegheny	CSX	Cumberland, MD to Sinns, PA	133.0	7.7	5.1	13.0	726.8	39.00	
PA	Allegheny	CSX	Sinns, PA to Brownsville, PA	38.0	20.7	9.3	21.0	726.8	169.38	
PA	Allegheny	CSX	Sinns, PA to Rankin Jct, PA	6.8	6.8	9.4	32.0	726.8	84.79	
PA	Allegheny	CSX	Rankin Jct, PA to New Castle, PA	51.0	23.7	9.4	31.0	726.8	286.28	
PA	Allegheny	CSX	Willow Grove, PA to New Castle, PA	56.0	18.0	0.0	0.0	726.8	0.00	
PA	Allegheny	CSX	Rankin Jct, PA to Willow Grove, PA	8.2	8.2	0.0	0.0	726.8	0.00	
PA	Allegheny	CSX	Glenwood Jct, PA to Tylerdale, PA	32.0	9.8	0.0	0.0	726.8	0.00	
PA	Allegheny	CR/NS	Jacks Run, PA to Conway East, PA	16.0	12.1	-0.6	-14.8	702.9	-72.33	
PA	Allegheny	CR/NS	Marysville, PA to Pitcairn, PA	227.0	0.6	0.3	-13.1	702.9	-3.17	
PA	Allegheny	CR/NS	Pitcairn, PA to Thomson, PA	3.0	3.0	-3.0	-12.5	702.9	-15.11	
PA	Allegheny	CR/NS	Thomson, PA to Jacks Run, PA	16.0	16.0	-5.6	-14.9	702.9	-96.05	
PA	Allegheny	CR/NS	Thomson, PA to W Brownsville, PA	42.0	11.8	-11.3	-31.4	702.9	-149.28	
PA	Allegheny	CR/NS	Etna, PA to Federal St, PA	6.0	6.0	0.3	-0.1	702.9	-0.24	

Attachment E-4

Emissions Changes for Rail Line Segments Included in Detailed County Netting Analyses

