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Table D1.2.Alt5-PD14. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 5 - VSRP-Compliant.

Table D1.2.Alt5-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 5 - VSRP-Non-Compliant.

Table D1.2.Alt5-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD18. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD19. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD20. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD21. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD22. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD23. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD24. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project Alternative 5 - Vessels that Comply with VSRP + Slide Valves

Table D1.2.Alt5-PD25. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project Alternative 5 - Non-Compliant Vessels within VSRP + Slide Valves.

Table D1.2.Alt5-PD26. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

Table D1.2.Alt5-PD27. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

Table D1.2.Alt5-PD28. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

Table D1.2.Alt5-PD29. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Alternative 5.

Table D1.2.Alt5-PD30. Mitigated Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Alternative 5 0

Table D1.2.Alt5-PD31. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alternative 5. 0

Table D1.2.Alt5-PD32. ADT Estimates - Berths 136-147 Alt 5 0

Table D1.2.Alt5-PD33. On-Road Truck Peak Daily Operational Data for the Berths 136-147 Terminal Project - Alternative 5

Table D1.2.Alt5-PD34. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Alternative 5 0

Table D1.2.PP-Mit-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD6. Peak Daily Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - Vessels that Comply with VSRP.

Table D1.2.PP-Mit-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - Non-Compliant Vessels within VSRP.

Table D1.2.PP-Mit-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD10. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD11. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD12. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD13. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD14. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - VSRP-Compliant.

Table D1.2.PP-Mit-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - VSRP-Non-Compliant.

Table D1.2.PP-Mit-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD18. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD19. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD20. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD21. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD22. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD23. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD24. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - Vessels that Comply with VSRP + Slide Valves

Table D1.2.PP-Mit-PD25. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - Non-Compliant Vessels within VSRP + Slide Valves.

Table D1.2.PP-Mit-PD26. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project + Slide Valves.

Table D1.2.PP-Mit-PD27. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project + Slide Valves.

Table D1.2.PP-Mit-PD28. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Proposed Project + Slide Valves.

Table D1.2.PP-Mit-PD29. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project .

Table D1.2.PP-Mit-PD30. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project.

Table D1.2.PP-Mit-PD31. Peak Daily Mitigated Truck Emissions for the Berths 136-147 Terminal Project - Mitigated Proposed Project

Table D1.2.PP-Mit-PD32. Road Dust Emissions for the Berths 136-147 Terminal Project - Mitigated Proposed Project.

Table D1.2.PP-Mit-PD33. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Mitigated Proposed Project.

Table D1.2.PP-Mit-PD34. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Mitigated Proposed Project.

Table D1.2.PP-Mit-PD35. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2007.

Table D1.2.PP-Mit-PD36. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2015.

Table D1.2.PP-Mit-PD37. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2025.

Table D1.2.PP-Mit-PD38. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2038.

Table D1.2.PP-Mit-PD39. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Mitigated Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project.

Table D1.2.PP-Mit-PD40. Peak Daily Train Emissions from the Relocated Pier A Rail Yard - Berths 136-147 Terminal Project - Mitigated Proposed Project Alternatives.

Table D1.2.PP-Mit-PD41. Peak Daily Terminal Yard TEU Throughput - Berths 136-147 Terminal Project - Mitigated Proposed Project.

Table D1.2.PP-Mit-PD42. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Mitigated Proposed Project

Table D1.2.PP-Mit-PD43. Peak Daily Operational Emissions - Berths 136-147 Terminal Mitigated Proposed Project.

Table D1.2.Alt3-Mit-PD1. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Vessels that Comply with Proposed VSRP.

Table D1.2.Alt3-Mit-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Non-Compliant Vessels with the Proposed VSRP.

Table D1.2.Alt3-Mit-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD6. Peak Daily Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Vessels that Comply with VSRP.

Table D1.2.Alt3-Mit-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Non-Compliant Vessels within VSRP.

Table D1.2.Alt3-Mit-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD10. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD11. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD12. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD13. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD14. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alt 3 - VSRP-Compliant.

Table D1.2.Alt3-Mit-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alt 3 - VSRP-Non-Compliant.

Table D1.2.Alt3-Mit-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD18. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD19. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD20. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD21. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD22. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD23. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD24. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Vessels that Comply with VSRP + Slide Valves

Table D1.2.Alt3-Mit-PD25. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Non-Compliant Vessels within VSRP + Slide Valves.

Table D1.2.Alt3-Mit-PD26. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3 + Slide Valves.

Table D1.2.Alt3-Mit-PD27. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3 + Slide Valves.

Table D1.2.Alt3-Mit-PD28. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Alt 3 + Slide Valves.

Table D1.2.Alt3-Mit-PD29. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD30. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD31. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD32. ADT Estimates - Berths 136-147 - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD33. On-Road Truck Peak Daily Operational Data for the Berths 136-147 Terminal Project - Mitigated Alt 3

Table D1.2.Alt3-Mit-PD34. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Table D1.2.Alt3-Mit-PD35. Road Dust Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Table D1.2.Alt3-Mit-PD36. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Table D1.2.Alt3-Mit-PD37. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Table D1.2.Alt3-Mit-PD38. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3 - Year 2007.

Table D1.2.Alt3-Mit-PD39. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3 -Year 2015.

Table D1.2.Alt3-Mit-PD40. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3 - Year 2025.

Table D1.2.Alt3-Mit-PD41. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3 -Year 2038.

Table D1.2.Alt3-Mit-PD42. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Mitigated Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3.

Table D1.2.Alt3-Mit-PD43. Peak Daily Terminal Yard TEU Throughput - Berths 136-147 Terminal Project - Mitigated Alt 3

Table D1.2.Alt3-Mit-PD44. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3

Table D1.2.Alt3-Mit-PD45. Peak Daily Operational Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3.

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Table D1.1.1. Emission Source Data for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010) (Pg 1 of 3).

Construction Activity/Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Wharf Demolition								
Air Compressor	50	0.60	1	30	8	240	10	2,400
Crane - 220-Ton Manitowoc 888	330	0.50	1	165	8	1,320	38	50,160
Derrick Barge	195	0.50	1	98	8	780	28	21,840
Excavator - Cat 345B	290	0.50	1	145	8	1,160	10	11,600
Forklift	105	0.50	1	53	6	315	10	3,150
Generator	45	0.75	1	34	8	270	10	2,700
Haul Truck - Demolished Materials (1) (2)	NA	NA	6	NA	8	48	9	443
Loader - Cat 966E	220	0.50	1	110	8	880	38	33,440
Tugboat	1,200	0.25	1	300	8	2,400	28	67,200
Vibratory Hammer	45	0.60	1	27	8	216	28	6,048
Remove 2 Existing Cranes at Berth 144								
Crane - 50 ton	330	0.30	2	198	8	1,584	4	6,336
Winch	305	0.50	1	153	4	610	4	2,440
Tugboat	1,200	0.25	1	300	8	2,400	2	4,800
Tugboat	1,200	0.68	1	816	1	816	1	816
Piledriving - Sheet Piles								
Derrick Barge Crane Hoist	564	0.25	1	141	4	564	87	49,068
Generator - Pile Hammer	190	0.60	1	114	8	912	87	79,344
Tugboat	1,200	0.25	1	300	1	300	87	26,100
Cargo Ship - Transit - Sheetpile Delivery (3)	NA	NA	1	NA	NA	NA	2	NA
Tugboat - Cargo Vessel Assist	4,106	0.31	1	1,273	1	1,273	2	2,546
Cargo Ship - Hotelling (3)	NA	NA	1	NA	24	NA	1	NA
Rip-Rap Placement (4)								
Barge - Generator	90	0.60	1	54	10	540	40.5	21,870
Barge - Generator	229	0.60	1	137	10	1,374	40.5	55,647
Barge - Deck Winch	120	0.50	1	60	10	600	40.5	24,300
Barge - Main Hoist	335	0.50	1	168	10	1,675	40.5	67,838
Tracked Loader - Cat 973	210	0.50	1	105	10	1,050	40.5	42,525
Tugboat - Generator	89	0.43	2	77	18	1,378	40.5	55,798
Tugboat - Main Engines (5)	1,600	0.68	2	2,176	12	26,112	40.5	1,057,536
Dredge and Disposal (6)								
Derrick Barge - Crane Hoist	564	0.50	1	282	24	6,768	88.3	597,840
Derrick Barge - Deck Winch	238	0.50	2	238	6	1,428	88.3	126,140
Derrick Barge - Generator	432	0.60	1	259	24	6,221	88.3	549,504
Derrick Barge - Generator	135	0.60	1	81	6	486	88.3	42,930
Haul Trucks - Berth 205 to Anch. Rd. (1) (7)	NA	NA	1	NA	200	200	88.3	17,700
Loader - 962G - Anchorage Rd.	200	0.50	1	100	16	1,600	88.3	141,333
Tug Boat - Transport Barge to Berth 205 (8)	1,350	0.68	2	1,836	0.8	1,469	88.3	129,744

Notes: (1) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-11 (LAHD 1997), but work days multiplied by 739/2000, as this ratio is the proposed/West Basin TIP wharf demolition lenghts.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) See Table C1-XX for a summary of the associated activity data. Arrival/departure would not occur on the same day.

(4) Equipment usage obtained from West Basin TIP FEIR 2nd Addendum Appendix Table AQ-1 (LAHD 2002), but work days multiplied by 739/1200, as this ratio is the proposed/West Basin TIP 2nd Addendum new wharf construction lenghts.

(5) Hours/Day = round trip duration between Berth 144 and Catalina Island (60 nautical miles [nm]) @ 5 knots (kts). Barge capacity = 2000 tons.

(6) Equipment usage obtained from West Basin TIP FEIR 2nd Addendum Appendix Table AQ-1 (LAHD 2002) and based upon a daily dredging rate of 3,000 cubic yards (cy).

(7) Assumes a truck capacity of 20 cy and a water-bulked daily disposal volume of 3,600 cy.

(8) Daily/total dredging volumes = 3,000/265,000 cy. With a water bulking factor of 1.2, daily/total dispoal volumes = 3,600/318,000 cy. Use of a 1,800 cy barge will require two round trips/day. Roundtrip barging activity = 2 nm @ 5 kts.

Table D1.1.2. Emission Source Data for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010) (Pg 2 of 3).

Construction Activity/Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Piledriving - Waterside Piles								
Derrick Barge Crane Hoist	564	0.25	1	141	4	564	33	18,612
Generator - Pile Hammer	190	0.60	1	114	8	912	33	30,096
Haul Trucks - Pile Deliveries (1)	NA	NA	130	NA	16	2,080	11	22,880
Jet Pump	290	0.60	1	174	8	1,392	33	45,936
Tugboat	1,200	0.25	1	300	1	300	33	9,900
Piledriving - Landside Piles								
Crane - 220-Ton Manitowoc 888	330	0.50	1	165	8	1,320	54	71,280
Forklift	105	0.50	1	53	8	420	54	22,680
Generator - Pile Hammer	190	0.60	1	114	8	912	54	49,248
Jet Pump	290	0.60	1	174	8	1,392	54	75,168
Haul Trucks - Pile Deliveries (1)	NA	NA	130	NA	17	2,164	17	36,790
Replace Existing Wharf (9)								
Air Compressor - 185 CFM	70	0.60	1	42	8	336	160	53,760
Air Compressor - 750 CFM	300	0.60	1	180	8	1,440	160	230,400
Air Compressor - 825 CFM	335	0.60	1	201	8	1,608	160	257,280
Air Compressor - 900 CFM	350	0.60	1	210	8	1,680	160	268,800
Bulldozer - D6	165	0.50	1	83	8	660	13	8,580
Bulldozer - D8	305	0.50	1	153	8	1,220	6	7,320
Concrete Boom Pump	57	0.50	1	29	8	228	6	1,368
Concrete Trucks (2)	NA	NA	15	NA	182	2,725	6	16,350
Crane - 220-Ton Manitowoc 888	330	0.50	1	165	8	1,320	80	105,600
Crane - 275-Ton Manitowoc 999	431	0.50	6	1,293	8	10,344	80	827,520
Crane - Manitowoc 4000	350	0.50	1	175	8	1,400	53	74,200
Crew Boat	240	0.25	1	60	4	240	3	720
Excavator - Cat 345B	290	0.50	1	145	8	1,160	80	92,800
Excavator w/ Ram -Komatso PC 220 LC5	157	0.60	1	94	8	754	53	39,941
Flat Bed	180	0.20	1	36	4	144	27	3,888
Forklift - Cat 200	125	0.50	3	188	6	1,125	160	180,000
Generator	45	0.75	1	34	8	270	13	3,510
Haul Trucks - Material Deliveries (1)	NA	NA	15	NA	5	75	120	9,000
Loader - Cat 966E	220	0.50	1	110	6	660	9	5,940

Notes: (9) Equipment usage based upon replacement of 739 feet of wharf at Berth 144.

Table D1.1.3. Emission Source Data for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010) (Pg 3 of 3).

Construction Activity/Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Upgrade Existing Wharf (10)								
Crane - 220-Ton Manitowoc 888	330	0.50	1	165	8	1,320	46	60,720
Compressor	50	0.60	1	30	8	240	4	960
Concrete Boom Pump	57	0.50	1	29	8	228	4	912
Concrete Trucks (2)	NA	NA	15	NA	143	2,138	4	8,550
Excavator w/ Ram -Komatso PC 220 LC5	157	0.60	1	94	8	754	30	22,608
Forklift - Cat 200	125	0.50	1	63	4	250	46	11,500
Generator	45	0.75	1	34	8	270	8	2,160
Loader - Cat 966E	220	0.50	1	110	8	880	5	4,400
Material Truck	NA	NA	15	NA	4	60	46	2,760
Install 3 Cranes at Berth 144								
Crane - 50 ton	330	0.30	2	198	8	1,584	4	6,336
Winch	305	0.50	1	153	4	610	3	1,830
Cargo Ship - Transit - Crane Delivery (3)	NA	NA	1	NA	NA	NA	2	NA
Tugboat - Cargo Vessel Assist	4,106	0.31	1	1,273	1	1,273	2	2,546
Cargo Ship - Hotelling (3)	NA	NA	1	NA	24	NA	4	NA

(10) Equipment usage based upon upgrades to 1,109 feet of wharf at Berths 145-147.

Table D1.1.4. Emission Source Data for 78 Acres of Backland Improvements at Berths 142-147 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Equipment Type/Activity	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Equip-Hrs Per Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Building Demolition (1)								
Bulldozer	310	0.50	2	310	8	2,480	11.3	27,969
Backhoe	160	0.50	2	160	8	1,280	11.3	14,436
Loader	215	0.50	3	323	8	2,580	11.3	29,097
Crane w/Wrecking Ball	180	0.50	1	90	8	720	11.3	8,120
Haul Truck (2)	NA	NA	20	NA	20	400	11.3	4,511
Building Demolition (3)	NA	NA	NA	NA	8	NA	11.3	1,015,000
Backland Improvements (4)								
Paving Machine	200	0.50	1	100	8	800	30.4	24,312
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	111.4	62,400
Compactive Roller	165	0.50	2	165	8	1,320	45.6	60,171
Scraper	195	0.50	2	195	8	1,560	45.6	71,112
Grader	180	0.50	1	90	8	720	50.6	36,468
Loader	215	0.50	1	108	8	860	50.6	43,558
Backhoe	160	0.50	1	80	8	640	35.5	22,691
Bulldozer - D6	165	0.50	1	83	8	660	35.5	23,400
Haul Truck - Paving (2)	NA	NA	15	NA	33	495	50.6	25,071
Haul Truck - Base (2)	NA	NA	15	NA	16	240	50.6	12,156
Semi Truck (2)	NA	NA	20	NA	16	320	50.6	16,208
Fugitive Dust (5)	NA	NA	6	NA	8	NA	111.4	669

Notes: (1) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-19 (LAHD 1997), but work days multiplied by 1.015M/4.05M, as ratio is the proposed/West Basin TIP demolition volumes.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Total Hp-Hrs = total cubic feet (cf) of demolished buildings. Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-19 (LAHD 1997), but work days multiplied by 1.015M/4.05M, as this ratio is the proposed/West Basin TIP demolition volumes.

(4) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-18 (LAHD 1997), but work days multiplied by 78/15.4, as this ratio is the proposed/West Basin TIP backland construction acreages.

(5) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table D1.1.5. Emission Source Data to Construct a New Administration Building, Main Gate, and Worker Parking Lot - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Equip-Hrs Per Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Construct Administration Building								
Air Compressor - 100 CFM	50	0.60	1	30	6	180	66	11,880
Concrete/Industrial Saw	84	0.73	1	61	6	368	66	24,283
Crane	190	0.30	1	57	6	342	66	22,572
Forklift	94	0.48	1	45	6	268	66	17,681
Generator	45	0.60	1	27	8	216	66	14,256
Concrete Trucks (1)	NA	NA	15	NA	14	210	3	630
Supply Trucks (1)	NA	NA	40	NA	10	400	5	2,000
Fugitive Dust (2)	NA	NA	1	NA	8	NA	16	16
Construct New Main Gate								
Air Compressor - 185 CFM	70	0.60	1	42	4	168	66	11,088
Backhoe	160	0.50	1	80	4	320	30	9,600
Compactive Roller	165	0.50	1	83	4	330	30	9,900
Generator	135	0.60	1	81	2	162	66	10,692
Concrete Trucks (1)	NA	NA	15	NA	1	15	30	450
Haul Trucks (1)	NA	NA	40	NA	1	40	66	2,640
Fugitive Dust (2)	NA	NA	2	NA	8	NA	9	18
Improve/Pave Demolished Areas and Parking Lot (3)								
Paving Machine	200	0.50	1	100	8	800	11.3	9,039
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	41.4	23,200
Compactive Roller	165	0.50	2	165	8	1,320	16.9	22,371
Scraper	195	0.50	2	195	8	1,560	16.9	26,439
Grader	180	0.50	1	90	8	720	18.8	13,558
Loader	215	0.50	1	108	8	860	18.8	16,195
Backhoe	160	0.50	1	80	8	640	13.2	8,436
Bulldozer - D6	165	0.50	1	83	8	660	13.2	8,700
Haul Truck - Paving (1)	NA	NA	15	NA	33	495	18.8	9,321
Haul Truck - Base (1)	NA	NA	15	NA	16	240	18.8	4,519
Semi Truck (1)	NA	NA	20	NA	16	320	18.8	6,026
Fugitive Dust (2)	NA	NA	5	NA	8	NA	41.4	207
Demolish Existing Admin. Bldg. and Gate								
Backhoe	160	0.50	2	160	8	1,280	4.5	5,703
Bulldozer	310	0.50	2	310	8	2,480	4.5	11,050
Crane w/Wrecking Ball	180	0.50	1	90	8	720	4.5	3,208
Loader	215	0.50	3	323	8	2,580	4.5	11,495
Haul Truck (1)	NA	NA	20	NA	20	400	4.5	1,782
Building Demolition (4)	NA	NA	NA	NA	8	NA	4.5	401,000

Notes: (1) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(2) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

(3) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-18 (LAHD 1997), but work days multiplied by 29/15.4, as this ratio is the proposed/West Basin TIP backland construction acreages.

(4) Total Hp-Hrs = total cubic feet (cf) of demolished buildings. Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-19 (LAHD 1997), but work days multiplied by 0.401M/4.05M, as this ratio is the proposed/West Basin TIP demolition volumes.

Table D1.1.6. Emission Source Datafor Construction of a New Maintenance and Repair Facility - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Equip-Hrs Per Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Construct Maintenance and Repair Facility								
Air Compressor - 100 CFM	50	0.60	1	30	6	180	203	36,450
Concrete/Industrial Saw	84	0.73	1	61	8	491	203	99,338
Crane	190	0.30	1	57	8	456	203	92,340
Generator	45	0.60	1	27	8	216	203	43,740
Rough Terrain Forklift	94	0.48	1	45	8	357	203	72,333
Concrete Trucks (1)	NA	NA	15	NA	14	210	9	1,933
Supply Trucks (1)	NA	NA	40	NA	10	400	15	6,136
Fugitive Dust (2)	NA	NA	3	NA	8	NA	49	147
Improve/Pave Demolished Areas and M&R Area (3)								
Paving Machine	200	0.50	1	100	8	800	5.5	4,364
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	20.0	11,200
Compactive Roller	165	0.50	2	165	8	1,320	8.2	10,800
Scraper	195	0.50	2	195	8	1,560	8.2	12,764
Grader	180	0.50	1	90	8	720	9.1	6,545
Loader	215	0.50	1	108	8	860	9.1	7,818
Backhoe	160	0.50	1	80	8	640	6.4	4,073
Bulldozer - D6	165	0.50	1	83	8	660	6.4	4,200
Haul Truck - Paving (1)	NA	NA	15	NA	33	495	9.1	4,500
Haul Truck - Base (1)	NA	NA	15	NA	16	240	9.1	2,182
Semi Truck (1)	NA	NA	20	NA	16	320	9.1	2,909
Fugitive Dust (2)	NA	NA	5	NA	8	NA	20.0	100
Demolish Existing M&R Facility								
Backhoe	160	0.50	2	160	8	1,280	7.7	9,813
Bulldozer	310	0.50	2	310	8	2,480	7.7	19,013
Crane w/Wrecking Ball	180	0.50	1	90	8	720	7.7	5,520
Loader	215	0.50	3	323	8	2,580	7.7	19,780
Haul Truck (1)	NA	NA	20	NA	20	400	7.7	3,067
Building Demolition (4)	NA	NA	NA	NA	8	NA	7.7	690,000

Notes: (1) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(2) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

(3) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-18 (LAHD 1997), but work days multiplied by 14/15.4, as this ratio is the proposed/West Basin TIP backland construction acreages.

(4) Total Hp-Hrs = total cubic feet (cf) of demolished buildings. Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-19 (LAHD 1997), but work days multiplied by 0.69M/4.05M, as this ratio is the proposed/West Basin TIP demolition volumes.

Table D1.1.7. Emission Source Data for Harry Bridges Blvd. Realignment - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Hp Rating	Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Street Removals								
Backhoe - 416D	77	0.50	1	39	8	308	14.5	4,472
Bulldozer - D9	405	0.50	1	203	8	1,620	14.5	23,522
Dump Truck - 16 CY	300	0.30	10	900	8	7,200	14.5	104,544
Fugitive Dust (1)	NA	NA	2	NA	8	NA	14.5	NA
Loader - 938G	160	0.50	2	160	8	1,280	29	37,171
Water Truck - 5000 Gallons	175	0.40	2	140	8	1,120	29	32,525
Street Improvements								
Asphalt Spreader - BG 240C	153	0.60	2	184	8	1,469	9	13,219
Concrete Truck - 9 CY (2)	NA	NA	15	NA	9	139	30	4,167
Concrete Truck - 9 CY	300	0.25	9	694	0.25	174	30	5,208
Fugitive Dust (1)	NA	NA	1	NA	8	NA	18	NA
Grader - 14H	215	0.50	2	215	8	1,720	9	15,480
Haul Truck - Base (2)	NA	NA	15	NA	381	5,715	9	51,435
Haul Truck - Paving (2)	NA	NA	15	NA	223	3,345	9	30,105
Loader - 938G	160	0.50	2	160	8	1,280	9	11,520
Oil Truck	300	0.40	1	120	8	960	9	8,640
Vibratory Compactor - CB 355D	105	0.75	2	158	8	1,260	18	22,680
Sewer Installation								
Backhoe - 416D	77	0.50	1	39	8	308	12	3,696
Dump Truck - 16 CY	300	0.25	1	75	8	600	12	7,200
Excavator Compactor - 320C	138	0.75	1	104	8	828	12	9,936
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	12	6,720
Water Systems Installation								
Backhoe - 416D	77	0.50	1	39	8	308	24	7,392
Dump Truck - 16 CY	300	0.25	1	75	8	600	24	14,400
Excavator Compactor - 320C	138	0.75	1	104	8	828	24	19,872
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	24	13,440
Storm Drain Installation								
Backhoe - 416D	77	0.50	1	39	8	308	30	9,240
Concrete Truck - 9 CY (2)	NA	NA	15	NA	9	135	8	1,080
Concrete Truck - 9 CY	300	0.25	9	675	0.25	169	8	1,350
Dump Truck - 16 CY	300	0.25	4	300	8	2,400	30	72,000
Excavator Compactor - 320C	138	0.75	1	104	8	828	30	24,840
Pipelayer - 561M	110	0.50	1	55	8	440	30	13,200
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	30	16,800

Notes: (1) Number Active is acres disturbed at one time and Total Fuel Use is acre-days disturbed.

(2) Number Active = miles/roundtrip, Hours/Day are the daily trips, Daily Hp-Hrs are the daily miles, and Total Hp-Hrs are the total miles.

Table D1.1.8. Emission Source Data for Construction of a 46-Acre Rail Yard at Berth 200 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type (1)	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Crane	195	0.50	2	195	8	1,560	315	492,069
Loader	160	0.50	1	80	8	640	210	134,583
Paving Machine	200	0.50	2	200	8	1,600	53	84,114
Grader	180	0.50	1	90	8	720	79	56,777
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	79	44,160
Backhoe	80	0.50	2	80	8	640	210	134,583
Roller	100	0.50	1	50	8	400	53	21,029
Air Compressor	50	0.60	2	60	8	480	315	151,406
Welding Machine	50	0.60	2	60	8	480	315	151,406
Generator	50	0.60	1	30	8	240	315	75,703
Material Truck (2)	NA	NA	15	NA	51	765	447	341,846
Fugitive Dust (3)	NA	NA	4	NA	8	NA	79	315

(1) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-13 (LAHD 1997), but work days multiplied by 46/17.5, as this ratio is the proposed/West Basin TIP Pier A railyard acreages.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table D1.1.9. Emission Source Data for 9 Acres of Backland Improvements at Berths 134-135 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Equipment Type/Activity	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Equip-Hrs Per Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Backland Improvements (1)								
Paving Machine	200	0.50	1	100	8	800	3.5	2,805
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	12.9	7,200
Compactive Roller	165	0.50	2	165	8	1,320	5.3	6,943
Scraper	195	0.50	2	195	8	1,560	5.3	8,205
Grader	180	0.50	1	90	8	720	5.8	4,208
Loader	215	0.50	1	108	8	860	5.8	5,026
Backhoe	160	0.50	1	80	8	640	4.1	2,618
Bulldozer - D6	165	0.50	1	83	8	660	4.1	2,700
Haul Truck - Paving (2)	NA	NA	15	NA	33	495	5.8	2,893
Haul Truck - Base (2)	NA	NA	15	NA	16	240	5.8	1,403
Semi Truck (2)	NA	NA	20	NA	16	320	5.8	1,870
Fugitive Dust (3)	NA	NA	4	NA	8	NA	12.9	51

Notes: (1) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-18 (LAHD 1997), but work days multiplied by 9/15.4, as this ratio is the proposed/West Basin TIP backland construction acreages.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table D1.1.10. Emission Source Data for Construction of the Berths 142-147 12-Acre ICTF and Associated 19-Acre Backlands - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Rail Track Removal (1)								
Forklift	165	0.50	2	165	8	1,320	50	66,000
Mobile Crane	180	0.50	2	180	8	1,440	50	72,000
Haul Truck (2)	NA	NA	20	NA	16	320	50	16,000
Rail Yard Construction (3)								
Crane	195	0.50	2	195	8	1,560	82.3	128,366
Loader	160	0.50	1	80	8	640	54.9	35,109
Paving Machine	200	0.50	2	200	8	1,600	13.7	21,943
Grader	180	0.50	1	90	8	720	20.6	14,811
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	20.6	11,520
Backhoe	80	0.50	2	80	8	640	54.9	35,109
Roller	100	0.50	1	50	8	400	13.7	5,486
Air Compressor	50	0.60	2	60	8	480	82.3	39,497
Welding Machine	50	0.60	2	60	8	480	82.3	39,497
Generator	50	0.60	1	30	8	240	82.3	19,749
Material Truck (2)	NA	NA	15	NA	51	765	116.6	89,177
Fugitive Dust (4)	NA	NA	4	NA	8	NA	20.6	82
Backland Improvements (5)								
Paving Machine	200	0.50	1	100	8	800	7.4	5,922
Water Truck - 5000 Gallons	175	0.40	1	70	8	560	27.1	15,200
Compactive Roller	165	0.50	2	165	8	1,320	11.1	14,657
Scraper	195	0.50	2	195	8	1,560	11.1	17,322
Grader	180	0.50	1	90	8	720	12.3	8,883
Loader	215	0.50	1	108	8	860	12.3	10,610
Backhoe	160	0.50	1	80	8	640	8.6	5,527
Bulldozer - D6	165	0.50	1	83	8	660	8.6	5,700
Haul Truck - Paving (2)	NA	NA	15	NA	33	495	12.3	6,107
Haul Truck - Base (2)	NA	NA	15	NA	16	240	12.3	2,961
Semi Truck (2)	NA	NA	20	NA	16	320	12.3	3,948
Fugitive Dust (4)	NA	NA	6	NA	8	NA	27.1	163

Notes: (1) Rail track removal eqiupment usage obtained from West Basin TIP FEIR Appendix E Table E.2-20 (LAHD 1997).

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-13 (LAHD 1997), but work days multiplied by 12/17.5, as this ratio is the proposed/West Basin TIP railyard acreages.

(4) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

(5) Equipment usage obtained from West Basin TIP FEIR Appendix E Table E.2-18 (LAHD 1997), but work days multiplied by 19/15.4, as this ratio is the proposed/West Basin TIP backland construction acreages.

Table D1.1.11. Emission Source Data for Existing Cranes Removal at Berth 136 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Existing Crane Removal								
Crane - 50 ton	330	0.30	2	198	8	1,584	4	6,336
Winch	305	0.50	1	153	4	610	4	2,440
Tugboat	1,200	0.25	1	300	8	2,400	2	4,800
Tugboat	1,200	0.68	1	816	1	816	1	816

Table D1.1.12. Emission Source Data for Construction of Harry Bridges Boulevard Buffer - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Landscape Installation								
Backhoe - 416D	77	0.50	6	231	8	1,848	240	443,520
Dump Truck - 12 CY (1)	NA	NA	20	NA	8	160	240	38,400
Dump Truck - 12 CY	300	0.25	8	600	0.25	150	240	36,000
Loader - 938G	160	0.50	1	80	8	640	240	153,600
Trencher	53	0.75	2	80	8	636	240	152,640
Material Truck (1)	NA	NA	30	NA	5	150	210	31,500
Water Truck - 5,000 Gallons	300	0.40	2	240	6	1,440	180	259,200
Fugitive Dust (2)	NA	NA	2	NA	8	NA	180	NA
Grading/Earthmoving								
Bulldozer - D9	405	0.50	1	203	8	1,620	80	129,600
Compactor - CS431C	105	0.75	2	158	6	945	80	75,600
Dump Truck - 20 CY (1)	NA	NA	20	NA	25	500	80	40,000
Dump Truck - 12 CY	300	0.25	25	1,875	0.25	469	80	37,500
Fugitive Dust (2)	NA	NA	8	NA	8	NA	80	NA
Grader - 140H	165	0.50	1	83	8	660	80	52,800
Loader - 938G	160	0.50	3	240	8	1,920	80	153,600
Scraper - 637E	700	0.40	3	840	6	5,040	27	136,080
Water Truck - 5,000 Gallons	300	0.40	2	240	6	1,440	80	115,200

Notes: (1) Number Active = miles/roundtrip, Hours/Day are the daily trips, Daily Hp-Hrs are the daily miles, and Total Hp-Hrs are the total miles.

(2) Number Active is acres disturbed at one time and Total Fuel Use is acre-days disturbed.

Table D1.1.13. Emission Source Data for Crane Installation at Berth 136 & Berth 144 - Berths 136-147 Proposed Project Phase 1

Construction Activity/Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Install Cranes at Berth 136 & Berth 144								
Crane - 50 ton	330	0.30	2	198	8	1,584	4	6,336
Winch	305	0.50	1	153	4	610	2	1,220
Cargo Ship - Transit - Crane Delivery (1)	NA	NA	1	NA	NA	NA	2	NA
Tugboat - Vessel Assist	4,106	0.31	1	1,273	1	1,273	2	2,546
Cargo Ship - Hotelling (1)	NA	NA	1	NA	24	NA	2	NA

Note: (1) See Table C1-XX for a summary of the associated activity data. Arrival/departure would not occur on the same day.

Table D1.1.14. Air Emission Factors for the Berths 136-147 Terminal Project Alternatives Construction Activities.

Project Year/Source Type	Fuel Type	Emission Factors (Grams/Horsepower-Hour)							References
		ROG	CO	NOx	SOx	PM	PM10 (8)	PM2.5 (8)	
Year 2005									
Off-Road Equipment - 25-50 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 51-120 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 121-175 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 176-250 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 251-500 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 501-750 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - >750 Hp	D	-	-	-	-	-	-	-	0
Year 2007									
Off-Road Equipment - 25-50 Hp	D	2.99	7.23	6.31	0.008	0.71	0.71	0.66	(1)
Off-Road Equipment - 51-120 Hp	D	1.26	3.85	7.39	0.006	0.66	0.66	0.61	(1)
Off-Road Equipment - 121-175 Hp	D	0.92	3.36	7.17	0.006	0.40	0.40	0.37	(1)
Off-Road Equipment - 176-250 Hp	D	0.70	1.93	7.07	0.006	0.27	0.27	0.25	(1)
Off-Road Equipment - 251-500 Hp	D	0.57	2.25	5.70	0.005	0.22	0.22	0.20	(1)
Off-Road Equipment - 501-750 Hp	D	0.66	2.69	6.63	0.006	0.25	0.25	0.23	(1)
Off-Road Equipment - >750 Hp	D	0.56	2.09	6.27	0.005	0.19	0.19	0.18	(1)
On-road Truck - Idle (Gms/Hr)	D	10.06	45.12	76.69	0.05	1.50	1.50	1.38	(2)
On-road Truck - 5 mph (Gms/Mi)	D	8.30	29.67	29.82	0.03	2.10	2.10	1.90	(2)
On-road Truck - 25 mph (Gms/Mi)	D	1.15	9.25	13.52	0.02	0.63	0.63	0.55	(2)
On-road Truck - 55 mph (Gms/Mi)	D	0.65	5.59	14.21	0.01	0.48	0.48	0.42	(2)
Dredge Materials Haul Truck - Composite (Gms/Mi)	D	1.87	11.29	15.15	0.02	0.77	0.77	0.71	(3)
Other On-Road Trucks - Composite (Gms/Mi)	D	1.13	7.53	14.85	0.02	0.59	0.59	0.54	(4)
Year 2015									
Off-Road Equipment - 25-50 Hp	D	1.27	5.57	5.07	0.008	0.34	0.34	0.31	(1)
Off-Road Equipment - 51-120 Hp	D	0.68	3.56	4.36	0.006	0.35	0.35	0.32	(1)
Off-Road Equipment - 121-175 Hp	D	0.57	3.25	4.16	0.006	0.23	0.23	0.21	(1)
Off-Road Equipment - 176-250 Hp	D	0.45	1.36	3.84	0.006	0.14	0.14	0.13	(1)
Off-Road Equipment - 251-500 Hp	D	0.39	1.35	3.07	0.005	0.11	0.11	0.10	(1)
Off-Road Equipment - 501-750 Hp	D	0.45	1.63	3.66	0.006	0.14	0.14	0.12	(1)
Off-Road Equipment - >750 Hp	D	0.36	1.24	3.92	0.005	0.11	0.11	0.10	(1)
On-road Truck - Idle (Gms/Hr)	D	7.87	41.68	87.41	0.05	0.82	0.82	0.75	(2)
On-road Truck - 5 mph (Gms/Mi)	D	4.36	13.72	14.70	0.03	0.85	0.85	0.76	(2)
On-road Truck - 25 mph (Gms/Mi)	D	0.60	3.92	6.61	0.02	0.30	0.30	0.25	(2)
On-road Truck - 55 mph (Gms/Mi)	D	0.33	2.68	6.44	0.01	0.28	0.28	0.23	(2)
Dredge Materials Haul Truck - Composite (Gms/Mi)	D	0.98	4.90	7.42	0.02	0.36	0.36	0.33	(3)
Other On-Road Trucks - Composite (Gms/Mi)	D	0.58	3.48	6.88	0.02	0.31	0.31	0.29	(4)
All Years									
Tugboat (Gm/Hp-Hr)	D	0.37	0.82	9.85	0.01	0.51	0.51	0.48	(5)
Fugitive Dust (Lbs/acre-day)	---	---	---	---	---	27.50	13.45	2.81	(6)
Building Demolition (Lbs/1000 cf)	---	---	---	---	---	0.84	0.41	0.09	(7)

Notes: (1) Composite emission factors developed from ARB OFFROAD2007 emissions model (2006) and based on average SCAB equipment fleet age distributions for project years 2007 and 2015.

(2) Heavy duty diesel truck running emission factors developed from EMFAC2007 (ARB 2006). Units in grams/mile for project years 2007 and 2015. Based on annual average conditions at 60 degrees and 50% humidity. PM emission factors include combustive and tire/brake wear contributions.

(3) Composite factors based on a round trip of 90% at 25 mph and 10% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

(4) For on-road trucks other then dredge material haul trucks, composite factor based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

(5) Data obtained from Table C2-15 of this EIR/S, then divided by 1.34 to convert to units of Gm/Hp-Hr.

(6) Units in lbs/acre-day from section 11.2.3 of AP-42 (EPA 1995). Emissions reduced by 75% from uncontrolled levels to represent compliance with SCAQMD Rule 403 - Fugitive Dust.

(7) CEQA Air Quality Handbook, Table A9-9-H (SCAQMD 1993). Units in lbs/1000 cubic feet (cf) of demolished building.

(8) PM10 and PM2.5 factors determined by factoring the PM by ratios given in the California Emissions Inventory Development and Reporting System (CEIDARS) Table PMSIZEPROFILE (ARB 2006).

Table D1.1.15. Daily Emissions for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal
Proposed Project Phase 1 (2007-2010) (Pg 1 of 3).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Demolition							
Air Compressor	1.6	3.8	3.3	0.0	0.4	0.4	0.3
Crane - 220-Ton Manitowoc 888	1.6	6.6	16.6	0.0	0.6	0.6	0.6
Derrick Barge	1.2	3.3	12.2	0.0	0.5	0.5	0.4
Excavator - Cat 345B	1.4	5.8	14.6	0.0	0.6	0.6	0.5
Forklift	0.9	2.7	5.1	0.0	0.5	0.5	0.4
Generator	1.8	4.3	3.8	0.0	0.4	0.4	0.4
Haul Truck - Demolished Materials (1)	0.1	0.9	1.7	0.0	0.1	0.1	0.1
Loader - Cat 966E	1.4	3.8	13.7	0.0	0.5	0.5	0.5
Tugboat	2.0	4.3	52.1	0.1	2.7	2.7	2.5
Vibratory Hammer	1.4	3.4	3.0	0.0	0.3	0.3	0.3
Subtotal	13.4	38.9	126.0	0.1	6.5	6.5	6.0
Remove 2 Existing Cranes at Berth 144							
Crane - 50 ton	2.0	7.9	19.9	0.0	0.8	0.8	0.7
Winch	0.8	3.0	7.7	0.0	0.3	0.3	0.3
Tugboat	2.0	4.3	52.1	0.1	2.7	2.7	2.5
Tugboat	0.7	1.5	17.7	0.0	0.9	0.9	0.9
Subtotal	5.4	16.7	97.4	0.1	4.7	4.7	4.4
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist	0.8	3.3	8.2	0.0	0.3	0.3	0.3
Generator - Pile Hammer	1.4	3.9	14.2	0.0	0.5	0.5	0.5
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Cargo Ship - Transit - Sheetpile Delivery	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Tugboat - Cargo Vessel Assist	1.0	2.3	27.6	0.0	1.4	1.4	1.3
Cargo Ship - Hotelling	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Subtotal	45.6	112.0	1246.0	674.9	92.8	92.8	87.0
Rip-Rap Placement							
Barge - Generator	1.5	4.6	8.8	0.0	0.8	0.8	0.7
Barge - Generator	2.1	5.9	21.4	0.0	0.8	0.8	0.7
Barge - Deck Winch	1.7	5.1	9.8	0.0	0.9	0.9	0.8
Barge - Main Hoist	2.1	8.3	21.0	0.0	0.8	0.8	0.7
Tracked Loader - Cat 973	1.6	4.5	16.4	0.0	0.6	0.6	0.6
Tugboat - Generator	3.8	11.7	22.4	0.0	2.0	2.0	1.8
Tugboat - Main Engines	21.5	47.3	567.1	0.9	29.4	29.4	27.5
Subtotal	34.3	87.3	666.9	0.9	35.3	35.3	33.0
Dredge and Disposal							
Derrick Barge - Crane Hoist	9.8	40.1	98.9	0.1	3.7	3.7	3.4
Derrick Barge - Deck Winch	2.2	6.1	22.2	0.0	0.8	0.8	0.8
Derrick Barge - Generator	7.8	30.9	78.1	0.1	3.0	3.0	2.7
Derrick Barge - Generator	1.0	3.6	7.7	0.0	0.4	0.4	0.4
Haul Trucks - Berth 205 to Anch. Rd. (1)	1.2	5.0	9.4	0.0	0.3	0.3	0.3
Loader - 962G - Anchorage Rd.	2.5	6.8	24.9	0.0	0.9	0.9	0.9
Tug Boat - Transport Barge to Berth 205	1.2	2.7	31.9	0.0	1.7	1.7	1.5
Subtotal	25.6	95.2	273.1	0.3	10.9	10.9	10.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.16. Daily Emissions for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal
Proposed Project Phase 1 (2007-2010) (Pg 2 of 3).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist	0.8	3.3	8.2	0.0	0.3	0.3	0.3
Generator - Pile Hammer	1.4	3.9	14.2	0.0	0.5	0.5	0.5
Haul Trucks - Pile Deliveries (1)	5.4	36.0	71.1	0.1	2.8	2.8	2.6
Jet Pump	1.7	6.9	17.5	0.0	0.7	0.7	0.6
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Subtotal	9.6	50.7	117.5	0.1	4.7	4.7	4.3
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	1.6	6.6	16.6	0.0	0.6	0.6	0.6
Forklift	1.2	3.6	6.8	0.0	0.6	0.6	0.6
Generator - Pile Hammer	1.4	3.9	14.2	0.0	0.5	0.5	0.5
Jet Pump	1.7	6.9	17.5	0.0	0.7	0.7	0.6
Haul Trucks - Pile Deliveries (1)	5.4	36.0	71.1	0.1	2.8	2.8	2.6
Subtotal	11.4	57.0	126.2	0.1	5.3	5.3	4.8
Replace Existing Wharf							
Air Compressor - 185 CFM	0.9	2.8	5.5	0.0	0.5	0.5	0.5
Air Compressor - 750 CFM	1.8	7.2	18.1	0.0	0.7	0.7	0.6
Air Compressor - 825 CFM	2.0	8.0	20.2	0.0	0.8	0.8	0.7
Air Compressor - 900 CFM	2.1	8.3	21.1	0.0	0.8	0.8	0.7
Bulldozer - D6	1.3	4.9	10.4	0.0	0.6	0.6	0.5
Bulldozer - D8	1.5	6.1	15.3	0.0	0.6	0.6	0.5
Concrete Boom Pump	0.6	1.9	3.7	0.0	0.3	0.3	0.3
Concrete Trucks (1)	0.8	4.5	8.5	0.0	0.3	0.3	0.3
Crane - 220-Ton Manitowoc 888	1.6	6.6	16.6	0.0	0.6	0.6	0.6
Crane - 275-Ton Manitowoc 999	12.9	51.4	129.9	0.1	4.9	4.9	4.5
Crane - Manitowoc 4000	1.7	7.0	17.6	0.0	0.7	0.7	0.6
Crew Boat	0.2	0.4	5.2	0.0	0.3	0.3	0.3
Excavator - Cat 345B	1.4	5.8	14.6	0.0	0.6	0.6	0.5
Excavator w/ Ram -Komatso PC 220 LC5	1.5	5.6	11.9	0.0	0.7	0.7	0.6
Flat Bed	0.2	0.6	2.2	0.0	0.1	0.1	0.1
Forklift - Cat 200	2.3	8.3	17.8	0.0	1.0	1.0	0.9
Generator	1.8	4.3	3.8	0.0	0.4	0.4	0.4
Haul Trucks - Material Deliveries (1)	0.2	1.3	2.5	0.0	0.1	0.1	0.1
Loader - Cat 966E	1.0	2.8	10.3	0.0	0.4	0.4	0.4
Subtotal	36.0	137.8	335.2	0.3	14.2	14.2	13.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.17. Daily Emissions for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010) (Pg 3 of 3).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Upgrade Existing Wharf							
Crane - 220-Ton Manitowoc 888	1.6	6.6	16.6	0.0	0.6	0.6	0.6
Compressor	1.6	3.8	3.3	0.0	0.4	0.4	0.3
Concrete Boom Pump	0.6	1.9	3.7	0.0	0.3	0.3	0.3
Concrete Trucks (1)	5.6	36.7	72.0	0.1	2.8	2.8	2.6
Excavator w/ Ram -Komatso PC 220 LC5	1.5	5.6	11.9	0.0	0.7	0.7	0.6
Forklift - Cat 200	0.5	1.9	4.0	0.0	0.2	0.2	0.2
Generator	1.8	4.3	3.8	0.0	0.4	0.4	0.4
Loader - Cat 966E	1.4	3.8	13.7	0.0	0.5	0.5	0.5
Material Truck (1)	0.2	1.0	2.0	0.0	0.1	0.1	0.1
Subtotal	14.8	65.5	131.0	0.1	6.1	6.1	5.6
Install 3 Cranes at Berth 144							
Crane - 50 ton	2.0	7.9	19.9	0.0	0.8	0.8	0.7
Winch	0.8	3.0	7.7	0.0	0.3	0.3	0.3
Cargo Ship - Transit - Crane Delivery	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Tugboat - Cargo Vessel Assist	1.0	2.3	27.6	0.0	1.4	1.4	1.3
Cargo Ship - Hotelling	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Subtotal	45.9	115.2	1244.6	674.9	92.7	92.7	86.8

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.18. Daily Emissions for 78 Acres of Backland Improvements at Berths 142-147 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Building Demolition							
Bulldozer	3.1	12.3	31.1	0.0	1.2	1.2	1.1
Backhoe	2.6	9.5	20.2	0.0	1.1	1.1	1.0
Loader	4.0	11.0	40.2	0.0	1.5	1.5	1.4
Crane w/Wrecking Ball	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Haul Truck (1)	1.0	6.8	13.4	0.0	0.5	0.5	0.5
Building Demolition	---	---	---	---	75.6	37.0	7.7
Subtotal	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Backland Improvements							
Paving Machine	1.2	3.4	12.5	0.0	0.5	0.5	0.4
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Compactive Roller	2.7	9.8	20.9	0.0	1.2	1.2	1.1
Scraper	2.4	6.7	24.3	0.0	0.9	0.9	0.8
Grader	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Loader	1.3	3.7	13.4	0.0	0.5	0.5	0.5
Backhoe	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Bulldozer - D6	1.3	4.9	10.4	0.0	0.6	0.6	0.5
Haul Truck - Paving (1)	1.3	8.5	16.7	0.0	0.7	0.7	0.6
Haul Truck - Base (1)	0.6	4.1	8.1	0.0	0.3	0.3	0.3
Semi Truck (1)	0.8	5.4	10.7	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	165.0	80.7	16.8
Subtotal	15.2	58.4	147.1	0.1	171.5	87.2	22.8

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.19. Daily Emissions to Construct a New Administration Building, Main Gate, and Worker Parking Lot - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Administration Building							
Air Compressor - 100 CFM	1.2	2.9	2.5	0.0	0.3	0.3	0.3
Concrete/Industrial Saw	1.0	3.1	6.0	0.0	0.5	0.5	0.5
Crane	0.5	1.5	5.3	0.0	0.2	0.2	0.2
Forklift	0.7	2.3	4.4	0.0	0.4	0.4	0.4
Generator	1.4	3.4	3.0	0.0	0.3	0.3	0.3
Concrete Trucks (1)	0.5	3.6	7.1	0.0	0.3	0.3	0.3
Supply Trucks (1)	1.0	6.7	13.2	0.0	0.5	0.5	0.5
Fugitive Dust	---	---	---	---	27.5	13.4	2.8
Subtotal	6.5	23.5	41.5	0.0	30.1	16.0	5.2
Construct New Main Gate							
Air Compressor - 185 CFM	0.5	1.4	2.7	0.0	0.2	0.2	0.2
Backhoe	0.6	2.4	5.1	0.0	0.3	0.3	0.3
Compactive Roller	0.7	2.4	5.2	0.0	0.3	0.3	0.3
Generator	0.3	1.2	2.6	0.0	0.1	0.1	0.1
Concrete Trucks (1)	0.0	0.3	0.5	0.0	0.0	0.0	0.0
Haul Trucks (1)	0.1	0.7	1.3	0.0	0.1	0.1	0.0
Fugitive Dust	---	---	---	---	55.0	26.9	5.6
Subtotal	2.3	8.4	17.4	0.0	56.0	27.9	6.6
Improve/Pave Demolished Areas and Parking Lot							
Paving Machine	1.2	3.4	12.5	0.0	0.5	0.5	0.4
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Compactive Roller	2.7	9.8	20.9	0.0	1.2	1.2	1.1
Scraper	2.4	6.7	24.3	0.0	0.9	0.9	0.8
Grader	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Loader	1.3	3.7	13.4	0.0	0.5	0.5	0.5
Backhoe	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Bulldozer - D6	1.3	4.9	10.4	0.0	0.6	0.6	0.5
Haul Truck - Paving (1)	1.3	8.5	16.7	0.0	0.7	0.7	0.6
Haul Truck - Base (1)	0.6	4.1	8.1	0.0	0.3	0.3	0.3
Semi Truck (1)	0.8	5.4	10.7	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	137.5	67.2	14.0
Subtotal	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing Admin. Bldg. and Gate							
Backhoe	2.6	9.5	20.2	0.0	1.1	1.1	1.0
Bulldozer	3.1	12.3	31.1	0.0	1.2	1.2	1.1
Crane w/Wrecking Ball	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Loader	4.0	11.0	40.2	0.0	1.5	1.5	1.4
Haul Truck (1)	1.0	6.8	13.4	0.0	0.5	0.5	0.5
Building Demolition	---	---	---	---	75.6	37.0	7.7
Subtotal	11.8	42.7	116.2	0.1	80.4	41.8	12.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.20. Daily Emissions for Construction of a New Maintenance and Repair Facility - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Maintenance and Repair Facility							
Air Compressor - 100 CFM	1.2	2.9	2.5	0.0	0.3	0.3	0.3
Concrete/Industrial Saw	1.4	4.2	8.0	0.0	0.7	0.7	0.7
Crane	0.7	1.9	7.1	0.0	0.3	0.3	0.2
Generator	1.4	3.4	3.0	0.0	0.3	0.3	0.3
Rough Terrain Forklift	1.0	3.0	5.8	0.0	0.5	0.5	0.5
Concrete Trucks (1)	0.5	3.6	7.1	0.0	0.3	0.3	0.3
Supply Trucks (1)	1.0	6.7	13.2	0.0	0.5	0.5	0.5
Fugitive Dust	---	---	---	---	82.5	40.3	8.4
Subtotal	7.2	25.8	46.7	0.0	85.4	43.3	11.1
Improve/Pave Demolished Areas and M&R Area							
Paving Machine	1.2	3.4	12.5	0.0	0.5	0.5	0.4
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Compactive Roller	2.7	9.8	20.9	0.0	1.2	1.2	1.1
Scraper	2.4	6.7	24.3	0.0	0.9	0.9	0.8
Grader	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Loader	1.3	3.7	13.4	0.0	0.5	0.5	0.5
Backhoe	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Bulldozer - D6	1.3	4.9	10.4	0.0	0.6	0.6	0.5
Haul Truck - Paving (1)	1.3	8.5	16.7	0.0	0.7	0.7	0.6
Haul Truck - Base (1)	0.6	4.1	8.1	0.0	0.3	0.3	0.3
Semi Truck (1)	0.8	5.4	10.7	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	137.5	67.2	14.0
Subtotal	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing M&R Facility							
Backhoe	2.6	9.5	20.2	0.0	1.1	1.1	1.0
Bulldozer	3.1	12.3	31.1	0.0	1.2	1.2	1.1
Crane w/Wrecking Ball	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Loader	4.0	11.0	40.2	0.0	1.5	1.5	1.4
Haul Truck (1)	1.0	6.8	13.4	0.0	0.5	0.5	0.5
Building Demolition	---	---	---	---	75.6	37.0	7.7
Subtotal	11.8	42.7	116.2	0.1	80.4	41.8	12.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.21. Daily Emissions for Harry Bridges Blvd. Realignment - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Street Removals							
Backhoe - 416D	0.9	2.6	5.0	0.0	0.4	0.4	0.4
Bulldozer - D9	2.0	8.1	20.3	0.0	0.8	0.8	0.7
Dump Truck - 16 CY	9.0	35.8	90.4	0.1	3.4	3.4	3.2
Fugitive Dust	---	---	---	---	55.0	26.9	5.6
Loader - 938G	2.6	9.5	20.2	0.0	1.1	1.1	1.0
Water Truck - 5000 Gallons	2.3	8.3	17.7	0.0	1.0	1.0	0.9
Subtotal	16.7	64.2	153.7	0.1	61.8	33.7	11.8
Street Improvements							
Asphalt Spreader - BG 240C	3.0	10.9	23.2	0.0	1.3	1.3	1.2
Concrete Truck - 9 CY (1)	0.4	2.4	4.7	0.0	0.2	0.2	0.2
Concrete Truck - 9 CY	0.2	0.9	2.2	0.0	0.1	0.1	0.1
Fugitive Dust (1)	---	---	---	---	27.5	13.4	2.8
Grader - 14H	2.6	7.3	26.8	0.0	1.0	1.0	0.9
Haul Truck - Base (1)	14.9	98.0	192.5	0.2	7.6	7.6	6.9
Haul Truck - Paving (1)	8.7	57.4	112.7	0.1	4.4	4.4	4.1
Loader - 938G	2.6	9.5	20.2	0.0	1.1	1.1	1.0
Oil Truck	1.2	4.8	12.1	0.0	0.5	0.5	0.4
Vibratory Compactor - CB 355D	3.5	10.7	20.5	0.0	1.8	1.8	1.7
Subtotal	37.2	201.7	414.9	0.4	45.5	31.4	19.3
Sewer Installation							
Backhoe - 416D	0.9	2.6	5.0	0.0	0.4	0.4	0.4
Dump Truck - 16 CY	0.7	3.0	7.5	0.0	0.3	0.3	0.3
Excavator Compactor - 320C	1.7	6.1	13.1	0.0	0.7	0.7	0.7
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Subtotal	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Water Systems Installation							
Backhoe - 416D	0.9	2.6	5.0	0.0	0.4	0.4	0.4
Dump Truck - 16 CY	0.7	3.0	7.5	0.0	0.3	0.3	0.3
Excavator Compactor - 320C	1.7	6.1	13.1	0.0	0.7	0.7	0.7
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Subtotal	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Storm Drain Installation							
Backhoe - 416D	0.9	2.6	5.0	0.0	0.4	0.4	0.4
Concrete Truck - 9 CY (1)	0.4	2.3	4.5	0.0	0.2	0.2	0.2
Concrete Truck - 9 CY	0.2	0.8	2.1	0.0	0.1	0.1	0.1
Dump Truck - 16 CY	3.0	11.9	30.1	0.0	1.1	1.1	1.1
Excavator Compactor - 320C	1.7	6.1	13.1	0.0	0.7	0.7	0.7
Pipelayer - 561M	1.2	3.7	7.2	0.0	0.6	0.6	0.6
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Subtotal	8.4	31.7	70.9	0.1	3.7	3.7	3.4