State	County	RR	Segment Name	Total Miles	Miles Within County	Change in Trains/Day	Change in MGT	Fuel Eff. Factor GTM/gal	NOX @ 566.4 lb/Kgal (ton/yr)	CO @ 62.9 lb/Kgal (ton/yr)
PA	Allegheny	CR/NS	Avonmore Coal, PA to Etna, PA	44.0	21.3	1.1	0.2	702.9	1.72	
PA	Allegheny	CR/NS	Pitcairn, PA to Jacks Run, PA	20.1	20.1	3.8	0.5	702.9	4.05	
PA	**Allegheny**							**TOTALS**	**249.04**	
PA	Beaver	CSX	Rankin Jct, PA to New Castle, PA	51.0	21.6	9.4	31.0	726.8	260.91	
PA	Beaver	CSX	Willow Grove, PA to New Castle, PA	56.0	9.1	0.0	0.0	726.8	0.00	
PA	Beaver	CR/NS	Rochester, PA to Youngstown, OH	39.0	12.4	5.1	5.3	702.9	26.52	
PA	Beaver	CR/NS	Rochester, PA to Yellow Creek, OH	26.0	14.2	-1.0	-1.1	702.9	-6.29	
PA	Beaver	CR/NS	Rochester, PA to Alliance, OH	57.0	14.7	-11.6	23.8	702.9	-140.96	
PA	Beaver	CR/NS	Conway East, PA to Rochester, PA	4.7	4.7	-8.4	-15.8	702.9	-30.11	
PA	Beaver	CR/NS	Jacks Run, PA to Conway East, PA	16.0	5.9	-0.6	-14.8	702.9	-35.30	
PA	**Beaver**							**TOTALS**	**74.77**	
PA	Bucks	CR/NS	Morrisville, PA to Abrams, PA	32.0	14.5	2.6	0.7	702.9	4.09	
PA	Bucks	SA/NEC	Oak Island, NJ to Morrisville, PA	49.0	0.5	2.9	1.2	check RR	#VALUE!	
PA	Bucks	SA/NEC	Morrisville, PA to Zoo, PA	28.5	16.8	3.7	8.0	check RR	#VALUE!	
PA	Bucks	SA/NEC	Midway, NJ to Morrisville, PA	17.3	0.5	7.6	17.0	check RR	#VALUE!	
PA	Bucks	CR/CSX	Newtown Jct, PA to Quakertown, PA	35.8	8.3	0.0	0.0	726.8	0.00	
PA	Bucks	CR/CSX	Lansdale, PA to Doylestown, PA	10.1	5.5	0.0	0.0	726.8	0.00	
PA	Bucks	CR/CSX	Glenside, PA to Warminster, PA	8.4	0.5	0.0	0.0	726.8	0.00	
PA	Bucks	CR/CSX	Jenkintown, PA to Neshaminy Falls, PA	10.3	3.0	0.0	0.0	726.8	0.00	
PA	Bucks	CR/CSX	CP Newtown Jct, PA to CP Wood, PA	20.7	7.6	-0.6	1.0	726.8	2.96	
PA	Bucks	CR/CSX	CP Wood, PA to Trenton, NJ	5.7	5.0	-4.3	-1.0	726.8	-1.95	
PA	**Bucks**							**TOTALS**	**#VALUE!**	
PA	Cumberland	CR/NS	Marysville, PA to Enola, PA	5.0	3.0	-5.3	-11.2	702.9	-13.36	
PA	Cumberland	CR/NS	Enola, PA to Wago York Haven, PA	18.0	6.3	-6.4	-13.2	702.9	-33.51	
PA	Cumberland	CR/NS	Harrisburg, PA to Hagerstown, MD	74.0	38.2	8.2	15.2	702.9	233.82	
PA	**Cumberland**							**TOTALS**	**186.96**	
PA	Dauphin	CR/NS	Rutherford, PA to Harrisburg, PA	6.0	6.0	13.6	3.8	702.9	9.19	
PA	Dauphin	CR/NS	WM Jct, PA to Rutherford, PA	45.0	9.1	7.3	4.2	702.9	15.42	
PA	Dauphin	CR/NS	Harrisburg, PA to Shocks, PA	22.0	13.6	3.8	4.0	702.9	21.92	
PA	Dauphin	CR/NS	Harrisburg, PA to Riverton Jct, VA	133.0	0.9	8.5	15.2	702.9	5.76	
PA	Dauphin	CR/NS	Harrisburg, PA to Marysville, PA	9.0	7.9	6.7	15.4	702.9	48.96	
PA	Dauphin	CR/NS	Rockville, PA to Watsontown, PA	64.0	26.9	2.0	3.9	702.9	42.25	
PA	**Dauphin**							**TOTALS**	**143.48**	
PA	Delaware	CSX	RG, PA to Wilsmere, DE	26.0	13.3	3.5	9.0	726.8	46.64	
PA	Delaware	SA/NEC	Arsenal, PA to Davis, DE	25.0	11.8	8.2	18.0	check RR	#VALUE!	
PA	Delaware	SA	Eastwick, PA to Lester, PA	6.1	1.5	0.0	0.0	719.2	0.00	
PA	**Delaware**							**TOTALS**	**#VALUE!**	
PA	Erie	NS	Buffalo FW, NY to Ashtabula, OH	128.0	44.1	12.2	21.2	702.9	376.43	
PA	Erie	CR/CSX	Buff Seneca, NY to Ashtabula, OH	122.8	44.4	0.7	-3.0	726.8	-51.89	
PA	**Erie**							**TOTALS**	**324.54**	
PA	Fayette	CSX	Cumberland, MD to Sinns, PA	133.0	37.6	5.1	13.0	726.8	190.46	
PA	Fayette	CSX	Sinns, PA to Brownsville, PA	38.0	12.3	9.3	21.0	726.8	100.65	
PA	Fayette	CSX	Green Jct, PA to Brownfield, PA	15.0	13.7	0.0	0.0	726.8	0.00	
PA	Fayette	SA	W Brownsville, PA to Catawba Jct, WV	66.4	28.7	1.8	2.0	719.2	22.60	