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.22. Daily Emissions for Construction of a 46-Acre Rail Yard at Berth 200 - Berths 136-147 Terminal
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Crane	2.4	6.7	24.3	0.0	0.9	0.9	0.8
Loader	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Paving Machine	2.5	6.8	24.9	0.0	0.9	0.9	0.9
Grader	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Backhoe	1.8	5.4	10.4	0.0	0.9	0.9	0.9
Roller	1.1	3.4	6.5	0.0	0.6	0.6	0.5
Air Compressor	3.2	7.7	6.7	0.0	0.8	0.8	0.7
Welding Machine	3.2	7.7	6.7	0.0	0.8	0.8	0.7
Generator	1.6	3.8	3.3	0.0	0.4	0.4	0.3
Material Truck (1)	2.0	13.1	25.8	0.0	1.0	1.0	0.9
Fugitive Dust	---	---	---	---	110.0	53.8	11.2
Subtotal	21.2	66.5	138.8	0.1	117.8	61.6	18.4

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of id

Table D1.1.23. Daily Emissions for 9 Acres of Backland Improvements at Berths 134-135 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	1.2	3.4	12.5	0.0	0.5	0.5	0.4
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Compactive Roller	2.7	9.8	20.9	0.0	1.2	1.2	1.1
Scraper	2.4	6.7	24.3	0.0	0.9	0.9	0.8
Grader	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Loader	1.3	3.7	13.4	0.0	0.5	0.5	0.5
Backhoe	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Bulldozer - D6	1.3	4.9	10.4	0.0	0.6	0.6	0.5
Haul Truck - Paving (1)	1.3	8.5	16.7	0.0	0.7	0.7	0.6
Haul Truck - Base (1)	0.6	4.1	8.1	0.0	0.3	0.3	0.3
Semi Truck (1)	0.8	5.4	10.7	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	110.0	53.8	11.2
Subtotal	15.2	58.4	147.1	0.1	116.5	60.3	17.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.24. Daily Emissions for Construction of the Berths 142-147 12-Acre ICTF and Associated 19-Acre Backlands - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Rail Track Removal							
Forklift	2.7	9.8	20.9	0.0	1.2	1.2	1.1
Mobile Crane	2.2	6.1	22.4	0.0	0.8	0.8	0.8
Haul Truck (1)	0.8	5.4	10.7	0.0	0.4	0.4	0.4
Subtotal	5.7	21.4	54.0	0.0	2.4	2.4	2.2
Rail Yard Construction							
Crane	2.4	6.7	24.3	0.0	0.9	0.9	0.8
Loader	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Paving Machine	2.5	6.8	24.9	0.0	0.9	0.9	0.9
Grader	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Backhoe	1.8	5.4	10.4	0.0	0.9	0.9	0.9
Roller	1.1	3.4	6.5	0.0	0.6	0.6	0.5
Air Compressor	3.2	7.7	6.7	0.0	0.8	0.8	0.7
Welding Machine	3.2	7.7	6.7	0.0	0.8	0.8	0.7
Generator	1.6	3.8	3.3	0.0	0.4	0.4	0.3
Material Truck (1)	2.0	13.1	25.8	0.0	1.0	1.0	0.9
Fugitive Dust	---	---	---	---	110.0	53.8	11.2
Subtotal	21.2	66.5	138.8	0.1	117.8	61.6	18.4
Backland Improvements							
Paving Machine	1.2	3.4	12.5	0.0	0.5	0.5	0.4
Water Truck - 5000 Gallons	1.1	4.1	8.9	0.0	0.5	0.5	0.5
Compactive Roller	2.7	9.8	20.9	0.0	1.2	1.2	1.1
Scraper	2.4	6.7	24.3	0.0	0.9	0.9	0.8
Grader	1.1	3.1	11.2	0.0	0.4	0.4	0.4
Loader	1.3	3.7	13.4	0.0	0.5	0.5	0.5
Backhoe	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Bulldozer - D6	1.3	4.9	10.4	0.0	0.6	0.6	0.5
Haul Truck - Paving (1)	1.3	8.5	16.7	0.0	0.7	0.7	0.6
Haul Truck - Base (1)	0.6	4.1	8.1	0.0	0.3	0.3	0.3
Semi Truck (1)	0.8	5.4	10.7	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	165.0	80.7	16.8
Subtotal	15.2	58.4	147.1	0.1	171.5	87.2	22.8

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.25. Daily Emissions for Existing Cranes Removal at Berth 136 - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Existing Crane Removal							
Crane - 50 ton	2.0	7.9	19.9	0.0	0.8	0.8	0.7
Winch	0.8	3.0	7.7	0.0	0.3	0.3	0.3
Tugboat	2.0	4.3	52.1	0.1	2.7	2.7	2.5
Tugboat	0.7	1.5	17.7	0.0	0.9	0.9	0.9
Subtotal	5.4	16.7	97.4	0.1	4.7	4.7	4.4

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.26. Daily Emissions for Construction of Harry Bridges Boulevard Buffer - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Landscape Installation							
Backhoe - 416D	5.1	15.7	30.1	0.0	2.7	2.7	2.5
Dump Truck - 12 CY (1)	0.4	2.7	5.4	0.0	0.2	0.2	0.2
Dump Truck - 12 CY	0.2	0.7	1.9	0.0	0.1	0.1	0.1
Loader - 938G	1.3	4.7	10.1	0.0	0.6	0.6	0.5
Trencher	1.8	5.4	10.4	0.0	0.9	0.9	0.9
Material Truck (1)	0.4	2.5	5.0	0.0	0.2	0.2	0.2
Water Truck - 5,000 Gallons	1.8	7.2	18.1	0.0	0.7	0.7	0.6
Fugitive Dust	---	---	---	---	55.0	26.9	5.6
Subtotal	11.0	39.0	80.9	0.1	60.4	32.2	10.5
Grading/Earthmoving							
Bulldozer - D9	2.0	8.1	20.3	0.0	0.8	0.8	0.7
Compactor - CS431C	2.6	8.0	15.4	0.0	1.4	1.4	1.3
Dump Truck - 20 CY (1)	1.3	8.5	16.7	0.0	0.7	0.7	0.6
Dump Truck - 12 CY	0.6	2.3	5.9	0.0	0.2	0.2	0.2
Fugitive Dust	---	---	---	---	220.0	107.6	22.4
Grader - 140H	1.3	4.9	10.4	0.0	0.6	0.6	0.5
Loader - 938G	3.9	14.2	30.4	0.0	1.7	1.7	1.6
Scraper - 637E	7.3	29.9	73.6	0.1	2.8	2.8	2.6
Water Truck - 5,000 Gallons	1.8	7.2	18.1	0.0	0.7	0.7	0.6
Subtotal	20.8	83.0	190.9	0.2	228.8	116.4	30.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.27. Daily Emissions for Crane Installation at Berth 136 & Berth 144 - Berths 136-147 Project Phase 1 (2012).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM10
Install Cranes at Berth 136 & Berth 144							
Crane - 50 ton	2.0	7.9	19.9	0.0	0.8	0.8	0.7
Winch	0.8	3.0	7.7	0.0	0.3	0.3	0.3
Cargo Ship - Transit - Crane Delivery (1)	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Tugboat - Vessel Assist	1.0	2.3	27.6	0.0	1.4	1.4	1.3
Cargo Ship - Hotelling (1)	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Subtotal	45.9	115.2	1244.6	674.9	92.7	92.7	86.8

Note: (1) See Table C1-XX for a summary of the associated activity data. Arrival/departure would not occur on the same day.

Table D1.1.28. Peak Daily Emissions from Berths 136-147 Terminal Proposed Project Phase 1 Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Wharf Demolition	13.4	38.9	126.0	0.1	6.5	6.5	6.0
Remove 2 Existing Cranes at Berth 144	5.4	16.7	97.4	0.1	4.7	4.7	4.4
Piledriving-Sheet Piles	45.6	112.0	1,246.0	674.9	92.8	92.8	87.0
Rip-Rap Placement	34.3	87.3	666.9	0.9	35.3	35.3	33.0
Dredge and Disposal	25.6	95.2	273.1	0.3	10.9	10.9	10.1
Piledriving-Waterside Piles	9.6	50.7	117.5	0.1	4.7	4.7	4.3
Piledriving-Landside Piles	11.4	57.0	126.2	0.1	5.3	5.3	4.8
Replace Existing Wharf	36.0	137.8	335.2	0.3	14.2	14.2	13.1
Upgrade Existing Wharf	14.8	65.5	131.0	0.1	6.1	6.1	5.6
Install 3 Cranes at Berth 144	45.9	115.2	1,244.6	674.9	92.7	92.7	86.8
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Backland Improvements	15.2	58.4	147.1	0.1	171.5	87.2	22.8
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	6.5	23.5	41.5	0.0	30.1	16.0	5.2
Construct New Main Gate	2.3	8.4	17.4	0.0	56.0	27.9	6.6
Improve/Pave Demolished Areas and Parking	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing Administration Building and Gate	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Construct a New Maintenance and Repair Facility-Berths 136-147							
Construct Maintenance and Repair Facility	7.2	25.8	46.7	0.0	85.4	43.3	11.1
Improve/Pave Demolished Areas and M&R	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing M&R Facility	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Harry Bridges Blvd. Realignment							
Street Removals	16.7	64.2	153.7	0.1	61.8	33.7	11.8
Street Improvements	37.2	201.7	414.9	0.4	45.5	31.4	19.3
Sewer Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Water Systems Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Storm Drain Installation	8.4	31.7	70.9	0.1	3.7	3.7	3.4
Construction of a 46-Acre Rail Yard at Berth 200	21.2	66.5	138.8	0.1	117.8	61.6	18.4
9 Acres of Backland Improvements at Berts 134-135	15.2	58.4	147.1	0.1	116.5	60.3	17.2
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	5.7	21.4	54.0	0.0	2.4	2.4	2.2
Rail Yard Construction	21.2	66.5	138.8	0.1	117.8	61.6	18.4
Backland Improvements	15.2	58.4	147.1	0.1	171.5	87.2	22.8
Existing Cranes Removal at Berth 136	5.4	16.7	97.4	0.1	4.7	4.7	4.4
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	11.0	39.0	80.9	0.1	60.4	32.2	10.5
Grading/Earthmoving	20.8	83.0	190.9	0.2	228.8	116.4	30.5
Install Cranes at Berth 136 & Berth 144	45.9	115.2	1,244.6	674.9	92.7	92.7	86.8
Commuting of Workers (1)	4.1	49.0	4.5	0.2	31.2	30.2	27.9
Peak Daily Emissions - CEQA Impact (2) (3)	126	443	1,845	676	762	424	161
Peak Daily Emissions - NFAB	111	494	983	1	717	380	120
NEPA Impact	15	(50)	862	675	44	44	41
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	55

Notes: (1)The Urbemis model was used to produced emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: upgrade of exisiting wharf, installation of 3 cranes at Berth 144, construction of a new main gate, construction of a new maintenance and repair facility, sewer installation with the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, 9 acres of backland improvements at Berths 134-135, landscape installation at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the following activities: rip-rap placement for wharf improvements at Berths 144-147, 78-acre backland improvements at Berths 142-147, construction of new administration building, construction of new maintenance and repair facility, street removals at Harry Bridges Blvd., construction of a 46-acre railyard at Berth 200, grading/earthmoving for the new Harry Bridges Blvd landscaped area, and commuting of workers.

Table D1.1.29. Hourly Emissions for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010) (Pg 1 of 3).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Demolition							
Air Compressor	0.2	0.5	0.4	0.0	0.0	0.0	0.0
Crane - 220-Ton Manitowoc 888	0.2	0.8	2.1	0.0	0.1	0.1	0.1
Derrick Barge							
Excavator - Cat 345B	0.2	0.7	1.8	0.0	0.1	0.1	0.1
Forklift	0.1	0.4	0.9	0.0	0.1	0.1	0.1
Generator	0.2	0.5	0.5	0.0	0.1	0.1	0.0
Haul Truck - Demolished Materials (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Tugboat							
Vibratory Hammer	0.2	0.4	0.4	0.0	0.0	0.0	0.0
Subtotal	1.3	4.0	7.8	0.0	0.4	0.4	0.4
Remove 2 Existing Cranes at Berth 144							
Crane - 50 ton	0.2	1.0	2.5	0.0	0.1	0.1	0.1
Winch	0.2	0.8	1.9	0.0	0.1	0.1	0.1
Tugboat							
Tugboat							
Subtotal	0.4	1.7	4.4	0.0	0.2	0.2	0.2
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Tugboat							
Cargo Ship - Transit - Sheetpile Delivery							
Tugboat - Cargo Vessel Assist							
Cargo Ship - Hotelling							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement							
Barge - Generator							
Barge - Generator							
Barge - Deck Winch							
Barge - Main Hoist							
Tracked Loader - Cat 973	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Tugboat - Generator							
Tugboat - Main Engines							
Subtotal	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Dredge and Disposal							
Derrick Barge - Crane Hoist							
Derrick Barge - Deck Winch							
Derrick Barge - Generator							
Derrick Barge - Generator							
Haul Trucks - Berth 205 to Anch. Rd. (1)	0.5	1.8	2.0	0.0	0.1	0.1	0.1
Loader - 962G - Anchorage Rd.	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Tug Boat - Transport Barge to Berth 205							
Subtotal	0.7	2.3	3.6	0.0	0.2	0.2	0.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.30. Hourly Emissions for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010) (Pg 2 of 3).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Haul Trucks - Pile Deliveries (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Jet Pump							
Tugboat							
Subtotal	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	0.2	0.8	2.1	0.0	0.1	0.1	0.1
Forklift	0.1	0.4	0.9	0.0	0.1	0.1	0.1
Generator - Pile Hammer							
Jet Pump							
Haul Trucks - Pile Deliveries (1)	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Subtotal	0.4	1.4	3.1	0.0	0.2	0.2	0.2
Replace Existing Wharf							
Air Compressor - 185 CFM	0.1	0.4	0.7	0.0	0.1	0.1	0.1
Air Compressor - 750 CFM	0.2	0.9	2.3	0.0	0.1	0.1	0.1
Air Compressor - 825 CFM	0.3	1.0	2.5	0.0	0.1	0.1	0.1
Air Compressor - 900 CFM	0.3	1.0	2.6	0.0	0.1	0.1	0.1
Bulldozer - D6	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Bulldozer - D8	0.2	0.8	1.9	0.0	0.1	0.1	0.1
Concrete Boom Pump	0.1	0.2	0.5	0.0	0.0	0.0	0.0
Concrete Trucks (1)	0.5	1.7	1.8	0.0	0.1	0.1	0.1
Crane - 220-Ton Manitowoc 888	0.2	0.8	2.1	0.0	0.1	0.1	0.1
Crane - 275-Ton Manitowoc 999	1.6	6.4	16.2	0.0	0.6	0.6	0.6
Crane - Manitowoc 4000	0.2	0.9	2.2	0.0	0.1	0.1	0.1
Crew Boat							
Excavator - Cat 345B	0.2	0.7	1.8	0.0	0.1	0.1	0.1
Excavator w/ Ram -Komatso PC 220 LC5	0.2	0.7	1.5	0.0	0.1	0.1	0.1
Flat Bed	0.1	0.2	0.6	0.0	0.0	0.0	0.0
Forklift - Cat 200	0.4	1.4	3.0	0.0	0.2	0.2	0.2
Generator	0.2	0.5	0.5	0.0	0.1	0.1	0.0
Haul Trucks - Material Deliveries (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Subtotal	5.0	18.7	43.2	0.0	1.9	1.9	1.7

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.31. Hourly Emissions for Wharf Improvements at Berths 144-147 - Berths 136-147 Terminal Project Proposed Project Phase 1 (2007-2010) (Pg 3 of 3).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Upgrade Existing Wharf							
Crane - 220-Ton Manitowoc 888	0.2	0.8	2.1	0.0	0.1	0.1	0.1
Compressor	0.2	0.5	0.4	0.0	0.0	0.0	0.0
Concrete Boom Pump	0.1	0.2	0.5	0.0	0.0	0.0	0.0
Concrete Trucks	0.4	1.3	1.4	0.0	0.1	0.1	0.1
Excavator w/ Ram -Komatso PC 220 LC5	0.2	0.7	1.5	0.0	0.1	0.1	0.1
Forklift - Cat 200	0.1	0.5	1.0	0.0	0.1	0.1	0.1
Generator	0.2	0.5	0.5	0.0	0.1	0.1	0.0
Loader - Cat 966E	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Material Truck (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	1.6	5.1	9.1	0.0	0.5	0.5	0.5
Install 3 Cranes at Berth 144							
Crane - 50 ton	0.2	1.0	2.5	0.0	0.1	0.1	0.1
Winch	0.2	0.8	1.9	0.0	0.1	0.1	0.1
Cargo Ship - Transit - Crane Delivery							
Tugboat - Cargo Vessel Assist							
Cargo Ship - Hotelling							
Subtotal	0.4	1.7	4.4	0.0	0.2	0.2	0.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.32. Hourly Emissions for 78 Acres of Backland Improvements at Berths 142-147 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Building Demolition							
Bulldozer	0.4	1.5	3.9	0.0	0.1	0.1	0.1
Backhoe	0.3	1.2	2.5	0.0	0.1	0.1	0.1
Loader	0.5	1.4	5.0	0.0	0.2	0.2	0.2
Crane w/Wrecking Ball	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Haul Truck (1)	0.1	0.2	0.2	0.0	0.0	0.0	0.0
Building Demolition	---	---	---	---	9.5	4.6	1.0
Subtotal	1.4	4.7	13.0	0.0	10.0	5.2	1.5
Backland Improvements							
Paving Machine	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Compactive Roller	0.3	1.2	2.6	0.0	0.1	0.1	0.1
Scraper	0.3	0.8	3.0	0.0	0.1	0.1	0.1
Grader	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Loader	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Backhoe	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Bulldozer - D6	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Haul Truck - Paving (1)	0.1	0.3	0.3	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	20.6	10.1	2.1
Subtotal	1.7	5.6	14.6	0.0	21.3	10.8	2.7

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.33. Hourly Emissions to Construct a New Administration Building, Main Gate, and Worker Parking Lot - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Administration Building							
Air Compressor - 100 CFM	0.2	0.5	0.4	0.0	0.0	0.0	0.0
Concrete/Industrial Saw	0.2	0.5	1.0	0.0	0.1	0.1	0.1
Crane	0.1	0.2	0.9	0.0	0.0	0.0	0.0
Forklift	0.1	0.4	0.7	0.0	0.1	0.1	0.1
Generator	0.2	0.4	0.4	0.0	0.0	0.0	0.0
Concrete Trucks (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Supply Trucks (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	3.4	1.7	0.4
Subtotal	0.8	2.3	3.6	0.0	3.7	2.0	0.6
Construct New Main Gate							
Air Compressor - 185 CFM	0.1	0.4	0.7	0.0	0.1	0.1	0.1
Backhoe	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Compactive Roller	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Generator	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Concrete Trucks (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haul Trucks (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	6.9	3.4	0.7
Subtotal	0.6	2.2	4.6	0.0	7.2	3.6	1.0
Improve/Pave Demolished Areas and Parking Lot							
Paving Machine	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Compactive Roller	0.3	1.2	2.6	0.0	0.1	0.1	0.1
Scraper	0.3	0.8	3.0	0.0	0.1	0.1	0.1
Grader	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Loader	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Backhoe	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Bulldozer - D6	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Haul Truck - Paving (1)	0.1	0.3	0.3	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	17.2	8.4	1.8
Subtotal	1.7	5.6	14.6	0.0	17.9	9.1	2.4
Demolish Existing Admin. Bldg. and Gate							
Backhoe	0.3	1.2	2.5	0.0	0.1	0.1	0.1
Bulldozer	0.4	1.5	3.9	0.0	0.1	0.1	0.1
Crane w/Wrecking Ball	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Loader	0.5	1.4	5.0	0.0	0.2	0.2	0.2
Haul Truck (1)	0.1	0.2	0.2	0.0	0.0	0.0	0.0
Building Demolition	---	---	---	---	9.5	4.6	1.0
Subtotal	1.4	4.7	13.0	0.0	10.0	5.2	1.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.34. Hourly Emissions for Construction of a New Maintenance and Repair Facility - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Maintenance and Repair Facility							
Air Compressor - 100 CFM	0.2	0.5	0.4	0.0	0.0	0.0	0.0
Concrete/Industrial Saw	0.2	0.5	1.0	0.0	0.1	0.1	0.1
Crane	0.1	0.2	0.9	0.0	0.0	0.0	0.0
Generator	0.2	0.4	0.4	0.0	0.0	0.0	0.0
Rough Terrain Forklift	0.1	0.4	0.7	0.0	0.1	0.1	0.1
Concrete Trucks (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Supply Trucks (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	10.3	5.0	1.1
Subtotal	0.8	2.3	3.6	0.0	10.6	5.3	1.3
Improve/Pave Demolished Areas and M&R Area							
Paving Machine	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Compactive Roller	0.3	1.2	2.6	0.0	0.1	0.1	0.1
Scraper	0.3	0.8	3.0	0.0	0.1	0.1	0.1
Grader	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Loader	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Backhoe	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Bulldozer - D6	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Haul Truck - Paving (1)	0.1	0.3	0.3	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	17.2	8.4	1.8
Subtotal	1.7	5.6	14.6	0.0	17.9	9.1	2.4
Demolish Existing M&R Facility							
Backhoe	0.3	1.2	2.5	0.0	0.1	0.1	0.1
Bulldozer	0.4	1.5	3.9	0.0	0.1	0.1	0.1
Crane w/Wrecking Ball	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Loader	0.5	1.4	5.0	0.0	0.2	0.2	0.2
Haul Truck (1)	0.1	0.2	0.2	0.0	0.0	0.0	0.0
Building Demolition	---	---	---	---	9.5	4.6	1.0
Subtotal	1.4	4.7	13.0	0.0	10.0	5.2	1.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.35. Hourly Emissions for Harry Bridges Blvd. Realignment - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Street Removals							
Backhoe - 416D	0.1	0.3	0.6	0.0	0.1	0.1	0.1
Bulldozer - D9	0.3	1.0	2.5	0.0	0.1	0.1	0.1
Dump Truck - 16 CY (1)	1.1	4.5	11.3	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	6.9	3.4	0.7
Loader - 938G	0.3	1.2	2.5	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.3	1.0	2.2	0.0	0.1	0.1	0.1
Subtotal	2.1	8.0	19.2	0.0	7.7	4.2	1.5
Street Improvements							
Asphalt Spreader - BG 240C	0.4	1.4	2.9	0.0	0.2	0.2	0.1
Concrete Truck - 9 CY (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Concrete Truck - 9 CY	0.9	3.5	8.7	0.0	0.3	0.3	0.3
Fugitive Dust (1)	---	---	---	---	3.4	1.7	0.4
Grader - 14H	0.3	0.9	3.3	0.0	0.1	0.1	0.1
Haul Truck - Base (1)	1.0	3.5	3.8	0.0	0.2	0.2	0.2
Haul Truck - Paving (1)	0.6	2.1	2.2	0.0	0.1	0.1	0.1
Loader - 938G	0.3	1.2	2.5	0.0	0.1	0.1	0.1
Oil Truck	0.1	0.6	1.5	0.0	0.1	0.1	0.1
Vibratory Compactor - CB 355D	0.4	1.3	2.6	0.0	0.2	0.2	0.2
Subtotal	4.0	14.5	27.7	0.0	4.9	3.1	1.7
Sewer Installation							
Backhoe - 416D	0.1	0.3	0.6	0.0	0.1	0.1	0.1
Dump Truck - 16 CY (1)	0.1	0.4	0.9	0.0	0.0	0.0	0.0
Excavator Compactor - 320C	0.2	0.8	1.6	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Subtotal	0.6	2.0	4.3	0.0	0.2	0.2	0.2
Water Systems Installation							
Backhoe - 416D	0.1	0.3	0.6	0.0	0.1	0.1	0.1
Dump Truck - 16 CY (1)	0.1	0.4	0.9	0.0	0.0	0.0	0.0
Excavator Compactor - 320C	0.2	0.8	1.6	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Subtotal	0.6	2.0	4.3	0.0	0.2	0.2	0.2
Storm Drain Installation							
Backhoe - 416D	0.1	0.3	0.6	0.0	0.1	0.1	0.1
Concrete Truck - 9 CY (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Concrete Truck - 9 CY	0.8	3.4	8.5	0.0	0.3	0.3	0.3
Dump Truck - 16 CY	0.4	1.5	3.8	0.0	0.1	0.1	0.1
Excavator Compactor - 320C	0.2	0.8	1.6	0.0	0.1	0.1	0.1
Pipelayer - 561M	0.2	0.5	0.9	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Subtotal	1.8	7.0	16.6	0.0	0.8	0.8	0.7

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.36. Hourly Emissions for Construction of a 46-Acre Rail Yard at Berth 200 - Berths 136-147 Terminal
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Crane	0.3	0.8	3.0	0.0	0.1	0.1	0.1
Loader	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Paving Machine	0.3	0.9	3.1	0.0	0.1	0.1	0.1
Grader	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Backhoe	0.2	0.7	1.3	0.0	0.1	0.1	0.1
Roller	0.1	0.4	0.8	0.0	0.1	0.1	0.1
Air Compressor	0.4	1.0	0.8	0.0	0.1	0.1	0.1
Welding Machine	0.4	1.0	0.8	0.0	0.1	0.1	0.1
Generator	0.2	0.5	0.4	0.0	0.0	0.0	0.0
Material Truck (1)	0.1	0.5	0.5	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	13.8	6.7	1.4
Subtotal	2.5	7.1	14.6	0.0	14.6	7.6	2.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes c

Table D1.1.37. Hourly Emissions for 9 Acres of Backland Improvements at Berths 134-135 - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Compactive Roller	0.3	1.2	2.6	0.0	0.1	0.1	0.1
Scraper	0.3	0.8	3.0	0.0	0.1	0.1	0.1
Grader	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Loader	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Backhoe	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Bulldozer - D6	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Haul Truck - Paving (1)	0.1	0.3	0.3	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	13.8	6.7	1.4
Subtotal	1.7	5.6	14.6	0.0	14.4	7.4	2.0

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.38. Hourly Emissions for Construction of the Berths 142-147 12-Acre ICTF and Associated 19-Acre Backlands - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Rail Track Removal							
Forklift	0.3	1.2	2.6	0.0	0.1	0.1	0.1
Mobile Crane	0.3	0.8	2.8	0.0	0.1	0.1	0.1
Haul Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Subtotal	0.7	2.1	5.6	0.0	0.3	0.3	0.2
Rail Yard Construction							
Crane	0.3	0.8	3.0	0.0	0.1	0.1	0.1
Loader	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Paving Machine	0.3	0.9	3.1	0.0	0.1	0.1	0.1
Grader	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Backhoe	0.2	0.7	1.3	0.0	0.1	0.1	0.1
Roller	0.1	0.4	0.8	0.0	0.1	0.1	0.1
Air Compressor	0.4	1.0	0.8	0.0	0.1	0.1	0.1
Welding Machine	0.4	1.0	0.8	0.0	0.1	0.1	0.1
Generator	0.2	0.5	0.4	0.0	0.0	0.0	0.0
Material Truck (1)	0.1	0.5	0.5	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	13.8	6.7	1.4
Subtotal	2.5	7.1	14.6	0.0	14.6	7.6	2.2
Backland Improvements							
Paving Machine	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.5	1.1	0.0	0.1	0.1	0.1
Compactive Roller	0.3	1.2	2.6	0.0	0.1	0.1	0.1
Scraper	0.3	0.8	3.0	0.0	0.1	0.1	0.1
Grader	0.1	0.4	1.4	0.0	0.1	0.1	0.0
Loader	0.2	0.5	1.7	0.0	0.1	0.1	0.1
Backhoe	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Bulldozer - D6	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Haul Truck - Paving (1)	0.1	0.3	0.3	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	20.6	10.1	2.1
Subtotal	1.7	5.6	14.6	0.0	21.3	10.8	2.7

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.39. Hourly Emissions for Existing Cranes Removal at Berth 136 - Berths 136-147 Terminal Project
Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Existing Crane Removal							
Crane - 50 ton	0.2	1.0	2.5	0.0	0.1	0.1	0.1
Winch	0.2	0.8	1.9	0.0	0.1	0.1	0.1
Tugboat							
Tugboat							
Subtotal	0.4	1.7	4.4	0.0	0.2	0.2	0.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.40. Hourly Emissions for Construction of Harry Bridges Boulevard Buffer - Berths 136-147 Terminal Proposed Project Phase 1 (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Landscape Installation							
Backhoe - 416D	0.6	2.0	3.8	0.0	0.3	0.3	0.3
Dump Truck - 12 CY (1)	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Dump Truck - 12 CY	0.7	3.0	7.5	0.0	0.3	0.3	0.3
Loader - 938G	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Trencher	0.2	0.7	1.3	0.0	0.1	0.1	0.1
Material Truck (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Truck - 5,000 Gallons	0.3	1.2	3.0	0.0	0.1	0.1	0.1
Fugitive Dust	---	---	---	---	6.9	3.4	0.7
Subtotal	2.1	7.5	17.0	0.0	7.8	4.3	1.6
Grading/Earthmoving							
Bulldozer - D9	0.3	1.0	2.5	0.0	0.1	0.1	0.1
Compactor - CS431C	0.4	1.3	2.6	0.0	0.2	0.2	0.2
Dump Truck - 20 CY (1)	0.1	0.2	0.2	0.0	0.0	0.0	0.0
Dump Truck - 12 CY	2.3	9.3	23.5	0.0	0.9	0.9	0.8
Fugitive Dust	---	---	---	---	27.5	13.4	2.8
Grader - 140H	0.2	0.6	1.3	0.0	0.1	0.1	0.1
Loader - 938G	0.5	1.8	3.8	0.0	0.2	0.2	0.2
Scraper - 637E	1.2	5.0	12.3	0.0	0.5	0.5	0.4
Water Truck - 5,000 Gallons	0.3	1.2	3.0	0.0	0.1	0.1	0.1
Subtotal	5.3	20.4	49.3	0.0	29.6	15.5	4.7

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.41. Hourly Emissions for Crane Installation at Berth 136 & Berth 144 - Berths 136-147 Project Phase 1 (2012).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Install Cranes at Berth 136 & Berth 144							
Crane - 50 ton	0.2	1.0	2.5	0.0	0.1	0.1	0.1
Winch	0.2	0.8	1.9	0.0	0.1	0.1	0.1
Cargo Ship - Transit - Crane Delivery (1)							
Tugboat - Vessel Assist							
Cargo Ship - Hotelling (1)							
Subtotal	0.4	1.7	4.4	0.0	0.2	0.2	0.2

Note: (1) See Table C1-XX for a summary of the associated activity data. Arrival/departure would not occur on the same day.

Table D1.1.42. Peak Hourly Emissions from Berths 136-147 Terminal Proposed Project Phase 1 Construction Activities (2007-2010) .

Construction Project/Activity (2)	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Wharf Demolition	1.3	4.0	7.8	0.0	0.4	0.4	0.4
Remove 2 Existing Cranes at Berth 144	0.4	1.7	4.4	0.0	0.2	0.2	0.2
Piledriving-Sheet Piles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement	0.2	0.4	1.6	0.0	0.1	0.1	0.1
Dredge and Disposal	0.7	2.3	3.6	0.0	0.2	0.2	0.2
Piledriving-Waterside Piles	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Piledriving-Landside Piles	0.4	1.4	3.1	0.0	0.2	0.2	0.2
Replace Existing Wharf	5.0	18.7	43.2	0.0	1.9	1.9	1.7
Upgrade Existing Wharf	1.6	5.1	9.1	0.0	0.5	0.5	0.5
Install 3 Cranes at Berth 144	0.4	1.7	4.4	0.0	0.2	0.2	0.2
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	1.4	4.7	13.0	0.0	10.0	5.2	1.5
Backland Improvements	1.7	5.6	14.6	0.0	21.3	10.8	2.7
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	0.8	2.3	3.6	0.0	3.7	2.0	0.6
Construct New Main Gate	0.6	2.2	4.6	0.0	7.2	3.6	1.0
Improve/Pave Demolished Areas and Parking	1.7	5.6	14.6	0.0	17.9	9.1	2.4
Demolish Existing Administration Building and Gate	1.4	4.7	13.0	0.0	10.0	5.2	1.5
Construct a New Maintenance and Repair Facility-Berths 136-147							
Construct Maintenance and Repair Facility	0.8	2.3	3.6	0.0	10.6	5.3	1.3
Improve/Pave Demolished Areas and M&R	1.7	5.6	14.6	0.0	17.9	9.1	2.4
Demolish Existing M&R Facility	1.4	4.7	13.0	0.0	10.0	5.2	1.5
Harry Bridges Blvd. Realignment							
Street Removals	2.1	8.0	19.2	0.0	7.7	4.2	1.5
Street Improvements	4.0	14.5	27.7	0.0	4.9	3.1	1.7
Sewer Installation	0.6	2.0	4.3	0.0	0.2	0.2	0.2
Water Systems Installation	0.6	2.0	4.3	0.0	0.2	0.2	0.2
Storm Drain Installation	1.8	7.0	16.6	0.0	0.8	0.8	0.7
Construction of a 46-Acre Rail Yard at Berth 200	2.5	7.1	14.6	0.0	14.6	7.6	2.2
9 Acres of Backland Improvements at Berts 134-135	1.7	5.6	14.6	0.0	14.4	7.4	2.0
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	0.7	2.1	5.6	0.0	0.3	0.3	0.2
Rail Yard Construction	2.5	7.1	14.6	0.0	14.6	7.6	2.2
Backland Improvements	1.7	5.6	14.6	0.0	21.3	10.8	2.7
Existing Cranes Removal at Berth 136	0.4	1.7	4.4	0.0	0.2	0.2	0.2
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	2.1	7.5	17.0	0.0	7.8	4.3	1.6
Grading/Earthmoving	5.3	20.4	49.3	0.0	29.6	15.5	4.7
Install Cranes at Berth 136 & Berth 144	0.4	1.7	4.4	0.0	0.2	0.2	0.2
Peak Hourly Emissions (1)	20	71	157	0	87	46	15

Notes: (1) Peak CO, ROG, SOx, and PM emissions assumed to occur from same activities that produce peak NOx and PM10 emissions.

(2) Does not include data for any activities that occur in the water

Table D1.1.43. Emission Source Data for the 10-Acre Northwest Slip Fill - Berths 136-147 Proposed Project Phase 2 (2015).

Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Equip-Hrs Per Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Dredge Dike Toe (1)								
Derrick Barge Crane Hoist	564	0.50	1	282	24	6,768	1.0	6,768
Deck Winch	238	0.50	2	238	6	1,428	1.0	1,428
Generator	432	0.60	1	259	24	6,221	1.0	6,221
Generator	135	0.60	1	81	6	486	1.0	486
Tug Boat - Transport Barge to Pier 400 (2)	1,350	0.68	2	1,836	2.1	3,856	1.0	3,856
Rip-Rap Placement (3)								
Barge - Generator	90	0.60	1	54	10	540	23.5	12,690
Barge - Generator	229	0.60	1	137	10	1,374	23.5	32,289
Barge - Deck Winch	120	0.50	1	60	10	600	23.5	14,100
Barge - Main Hoist	335	0.50	1	168	10	1,675	23.5	39,363
Tracked Loader - Cat 973	210	0.50	1	105	10	1,050	23.5	24,675
Tugboat - Generator	89	0.43	2	77	18	1,378	23.5	32,376
Tugboat - Main Engines (4)	1,600	0.68	2	2,176	12	26,112	23.5	613,632
Channel Dredging (5)								
Derrick Hoist - Hydraulic Dredge	240	0.70	1	168	4	672	25.0	16,800
Derrick Winch - Hydraulic Dredge	87	0.70	1	61	1	61	25.0	1,523
Anchor Barge Winch - Hydraulic Dredge	180	0.70	1	126	4	504	25.0	12,600
Generator - Hydraulic Dredge	350	0.60	1	210	4	840	3.4	2,877
Tug Boat - Hydraulic Dredge	850	0.50	1	425	18	7,650	25.0	191,250
Tug Boat - Hydraulic Dredge	700	0.50	1	350	18	6,300	25.0	157,500
Disposal into Dike								
Booster Pump (6)	1,200	0.50	1	600	24	14,400	10.0	144,000
Bulldozer - D8	335	0.50	2	335	8	2,680	10.0	26,800
Tug Boat - Sediment Transport to Site (2) (7)	2,200	0.68	27	40,392	2.1	84,823	25.0	2,120,580

Notes: (1) Based upon equipment usage associated with a dike toe dredge volume = 3,000 cy.

(2) Hours/Day = duration of the 10.5 nm round trip between Berth 136 and Pier 400 @ 5 kts.

(3) Equipment usage obtained from rip-rap placement in Table C1-1, multiplied by 92,875/177,000 tons.

(4) Hours/Day = duration of round trip between Catalina Island and Berth 136 (60 nm) @ 5 kts.

(5) Equipment usage for dredge equipment obtained from Channel Deepening SEIS/R Table D-8 (USACE & LAHD 2000) = 32,000 cy/day. Total dredge volume = 0.8M cy. Excludes use of electrified equipment to dredge and pump sediments.

(6) Assumes that 40% of the total dredge volume will be placed into the dike by booster pumping from barges.

(7) Hydraulic dredge slurry assumed to be 40% water, or a daily water bulked disposal volume of 53,300 cy. At a barge capacity of 2000 cy, this would require 27 daily barge trips.

Table D1.1.44. Emission Source Data for 10 Acres of Backland Improvements at Berth 131 - Berths 136-147
Proposed Project Phase 2 (2015).

Equipment Type	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Equip-Hrs Per Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Backland Improvements (1)								
Paving Machine	200	0.50	1	100	8	800	3.9	3,117
Water Truck	325	0.50	1	163	8	1,300	14.3	18,571
Compactive Roller	165	0.50	2	165	8	1,320	5.8	7,714
Scraper	195	0.50	2	195	8	1,560	5.8	9,117
Grader	180	0.50	1	90	8	720	6.5	4,675
Loader	215	0.50	1	108	8	860	6.5	5,584
Backhoe	160	0.50	1	80	8	640	4.5	2,909
Bulldozer - D6	165	0.50	1	83	8	660	4.5	3,000
Haul Truck - Paving (2)	NA	NA	15	NA	33	495	6.5	3,214
Haul Truck - Base (2)	NA	NA	15	NA	16	240	6.5	1,558
Semi Truck (2)	NA	NA	20	NA	16	320	6.5	2,078
Fugitive Dust (3)	NA	NA	4	NA	8	NA	14.3	57

Notes: (1) Equipment usage from backland improvements West Basin FEIR Appendix E Table E.2-18 (LAHD 1997), multiplied by 10/15.4 acres.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table D1.1.45. Emission Source Data for Berth 136 Wharf Extension - Berths 136-147 Proposed Project Phase 2 (2015).

Construction Activity/Equipment Type (1)	Hp Rating	Ave. Daily Load Factor	Number Active	Hourly Hp-Hrs	Hours/ Day	Daily Hp-Hrs	Work Days	Total Hp-Hrs
Piledriving - Sheet Piles								
Derrick Barge Crane Hoist	564	0.25	1	141	4	564	20	11,165
Generator - Pile Hammer	190	0.60	1	114	8	912	20	18,053
Tugboat	1,200	0.25	1	300	1	300	20	5,939
Cargo Ship - Transit - Sheetpile Delivery (2)	NA	NA	1	NA	NA	NA	2	NA
Tugboat - Cargo Vessel Assist	4,106	0.31	1	1,273	1	1,273	2	2,546
Cargo Ship - Hotelling (2)	NA	NA	1	NA	24	NA	1	NA
Piledriving - Waterside Piles								
Derrick Barge Crane Hoist	564	0.25	1	141	4	564	14	8,037
Generator - Pile Hammer	190	0.60	1	114	8	912	14	12,996
Haul Trucks - Pile Deliveries (3)	NA	NA	130	NA	16	2,080	5	9,880
Jet Pump	290	0.60	1	174	8	1,392	14	19,836
Tugboat	1,200	0.25	1	300	1	300	14	4,275
Piledriving - Landside Piles								
Crane - 220-Ton Manitowoc 888	330	0.50	1	165	8	1,320	13	16,979
Forklift	105	0.50	1	53	8	420	13	5,403
Generator - Pile Hammer	190	0.60	1	114	8	912	13	11,731
Jet Pump	290	0.60	1	174	8	1,392	13	17,906
Haul Trucks - Pile Deliveries (3)	NA	NA	130	NA	17	2,151	4	8,710
Dike Filling								
Loader - 950G	180	0.50	2	180	8	1,440	9	12,896
Haul Trucks - Fill (3) (4)	NA	NA	12	NA	67	804	9	7,200
Wharf Construction								
Air Compressor - 185 CFM	70	0.60	1	42	8	336	87	29,099
Air Compressor - 750 CFM	300	0.60	1	180	8	1,440	87	124,709
Air Compressor - 825 CFM	335	0.60	1	201	8	1,608	87	139,258
Air Compressor - 900 CFM	350	0.60	1	210	8	1,680	87	145,494
Bulldozer - D6	165	0.50	1	83	8	660	7	4,644
Bulldozer - D8	305	0.50	1	153	8	1,220	3	3,962
Concrete Boom Pump	57	0.50	1	29	8	228	3	740
Concrete Trucks (3)	NA	NA	15	NA	336	5,034	3	16,350
Crane - 220-Ton Manitowoc 888	330	0.50	1	165	8	1,320	43	57,158
Crane - 275-Ton Manitowoc 999	431	0.50	6	1,293	8	10,344	43	447,913
Crane - Manitowoc 4000	350	0.50	1	175	8	1,400	29	40,162
Crew Boat	240	0.25	1	60	4	240	2	390
Excavator - Cat 345B	290	0.50	1	145	8	1,160	43	50,230
Excavator w/ Ram -Komatso PC 220 LC5	157	0.60	1	94	8	754	29	21,619
Flat Bed	180	0.20	1	36	4	144	15	2,104
Forklift - Cat 200	125	0.50	3	188	6	1,125	87	97,429
Generator	45	0.75	1	34	8	270	7	1,900
Haul Trucks - Material Deliveries (3)	NA	NA	15	NA	5	75	65	4,871
Loader - Cat 966E	220	0.50	1	110	6	660	5	3,215

Notes: (1) Equipment usage associated with Piledriving - Sheet Piles obtained by multiplying the data for this activity in Table C1-1 by 400'/1758'.
The # of waterside/landside piles estimated by multiplying the # piles used to construct the Berth 100 wharf by 400'/1200' = 114/101.
Equipment usages associated with Piledriving - Waterside and Landside Piles obtained by multiplying data for these activities in Table C1-1 by 114/264 and 101/424, respectively. Equipment usage associated with Wharf Construction obtained by multiplying the data for this activity in Table C1-1 by 400'/739'.

(2) See Table C1-XX for a summary of the associated activity data. Arrival/departure would not occur on the same day.

(3) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(4) Based upon a truck volume of 20 cy and total volume of 12,000 cy.
Equipment usages associated with Piledriving - Waterside and Landside Piles obtained by multiplying data for these activities in Table C1-1 by 114/264 and 101/424, respectively. Equipment usage associated with Wharf Construction obtained by multiplying the data for this activity in Table C1-1 by 400'/739'.

Table D1.1.46. Daily Emissions for the 10-Acre Northwest Slip Fill - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Day						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Dredge Dike Toe							
Derrick Barge Crane Hoist	6.8	24.3	54.5	0.1	2.0	2.0	1.9
Deck Winch	1.4	4.3	12.1	0.0	0.4	0.4	0.4
Generator	5.3	18.5	42.2	0.1	1.6	1.6	1.4
Generator	0.6	3.5	4.5	0.0	0.2	0.2	0.2
Tug Boat - Transport Barge to Pier 400	3.2	7.0	83.7	0.1	4.3	4.3	4.1
Subtotal	17.3	57.6	197.0	0.3	8.6	8.6	8.0
Rip-Rap Placement							
Barge - Generator	0.8	4.2	5.2	0.0	0.4	0.4	0.4
Barge - Generator	1.4	4.1	11.6	0.0	0.4	0.4	0.4
Barge - Deck Winch	0.9	4.7	5.8	0.0	0.5	0.5	0.4
Barge - Main Hoist	1.4	5.0	11.4	0.0	0.4	0.4	0.4
Tracked Loader - Cat 973	1.0	3.2	8.9	0.0	0.3	0.3	0.3
Tugboat - Generator	2.1	10.8	13.2	0.0	1.1	1.1	1.0
Tugboat - Main Engines	21.5	47.3	567.1	0.9	29.4	29.4	27.5
Subtotal	29.1	79.3	623.2	0.9	32.5	32.5	30.4
Channel Dredging							
Derrick Hoist - Hydraulic Dredge	0.7	2.0	5.7	0.0	0.2	0.2	0.2
Derrick Winch - Hydraulic Dredge	0.1	0.5	0.6	0.0	0.0	0.0	0.0
Anchor Barge Winch - Hydraulic Dredge	0.5	1.5	4.3	0.0	0.2	0.2	0.1
Generator - Hydraulic Dredge	0.7	2.5	5.7	0.0	0.2	0.2	0.2
Tug Boat - Hydraulic Dredge	6.3	13.8	166.1	0.3	8.6	8.6	8.1
Tug Boat - Hydraulic Dredge	5.2	11.4	136.8	0.2	7.1	7.1	6.6
Subtotal	13.5	31.8	319.2	0.5	16.3	16.3	15.3
Disposal into Dike							
Booster Pump	11.3	39.5	124.5	0.2	3.6	3.6	3.3
Bulldozer - D8	2.3	8.0	18.2	0.0	0.7	0.7	0.6
Tug Boat - Sediment Transport to Site	69.8	153.5	1,842.1	2.8	95.5	95.5	89.4
Subtotal	83.4	200.9	1,984.7	3.0	99.7	99.7	93.4

Table D1.1.47. Daily Emissions for 10 Acres of Backland Improvements at Berth 131 - Berths 136-147
Proposed Project Phase 2 (2015).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	0.8	2.4	6.8	0.0	0.2	0.2	0.2
Water Truck	1.1	3.9	8.8	0.0	0.3	0.3	0.3
Compactive Roller	1.7	9.5	12.1	0.0	0.7	0.7	0.6
Scraper	1.6	4.7	13.2	0.0	0.5	0.5	0.4
Grader	0.7	2.2	6.1	0.0	0.2	0.2	0.2
Loader	0.9	2.6	7.3	0.0	0.3	0.3	0.2
Backhoe	0.8	4.6	5.9	0.0	0.3	0.3	0.3
Bulldozer - D6	0.8	4.7	6.0	0.0	0.3	0.3	0.3
Haul Truck - Paving (1)	0.7	4.1	8.0	0.0	0.3	0.3	0.3
Haul Truck - Base (1)	0.3	2.0	3.9	0.0	0.2	0.2	0.2
Semi Truck (1)	0.4	2.6	5.1	0.0	0.2	0.2	0.2
Fugitive Dust	---	---	---	---	110.0	53.8	11.2
Subtotal	9.8	43.1	83.3	0.1	113.6	57.4	14.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.48. Daily Emissions for Berth 136 Wharf Extension - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Day						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist	0.6	2.0	4.5	0.0	0.2	0.2	0.2
Generator - Pile Hammer	1.1	6.5	8.4	0.0	0.5	0.5	0.4
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Cargo Ship - Transit - Sheetpile Delivery	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Tugboat - Cargo Vessel Assist	1.0	2.3	27.6	0.0	1.4	1.4	1.3
Cargo Ship - Hotelling	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Subtotal	45.1	113.4	1,236.4	674.9	92.6	92.6	86.8
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist	0.6	2.0	4.5	0.0	0.2	0.2	0.2
Generator - Pile Hammer	0.9	2.7	7.7	0.0	0.3	0.3	0.3
Haul Trucks - Pile Deliveries (1)	2.7	16.1	31.8	0.1	1.4	1.4	1.3
Jet Pump	1.2	4.1	9.4	0.0	0.3	0.3	0.3
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Subtotal	5.6	25.5	60.0	0.1	2.6	2.6	2.4
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	1.1	3.9	8.9	0.0	0.3	0.3	0.3
Forklift	0.6	3.3	4.0	0.0	0.3	0.3	0.3
Generator - Pile Hammer	0.9	2.7	7.7	0.0	0.3	0.3	0.3
Jet Pump	1.2	4.1	9.4	0.0	0.3	0.3	0.3
Haul Trucks - Pile Deliveries (1)	2.8	16.6	32.9	0.1	1.5	1.5	1.4
Subtotal	6.6	30.7	63.1	0.1	2.8	2.8	2.5
Dike Filling							
Loader - 950G	1.4	4.3	12.2	0.0	0.4	0.4	0.4
Haul Trucks - Fill (1)	1.1	6.7	13.3	0.0	0.6	0.6	0.5
Subtotal	2.6	11.0	25.5	0.0	1.0	1.0	0.9
Wharf Construction							
Air Compressor - 185 CFM	0.5	2.6	3.2	0.0	0.3	0.3	0.2
Air Compressor - 750 CFM	1.2	4.3	9.8	0.0	0.4	0.4	0.3
Air Compressor - 825 CFM	1.4	4.8	10.9	0.0	0.4	0.4	0.4
Air Compressor - 900 CFM	1.4	5.0	11.4	0.0	0.4	0.4	0.4
Bulldozer - D6	0.8	4.7	6.0	0.0	0.3	0.3	0.3
Bulldozer - D8	1.0	3.6	8.3	0.0	0.3	0.3	0.3
Concrete Boom Pump	0.3	1.8	2.2	0.0	0.2	0.2	0.2
Concrete Trucks (1)	7.0	41.2	81.8	0.2	3.5	3.5	3.3
Crane - 220-Ton Manitowoc 888	1.1	3.9	8.9	0.0	0.3	0.3	0.3
Crane - 275-Ton Manitowoc 999	8.8	30.7	70.1	0.1	2.6	2.6	2.4
Crane - Manitowoc 4000	1.2	4.2	9.5	0.0	0.3	0.3	0.3
Crew Boat	0.2	0.4	5.2	0.0	0.3	0.3	0.3
Excavator - Cat 345B	1.0	3.4	7.9	0.0	0.3	0.3	0.3
Excavator w/ Ram -Komatso PC 220 LC5	0.9	5.4	6.9	0.0	0.4	0.4	0.3
Flat Bed	0.1	0.4	1.2	0.0	0.0	0.0	0.0
Forklift - Cat 200	1.4	8.1	10.3	0.0	0.6	0.6	0.5
Generator	0.8	3.3	3.0	0.0	0.2	0.2	0.2
Haul Trucks - Material Deliveries (1)	0.1	0.6	1.2	0.0	0.1	0.1	0.0
Loader - Cat 966E	0.7	2.0	5.6	0.0	0.2	0.2	0.2
Subtotal	30.0	130.5	263.5	0.5	11.1	11.1	10.2

Notes: (1) Within construction site area, assuming 1 mile o

Table D1.1.49. Peak Daily Emissions from Berths 136-147 Terminal Proposed Project Phase 2 Construction Activities (2015) .

Construction Proposed Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
10-Acre Northwest Slip Fill							
Dredge Dike Toe	17.3	57.6	197.0	0.3	8.6	8.6	8.0
Rip-Rap Placement	29.1	79.3	623.2	0.9	32.5	32.5	30.4
Channel Dredging	13.5	31.8	319.2	0.5	16.3	16.3	15.3
Disposal into Dike	83.4	200.9	1,984.7	3.0	99.7	99.7	93.4
10-Acres of Backland Improvement at Berth 131	9.8	43.1	83.3	0.1	113.6	57.4	14.5
Berth 136 Wharf Extension							
Piledriving - Sheet Piles	45.1	113.4	1,236.4	674.9	92.6	92.6	86.8
Piledriving - Waterside Piles	5.6	25.5	60.0	0.1	2.6	2.6	2.4
Piledriving - Lanside Piles	6.6	30.7	63.1	0.1	2.8	2.8	2.5
Dike Filling	2.6	11.0	25.5	0.0	1.0	1.0	0.9
Wharf Construction	30.0	130.5	263.5	0.5	11.1	11.1	10.2
Peak Daily Emissions (1)	97	233	2,304	3	116	116	109
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	55

Notes: (1) Peak daily emissions of all criteria pollutants are assumed to occur from the following two simultaneous activities at the 10-acre Northwest slip fill: channel dredging and disposal into dike.

Table D1.1.50. Hourly Emissions for the 10-Acre Northwest Slip Fill - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Hour						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Dredge Dike Toe							
Derrick Barge Crane Hoist							
Deck Winch							
Generator							
Generator							
Tug Boat - Transport Barge to Pier 400							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement							
Barge - Generator							
Barge - Generator							
Barge - Deck Winch							
Barge - Main Hoist							
Tracked Loader - Cat 973	0.1	0.3	0.9	0.0	0.0	0.0	0.0
Tugboat - Generator							
Tugboat - Main Engine							
Subtotal	0.1	0.3	0.9	0.0	0.0	0.0	0.0
Channel Dredging							
Derrick Hoist - Hydraulic Dredge							
Derrick Winch - Hydraulic Dredge							
Anchor Barge Winch - Hydraulic Dredge							
Generator - Hydraulic Dredge							
Tug Boat - Hydraulic Dredge							
Tug Boat - Hydraulic Dredge							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposal into Dike							
Booster Pump	0.5	1.6	5.2	0.0	0.2	0.2	0.1
Bulldozer - D8	0.3	1.0	2.3	0.0	0.1	0.1	0.1
Tug Boat - Sediment Transport to Site							
Subtotal	0.8	2.6	7.5	0.0	0.2	0.2	0.2

Table D1.1.51. Hourly Emissions for 10 Acres of Backland Improvements at Berth 131 - Berths 136-147
Proposed Project Phase 2 (2015).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	0.1	0.3	0.8	0.0	0.0	0.0	0.0
Water Truck	0.1	0.5	1.1	0.0	0.0	0.0	0.0
Compactive Roller	0.2	1.2	1.5	0.0	0.1	0.1	0.1
Scraper	0.2	0.6	1.7	0.0	0.1	0.1	0.1
Grader	0.1	0.3	0.8	0.0	0.0	0.0	0.0
Loader	0.1	0.3	0.9	0.0	0.0	0.0	0.0
Backhoe	0.1	0.6	0.7	0.0	0.0	0.0	0.0
Bulldozer - D6	0.1	0.6	0.8	0.0	0.0	0.0	0.0
Haul Truck - Paving	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Haul Truck - Base	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Semi Truck	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	13.8	6.7	1.4
Subtotal	1.1	4.6	8.7	0.0	14.1	7.1	1.7

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.52. Hourly Emissions for Berth 136 Wharf Extension - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Hour						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Tugboat							
Cargo Ship - Transit - Sheetpile Delivery							
Tugboat - Cargo Vessel Assist							
Cargo Ship - Hotelling							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Haul Trucks - Pile Deliveries	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Jet Pump							
Tugboat							
Subtotal	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	0.1	0.5	1.1	0.0	0.0	0.0	0.0
Forklift	0.1	0.4	0.5	0.0	0.0	0.0	0.0
Generator - Pile Hammer							
Jet Pump							
Haul Trucks - Pile Deliveries	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Subtotal	0.2	1.0	1.7	0.0	0.1	0.1	0.1
Dike Filling							
Loader - 950G	0.2	0.5	1.5	0.0	0.1	0.1	0.0
Haul Trucks - Fill	0.1	0.3	0.4	0.0	0.0	0.0	0.0
Subtotal	0.3	0.9	1.9	0.0	0.1	0.1	0.1
Wharf Construction							
Air Compressor - 185 CFM	0.1	0.3	0.4	0.0	0.0	0.0	0.0
Air Compressor - 750 CFM	0.2	0.5	1.2	0.0	0.0	0.0	0.0
Air Compressor - 825 CFM	0.2	0.6	1.4	0.0	0.1	0.1	0.0
Air Compressor - 900 CFM	0.2	0.6	1.4	0.0	0.1	0.1	0.0
Bulldozer - D6	0.1	0.6	0.8	0.0	0.0	0.0	0.0
Bulldozer - D8	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Concrete Boom Pump	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Concrete Trucks	0.5	1.6	2.0	0.0	0.1	0.1	0.1
Crane - 220-Ton Manitowoc 888	0.1	0.5	1.1	0.0	0.0	0.0	0.0
Crane - 275-Ton Manitowoc 999	1.1	3.8	8.8	0.0	0.3	0.3	0.3
Crane - Manitowoc 4000	0.1	0.5	1.2	0.0	0.0	0.0	0.0
Crew Boat							
Excavator - Cat 345B	0.1	0.4	1.0	0.0	0.0	0.0	0.0
Excavator w/ Ram -Komatso PC 220 LC5	0.1	0.7	0.9	0.0	0.0	0.0	0.0
Flat Bed	0.0	0.1	0.3	0.0	0.0	0.0	0.0
Forklift - Cat 200	0.2	1.3	1.7	0.0	0.1	0.1	0.1
Generator	0.1	0.4	0.4	0.0	0.0	0.0	0.0
Haul Trucks - Material Deliveries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.1	0.3	0.9	0.0	0.0	0.0	0.0
Subtotal	3.4	13.1	24.8	0.0	1.0	1.0	0.9

Notes: (1) Within construction site area, assuming 1 mile of tran

Table D1.1.53. Peak Hourly Emissions from Berths 136-147 Terminal Proposed Project Phase 2 Construction Activities (2015) .

Construction Proposed Project/Activity (3)	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
10-Acre Northwest Slip Fill							
Dredge Dike Toe	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement	0.1	0.3	0.9	0.0	0.0	0.0	0.0
Channel Dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposal into Dike	0.8	2.6	7.5	0.0	0.2	0.2	0.2
10-Acres of Backland Improvement at Berth 131	1.1	4.6	8.7	0.0	14.1	7.1	1.7
Berth 136 Wharf Extension							
Piledriving - Sheet Piles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Piledriving - Waterside Piles	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Piledriving - Lanside Piles	0.2	1.0	1.7	0.0	0.1	0.1	0.1
Dike Filling	0.3	0.9	1.9	0.0	0.1	0.1	0.1
Wharf Construction	3.4	13.1	24.8	0.0	1.0	1.0	0.9
Peak Hourly Emissions (1) (2)	3	13	25	0	14	7	2

Notes: (1) Peak CO, ROG, and SOx emissions assumed to occur from same activities that produce peak NOx emissions.

(2) Peak PM emissions assumed to occur from same activities that produce peak PM10 emissions.

(3) Does not include data for any activities that occur in the water

Table D1.1.54. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alternative

Project Scenario/Activity	Annual Ship Visits	Hoteling Time/ Visit (Hours) (2)
Phase 1/Wharf Improvements		
Deliver Sheetpiles to Berth 144	1	24
Deliver 3 Cranes to Berth 144	1	96
Deliver 2 Cranes, one each at Berth 136 & 144	1	48
Total Ship Visits	3	168
Phase 2/Wharf Extension		
Deliver Sheetpiles to Berth 136	1	24
Total Ship Visits	1	24

Notes: (1)

Table D1.1.55. Cargo Vessel Propulsion Engine Usage per One-Way Ship Trip in the POLA Fairway Zone - Berths 136-147 Terminal Project Alternatives.

		Fairway (1)						
Vessel Type	Propulsion Max Hp (2)	Load Factor (3)	Modal Hp	Distance (NM)	Speed (Kts) (4)	Hours Per Trip	Hp-Hrs/ Trip	kW-Hrs/ Trip (5)
Non-Compliance with VSRP (6)								
General Cargo	10,989	0.83	9,132	38.9	14.7	2.64	24,148	18,014
Compliance with VSRP (7)								
General Cargo - Outside VSRPZ	10,989	0.83	9,132	16.9	14.7	1.15	10,473	7,813
General Cargo - In VSRPZ	10,989	0.45	4,973	22.0	12.0	1.83	9,118	6,802
General Cargo - Total kW-Hrs								14,615

Notes: (1) Vessel route between the boundary of the SCAQMD waters and the Precautionary Area. Based upon data from the Port of Los Angeles Baseline Air Emissions Inventory (PEI) (Starcrest 2005) Table 2.8 and expected usage of fairway routes for each vessel type (see Table C2-5a).

(2) Average maximum horsepower rating from Lloyds data, ship builders (Samsung Heavy Industries 2003), and PEI Table 2.26.

(3) PEI page 68.

(4) Represents service speed, which is 94% of maximum speed (PEI page 68).

(5) 1 kW-Hr = 0.746 Hp-Hrs.

(6) Length of fairway within the Vessel Speed Reduction Program (VSRP) Zone (VSRPZ) = 22 nautical miles (NM).

(7) Load factor derived from Propeller Law, where load factor = (actual speed/max. speed) ^{3} (PEI page 99).

Table D1.1.56. Cargo Vessel Propulsion Engine Usage per One-Way Ship Trip in the POLA Precautionary Area - Berths 136-147 Terminal Project Alternatives.

	Precautionary Area (1)							
Vessel Type	Propulsion Max Hp	Load Factor (2)	Modal Hp	Distance (NM)	Speed (Kts) (3)	Hours	Hp-Hrs/ Trip	kW-Hrs/ Trip
General Cargo	10,989	0.19	2,098	9.6	9.0	1.07	2,238	1,670

Notes: (1) Portion of the trip between the fairway and POLA breakwater.

(2) Load factor derived from Propeller Law, where load factor = (actual speed/max. speed) ^{3} (PEI page 99).

(3) Average transit speeds obtained from PEI Table 2.8.

Table D1.1.57. Cargo Vessel Propulsion Engine Usage per One-Way Ship Trip within the POLA Breakwater - Berths 136-147 Terminal Project Alternatives.

		Harbor (1)				
Vessel Type	Propulsion Max Hp	Load Factor (2)	Modal Hp	Hours (3)	Hp-Hrs/ Trip	kW-Hrs/ Trip
General Cargo	10,989	0.054	590	1.06	625	466

Notes: (1) Average one-way transit operations between the POLA breakwater and the Berth 136-149 Terminal.

(2) Based on average inbound, outbound, and docking load factors (PEI Table 2.46).

(3) Based upon average one-way transit + docking times (PEI Table 2.51).

Table D1.1.58. Cargo Vessel Transit Distances within the Fairway and Precautionary Areas - Berths 136-147 Terminal Project Alternatives.

Fairway 1-way Route Length (1)/ Percent in Route (2)				
	North	West	South	Ave.
Vessel Type	39.5	43.5	36.0	Length
Container	90.0	10.0	-	39.9
General Cargo	60.0	10.0	30.0	38.9
Auto	80.0	10.0	10.0	39.6
Precautionary Area 1-way Route Length (1)/Percent in Route (2)				
	North (3)	West (3)	South (3)	Ave.
	10.5	10.5	7.5	Length
Container	90.0	10.0	-	10.5
General Cargo	60.0	10.0	30.0	9.6
Auto	80.0	10.0	10.0	10.2

Notes: (1) Route lengths in units of nautical miles (nm) (from PEI Table 2.8).

(2) Based upon expected transit distribution patterns (TraPac 2004).

(3) Revised from PEI Table 2.8 values, based upon review of nautical chart???

Table D1.1.59. Cargo Vessel Auxiliary Generator Usage per One-Way Fairway Transit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel (1)	Load Factor (2)	Hours/ Transit	kW-Hrs/ Transit
General Cargo	1,777	0.17	2.64	799

Notes: (1) PEI Table 2.18, except kW rating for 8,000-9,000 vessel estimated by extrapolation from 5,000-6,000 TEU vessel rating.
(2) PEI Table 2.19.

Table D1.1.60. Cargo Vessel Auxiliary Generator Usage per One-Way Precautionary Area Transit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel	Load Factor (1)	Hours/ Transit	kW-Hrs/ Transit
General Cargo	1,777	0.27	1.07	512

Notes: (1) PEI Table 2.19.

Table D1.1.61. Cargo Vessel Auxiliary Generator Usage per One-Way Transit within the POLA Breakwater - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel	Load Factor (1)	Hours/ Transit	kW-Hrs/ Transit
General Cargo	1,777	0.45	1.06	848

Notes: (1) PEI Table 2.19.

Table D1.1.62. Cargo Vessel Hoteling Auxiliary Generator Usage per Ship Visit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel	Load Factor (1)	kW-Hrs/ Day
General Cargo	1,777	0.22	9,383

Notes: (1) PEI Table 2.19.

Table D1.1.63. Cargo Vessel Hoteling Auxiliary Boiler Usage per Ship Visit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Hourly Fuel Usage (1)
All Cargo Vessels	0.032

Notes: (1) Units in tons/hour of fuel consumption (PEI Section 2.5.6).

Table D1.1.64. Baseline Year 2003 Cargo Vessel Tugboat Assist Usage - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Tugboat Max Hp (1)	Load Factor (2)	Hours/ Assist (3)	Hp-Hr/Vessel Assist	# of Assists/ Vessel Visit (4)	Total Hp-Hrs/ Vessel Visit	Total kW-Hrs/ Vessel Visit
General Cargo	4,106	0.31	1.38	1,754	3	5,262	3,925

Notes: (1) From PEI Table 3.1.

(2) From PEI, Table 3.9.

(3) Duration per 1-way vessel trip. Eqaul to cargo vessel Harbro transit durations presented in Table C2-4 times 1.3 to account for tug movement and assist time. General cargo and auto carrier vessels assumed to require the same tugboat assist usage as containerships <3,000 TEUs.

(4) Estimated by multiplying the ratio of 2003/2001 throughputs for the Berths 136-147 terminal by tug activitiy during the 2001 baseline year. This amounts to 2.8 tug assists per ship visit. Tug assist usages for future project years based upon 3 tug assists per ship visit.

Table D1.1.65. Baseline Year 2003 Tugboat Aux. Generator Usage during Cargo Vessel Assists - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Aux. Engine Hp (1)	Load Factor (2)	Hours/ Assist (3)	Hp-Hr/Vessel Assist	# of Assists/ Vessel Visit (4)	Total Hp-Hrs/ Vessel Visit	Total kW-Hrs/ Vessel Visit
General Cargo	209	0.43	1.38	124	3	372	277

Notes: (1) From PEI Table 3.1.

(2) From PEI Table 3.9.

(3) Duration = 1.3 times tug assist time in Table C2-13 to account for usage when main engines are shut down in stand-by mode. General cargo/ auto carrier vessels would require the same usage as containerships <3,000 TEUs.

Table D1.1.66. Emissions Factors for Vessels - Berths 136-147 Terminal Project Alternatives.

Operational Mode/Ship-Engine Type	Emission Factors (Gm/kW-Hr)							Source
	ROG	CO	NOx	SOx	PM	PM10	PM2.5	
Cruise								
OGVs - Slow Speed Diesel	0.60	1.40	18.10	10.50	1.50	1.50	1.41	(1)
Precautionary Area/Maneuver								
OGVs - Slow Speed Diesel 5% Load Adjustment Factor	8.00	4.00	1.83	1.00	2.44	2.44	2.29	(2)
OGVs - Slow Speed Diesel 6% Load Adjustment Factor	6.09	3.33	1.60	1.00	2.04	2.04	1.91	(2)
OGVs - Slow Speed Diesel 19% Load Adjustment Factor	1.08	1.05	1.01	1.00	1.02	1.02	0.96	(2)
OGVs - Slow Speed Diesel 5.4% Load Emission Factor	4.34	5.22	31.46	10.50	3.42	3.42	3.20	(3)
OGVs - Slow Speed Diesel 19% Load Emission Factor	0.65	1.47	18.28	10.50	1.53	1.53	1.43	(3)
Tugboats - Medium Speed Diesel Engines > 1340 Hp	0.50	1.10	10.60	0.81	0.81	0.81	0.76	(4)
Tugboats - Post-Year 2006 ULSD	0.50	1.10	10.60	0.006	0.75	0.75	0.70	(5)
Auxiliary Generators								
OGVs - Medium Speed Diesel - Residual Oil	0.40	1.10	14.70	12.30	1.50	1.50	1.41	(6)
OGVs - Medium Speed Diesel - Marine Gas Oil @ 0.5% S	0.40	1.10	13.90	2.11	0.30	0.30	0.28	(6)
OGVs - Medium Speed Diesel - Marine Gas Oil @ 0.2% S	0.40	1.10	13.90	0.84	0.21	0.21	0.20	(6)
Tugboats - High Speed Diesel - POLA Diesel	0.40	0.90	10.90	0.80	0.21	0.21	0.20	(6)
Tugboats - High Speed Diesel - Post-Year 2006 ULSD	0.40	0.90	10.90	0.006	0.15	0.15	0.14	(6)
Auxiliary Boilers								
Commercial Vessels	0.76	9.20	24.60	108.00	3.02	3.02	2.83	(7)

Notes: (1) Applies to OGV operations within the fairway and precautionary area (PEI Table 2.20). PM10 factor from Table 2.20 divided by 0.8 to produce PM factor for slow speed diesel engine buring residual oil (See Table 2.9 and section 2.5.1. [Entec 2002]).

(2) Unitless adjustment factors from PEI Table 2.21 that are applied to OGV main power plant emission factors in PEI Table 2.20 to obtain low load emission factors.

(3) Calculated OGV main power plant low load emission factors.

(4) Data for medium speed diesel engines burning marine gas oil with an average sulfur (S) content = 0.5% (Table 2.9 [Entec 2002]), then SO2 factor adjusted for average POLA diesel S content of 0.19% (PEI Section 3.2.2) and PM factor adjusted for POLA fuel with the use of assumptions found in EPA Notice of Proposed Rule Making for Category 3 engines (EPA 2002).

(5) In 2007, assist tugs would use ULSD with a S content of 15 ppm. PM factor adjusted with the use of EPA assumptions (EPA 2002).

(6) Table 2.22 (Starcrest 2004). PM emission factors for medium speed diesel engnies burning 0.2% S marine gas, POLA diesel, and ULSD calculated with the use of EPA assumptions (EPA 2002).

(7) Units in Lb/ton fuel from PEI Table 2.23. Original PM10 factor divided by 0.86 to produce PM factor (Table 1.3-5 [EPA 1998]).

SO2 EF in Gm/kW-Hr for 1% S Content #2 diesel	4.30
SO2 EF in Gm/Hp-Hr for 0.05% S Content #2 diesel	0.16
SO2 EF in Gm/Hp-Hr for 0.033% S Content #2 diesel	0.10
SO2 EF in Gm/Hp-Hr for 0.22% S Content #2 diesel - line haul locos	0.69
SO2 EF in Gm/Hp-Hr for 15 ppm S Content #2 diesel	0.006

Table D1.1.67. Annual Cargo Vessel Emissions Berths 136-147 Terminal Project - Alternative 1.

Berths 136-147 Terminal Project - Alternative 1.

	Tons per Year						
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Phase 1							
Delivery of Sheet Piles for Berth 144 Wharf Improvement							
Ships - Fairway Transit	0.02	0.06	0.72	0.42	0.06	0.06	0.06
Ships - Aux. Sources w/i Fairway	0.00	0.00	0.03	0.02	0.00	0.00	0.00
Ships - Precautionary Area Transit	0.00	0.01	0.07	0.04	0.01	0.01	0.01
Ships - Aux. Sources w/i Precautionary Area	0.00	0.00	0.02	0.01	0.00	0.00	0.00
Ships - Maneuvering	0.00	0.01	0.03	0.01	0.00	0.00	0.00
Ships - Aux. Sources during Maneuvering	0.00	0.00	0.03	0.01	0.00	0.00	0.00
Ships - Hoteling Aux. Sources	0.00	0.01	0.16	0.10	0.01	0.01	0.01
Tugboats - Cargo Vessel Assist	0.00	0.01	0.05	0.00	0.00	0.00	0.00
Subtotal	0.04	0.09	1.10	0.61	0.08	0.08	0.08
Delivery of 3 Cranes for Berth 144							
Ships - Fairway Transit	0.02	0.06	0.72	0.42	0.06	0.06	0.06
Ships - Aux. Sources w/i Fairway	0.00	0.00	0.03	0.02	0.00	0.00	0.00
Ships - Precautionary Area Transit	0.00	0.01	0.07	0.04	0.01	0.01	0.01
Ships - Aux. Sources w/i Precautionary Area	0.00	0.00	0.02	0.01	0.00	0.00	0.00
Ships - Maneuvering	0.00	0.01	0.03	0.01	0.00	0.00	0.00
Ships - Aux. Sources during Maneuvering	0.00	0.00	0.03	0.01	0.00	0.00	0.00
Ships - Hoteling Aux. Sources	0.02	0.06	0.63	0.41	0.04	0.04	0.03
Tugboats - Cargo Vessel Assist	0.00	0.01	0.05	0.00	0.00	0.00	0.00
Subtotal	0.05	0.14	1.56	0.92	0.11	0.11	0.10
Delivery of 2 Cranes, one each for Berths 136 & 144							
Ships - Fairway Transit	0.02	0.06	0.72	0.42	0.06	0.06	0.06
Ships - Aux. Sources w/i Fairway	0.00	0.00	0.03	0.02	0.00	0.00	0.00
Ships - Precautionary Area Transit	0.00	0.01	0.07	0.04	0.01	0.01	0.01
Ships - Aux. Sources w/i Precautionary Area	0.00	0.00	0.02	0.01	0.00	0.00	0.00
Ships - Maneuvering	0.00	0.01	0.03	0.01	0.00	0.00	0.00
Ships - Aux. Sources during Maneuvering	0.00	0.00	0.03	0.01	0.00	0.00	0.00
Ships - Hoteling Aux. Sources	0.01	0.03	0.31	0.20	0.02	0.02	0.02
Tugboats - Cargo Vessel Assist	0.00	0.01	0.05	0.00	0.00	0.00	0.00
Subtotal	0.04	0.11	1.25	0.72	0.09	0.09	0.09
Phase 1 - Subtotal	0.14	0.34	3.91	2.25	0.29	0.29	0.27
Phase 2							
Delivery of Sheet Piles for Berth 136 Wharf Extension							
Ships - Fairway Transit	0.02	0.06	0.72	0.42	0.06	0.06	0.06
Ships - Aux. Sources w/i Fairway	0.00	0.00	0.03	0.02	0.00	0.00	0.00
Ships - Precautionary Area Transit	0.00	0.01	0.07	0.04	0.01	0.01	0.01
Ships - Aux. Sources w/i Precautionary Area	0.00	0.00	0.02	0.01	0.00	0.00	0.00
Ships - Maneuvering	0.00	0.01	0.03	0.01	0.00	0.00	0.00
Ships - Aux. Sources during Maneuvering	0.00	0.00	0.03	0.01	0.00	0.00	0.00
Ships - Hoteling Aux. Sources	0.00	0.01	0.16	0.10	0.01	0.01	0.01
Tugboats - Cargo Vessel Assist	0.00	0.01	0.05	0.00	0.00	0.00	0.00
Subtotal	0.04	0.09	1.10	0.61	0.08	0.08	0.08

Note: (1) Assumes 37/63% residual/diesel fuel usage in aux. gens (PEI Table 2.3).

Table D1.1.68. Daily Cargo Vessel Emissions Berths 136-147 Terminal Project - Alternative 1.

Project Scenario/Vessel Type	Pounds per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Phase 1							
Delivery of Sheet Piles for Berth 144 Wharf Improvements							
Transit							
Ships - Fairway Transit	23.8	55.6	718.8	417.0	59.6	59.6	55.8
Ships - Aux. Sources w/i Fairway	0.8	2.7	27.1	19.5	1.6	1.6	1.5
Ships - Precautionary Area Transit	2.4	5.4	67.3	38.6	5.6	5.6	5.3
Ships - Aux. Sources w/i Precautionary Area	0.5	1.6	16.9	10.3	0.9	0.9	0.9
Ships - Maneuvering	4.5	5.4	32.3	10.8	3.5	3.5	3.3
Ships - Aux. Sources during Maneuvering	0.8	2.4	27.4	14.7	1.5	1.5	1.4
Tugboats - Cargo Vessel Assist	2.3	5.0	49.2	0.0	3.3	3.3	3.1
Subtotal - Transit	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Hoteling							
Ships - Hoteling Aux. Sources (full day)	8.9	29.8	312.5	204.6	17.7	17.7	16.6
Ships - Hoteling Aux. Sources (time left after transit) (2)	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Delivery of 3 Cranes for Berth 144							
Transit							
Ships - Fairway Transit	23.8	55.6	718.8	417.0	59.6	59.6	55.8
Ships - Aux. Sources w/i Fairway	0.8	2.7	27.1	19.5	1.6	1.6	1.5
Ships - Precautionary Area Transit	2.4	5.4	67.3	38.6	5.6	5.6	5.3
Ships - Aux. Sources w/i Precautionary Area	0.5	1.6	16.9	10.3	0.9	0.9	0.9
Ships - Maneuvering	4.5	5.4	32.3	10.8	3.5	3.5	3.3
Ships - Aux. Sources during Maneuvering	0.8	2.4	27.4	14.7	1.5	1.5	1.4
Tugboats - Cargo Vessel Assist	2.3	5.0	49.2	0.0	3.3	3.3	3.1
Subtotal - Transit	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Hoteling							
Ships - Hoteling Aux. Sources	8.9	29.8	312.5	204.6	17.7	17.7	16.6
Ships - Hoteling Aux. Sources (time left after transit) (2)	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Delivery of 2 Cranes, one each for Berths 136 & 144							
Transit							
Ships - Fairway Transit	23.8	55.6	718.8	417.0	59.6	59.6	55.8
Ships - Aux. Sources w/i Fairway	0.8	2.7	27.1	19.5	1.6	1.6	1.5
Ships - Precautionary Area Transit	2.4	5.4	67.3	38.6	5.6	5.6	5.3
Ships - Aux. Sources w/i Precautionary Area	0.5	1.6	16.9	10.3	0.9	0.9	0.9
Ships - Maneuvering	4.5	5.4	32.3	10.8	3.5	3.5	3.3
Ships - Aux. Sources during Maneuvering	0.8	2.4	27.4	14.7	1.5	1.5	1.4
Tugboats - Cargo Vessel Assist	2.3	5.0	49.2	0.0	3.3	3.3	3.1
Subtotal - Transit	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Hoteling							
Ships - Hoteling Aux. Sources	8.9	29.8	312.5	204.6	17.7	17.7	16.6
Ships - Hoteling Aux. Sources (time left after transit) (2)	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Phase 2							
Delivery of Sheet Piles for Berth 136 Wharf Extension							
Transit							
Ships - Fairway Transit	23.8	55.6	718.8	417.0	59.6	59.6	55.8
Ships - Aux. Sources w/i Fairway	0.8	2.7	27.1	19.5	1.6	1.6	1.5
Ships - Precautionary Area Transit	2.4	5.4	67.3	38.6	5.6	5.6	5.3
Ships - Aux. Sources w/i Precautionary Area	0.5	1.6	16.9	10.3	0.9	0.9	0.9
Ships - Maneuvering	4.5	5.4	32.3	10.8	3.5	3.5	3.3
Ships - Aux. Sources during Maneuvering	0.8	2.4	27.4	14.7	1.5	1.5	1.4
Tugboats - Cargo Vessel Assist	2.3	5.0	49.2	0.0	3.3	3.3	3.1
Subtotal - Transit	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Hoteling							
Ships - Hoteling Aux. Sources	8.9	29.8	312.5	204.6	17.7	17.7	16.6
Ships - Hoteling Aux. Sources (time left after transit) (2)	7.1	23.9	250.4	163.9	14.2	14.2	13.3

Note: (1) Assumes 37/63% residual/diesel fuel usage in aux. gens (PEI Table 2.3).

(2) Ship takes 4.77 hours to transit one-way (2.64 Fairway, 1.07 Precautionary Area, 1.06 Manuevering), so ship spends 19.23 hours hotelling on day of transit.

Table D1.1.69. Peak Daily Emissions from Berths 136-147 Terminal Project NFAB Construction Activities (2007-2010) .

	Pounds Per Day						
Construction Project/Activity	ROG	CO	NOx	SOx	PM	PM10	PM2.5
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	12	43	116	0	80	42	12
Backland Improvements	15	58	147	0	172	87	23
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	6	23	41	0	30	16	5
Construct New Main Gate	2	8	17	0	56	28	7
Improve/Pave Demolished Areas and Parking	15	58	147	0	144	74	20
Demolish Existing Administration Building and Gate	12	43	116	0	80	42	12
Construct a New Maintenance and Repair Facility-Berths 136-147							
Construct Maintenance and Repair Facility	7	26	47	0	85	43	11
Improve/Pave Demolished Areas and M&R	15	58	147	0	144	74	20
Demolish Existing M&R Facility	12	43	116	0	80	42	12
Harry Bridges Blvd. Realignment							
Street Removals	17	64	154	0	62	34	12
Street Improvements	37	202	415	0	45	31	19
Sewer Installation	4	16	34	0	2	2	2
Water Systems Installation	4	16	34	0	2	2	2
Storm Drain Installation	8	32	71	0	4	4	3
Construction of a 46-Acre Rail Yard at Berth 200	21	66	139	0	118	62	18
9 Acres of Backland Improvements at Berts 134-135	15	58	147	0	117	60	17
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	6	21	54	0	2	2	2
Rail Yard Construction	21	66	139	0	118	62	18
Backland Improvements	15	58	147	0	172	87	23
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	11	39	81	0	60	32	11
Grading/Earthmoving	21	83	191	0	229	116	31
Commuting of Workers (1)	3	35	3	0	22	21	20
Peak Daily Emissions (2) (3)	111	494	983	1	717	380	120
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The URBEMIS model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: 78-acres of backland improvements at Berths 142-147, construction of a new administration building, construction of a new maintenance and repair facility, street improvements at the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, grading/earthmoving at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the same set of activities that produce peak CO, ROG, NOx, and SOx emissions with one exception: instead of street improvements at the Harry Bridges Blvd. realignment, the street removals will be a contributor to the peak day.

Table D1.1.70. Peak Daily Emissions from Berths 136-147 Terminal Project Alternative 2 Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Wharf Demolition	13.4	38.9	126.0	0.1	6.5	6.5	6.0
Remove 2 Existing Cranes at Berth 144	5.4	16.7	97.4	0.1	4.7	4.7	4.4
Piledriving-Sheet Piles	45.6	112.0	1,246.0	674.9	92.8	92.8	87.0
Rip-Rap Placement	85.2	261.5	525.1	0.4	44.0	44.0	40.5
Dredge and Disposal	28.5	105.0	265.2	0.2	11.4	11.4	10.5
Piledriving-Waterside Piles	9.6	50.7	117.5	0.1	4.7	4.7	4.3
Piledriving-Landside Piles	11.4	57.0	126.2	0.1	5.3	5.3	4.8
Replace Existing Wharf	36.0	137.8	335.2	0.3	14.2	14.2	13.1
Upgrade Existing Wharf	14.8	65.5	131.0	0.1	6.1	6.1	5.6
Install 3 Cranes at Berth 144	48.3	123.6	1,237.6	674.9	93.1	93.1	87.2
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Backland Improvements	15.2	58.4	147.1	0.1	171.5	87.2	22.8
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	6.5	23.5	41.5	0.0	30.1	16.0	5.2
Construct New Main Gate	2.3	8.4	17.4	0.0	56.0	27.9	6.6
Improve/Pave Demolished Areas and Parking	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing Administration Building and Gate	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Construct a New Maintenance and Repair Facility-Berths 136-147							
Construct Maintenance and Repair Facility	7.2	25.8	46.7	0.0	85.4	43.3	11.1
Improve/Pave Demolished Areas and M&R	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing M&R Facility	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Harry Bridges Blvd. Realignment							
Street Removals	16.7	64.2	153.7	0.1	61.8	33.7	11.8
Street Improvements	37.2	201.7	414.9	0.4	45.5	31.4	19.3
Sewer Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Water Systems Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Storm Drain Installation	8.4	31.7	70.9	0.1	3.7	3.7	3.4
Construction of a 46-Acre Rail Yard at Berth 200	21.2	66.5	138.8	0.1	117.8	61.6	18.4
9 Acres of Backland Improvements at Berts 134-135	15.2	58.4	147.1	0.1	116.5	60.3	17.2
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	5.7	21.4	54.0	0.0	2.4	2.4	2.2
Rail Yard Construction	21.2	66.5	138.8	0.1	117.8	61.6	18.4
Backland Improvements	15.2	58.4	147.1	0.1	171.5	87.2	22.8
Existing Cranes Removal at Berth 136	5.4	16.7	97.4	0.1	4.7	4.7	4.4
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	11.0	39.0	80.9	0.1	60.4	32.2	10.5
Grading/Earthmoving	20.8	83.0	190.9	0.2	228.8	116.4	30.5
Install Cranes at Berth 136 & Berth 144	45.9	115.2	1,244.6	674.9	92.7	92.7	86.8
Commuting of Workers (1)	3.5	41.7	3.8	0.1	26.5	25.7	23.7
Peak Daily Emissions (2) (3)	128	445	1,838	676	766	428	164
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The Urbemis model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: upgrade of exisiting wharf, installation of 3 cranes at Berth 144, construction of a new main gate, construction of a new maintenance and repair facility, sewer installation with the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, 5 acres of backland improvements at Berths 134-135, landscape installation at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the following activities: rip-rap placement for wharf improvements at Berths 144-147, 78-acre backland improvements at Berths 142-147, construction of new administration building, construction of new maintenance and repair facility, street removals at Harry Bridges Blvd., construction of a 46-acre railyard at Berth 200, grading/earthmoving for the new Harry Bridges Blvd landscaped area, and commuting of workers.

Table D1.1.71. Peak Daily Emissions from Berths 136-147 Terminal Project Alternative 3 Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Remove 2 Existing Cranes at Berth 144	5.4	16.7	97.4	0.1	4.7	4.7	4.4
Upgrade Existing Wharf	14.8	65.5	131.0	0.1	6.1	6.1	5.6
Install 3 Cranes at Berth 144	48.3	123.6	1,237.6	674.9	93.1	93.1	87.2
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Backland Improvements	15.2	58.4	147.1	0.1	171.5	87.2	22.8
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	6.5	23.5	41.5	0.0	30.1	16.0	5.2
Construct New Main Gate	2.3	8.4	17.4	0.0	56.0	27.9	6.6
Improve/Pave Demolished Areas and Parking	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing Administration Building and Gate	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Construct a New Maintenance and Repair Facility-Berths 136-147							
Construct Maintenance and Repair Facility	7.2	25.8	46.7	0.0	85.4	43.3	11.1
Improve/Pave Demolished Areas and M&R	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing M&R Facility	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Harry Bridges Blvd. Realignment							
Street Removals	16.7	64.2	153.7	0.1	61.8	33.7	11.8
Street Improvements	37.2	201.7	414.9	0.4	45.5	31.4	19.3
Sewer Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Water Systems Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Storm Drain Installation	8.4	31.7	70.9	0.1	3.7	3.7	3.4
Construction of a 46-Acre Rail Yard at Berth 200	21.2	66.5	138.8	0.1	117.8	61.6	18.4
9 Acres of Backland Improvements at Berts 134-135	15.2	58.4	147.1	0.1	116.5	60.3	17.2
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	5.7	21.4	54.0	0.0	2.4	2.4	2.2
Rail Yard Construction	21.2	66.5	138.8	0.1	117.8	61.6	18.4
Backland Improvements	15.2	58.4	147.1	0.1	171.5	87.2	22.8
Existing Cranes Removal at Berth 136	5.4	16.7	97.4	0.1	4.7	4.7	4.4
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	11.0	39.0	80.9	0.1	60.4	32.2	10.5
Grading/Earthmoving	20.8	83.0	190.9	0.2	228.8	116.4	30.5
Install Cranes at Berth 136 & Berth 144	45.9	115.2	1,244.6	674.9	92.7	92.7	86.8
Commuting of Workers (1)	1.0	11.6	1.1	0.0	7.4	7.1	6.6
Peak Daily Emissions (2) (3)	125	415	1,835	675	703	365	106
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The Urbemis model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: upgrade of exisiting wharf, installation of 3 cranes at Berth 144, construction of a new main gate, construction of a new maintenance and repair facility, sewer installation with the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, 9 acres of backland improvements at Berths 134-135, landscape installation at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the following activities: 78-acre backland improvements at Berths 142-147, construction of new administration building, construction of new maintenance and repair facility, street removals at Harry Bridges Blvd., construction of a 46-acre railyard at Berth 200, grading/earthmoving for the new Harry Bridges Blvd landscaped area, and commuting of workers.

Table D1.1.72. Peak Daily Emissions from Berths 136-147 Terminal Project Alternative 4 Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Backland Improvements	15.2	58.4	147.1	0.1	171.5	87.2	22.8
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	6.5	23.5	41.5	0.0	30.1	16.0	5.2
Construct New Main Gate	2.3	8.4	17.4	0.0	56.0	27.9	6.6
Improve/Pave Demolished Areas and Parking	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing Administration Building and Gate	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Construct a New Maintenance and Repair Facility-Berths 136-147							
Construct Maintenance and Repair Facility	7.2	25.8	46.7	0.0	85.4	43.3	11.1
Improve/Pave Demolished Areas and M&R	15.2	58.4	147.1	0.1	144.0	73.8	20.0
Demolish Existing M&R Facility	11.8	42.7	116.2	0.1	80.4	41.8	12.1
Harry Bridges Blvd. Realignment							
Street Removals	16.7	64.2	153.7	0.1	61.8	33.7	11.8
Street Improvements	37.2	201.7	414.9	0.4	45.5	31.4	19.3
Sewer Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Water Systems Installation	4.4	15.9	34.5	0.0	2.0	2.0	1.8
Storm Drain Installation	8.4	31.7	70.9	0.1	3.7	3.7	3.4
9 Acres of Backland Improvements at Berts 134-135	15.2	58.4	147.1	0.1	116.5	60.3	17.2
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	11.0	39.0	80.9	0.1	60.4	32.2	10.5
Grading/Earthmoving	20.8	83.0	190.9	0.2	228.8	116.4	30.5
Commuting of Workers (1)	2.9	34.8	3.2	0.1	22.1	21.4	19.8
Peak Daily Emissions (2) (3)	90	427	844	1	600	318	101
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The Urbemis model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: 78-acres of backland improvements at Berths 142-147, construction of a new administration building, construction of a new maintenance and repair facility, street improvements at the Harry Bridges Blvd. realignment, grading/earthmoving at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the same set of activities that produce peak CO, ROG, NOx, and SOx emissions with one exception: instead of street improvements at the Harry Bridges Blvd. realignment, the street removals will be a contributor to the peak day.

Table D1.1.73 Mitigated Air Emission Factors for the Berths 136-147 Terminal Project Alternatives Construction Activities.

Project Year/Source Type	Fuel Type	Emission Factors (Grams/Horsepower-Hour) ROG	CO	NOx	SOx	PM	PM10	PM2.5	References
Year 2005									
Off-Road Equipment - 25-50 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 51-120 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 121-175 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 176-250 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 251-500 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - 501-750 Hp	D	-	-	-	-	-	-	-	0
Off-Road Equipment - >750 Hp	D	-	-	-	-	-	-	-	0
Year 2007									
Off-Road Equipment - 25-50 Hp	D	0.56	2.34	4.57	0.004	0.38	0.38	0.35	(1)
Off-Road Equipment - 51-120 Hp	D	0.58	3.23	5.64	0.006	0.39	0.39	0.36	(1)
Off-Road Equipment - 121-175 Hp	D	0.42	2.70	5.26	0.006	0.24	0.24	0.22	(1)
Off-Road Equipment - 176-250 Hp	D	0.24	0.92	5.00	0.006	0.12	0.12	0.11	(1)
Off-Road Equipment - 251-500 Hp	D	0.24	0.92	4.95	0.005	0.12	0.12	0.11	(1)
Off-Road Equipment - 501-750 Hp	D	0.24	0.92	4.95	0.006	0.12	0.12	0.11	(1)
Off-Road Equipment - >750 Hp	D	0.24	0.92	4.95	0.005	0.12	0.12	0.11	(1)
On-road Truck - Idle (Gms/Hr)	D	10.09	33.28	119.15	0.07	0.98	0.98	0.90	(3)
On-road Truck - 5 mph (Gms/Mi)	D	6.78	11.20	31.35	0.04	1.48	1.48	1.32	(3)
On-road Truck - 25 mph (Gms/Mi)	D	0.80	3.68	12.84	0.02	0.44	0.44	0.36	(3)
On-road Truck - 55 mph (Gms/Mi)	D	0.47	2.05	11.17	0.02	0.40	0.39	0.32	(3)
Dredge Materials Haul Truck - Composite (Gms/Mi)	D	1.39	4.43	14.69	0.02	0.54	0.54	0.50	(4)
Other On-Road Trucks - Composite (Gms/Mi)	D	0.85	2.83	12.51	0.02	0.46	0.46	0.42	(5)
Year 2015									
Off-Road Equipment - 25-50 Hp	D	0.13	2.72	2.90	0.004	0.02	0.02	0.01	(2)
Off-Road Equipment - 51-120 Hp	D	0.09	3.05	1.40	0.004	0.02	0.02	0.01	(2)
Off-Road Equipment - 121-175 Hp	D	0.06	2.70	0.27	0.004	0.02	0.02	0.01	(2)
Off-Road Equipment - 176-250 Hp	D	0.06	0.92	0.27	0.004	0.02	0.02	0.01	(2)
Off-Road Equipment - 251-500 Hp	D	0.06	0.92	0.27	0.004	0.02	0.02	0.01	(2)
Off-Road Equipment - 501-750 Hp	D	0.06	0.92	0.27	0.004	0.02	0.02	0.01	(2)
Off-Road Equipment - >750 Hp	D	0.06	0.92	2.36	0.004	0.02	0.02	0.02	(2)
On-road Truck - Idle (Gms/Hr)	D	7.19	30.13	127.88	0.07	0.09	0.09	0.09	(3)
On-road Truck - 5 mph (Gms/Mi)	D	3.13	6.17	12.66	0.04	0.16	0.16	0.10	(3)
On-road Truck - 25 mph (Gms/Mi)	D	0.42	1.40	5.30	0.02	0.13	0.13	0.08	(3)
On-road Truck - 55 mph (Gms/Mi)	D	0.21	1.50	3.72	0.02	0.18	0.18	0.13	(3)
Dredge Materials Haul Truck - Composite (Gms/Mi)	D	0.69	1.87	6.04	0.02	0.14	0.14	0.12	(4)
Other On-Road Trucks - Composite (Gms/Mi)	D	0.40	1.71	4.48	0.02	0.17	0.17	0.16	(5)
All Years									
Tugboat (Gm/Hp-Hr)	D	0.37	0.82	9.85	0.01	0.51	0.51	0.48	(6)
Fugitive Dust (Lbs/acre-day)	---	---	---	---	---	11.00	5.38	1.12	(7)
Building Demolition (Lbs/1000 cf)	---	---	---	---	---	0.84	0.41	0.09	(8)

Notes: (1) From ARB OFFROAD2007 emissions model (2006) for each Hp category Tier 2 implementation year. Assuming ROG = THC*1.27.

(2) From ARB OFFROAD2007 emissions model (2006) for new equipment, year 2015. Assuming ROG = THC*1.27.

(3) Heavy duty diesel truck running emission factors developed from EMFAC2007 (ARB 2006). Units in grams/mile for project years 2007 and 2015. Based on annual average conditions at 60 degrees and 50% humidity. PM emission factors include combustive and tire/brake wear contributions. Mitigated 2007 fleet assumes that 1/2 of the trucks are compliant with 2007 standards. Mitigated 2015 fleet assumes that all trucks are compliant with 2007 standards.

(4) Composite factors based on a round trip of 90% at 25 mph and 10% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

(5) For on-road trucks other then dredge material haul trucks, composite factor based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

(6) Data obtained from Table C2-15 of this EIR/S, then divided by 1.34 to convert to units of Gm/Hp-Hr.

(7) Units in lbs/acre-day from section 11.2.3 of AP-42 (EPA 1995). Emissions reduced by 90% from uncontrolled levels.

(8) CEQA Air Quality Handbook, Table A9-9-H (SCAQMD 1993). Units in lbs/1000 cubic feet (cf) of demolished building.

Table D1.1.74. Daily Emissions for Wharf Improvements at Berths 144-147 - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010) (Pg 1 of 3).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Demolition							
Air Compressor	0.3	1.2	2.4	0.0	0.2	0.2	0.2
Crane - 220-Ton Manitowoc 888	0.7	2.7	14.4	0.0	0.3	0.3	0.3
Derrick Barge	0.4	1.6	8.6	0.0	0.2	0.2	0.2
Excavator - Cat 345B	0.6	2.4	12.7	0.0	0.3	0.3	0.3
Forklift	0.4	2.2	3.9	0.0	0.3	0.3	0.2
Generator	0.3	1.4	2.7	0.0	0.2	0.2	0.2
Haul Truck - Demolished Materials (1)	0.1	0.3	1.5	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.5	1.8	9.7	0.0	0.2	0.2	0.2
Tugboat	2.0	4.3	52.1	0.1	2.7	2.7	2.5
Vibratory Hammer	0.3	1.1	2.2	0.0	0.2	0.2	0.2
Subtotal	5.6	19.1	110.2	0.1	4.7	4.7	4.4
Remove 2 Existing Cranes at Berth 144							
Crane - 50 ton	0.8	3.2	17.3	0.0	0.4	0.4	0.4
Winch	0.3	1.2	6.7	0.0	0.2	0.2	0.1
Tugboat	2.0	4.3	52.1	0.1	2.7	2.7	2.5
Tugboat	0.7	1.5	17.7	0.0	0.9	0.9	0.9
Subtotal	3.8	10.3	93.8	0.1	4.2	4.2	3.9
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist	0.3	1.1	6.2	0.0	0.1	0.1	0.1
Generator - Pile Hammer	0.5	1.8	10.1	0.0	0.2	0.2	0.2
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Cargo Ship - Transit - Sheetpile Delivery	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Tugboat - Cargo Vessel Assist	1.0	2.3	27.6	0.0	1.4	1.4	1.3
Cargo Ship - Hotelling	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Subtotal	44.2	107.8	1239.7	674.9	92.4	92.4	86.5
Rip-Rap Placement							
Barge - Generator	0.7	3.8	6.7	0.0	0.5	0.5	0.4
Barge - Generator	0.7	2.8	15.1	0.0	0.4	0.4	0.3
Barge - Deck Winch	0.8	4.3	7.5	0.0	0.5	0.5	0.5
Barge - Main Hoist	0.9	3.4	18.3	0.0	0.4	0.4	0.4
Tracked Loader - Cat 973	0.6	2.1	11.6	0.0	0.3	0.3	0.3
Tugboat - Generator	1.8	9.8	17.1	0.0	1.2	1.2	1.1
Tugboat - Main Engines	33.4	185.9	324.7	0.4	22.5	22.5	20.7
Subtotal	38.8	212.2	401.0	0.4	25.7	25.7	23.6
Dredge and Disposal							
Derrick Barge - Crane Hoist	3.6	13.7	73.9	0.1	1.8	1.8	1.6
Derrick Barge - Deck Winch	0.8	2.9	15.7	0.0	0.4	0.4	0.3
Derrick Barge - Generator	3.3	12.6	67.9	0.1	1.6	1.6	1.5
Derrick Barge - Generator	0.5	2.9	5.6	0.0	0.3	0.3	0.2
Haul Trucks - Berth 205 to Anch. Rd. (1)	1.0	2.5	9.9	0.0	0.2	0.2	0.2
Loader - 962G - Anchorage Rd.	0.8	3.2	17.6	0.0	0.4	0.4	0.4
Tug Boat - Transport Barge to Berth 205	1.9	10.5	18.3	0.0	1.3	1.3	1.2
Subtotal	11.8	48.3	208.9	0.2	6.0	6.0	5.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.75. Daily Emissions for Wharf Improvements at Berths 144-147 - Berths 136-149 Terminal Project

Proposed Project Phase 1-Mitiagted (2007-2010) (Pg 2 of 3).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist	0.3	1.1	6.2	0.0	0.1	0.1	0.1
Generator - Pile Hammer	0.5	1.8	10.1	0.0	0.2	0.2	0.2
Haul Trucks - Pile Deliveries (1)	4.1	13.6	60.1	0.1	2.2	2.2	2.0
Jet Pump	0.7	2.8	15.2	0.0	0.4	0.4	0.3
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Subtotal	5.8	20.0	98.0	0.1	3.3	3.3	3.0
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	0.7	2.7	14.4	0.0	0.3	0.3	0.3
Forklift	0.5	3.0	5.2	0.0	0.4	0.4	0.3
Generator - Pile Hammer	0.5	1.8	10.1	0.0	0.2	0.2	0.2
Jet Pump	0.7	2.8	15.2	0.0	0.4	0.4	0.3
Haul Trucks - Pile Deliveries (1)	4.1	13.6	60.1	0.1	2.2	2.2	2.0
Subtotal	6.5	24.0	104.9	0.1	3.5	3.5	3.2
Replace Existing Wharf							
Air Compressor - 185 CFM	0.4	2.4	4.2	0.0	0.3	0.3	0.3
Air Compressor - 750 CFM	0.8	2.9	15.7	0.0	0.4	0.4	0.4
Air Compressor - 825 CFM	0.9	3.3	17.5	0.0	0.4	0.4	0.4
Air Compressor - 900 CFM	0.9	3.4	18.3	0.0	0.4	0.4	0.4
Bulldozer - D6	0.6	3.9	7.7	0.0	0.3	0.3	0.3
Bulldozer - D8	0.6	2.5	13.3	0.0	0.3	0.3	0.3
Concrete Boom Pump	0.3	1.6	2.8	0.0	0.2	0.2	0.2
Concrete Trucks (1)	0.7	2.2	9.0	0.0	0.2	0.2	0.2
Crane - 220-Ton Manitowoc 888	0.7	2.7	14.4	0.0	0.3	0.3	0.3
Crane - 275-Ton Manitowoc 999	5.5	21.0	112.9	0.1	2.7	2.7	2.5
Crane - Manitowoc 4000	0.7	2.8	15.3	0.0	0.4	0.4	0.3
Crew Boat	0.2	0.4	5.2	0.0	0.3	0.3	0.3
Excavator - Cat 345B	0.6	2.4	12.7	0.0	0.3	0.3	0.3
Excavator w/ Ram -Komatso PC 220 LC5	0.7	4.5	8.7	0.0	0.4	0.4	0.4
Flat Bed	0.1	0.3	1.6	0.0	0.0	0.0	0.0
Forklift - Cat 200	1.0	6.7	13.0	0.0	0.6	0.6	0.5
Generator	0.3	1.4	2.7	0.0	0.2	0.2	0.2
Haul Trucks - Material Deliveries (1)	0.1	0.5	2.2	0.0	0.1	0.1	0.1
Loader - Cat 966E	0.3	1.3	7.3	0.0	0.2	0.2	0.2
Subtotal	15.5	66.2	284.5	0.3	8.2	8.2	7.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.76. Daily Emissions for Wharf Improvements at Berths 144-147 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010) (Pg 3 of 3).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Upgrade Existing Wharf							
Crane - 220-Ton Manitowoc 888	0.7	2.7	14.4	0.0	0.3	0.3	0.3
Compressor	0.3	1.2	2.4	0.0	0.2	0.2	0.2
Concrete Boom Pump	0.3	1.6	2.8	0.0	0.2	0.2	0.2
Concrete Trucks (1)	4.3	14.2	62.1	0.1	2.2	2.2	2.0
Excavator w/ Ram -Komatso PC 220 LC5	0.7	4.5	8.7	0.0	0.4	0.4	0.4
Forklift - Cat 200	0.2	1.5	2.9	0.0	0.1	0.1	0.1
Generator	0.3	1.4	2.7	0.0	0.2	0.2	0.2
Loader - Cat 966E	0.5	1.8	9.7	0.0	0.2	0.2	0.2
Material Truck (1)	0.1	0.4	1.7	0.0	0.1	0.1	0.1
Subtotal	7.4	29.3	107.5	0.1	4.0	4.0	3.7
Install 3 Cranes at Berth 144							
Crane - 50 ton	0.8	3.2	17.3	0.0	0.4	0.4	0.4
Winch	0.3	1.2	6.7	0.0	0.2	0.2	0.1
Cargo Ship - Transit - Crane Delivery	28.0	62.4	751.2	408.7	60.8	60.8	57.0
Tugboat - Cargo Vessel Assist	1.6	9.1	15.8	0.0	1.1	1.1	1.0
Cargo Ship - Hotelling	5.7	19.1	200.3	131.1	11.4	11.4	10.6
Subtotal	36.5	95.1	991.3	539.9	73.8	73.8	69.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.77. Daily Emissions for 78 Acres of Backland Improvements at Berths 142-147 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Building Demolition							
Bulldozer	1.3	5.0	27.1	0.0	0.7	0.7	0.6
Backhoe	1.2	7.6	14.8	0.0	0.7	0.7	0.6
Loader	1.4	5.2	28.4	0.0	0.7	0.7	0.6
Crane w/Wrecking Ball	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Haul Truck (1)	0.8	2.6	11.5	0.0	0.4	0.4	0.4
Building Demolition	---	---	---	---	75.6	37.0	7.7
Subtotal	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Backland Improvements							
Paving Machine	0.4	1.6	8.8	0.0	0.2	0.2	0.2
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Compactive Roller	1.2	7.9	15.3	0.0	0.7	0.7	0.6
Scraper	0.8	3.2	17.2	0.0	0.4	0.4	0.4
Grader	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Loader	0.5	1.7	9.5	0.0	0.2	0.2	0.2
Backhoe	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Bulldozer - D6	0.6	3.9	7.7	0.0	0.3	0.3	0.3
Haul Truck - Paving (1)	1.0	3.3	14.4	0.0	0.5	0.5	0.5
Haul Truck - Base (1)	0.5	1.6	7.0	0.0	0.2	0.2	0.2
Semi Truck (1)	0.6	2.1	9.2	0.0	0.3	0.3	0.3
Fugitive Dust	---	---	---	---	66.0	32.3	6.7
Subtotal	7.1	33.9	110.8	0.1	69.8	36.1	10.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.78. Daily Emissions to Construct a New Administration Building, Main Gate, and Worker Parking Lot - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Administration Building							
Air Compressor - 100 CFM	0.2	0.9	1.8	0.0	0.2	0.2	0.1
Concrete/Industrial Saw	0.5	2.6	4.6	0.0	0.3	0.3	0.3
Crane	0.2	0.7	3.8	0.0	0.1	0.1	0.1
Forklift	0.3	1.9	3.3	0.0	0.2	0.2	0.2
Generator	0.3	1.1	2.2	0.0	0.2	0.2	0.2
Concrete Trucks (1)	0.4	1.4	6.1	0.0	0.2	0.2	0.2
Supply Trucks (1)	0.8	2.6	11.3	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	11.0	5.4	1.1
Subtotal	2.7	11.2	33.0	0.0	12.6	7.0	2.6
Construct New Main Gate							
Air Compressor - 185 CFM	0.2	1.2	2.1	0.0	0.1	0.1	0.1
Backhoe	0.3	1.9	3.7	0.0	0.2	0.2	0.2
Compactive Roller	0.3	2.0	3.8	0.0	0.2	0.2	0.2
Generator	0.2	1.0	1.9	0.0	0.1	0.1	0.1
Concrete Trucks (1)	0.0	0.1	0.4	0.0	0.0	0.0	0.0
Haul Trucks (1)	0.1	0.3	1.1	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	22.0	10.8	2.2
Subtotal	1.1	6.4	13.1	0.0	22.6	11.4	2.8
Improve/Pave Demolished Areas and Parking Lot							
Paving Machine	0.4	1.6	8.8	0.0	0.2	0.2	0.2
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Compactive Roller	1.2	7.9	15.3	0.0	0.7	0.7	0.6
Scraper	0.8	3.2	17.2	0.0	0.4	0.4	0.4
Grader	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Loader	0.5	1.7	9.5	0.0	0.2	0.2	0.2
Backhoe	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Bulldozer - D6	0.6	3.9	7.7	0.0	0.3	0.3	0.3
Haul Truck - Paving (1)	1.0	3.3	14.4	0.0	0.5	0.5	0.5
Haul Truck - Base (1)	0.5	1.6	7.0	0.0	0.2	0.2	0.2
Semi Truck (1)	0.6	2.1	9.2	0.0	0.3	0.3	0.3
Fugitive Dust	---	---	---	---	55.0	26.9	5.6
Subtotal	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing Admin. Bldg. and Gate							
Backhoe	1.2	7.6	14.8	0.0	0.7	0.7	0.6
Bulldozer	1.3	5.0	27.1	0.0	0.7	0.7	0.6
Crane w/Wrecking Ball	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Loader	1.4	5.2	28.4	0.0	0.7	0.7	0.6
Haul Truck (1)	0.8	2.6	11.5	0.0	0.4	0.4	0.4
Building Demolition	---	---	---	---	75.6	37.0	7.7
Subtotal	5.0	22.0	89.8	0.1	78.2	39.6	10.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.79. Daily Emissions for Construction of a New Maintenance and Repair Facility - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Maintenance and Repair Facility							
Air Compressor - 100 CFM	0.2	0.9	1.8	0.0	0.2	0.2	0.1
Concrete/Industrial Saw	0.6	3.5	6.1	0.0	0.4	0.4	0.4
Crane	0.2	0.9	5.0	0.0	0.1	0.1	0.1
Generator	0.3	1.1	2.2	0.0	0.2	0.2	0.2
Rough Terrain Forklift	0.5	2.5	4.4	0.0	0.3	0.3	0.3
Concrete Trucks (1)	0.4	1.4	6.1	0.0	0.2	0.2	0.2
Supply Trucks (1)	0.8	2.6	11.3	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	33.0	16.1	3.4
Subtotal	3.0	13.0	36.9	0.0	34.8	17.9	5.0
Improve/Pave Demolished Areas and M&R Area							
Paving Machine	0.4	1.6	8.8	0.0	0.2	0.2	0.2
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Compactive Roller	1.2	7.9	15.3	0.0	0.7	0.7	0.6
Scraper	0.8	3.2	17.2	0.0	0.4	0.4	0.4
Grader	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Loader	0.5	1.7	9.5	0.0	0.2	0.2	0.2
Backhoe	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Bulldozer - D6	0.6	3.9	7.7	0.0	0.3	0.3	0.3
Haul Truck - Paving (1)	1.0	3.3	14.4	0.0	0.5	0.5	0.5
Haul Truck - Base (1)	0.5	1.6	7.0	0.0	0.2	0.2	0.2
Semi Truck (1)	0.6	2.1	9.2	0.0	0.3	0.3	0.3
Fugitive Dust	---	---	---	---	55.0	26.9	5.6
Subtotal	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing M&R Facility							
Backhoe	1.2	7.6	14.8	0.0	0.7	0.7	0.6
Bulldozer	1.3	5.0	27.1	0.0	0.7	0.7	0.6
Crane w/Wrecking Ball	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Loader	1.4	5.2	28.4	0.0	0.7	0.7	0.6
Haul Truck (1)	0.8	2.6	11.5	0.0	0.4	0.4	0.4
Building Demolition	---	---	---	---	75.6	37.0	7.7
Subtotal	5.0	22.0	89.8	0.1	78.2	39.6	10.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.80. Daily Emissions for Harry Bridges Blvd. Realignment - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Street Removals							
Backhoe - 416D	0.4	2.2	3.8	0.0	0.3	0.3	0.2
Bulldozer - D9	0.9	3.3	17.7	0.0	0.4	0.4	0.4
Dump Truck - 16 CY	3.8	14.6	78.6	0.1	1.9	1.9	1.8
Fugitive Dust	---	---	---	---	22.0	10.8	2.2
Loader - 938G	1.2	7.6	14.8	0.0	0.7	0.7	0.6
Water Truck - 5000 Gallons	1.0	6.7	13.0	0.0	0.6	0.6	0.5
Subtotal	7.3	34.4	127.9	0.1	25.9	14.6	5.8
Street Improvements							
Asphalt Spreader - BG 240C	1.4	8.7	17.0	0.0	0.8	0.8	0.7
Concrete Truck - 9 CY (1)	0.3	0.9	4.0	0.0	0.1	0.1	0.1
Concrete Truck - 9 CY	0.1	0.4	1.9	0.0	0.0	0.0	0.0
Fugitive Dust (1)	---	---	---	---	11.0	5.4	1.1
Grader - 14H	0.9	3.5	19.0	0.0	0.5	0.5	0.4
Haul Truck - Base (1)	11.4	38.0	166.0	0.2	5.8	5.8	5.4
Haul Truck - Paving (1)	6.7	22.3	97.1	0.1	3.4	3.4	3.1
Loader - 938G	1.2	7.6	14.8	0.0	0.7	0.7	0.6
Oil Truck	0.5	1.9	10.5	0.0	0.3	0.3	0.2
Vibratory Compactor - CB 355D	1.6	9.0	15.7	0.0	1.1	1.1	1.0
Subtotal	24.0	92.3	346.0	0.5	23.7	18.0	12.8
Sewer Installation							
Backhoe - 416D	0.4	2.2	3.8	0.0	0.3	0.3	0.2
Dump Truck - 16 CY	0.3	1.2	6.5	0.0	0.2	0.2	0.1
Excavator Compactor - 320C	0.8	4.9	9.6	0.0	0.4	0.4	0.4
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Subtotal	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Water Systems Installation							
Backhoe - 416D	0.4	2.2	3.8	0.0	0.3	0.3	0.2
Dump Truck - 16 CY	0.3	1.2	6.5	0.0	0.2	0.2	0.1
Excavator Compactor - 320C	0.8	4.9	9.6	0.0	0.4	0.4	0.4
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Subtotal	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Storm Drain Installation							
Backhoe - 416D	0.4	2.2	3.8	0.0	0.3	0.3	0.2
Concrete Truck - 9 CY (1)	0.3	0.9	3.9	0.0	0.1	0.1	0.1
Concrete Truck - 9 CY	0.1	0.3	1.8	0.0	0.0	0.0	0.0
Dump Truck - 16 CY	1.3	4.9	26.2	0.0	0.6	0.6	0.6
Excavator Compactor - 320C	0.8	4.9	9.6	0.0	0.4	0.4	0.4
Pipelayer - 561M	0.6	3.1	5.5	0.0	0.4	0.4	0.3
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Subtotal	3.9	19.7	57.3	0.1	2.2	2.2	2.0

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.81. Daily Emissions for Construction of a 46-Acre Rail Yard at Berth 200 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Crane	0.8	3.2	17.2	0.0	0.4	0.4	0.4
Loader	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Paving Machine	0.8	3.2	17.6	0.0	0.4	0.4	0.4
Grader	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Backhoe	0.8	4.6	8.0	0.0	0.6	0.6	0.5
Roller	0.5	2.8	5.0	0.0	0.3	0.3	0.3
Air Compressor	0.6	2.5	4.8	0.0	0.4	0.4	0.4
Welding Machine	0.6	2.5	4.8	0.0	0.4	0.4	0.4
Generator	0.3	1.2	2.4	0.0	0.2	0.2	0.2
Material Truck (1)	1.5	5.1	22.2	0.0	0.8	0.8	0.7
Fugitive Dust	---	---	---	---	44.0	21.5	4.5
Subtotal	7.5	33.7	103.9	0.1	48.3	25.9	8.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idlir

Table D1.1.82. Daily Emissions for 9 Acres of Backland Improvements at Berths 134-135 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	0.4	1.6	8.8	0.0	0.2	0.2	0.2
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Compactive Roller	1.2	7.9	15.3	0.0	0.7	0.7	0.6
Scraper	0.8	3.2	17.2	0.0	0.4	0.4	0.4
Grader	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Loader	0.5	1.7	9.5	0.0	0.2	0.2	0.2
Backhoe	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Bulldozer - D6	0.6	3.9	7.7	0.0	0.3	0.3	0.3
Haul Truck - Paving (1)	1.0	3.3	14.4	0.0	0.5	0.5	0.5
Haul Truck - Base (1)	0.5	1.6	7.0	0.0	0.2	0.2	0.2
Semi Truck (1)	0.6	2.1	9.2	0.0	0.3	0.3	0.3
Fugitive Dust	---	---	---	---	44.0	21.5	4.5
Subtotal	7.1	33.9	110.8	0.1	47.8	25.3	8.0

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.83. Daily Emissions for Construction of the Berths 142-147 12-Acre ICTF and Associated 19-Acre Backlands - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Rail Track Removal							
Forklift	1.2	7.9	15.3	0.0	0.7	0.7	0.6
Mobile Crane	0.8	2.9	15.9	0.0	0.4	0.4	0.4
Haul Truck (1)	0.6	2.1	9.2	0.0	0.3	0.3	0.3
Subtotal	2.6	12.9	40.4	0.1	1.4	1.4	1.3
Rail Yard Construction							
Crane	0.8	3.2	17.2	0.0	0.4	0.4	0.4
Loader	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Paving Machine	0.8	3.2	17.6	0.0	0.4	0.4	0.4
Grader	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Backhoe	0.8	4.6	8.0	0.0	0.6	0.6	0.5
Roller	0.5	2.8	5.0	0.0	0.3	0.3	0.3
Air Compressor	0.6	2.5	4.8	0.0	0.4	0.4	0.4
Welding Machine	0.6	2.5	4.8	0.0	0.4	0.4	0.4
Generator	0.3	1.2	2.4	0.0	0.2	0.2	0.2
Material Truck (1)	1.5	5.1	22.2	0.0	0.8	0.8	0.7
Fugitive Dust	---	---	---	---	44.0	21.5	4.5
Subtotal	7.5	33.7	103.9	0.1	48.3	25.9	8.5
Backland Improvements							
Paving Machine	0.4	1.6	8.8	0.0	0.2	0.2	0.2
Water Truck - 5000 Gallons	0.5	3.3	6.5	0.0	0.3	0.3	0.3
Compactive Roller	1.2	7.9	15.3	0.0	0.7	0.7	0.6
Scraper	0.8	3.2	17.2	0.0	0.4	0.4	0.4
Grader	0.4	1.5	7.9	0.0	0.2	0.2	0.2
Loader	0.5	1.7	9.5	0.0	0.2	0.2	0.2
Backhoe	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Bulldozer - D6	0.6	3.9	7.7	0.0	0.3	0.3	0.3
Haul Truck - Paving (1)	1.0	3.3	14.4	0.0	0.5	0.5	0.5
Haul Truck - Base (1)	0.5	1.6	7.0	0.0	0.2	0.2	0.2
Semi Truck (1)	0.6	2.1	9.2	0.0	0.3	0.3	0.3
Fugitive Dust	---	---	---	---	66.0	32.3	6.7
Subtotal	7.1	33.9	110.8	0.1	69.8	36.1	10.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.84. Daily Emissions for Existing Cranes Removal at Berth 136 - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Existing Crane Removal							
Crane - 50 ton	0.8	3.2	17.3	0.0	0.4	0.4	0.4
Winch	0.3	1.2	6.7	0.0	0.2	0.2	0.1
Tugboat	2.0	4.3	52.1	0.1	2.7	2.7	2.5
Tugboat	0.7	1.5	17.7	0.0	0.9	0.9	0.9
Subtotal	3.8	10.3	93.8	0.1	4.2	4.2	3.9

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.85. Daily Emissions for Construction of Harry Bridges Boulevard Buffer - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Landscape Installation							
Backhoe - 416D	2.4	13.2	23.0	0.0	1.6	1.6	1.5
Dump Truck - 12 CY (1)	0.3	1.0	4.6	0.0	0.2	0.2	0.1
Dump Truck - 12 CY	0.1	0.3	1.6	0.0	0.0	0.0	0.0
Loader - 938G	0.6	3.8	7.4	0.0	0.3	0.3	0.3
Trencher	0.8	4.5	7.9	0.0	0.5	0.5	0.5
Material Truck (1)	0.3	1.0	4.2	0.0	0.2	0.2	0.1
Water Truck - 5,000 Gallons	0.8	2.9	15.7	0.0	0.4	0.4	0.4
Fugitive Dust	---	---	---	---	22.0	10.8	2.2
Subtotal	5.2	26.7	64.5	0.1	25.2	14.0	5.2
Grading/Earthmoving							
Bulldozer - D9	0.9	3.3	17.7	0.0	0.4	0.4	0.4
Compactor - CS431C	1.2	6.7	11.8	0.0	0.8	0.8	0.7
Dump Truck - 20 CY (1)	1.0	3.3	14.3	0.0	0.5	0.5	0.5
Dump Truck - 12 CY	0.2	1.0	5.1	0.0	0.1	0.1	0.1
Fugitive Dust	---	---	---	---	88.0	43.0	9.0
Grader - 140H	0.6	3.9	7.7	0.0	0.3	0.3	0.3
Loader - 938G	1.8	11.4	22.3	0.0	1.0	1.0	0.9
Scraper - 637E	2.7	10.2	55.0	0.1	1.3	1.3	1.2
Water Truck - 5,000 Gallons	0.8	2.9	15.7	0.0	0.4	0.4	0.4
Subtotal	9.1	42.7	149.5	0.2	93.0	48.0	13.5

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.86. Daily Emissions for Crane Installation at Berth 136 & Berth 144 - Berths 136-147 Project Phase 1 (2012).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Install Cranes at Berth 136 & Berth 144							
Crane - 50 ton	0.8	3.2	17.3	0.0	0.4	0.4	0.4
Winch	0.3	1.2	6.7	0.0	0.2	0.2	0.1
Cargo Ship - Transit - Crane Delivery (1)	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Tugboat - Vessel Assist	1.0	2.3	27.6	0.0	1.4	1.4	1.3
Cargo Ship - Hotelling (1)	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Subtotal	44.3	108.7	1240.9	674.9	92.2	92.2	86.4

Note: (1) See Table C1-XX for a summary of the associated activity data. Arrival/departure would not occur on the same day.

Table D1.1.87. Mitigated Peak Daily Emissions from Berths 136-147 Terminal Project Proposed Project Phase 1-Mitiagted Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Wharf Demolition	5.6	19.1	110.2	0.1	4.7	4.7	4.4
Remove 2 Existing Cranes at Berth 144	3.8	10.3	93.8	0.1	4.2	4.2	3.9
Piledriving-Sheet Piles	44.2	107.8	1,239.7	674.9	92.4	92.4	86.5
Rip-Rap Placement	38.8	212.2	401.0	0.4	25.7	25.7	23.6
Dredge and Disposal	11.8	48.3	208.9	0.2	6.0	6.0	5.5
Piledriving-Waterside Piles	5.8	20.0	98.0	0.1	3.3	3.3	3.0
Piledriving-Landside Piles	6.5	24.0	104.9	0.1	3.5	3.5	3.2
Replace Existing Wharf	15.5	66.2	284.5	0.3	8.2	8.2	7.5
Upgrade Existing Wharf	7.4	29.3	107.5	0.1	4.0	4.0	3.7
Install 3 Cranes at Berth 144	36.5	95.1	991.3	539.9	73.8	73.8	69.2
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	2.7	11.2	33.0	0.0	12.6	7.0	2.6
Construct New Main Gate	1.1	6.4	13.1	0.0	22.6	11.4	2.8
Improve/Pave Demolished Areas and Parking	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing Administration Building and Gate	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Construct a New Maintenance and Repair Facility-Berths 136-149							
Construct Maintenance and Repair Facility	3.0	13.0	36.9	0.0	34.8	17.9	5.0
Improve/Pave Demolished Areas and M&R	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing M&R Facility	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Harry Bridges Blvd. Realignment							
Street Removals	7.3	34.4	127.9	0.1	25.9	14.6	5.8
Street Improvements	24.0	92.3	346.0	0.5	23.7	18.0	12.8
Sewer Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Water Systems Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Storm Drain Installation	3.9	19.7	57.3	0.1	2.2	2.2	2.0
Construction of a 46-Acre Rail Yard at Berth 200	7.5	33.7	103.9	0.1	48.3	25.9	8.5
9 Acres of Backland Improvements at Berts 134-135	7.1	33.9	110.8	0.1	47.8	25.3	8.0
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	2.6	12.9	40.4	0.1	1.4	1.4	1.3
Rail Yard Construction	7.5	33.7	103.9	0.1	48.3	25.9	8.5
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Existing Cranes Removal at Berth 136	3.8	10.3	93.8	0.1	4.2	4.2	3.9
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	5.2	26.7	64.5	0.1	25.2	14.0	5.2
Grading/Earthmoving	9.1	42.7	149.5	0.2	93.0	48.0	13.5
Install Cranes at Berth 136 & Berth 144	44.3	108.7	1,240.9	674.9	92.2	92.2	86.4
Commuting of Workers (1)	4.1	49.0	4.5	0.2	31.2	30.2	27.9
Mitigated Peak Daily Emissions (2) (3)	74	299	1,459	541	341	205	97
Mitigated Peak Daily Emissions - NFAB	56	262	783	1	306	171	65
NEPA Impact	18	37	676	540	35	34	32
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	55

Notes: (1)The Urbemis model was used to produced emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: upgrade of exisiting wharf, installation of 3 cranes at Berth 144, construction of a new main gate, construction of a new maintenance and repair facility, sewer installation with the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, 5 acres of backland improvements at Berths 134-135, landscape installation at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the following activities: rip-rap placement for wharf improvements at Berths 144-147, 78-acre backland improvements at Berths 142-147, construction of new administration building, construction of new maintenance and repair facility, street removals at Harry Bridges Blvd., construction of a 46-acre railyard at Berth 200, grading/earthmoving for the new Harry Bridges Blvd landscaped area, and commuting of workers.

Table D1.1.88. Hourly Emissions for Wharf Improvements at Berths 144-147 - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010) (Pg 1 of 3).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Demolition							
Air Compressor	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Crane - 220-Ton Manitowoc 888	0.1	0.3	1.8	0.0	0.0	0.0	0.0
Derrick Barge							
Excavator - Cat 345B	0.1	0.3	1.6	0.0	0.0	0.0	0.0
Forklift	0.1	0.4	0.7	0.0	0.0	0.0	0.0
Generator	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Haul Truck - Demolished Materials (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Tugboat							
Vibratory Hammer	0.0	0.1	0.3	0.0	0.0	0.0	0.0
Subtotal	0.4	1.7	6.3	0.0	0.2	0.2	0.2
Remove 2 Existing Cranes at Berth 144							
Crane - 50 ton	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Winch	0.1	0.3	1.7	0.0	0.0	0.0	0.0
Tugboat							
Tugboat							
Subtotal	0.2	0.7	3.8	0.0	0.1	0.1	0.1
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Tugboat							
Cargo Ship - Transit - Sheetpile Delivery							
Tugboat - Cargo Vessel Assist							
Cargo Ship - Hotelling							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement							
Barge - Generator							
Barge - Generator							
Barge - Deck Winch							
Barge - Main Hoist							
Tracked Loader - Cat 973	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Tugboat - Generator							
Tugboat - Main Engines							
Subtotal	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Dredge and Disposal							
Derrick Barge - Crane Hoist							
Derrick Barge - Deck Winch							
Derrick Barge - Generator							
Derrick Barge - Generator							
Haul Trucks - Berth 205 to Anch. Rd. (1)	0.4	0.8	2.3	0.0	0.1	0.1	0.1
Loader - 962G - Anchorage Rd.	0.1	0.2	1.1	0.0	0.0	0.0	0.0
Tug Boat - Transport Barge to Berth 205							
Subtotal	0.5	1.0	3.4	0.0	0.1	0.1	0.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.89. Hourly Emissions for Wharf Improvements at Berths 144-147 - Berths 136-149 Terminal Project

Proposed Project Phase 1-Mitiagted (2007-2010) (Pg 2 of 3).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Haul Trucks - Pile Deliveries (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Jet Pump							
Tugboat							
Subtotal	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	0.1	0.3	1.8	0.0	0.0	0.0	0.0
Forklift	0.1	0.4	0.7	0.0	0.0	0.0	0.0
Generator - Pile Hammer							
Jet Pump							
Haul Trucks - Pile Deliveries (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Subtotal	0.2	0.8	2.6	0.0	0.1	0.1	0.1
Replace Existing Wharf							
Air Compressor - 185 CFM	0.1	0.3	0.5	0.0	0.0	0.0	0.0
Air Compressor - 750 CFM	0.1	0.4	2.0	0.0	0.0	0.0	0.0
Air Compressor - 825 CFM	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Air Compressor - 900 CFM	0.1	0.4	2.3	0.0	0.1	0.1	0.1
Bulldozer - D6	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Bulldozer - D8	0.1	0.3	1.7	0.0	0.0	0.0	0.0
Concrete Boom Pump	0.0	0.2	0.4	0.0	0.0	0.0	0.0
Concrete Trucks (1)	0.4	0.7	2.1	0.0	0.1	0.1	0.1
Crane - 220-Ton Manitowoc 888	0.1	0.3	1.8	0.0	0.0	0.0	0.0
Crane - 275-Ton Manitowoc 999	0.7	2.6	14.1	0.0	0.3	0.3	0.3
Crane - Manitowoc 4000	0.1	0.4	1.9	0.0	0.0	0.0	0.0
Crew Boat							
Excavator - Cat 345B	0.1	0.3	1.6	0.0	0.0	0.0	0.0
Excavator w/ Ram -Komatso PC 220 LC5	0.1	0.6	1.1	0.0	0.0	0.0	0.0
Flat Bed	0.0	0.1	0.4	0.0	0.0	0.0	0.0
Forklift - Cat 200	0.2	1.1	2.2	0.0	0.1	0.1	0.1
Generator	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Haul Trucks - Material Deliveries (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Subtotal	2.3	9.0	36.7	0.0	1.1	1.1	1.0

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.90. Hourly Emissions for Wharf Improvements at Berths 144-147 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010) (Pg 3 of 3).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Upgrade Existing Wharf							
Crane - 220-Ton Manitowoc 888	0.1	0.3	1.8	0.0	0.0	0.0	0.0
Compressor	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Concrete Boom Pump	0.0	0.2	0.4	0.0	0.0	0.0	0.0
Concrete Trucks	0.3	0.5	1.6	0.0	0.1	0.1	0.1
Excavator w/ Ram -Komatso PC 220 LC5	0.1	0.6	1.1	0.0	0.0	0.0	0.0
Forklift - Cat 200	0.1	0.4	0.7	0.0	0.0	0.0	0.0
Generator	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Material Truck (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	0.7	2.6	7.5	0.0	0.3	0.3	0.3
Install 3 Cranes at Berth 144							
Crane - 50 ton	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Winch	0.1	0.3	1.7	0.0	0.0	0.0	0.0
Cargo Ship - Transit - Crane Delivery							
Tugboat - Cargo Vessel Assist							
Cargo Ship - Hotelling							
Subtotal	0.2	0.7	3.8	0.0	0.1	0.1	0.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.91. Hourly Emissions for 89 Acres of Backland Improvements at Berths 142-147 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Building Demolition							
Bulldozer	0.2	0.6	3.4	0.0	0.1	0.1	0.1
Backhoe	0.1	1.0	1.9	0.0	0.1	0.1	0.1
Loader	0.2	0.7	3.6	0.0	0.1	0.1	0.1
Crane w/Wrecking Ball	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Haul Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Building Demolition	---	---	---	---	9.5	4.6	1.0
Subtotal	0.6	2.5	10.0	0.0	9.7	4.9	1.2
Backland Improvements							
Paving Machine	0.1	0.2	1.1	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Compactive Roller	0.2	1.0	1.9	0.0	0.1	0.1	0.1
Scraper	0.1	0.4	2.1	0.0	0.1	0.1	0.0
Grader	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Loader	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Backhoe	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Bulldozer - D6	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Haul Truck - Paving (1)	0.1	0.1	0.4	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	8.3	4.0	0.8
Subtotal	0.8	3.6	10.8	0.0	8.6	4.4	1.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.92. Hourly Emissions to Construct a New Administration Building, Main Gate, and Worker Parking Lot - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Administration Building							
Air Compressor - 100 CFM	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Concrete/Industrial Saw	0.1	0.4	0.8	0.0	0.1	0.1	0.0
Crane	0.0	0.1	0.6	0.0	0.0	0.0	0.0
Forklift	0.1	0.3	0.6	0.0	0.0	0.0	0.0
Generator	0.0	0.1	0.3	0.0	0.0	0.0	0.0
Concrete Trucks (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Supply Trucks (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	1.4	0.7	0.1
Subtotal	0.3	1.3	2.8	0.0	1.5	0.8	0.3
Construct New Main Gate							
Air Compressor - 185 CFM	0.1	0.3	0.5	0.0	0.0	0.0	0.0
Backhoe	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Compactive Roller	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Generator	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Concrete Trucks (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haul Trucks (1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	2.8	1.3	0.3
Subtotal	0.3	1.8	3.4	0.0	2.9	1.5	0.4
Improve/Pave Demolished Areas and Parking Lot							
Paving Machine	0.1	0.2	1.1	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Compactive Roller	0.2	1.0	1.9	0.0	0.1	0.1	0.1
Scraper	0.1	0.4	2.1	0.0	0.1	0.1	0.0
Grader	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Loader	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Backhoe	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Bulldozer - D6	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Haul Truck - Paving (1)	0.1	0.1	0.4	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	6.9	3.4	0.7
Subtotal	0.8	3.6	10.8	0.0	7.2	3.7	1.0
Demolish Existing Admin. Bldg. and Gate							
Backhoe	0.1	1.0	1.9	0.0	0.1	0.1	0.1
Bulldozer	0.2	0.6	3.4	0.0	0.1	0.1	0.1
Crane w/Wrecking Ball	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Loader	0.2	0.7	3.6	0.0	0.1	0.1	0.1
Haul Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Building Demolition	---	---	---	---	9.5	4.6	1.0
Subtotal	0.6	2.5	10.0	0.0	9.7	4.9	1.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.93. Hourly Emissions for Construction of a New Maintenance and Repair Facility - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Construct Maintenance and Repair Facility							
Air Compressor - 100 CFM	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Concrete/Industrial Saw	0.1	0.4	0.8	0.0	0.1	0.1	0.0
Crane	0.0	0.1	0.6	0.0	0.0	0.0	0.0
Generator	0.0	0.1	0.3	0.0	0.0	0.0	0.0
Rough Terrain Forklift	0.1	0.3	0.6	0.0	0.0	0.0	0.0
Concrete Trucks (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Supply Trucks (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	4.1	2.0	0.4
Subtotal	0.3	1.3	2.8	0.0	4.3	2.2	0.6
Improve/Pave Demolished Areas and M&R Area							
Paving Machine	0.1	0.2	1.1	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Compactive Roller	0.2	1.0	1.9	0.0	0.1	0.1	0.1
Scraper	0.1	0.4	2.1	0.0	0.1	0.1	0.0
Grader	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Loader	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Backhoe	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Bulldozer - D6	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Haul Truck - Paving (1)	0.1	0.1	0.4	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	6.9	3.4	0.7
Subtotal	0.8	3.6	10.8	0.0	7.2	3.7	1.0
Demolish Existing M&R Facility							
Backhoe	0.1	1.0	1.9	0.0	0.1	0.1	0.1
Bulldozer	0.2	0.6	3.4	0.0	0.1	0.1	0.1
Crane w/Wrecking Ball	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Loader	0.2	0.7	3.6	0.0	0.1	0.1	0.1
Haul Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Building Demolition	---	---	---	---	9.5	4.6	1.0
Subtotal	0.6	2.5	10.0	0.0	9.7	4.9	1.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.94. Hourly Emissions for Harry Bridges Blvd. Realignment - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Street Removals							
Backhoe - 416D	0.0	0.3	0.5	0.0	0.0	0.0	0.0
Bulldozer - D9	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Dump Truck - 16 CY (1)	0.5	1.8	9.8	0.0	0.2	0.2	0.2
Fugitive Dust	---	---	---	---	2.8	1.3	0.3
Loader - 938G	0.1	1.0	1.9	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.8	1.6	0.0	0.1	0.1	0.1
Subtotal	0.9	4.3	16.0	0.0	3.2	1.8	0.7
Street Improvements							
Asphalt Spreader - BG 240C	0.2	1.1	2.1	0.0	0.1	0.1	0.1
Concrete Truck - 9 CY (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Concrete Truck - 9 CY	0.4	1.4	7.6	0.0	0.2	0.2	0.2
Fugitive Dust (1)	---	---	---	---	1.4	0.7	0.1
Grader - 14H	0.1	0.4	2.4	0.0	0.1	0.1	0.1
Haul Truck - Base (1)	0.8	1.5	4.3	0.0	0.2	0.2	0.1
Haul Truck - Paving (1)	0.5	0.9	2.5	0.0	0.1	0.1	0.1
Loader - 938G	0.1	1.0	1.9	0.0	0.1	0.1	0.1
Oil Truck	0.1	0.2	1.3	0.0	0.0	0.0	0.0
Vibratory Compactor - CB 355D	0.2	1.1	2.0	0.0	0.1	0.1	0.1
Subtotal	2.4	7.6	24.2	0.0	2.2	1.5	0.9
Sewer Installation							
Backhoe - 416D	0.0	0.3	0.5	0.0	0.0	0.0	0.0
Dump Truck - 16 CY (1)	0.0	0.2	0.8	0.0	0.0	0.0	0.0
Excavator Compactor - 320C	0.1	0.6	1.2	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Subtotal	0.2	1.5	3.3	0.0	0.1	0.1	0.1
Water Systems Installation							
Backhoe - 416D	0.0	0.3	0.5	0.0	0.0	0.0	0.0
Dump Truck - 16 CY (1)	0.0	0.2	0.8	0.0	0.0	0.0	0.0
Excavator Compactor - 320C	0.1	0.6	1.2	0.0	0.1	0.1	0.1
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Subtotal	0.2	1.5	3.3	0.0	0.1	0.1	0.1
Storm Drain Installation							
Backhoe - 416D	0.0	0.3	0.5	0.0	0.0	0.0	0.0
Concrete Truck - 9 CY (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Concrete Truck - 9 CY	0.4	1.4	7.4	0.0	0.2	0.2	0.2
Dump Truck - 16 CY	0.2	0.6	3.3	0.0	0.1	0.1	0.1
Excavator Compactor - 320C	0.1	0.6	1.2	0.0	0.1	0.1	0.1
Pipelayer - 561M	0.1	0.4	0.7	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Subtotal	0.8	3.7	13.9	0.0	0.4	0.4	0.4

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.95. Hourly Emissions for Construction of a 46-Acre Rail Yard at Berth 200 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Crane	0.1	0.4	2.1	0.0	0.1	0.1	0.0
Loader	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Paving Machine	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Grader	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Backhoe	0.1	0.6	1.0	0.0	0.1	0.1	0.1
Roller	0.1	0.4	0.6	0.0	0.0	0.0	0.0
Air Compressor	0.1	0.3	0.6	0.0	0.1	0.1	0.0
Welding Machine	0.1	0.3	0.6	0.0	0.1	0.1	0.0
Generator	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Material Truck (1)	0.1	0.2	0.6	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	5.5	2.7	0.6
Subtotal	0.9	3.8	10.8	0.0	6.0	3.2	1.0

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idlin

Table D1.1.96. Hourly Emissions for 5 Acres of Backland Improvements at Berths 134-135 - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	0.1	0.2	1.1	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Compactive Roller	0.2	1.0	1.9	0.0	0.1	0.1	0.1
Scraper	0.1	0.4	2.1	0.0	0.1	0.1	0.0
Grader	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Loader	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Backhoe	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Bulldozer - D6	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Haul Truck - Paving (1)	0.1	0.1	0.4	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	5.5	2.7	0.6
Subtotal	0.8	3.6	10.8	0.0	5.9	3.1	0.9

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.97. Hourly Emissions for Construction of the Berths 142-147 12-Acre ICTF and Associated 19-Acre Backlands - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Rail Track Removal							
Forklift	0.2	1.0	1.9	0.0	0.1	0.1	0.1
Mobile Crane	0.1	0.4	2.0	0.0	0.0	0.0	0.0
Haul Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Subtotal	0.3	1.4	4.1	0.0	0.1	0.1	0.1
Rail Yard Construction							
Crane	0.1	0.4	2.1	0.0	0.1	0.1	0.0
Loader	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Paving Machine	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Grader	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Backhoe	0.1	0.6	1.0	0.0	0.1	0.1	0.1
Roller	0.1	0.4	0.6	0.0	0.0	0.0	0.0
Air Compressor	0.1	0.3	0.6	0.0	0.1	0.1	0.0
Welding Machine	0.1	0.3	0.6	0.0	0.1	0.1	0.0
Generator	0.0	0.2	0.3	0.0	0.0	0.0	0.0
Material Truck (1)	0.1	0.2	0.6	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	5.5	2.7	0.6
Subtotal	0.9	3.8	10.8	0.0	6.0	3.2	1.0
Backland Improvements							
Paving Machine	0.1	0.2	1.1	0.0	0.0	0.0	0.0
Water Truck - 5000 Gallons	0.1	0.4	0.8	0.0	0.0	0.0	0.0
Compactive Roller	0.2	1.0	1.9	0.0	0.1	0.1	0.1
Scraper	0.1	0.4	2.1	0.0	0.1	0.1	0.0
Grader	0.0	0.2	1.0	0.0	0.0	0.0	0.0
Loader	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Backhoe	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Bulldozer - D6	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Haul Truck - Paving (1)	0.1	0.1	0.4	0.0	0.0	0.0	0.0
Haul Truck - Base (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Semi Truck (1)	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	8.3	4.0	0.8
Subtotal	0.8	3.6	10.8	0.0	8.6	4.4	1.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.98. Hourly Emissions for Existing Cranes Removal at Berth 136 - Berths 136-149 Terminal Project
Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Existing Crane Removal							
Crane - 50 ton	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Winch	0.1	0.3	1.7	0.0	0.0	0.0	0.0
Tugboat							
Tugboat							
Subtotal	0.2	0.7	3.8	0.0	0.1	0.1	0.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.99. Hourly Emissions for Construction of Harry Bridges Boulevard Buffer - Berths 136-149 Terminal Project Proposed Project Phase 1-Mitiagted (2007-2010).

Construction Activity/Equipment Type	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Landscape Installation							
Backhoe - 416D	0.3	1.6	2.9	0.0	0.2	0.2	0.2
Dump Truck - 12 CY (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Dump Truck - 12 CY	0.3	1.2	6.5	0.0	0.2	0.2	0.1
Loader - 938G	0.1	0.5	0.9	0.0	0.0	0.0	0.0
Trencher	0.1	0.6	1.0	0.0	0.1	0.1	0.1
Material Truck (1)	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Water Truck - 5,000 Gallons	0.1	0.5	2.6	0.0	0.1	0.1	0.1
Fugitive Dust	---	---	---	---	2.8	1.3	0.3
Subtotal	0.9	4.4	14.1	0.0	3.3	1.9	0.8
Grading/Earthmoving							
Bulldozer - D9	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Compactor - CS431C	0.2	1.1	2.0	0.0	0.1	0.1	0.1
Dump Truck - 20 CY (1)	0.1	0.1	0.3	0.0	0.0	0.0	0.0
Dump Truck - 12 CY	1.0	3.8	20.5	0.0	0.5	0.5	0.5
Fugitive Dust	---	---	---	---	11.0	5.4	1.1
Grader - 140H	0.1	0.5	1.0	0.0	0.0	0.0	0.0
Loader - 938G	0.2	1.4	2.8	0.0	0.1	0.1	0.1
Scraper - 637E	0.4	1.7	9.2	0.0	0.2	0.2	0.2
Water Truck - 5,000 Gallons	0.1	0.5	2.6	0.0	0.1	0.1	0.1
Subtotal	2.2	9.5	40.4	0.0	12.2	6.5	2.2

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.100. Hourly Emissions for Crane Installation at Berth 136 & Berth 144 - Berths 136-147 Project Phase 1 (2012).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Install Cranes at Berth 136 & Berth 144							
Crane - 50 ton	0.1	0.4	2.2	0.0	0.1	0.1	0.0
Winch	0.1	0.3	1.7	0.0	0.0	0.0	0.0
Cargo Ship - Transit - Crane Delivery (1)							
Tugboat - Vessel Assist							
Cargo Ship - Hotelling (1)							
Subtotal	0.2	0.7	3.8	0.0	0.1	0.1	0.1

Note: (1) See Table C1-XX for a summary of the associated activity data. Arrival/departure would not occur on the same day.

Table D1.1.101. Mitigated Peak Hourly Emissions from Berths 136-147 Terminal Project Proposed Project Phase 1-Mitiagted Construction Activities (2007-2010) .

Construction Project/Activity (2)	Pounds Per Hour						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Wharf Demolition	0.4	1.7	6.3	0.0	0.2	0.2	0.2
Remove 2 Existing Cranes at Berth 144	0.2	0.7	3.8	0.0	0.1	0.1	0.1
Piledriving-Sheet Piles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement	0.1	0.2	1.2	0.0	0.0	0.0	0.0
Dredge and Disposal	0.5	1.0	3.4	0.0	0.1	0.1	0.1
Piledriving-Waterside Piles	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Piledriving-Landside Piles	0.2	0.8	2.6	0.0	0.1	0.1	0.1
Replace Existing Wharf	2.3	9.0	36.7	0.0	1.1	1.1	1.0
Upgrade Existing Wharf	0.7	2.6	7.5	0.0	0.3	0.3	0.3
Install 3 Cranes at Berth 144	0.2	0.7	3.8	0.0	0.1	0.1	0.1
89 Acres of Backland Improvement at Berths 142-147							
Building Demolition	0.6	2.5	10.0	0.0	9.7	4.9	1.2
Backland Improvements	0.8	3.6	10.8	0.0	8.6	4.4	1.2
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	0.3	1.3	2.8	0.0	1.5	0.8	0.3
Construct New Main Gate	0.3	1.8	3.4	0.0	2.9	1.5	0.4
Improve/Pave Demolished Areas and Parking	0.8	3.6	10.8	0.0	7.2	3.7	1.0
Demolish Existing Administration Building and Gate	0.6	2.5	10.0	0.0	9.7	4.9	1.2
Construct a New Maintenance and Repair Facility-Berths 136-149							
Construct Maintenance and Repair Facility	0.3	1.3	2.8	0.0	4.3	2.2	0.6
Improve/Pave Demolished Areas and M&R	0.8	3.6	10.8	0.0	7.2	3.7	1.0
Demolish Existing M&R Facility	0.6	2.5	10.0	0.0	9.7	4.9	1.2
Harry Bridges Blvd. Realignment							
Street Removals	0.9	4.3	16.0	0.0	3.2	1.8	0.7
Street Improvements	2.4	7.6	24.2	0.0	2.2	1.5	0.9
Sewer Installation	0.2	1.5	3.3	0.0	0.1	0.1	0.1
Water Systems Installation	0.2	1.5	3.3	0.0	0.1	0.1	0.1
Storm Drain Installation	0.8	3.7	13.9	0.0	0.4	0.4	0.4
Construction of a 46-Acre Rail Yard at Berth 200	0.9	3.8	10.8	0.0	6.0	3.2	1.0
5 Acres of Backland Improvements at Berts 134-135	0.8	3.6	10.8	0.0	5.9	3.1	0.9
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	0.3	1.4	4.1	0.0	0.1	0.1	0.1
Rail Yard Construction	0.9	3.8	10.8	0.0	6.0	3.2	1.0
Backland Improvements	0.8	3.6	10.8	0.0	8.6	4.4	1.2
Existing Cranes Removal at Berth 136	0.2	0.7	3.8	0.0	0.1	0.1	0.1
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	0.9	4.4	14.1	0.0	3.3	1.9	0.8
Grading/Earthmoving	2.2	9.5	40.4	0.0	12.2	6.5	2.2
Install Cranes at Berth 136 & Berth 144	0.2	0.7	3.8	0.0	0.1	0.1	0.1
Peak Hourly Emissions (1)	9	36	128	0	36	20	7

Notes: (1) Peak CO, ROG, SOx, and PM emissions assumed to occur from same activities that produce peak NOx and PM10 emissions.

(2) Does not include data for any activities that occur in the water

Table D1.1.102. Daily Emissions for the 10-Acre Northwest Slip Fill - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Day						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Dredge Dike Toe							
Derrick Barge Crane Hoist	0.9	13.7	4.0	0.1	0.2	0.2	0.2
Deck Winch	0.2	2.9	0.9	0.0	0.0	0.0	0.0
Generator	0.9	12.6	3.7	0.1	0.2	0.2	0.2
Generator	0.1	2.9	0.3	0.0	0.0	0.0	0.0
Tug Boat - Transport Barge to Pier 400	3.2	7.0	83.7	0.1	4.3	4.3	4.1
Subtotal	5.3	39.1	92.6	0.3	4.8	4.8	4.5
Rip-Rap Placement							
Barge - Generator	0.1	3.6	1.7	0.0	0.0	0.0	0.0
Barge - Generator	0.2	2.8	0.8	0.0	0.0	0.0	0.0
Barge - Deck Winch	0.1	4.0	1.9	0.0	0.0	0.0	0.0
Barge - Main Hoist	0.2	3.4	1.0	0.0	0.1	0.1	0.1
Tracked Loader - Cat 973	0.1	2.1	0.6	0.0	0.0	0.0	0.0
Tugboat - Generator	0.3	9.3	4.3	0.0	0.0	0.0	0.0
Tugboat - Main Engines	21.5	47.3	567.1	0.9	29.4	29.4	27.5
Subtotal	22.5	72.5	577.3	0.9	29.6	29.6	27.7
Channel Dredging							
Derrick Hoist - Hydraulic Dredge	0.1	1.4	0.4	0.0	0.0	0.0	0.0
Derrick Winch - Hydraulic Dredge	0.0	0.4	0.2	0.0	0.0	0.0	0.0
Anchor Barge Winch - Hydraulic Dredge	0.1	1.0	0.3	0.0	0.0	0.0	0.0
Generator - Hydraulic Dredge	0.1	1.7	0.5	0.0	0.0	0.0	0.0
Tug Boat - Hydraulic Dredge	1.1	15.5	39.8	0.1	0.3	0.3	0.3
Tug Boat - Hydraulic Dredge	0.9	12.8	3.8	0.1	0.2	0.2	0.2
Subtotal	2.2	32.8	44.9	0.2	0.6	0.6	0.6
Disposal into Dike							
Booster Pump	2.0	29.2	74.9	0.1	0.6	0.6	0.6
Bulldozer - D8	0.4	5.4	1.6	0.0	0.1	0.1	0.1
Tug Boat - Sediment Transport to Site	69.8	153.5	1,842.1	2.8	95.5	95.5	89.4
Subtotal	72.2	188.1	1,918.6	3.0	96.2	96.2	90.1

Table D1.1.103. Daily Emissions for 10 Acres of Backland Improvements at Berth 131 - Berths 136-147
Proposed Project Phase 2 (2015).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	0.1	1.6	0.5	0.0	0.0	0.0	0.0
Water Truck	0.2	2.6	0.8	0.0	0.0	0.0	0.0
Compactive Roller	0.2	7.9	0.8	0.0	0.0	0.0	0.0
Scraper	0.2	3.2	0.9	0.0	0.1	0.1	0.0
Grader	0.1	1.5	0.4	0.0	0.0	0.0	0.0
Loader	0.1	1.7	0.5	0.0	0.0	0.0	0.0
Backhoe	0.1	3.8	0.4	0.0	0.0	0.0	0.0
Bulldozer - D6	0.1	3.9	0.4	0.0	0.0	0.0	0.0
Haul Truck - Paving (1)	0.5	2.1	5.7	0.0	0.2	0.2	0.2
Haul Truck - Base (1)	0.2	1.0	2.7	0.0	0.1	0.1	0.1
Semi Truck (1)	0.3	1.3	3.5	0.0	0.1	0.1	0.1
Fugitive Dust	---	---	---	---	44.0	21.5	4.5
Subtotal	2.1	30.6	16.6	0.1	44.7	22.2	5.1

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.104. Daily Emissions for Berth 136 Wharf Extension - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Day						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist	0.1	1.1	0.3	0.0	0.0	0.0	0.0
Generator - Pile Hammer	0.1	5.4	0.5	0.0	0.0	0.0	0.0
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Cargo Ship - Transit - Sheetpile Delivery	35.0	78.1	938.9	510.9	76.0	76.0	71.2
Tugboat - Cargo Vessel Assist	1.0	2.3	27.6	0.0	1.4	1.4	1.3
Cargo Ship - Hotelling	7.1	23.9	250.4	163.9	14.2	14.2	13.3
Subtotal	43.6	111.4	1,224.4	674.9	92.0	92.0	86.2
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist	0.1	1.1	0.3	0.0	0.0	0.0	0.0
Generator - Pile Hammer	0.1	1.8	0.5	0.0	0.0	0.0	0.0
Haul Trucks - Pile Deliveries (1)	1.8	7.9	20.9	0.1	0.8	0.8	0.7
Jet Pump	0.2	2.8	0.8	0.0	0.0	0.0	0.0
Tugboat	0.2	0.5	6.5	0.0	0.3	0.3	0.3
Subtotal	2.5	14.3	29.2	0.1	1.2	1.2	1.1
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	0.2	2.7	0.8	0.0	0.0	0.0	0.0
Forklift	0.1	2.8	1.3	0.0	0.0	0.0	0.0
Generator - Pile Hammer	0.1	1.8	0.5	0.0	0.0	0.0	0.0
Jet Pump	0.2	2.8	0.8	0.0	0.0	0.0	0.0
Haul Trucks - Pile Deliveries (1)	1.9	8.2	21.7	0.1	0.8	0.8	0.7
Subtotal	2.5	18.4	25.1	0.1	0.9	0.9	0.9
Dike Filling							
Loader - 950G	0.2	2.9	0.9	0.0	0.0	0.0	0.0
Haul Trucks - Fill (1)	0.8	3.4	9.5	0.0	0.3	0.3	0.3
Subtotal	1.0	6.3	10.4	0.0	0.3	0.3	0.3
Wharf Construction							
Air Compressor - 185 CFM	0.1	2.3	1.0	0.0	0.0	0.0	0.0
Air Compressor - 750 CFM	0.2	2.9	0.9	0.0	0.0	0.0	0.0
Air Compressor - 825 CFM	0.2	3.3	1.0	0.0	0.1	0.1	0.0
Air Compressor - 900 CFM	0.2	3.4	1.0	0.0	0.1	0.1	0.1
Bulldozer - D6	0.1	3.9	0.4	0.0	0.0	0.0	0.0
Bulldozer - D8	0.2	2.5	0.7	0.0	0.0	0.0	0.0
Concrete Boom Pump	0.0	1.5	0.7	0.0	0.0	0.0	0.0
Concrete Trucks (1)	4.8	20.9	57.7	0.2	1.9	1.9	1.7
Crane - 220-Ton Manitowoc 888	0.2	2.7	0.8	0.0	0.0	0.0	0.0
Crane - 275-Ton Manitowoc 999	1.4	21.0	6.2	0.1	0.3	0.3	0.3
Crane - Manitowoc 4000	0.2	2.8	0.8	0.0	0.0	0.0	0.0
Crew Boat	0.2	0.4	5.2	0.0	0.3	0.3	0.3
Excavator - Cat 345B	0.2	2.4	0.7	0.0	0.0	0.0	0.0
Excavator w/ Ram -Komatso PC 220 LC5	0.1	4.5	0.4	0.0	0.0	0.0	0.0
Flat Bed	0.0	0.3	0.1	0.0	0.0	0.0	0.0
Forklift - Cat 200	0.2	6.7	0.7	0.0	0.0	0.0	0.0
Generator	0.1	1.6	1.7	0.0	0.0	0.0	0.0
Haul Trucks - Material Deliveries (1)	0.1	0.3	0.9	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.1	1.3	0.4	0.0	0.0	0.0	0.0
Subtotal	8.6	84.7	81.2	0.4	3.0	3.0	2.8

Notes: (1) Within construction site area, assuming 1 mile of tra

Table D1.1.105. Mitigated Peak Daily Emissions from Berths 136-147 Terminal Proposed Project Phase 2 Construction Activities (2015) .

Construction Proposed Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
10-Acre Northwest Slip Fill							
Dredge Dike Toe	5.3	39.1	92.6	0.3	4.8	4.8	4.5
Rip-Rap Placement	22.5	72.5	577.3	0.9	29.6	29.6	27.7
Channel Dredging	2.2	32.8	44.9	0.2	0.6	0.6	0.6
Disposal into Dike	72.2	188.1	1,918.6	3.0	96.2	96.2	90.1
10-Acres of Backland Improvement at Berth 131	2.1	30.6	16.6	0.1	44.7	22.2	5.1
Berth 136 Wharf Extension							
Piledriving - Sheet Piles	43.6	111.4	1,224.4	674.9	92.0	92.0	86.2
Piledriving - Waterside Piles	2.5	14.3	29.2	0.1	1.2	1.2	1.1
Piledriving - Lanside Piles	2.5	18.4	25.1	0.1	0.9	0.9	0.9
Dike Filling	1.0	6.3	10.4	0.0	0.3	0.3	0.3
Wharf Construction	8.6	84.7	81.2	0.4	3.0	3.0	2.8
Peak Daily Emissions (1)	74	221	1,964	3	97	97	91
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	55

Notes: (1) Peak daily emissions of all criteria pollutants are assumed to occur from the following two simultaneous activities at the 10-acre Northwest slip fill: channel dredging and disposal into dike.

Table D1.1.106. Hourly Emissions for the 10-Acre Northwest Slip Fill - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Day						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Dredge Dike Toe							
Derrick Barge Crane Hoist							
Deck Winch							
Generator							
Generator							
Tug Boat - Transport Barge to Pier 400							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement							
Barge - Generator							
Barge - Generator							
Barge - Deck Winch							
Barge - Main Hoist							
Tracked Loader - Cat 973	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Tugboat - Generator							
Tugboat - Main Engine							
Subtotal	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Channel Dredging							
Derrick Hoist - Hydraulic Dredge							
Derrick Winch - Hydraulic Dredge							
Anchor Barge Winch - Hydraulic Dredge							
Generator - Hydraulic Dredge							
Tug Boat - Hydraulic Dredge							
Tug Boat - Hydraulic Dredge							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposal into Dike							
Booster Pump	0.1	1.2	3.1	0.0	0.0	0.0	0.0
Bulldozer - D8	0.0	0.7	0.2	0.0	0.0	0.0	0.0
Tug Boat - Sediment Transport to Site							
Subtotal	0.1	1.9	3.3	0.0	0.0	0.0	0.0

Table D1.1.107. Hourly Emissions for 10 Acres of Backland Improvements at Berth 131 - Berths 136-147
Proposed Project Phase 2 (2015).

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Backland Improvements							
Paving Machine	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Water Truck	0.0	0.3	0.1	0.0	0.0	0.0	0.0
Compactive Roller	0.0	1.0	0.1	0.0	0.0	0.0	0.0
Scraper	0.0	0.4	0.1	0.0	0.0	0.0	0.0
Grader	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Loader	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Backhoe	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Bulldozer - D6	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Haul Truck - Paving	0.0	0.1	0.2	0.0	0.0	0.0	0.0
Haul Truck - Base	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Semi Truck	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fugitive Dust	---	---	---	---	5.5	2.7	0.6
Subtotal	0.2	3.4	1.0	0.0	5.5	2.7	0.6

Notes: (1) Within construction site area, assuming 1 mile of transport @ 5mph and 5 minutes of idling mode for each truck round trip.

Table D1.1.108. Hourly Emissions for Berth 136 Wharf Extension - Berths 136-147 Proposed Project Phase 2 (2015).

	Pounds Per Day						
Construction Activity/Equipment Type	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Piledriving - Sheet Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Tugboat							
Cargo Ship - Transit - Sheetpile Delivery							
Tugboat - Cargo Vessel Assist							
Cargo Ship - Hotelling							
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Piledriving - Waterside Piles							
Derrick Barge Crane Hoist							
Generator - Pile Hammer							
Haul Trucks - Pile Deliveries	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Jet Pump							
Tugboat							
Subtotal	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Piledriving - Landside Piles							
Crane - 220-Ton Manitowoc 888	0.0	0.3	0.1	0.0	0.0	0.0	0.0
Forklift	0.0	0.4	0.2	0.0	0.0	0.0	0.0
Generator - Pile Hammer							
Jet Pump							
Haul Trucks - Pile Deliveries	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Subtotal	0.1	0.7	0.4	0.0	0.0	0.0	0.0
Dike Filling							
Loader - 950G	0.0	0.4	0.1	0.0	0.0	0.0	0.0
Haul Trucks - Fill	0.1	0.2	0.4	0.0	0.0	0.0	0.0
Subtotal	0.1	0.5	0.5	0.0	0.0	0.0	0.0
Wharf Construction							
Air Compressor - 185 CFM	0.0	0.3	0.1	0.0	0.0	0.0	0.0
Air Compressor - 750 CFM	0.0	0.4	0.1	0.0	0.0	0.0	0.0
Air Compressor - 825 CFM	0.0	0.4	0.1	0.0	0.0	0.0	0.0
Air Compressor - 900 CFM	0.0	0.4	0.1	0.0	0.0	0.0	0.0
Bulldozer - D6	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Bulldozer - D8	0.0	0.3	0.1	0.0	0.0	0.0	0.0
Concrete Boom Pump	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Concrete Trucks	0.3	0.8	2.2	0.0	0.0	0.0	0.0
Crane - 220-Ton Manitowoc 888	0.0	0.3	0.1	0.0	0.0	0.0	0.0
Crane - 275-Ton Manitowoc 999	0.2	2.6	0.8	0.0	0.0	0.0	0.0
Crane - Manitowoc 4000	0.0	0.4	0.1	0.0	0.0	0.0	0.0
Crew Boat							
Excavator - Cat 345B	0.0	0.3	0.1	0.0	0.0	0.0	0.0
Excavator w/ Ram -Komatso PC 220 LC5	0.0	0.6	0.1	0.0	0.0	0.0	0.0
Flat Bed	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Forklift - Cat 200	0.0	1.1	0.1	0.0	0.0	0.0	0.0
Generator	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Haul Trucks - Material Deliveries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Loader - Cat 966E	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Subtotal	0.8	9.1	4.4	0.0	0.1	0.1	0.1

Notes: (1) Within construction site area, assuming 1 mile of transpo

Table D1.1.109. Mitigated Peak Hourly Emissions from Berths 136-147 Terminal Proposed Project Phase 2 Construction Activities (2015) .

Construction Proposed Project/Activity (3)	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
10-Acre Northwest Slip Fill							
Dredge Dike Toe	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rip-Rap Placement	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Channel Dredging	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposal into Dike	0.1	1.9	3.3	0.0	0.0	0.0	0.0
10-Acres of Backland Improvement at Berth 131	0.2	3.4	1.0	0.0	5.5	2.7	0.6
Berth 136 Wharf Extension							
Piledriving - Sheet Piles	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Piledriving - Waterside Piles	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Piledriving - Lanside Piles	0.1	0.7	0.4	0.0	0.0	0.0	0.0
Dike Filling	0.1	0.5	0.5	0.0	0.0	0.0	0.0
Wharf Construction	0.8	9.1	4.4	0.0	0.1	0.1	0.1
Peak Hourly Emissions (1) (2)	1	9	4	0	6	3	1

Notes: (1) Peak CO, ROG, and SOx emissions assumed to occur from same activities that produce peak NOx emissions.

(2) Peak PM emissions assumed to occur from same activities that produce peak PM10 emissions.

(3) Does not include data for any activities that occur in the water

Table D1.1.110. Mitigated Peak Daily Emissions from Berths 136-147 Terminal Project NFAB Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	2.7	11.2	33.0	0.0	12.6	7.0	2.6
Construct New Main Gate	1.1	6.4	13.1	0.0	22.6	11.4	2.8
Improve/Pave Demolished Areas and Parking	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing Administration Building and Gate	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Construct a New Maintenance and Repair Facility-Berths 136-149							
Construct Maintenance and Repair Facility	3.0	13.0	36.9	0.0	34.8	17.9	5.0
Improve/Pave Demolished Areas and M&R	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing M&R Facility	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Harry Bridges Blvd. Realignment							
Street Removals	7.3	34.4	127.9	0.1	25.9	14.6	5.8
Street Improvements	24.0	92.3	346.0	0.5	23.7	18.0	12.8
Sewer Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Water Systems Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Storm Drain Installation	3.9	19.7	57.3	0.1	2.2	2.2	2.0
Construction of a 46-Acre Rail Yard at Berth 200	7.5	33.7	103.9	0.1	48.3	25.9	8.5
9 Acres of Backland Improvements at Berts 134-135	7.1	33.9	110.8	0.1	47.8	25.3	8.0
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	2.6	12.9	40.4	0.1	1.4	1.4	1.3
Rail Yard Construction	7.5	33.7	103.9	0.1	48.3	25.9	8.5
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	5.2	26.7	64.5	0.1	25.2	14.0	5.2
Grading/Earthmoving	9.1	42.7	149.5	0.2	93.0	48.0	13.5
Commuting of Workers (1)	2.9	34.8	3.2	0.1	22.1	21.4	19.8
Peak Daily Emissions (2) (3)	56	262	783	1	306	171	65
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The Urbemis model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: 78-acres of backland improvements at Berths 142-147, construction of a new administration building, construction of a new maintenance and repair facility, street improvements at the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, grading/earthmoving at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the same set of activities that produce peak CO, ROG, NOx, and SOx emissions with one exception: instead of street improvements at the Harry Bridges Blvd. realignment, the street removals will be a contributor to the peak day.

Table D1.1.111. Mitigated Peak Daily Emissions from Berths 136-147 Terminal Project Alternative 2 Construction Activities (2007-2010) .

Construction Activity/Equipment Type	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Wharf Demolition	5.6	19.1	110.2	0.1	4.7	4.7	4.4
Remove 2 Existing Cranes at Berth 144	3.8	10.3	93.8	0.1	4.2	4.2	3.9
Piledriving-Sheet Piles	113.1	159.9	1,065.3	587.0	154.2	154.2	149.2
Rip-Rap Placement	38.8	212.2	401.0	0.4	25.7	25.7	23.6
Dredge and Disposal	11.8	48.3	208.9	0.2	6.0	6.0	5.5
Piledriving-Waterside Piles	5.8	20.0	98.0	0.1	3.3	3.3	3.0
Piledriving-Landside Piles	6.5	24.0	104.9	0.1	3.5	3.5	3.2
Replace Existing Wharf	15.5	66.2	284.5	0.3	8.2	8.2	7.5
Upgrade Existing Wharf	7.4	29.3	107.5	0.1	4.0	4.0	3.7
Install 3 Cranes at Berth 144	44.9	115.5	1,229.1	674.9	91.9	91.9	86.1
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	2.7	11.2	33.0	0.0	12.6	7.0	2.6
Construct New Main Gate	1.1	6.4	13.1	0.0	22.6	11.4	2.8
Improve/Pave Demolished Areas and Parking	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing Administration Building and Gate	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Construct a New Maintenance and Repair Facility-Berths 136-149							
Construct Maintenance and Repair Facility	3.0	13.0	36.9	0.0	34.8	17.9	5.0
Improve/Pave Demolished Areas and M&R	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing M&R Facility	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Harry Bridges Blvd. Realignment							
Street Removals	7.3	34.4	127.9	0.1	25.9	14.6	5.8
Street Improvements	24.0	92.3	346.0	0.5	23.7	18.0	12.8
Sewer Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Water Systems Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Storm Drain Installation	3.9	19.7	57.3	0.1	2.2	2.2	2.0
Construction of a 46-Acre Rail Yard at Berth 200	7.5	33.7	103.9	0.1	48.3	25.9	8.5
9 Acres of Backland Improvements at Berts 134-135	7.1	33.9	110.8	0.1	47.8	25.3	8.0
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	2.6	12.9	40.4	0.1	1.4	1.4	1.3
Rail Yard Construction	7.5	33.7	103.9	0.1	48.3	25.9	8.5
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Existing Cranes Removal at Berth 136	3.8	10.3	93.8	0.1	4.2	4.2	3.9
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	5.2	26.7	64.5	0.1	25.2	14.0	5.2
Grading/Earthmoving	9.1	42.7	149.5	0.2	93.0	48.0	13.5
Install Cranes at Berth 136 & Berth 144	44.3	108.7	1,240.9	674.9	92.2	92.2	86.4
Commuting of Workers (1)	3.5	41.7	3.8	0.1	31.2	30.2	27.9
Peak Daily Emissions (2) (3)	82	312	1,696	676	341	205	97
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The Urbemis model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: upgrade of exisiting wharf, installation of 3 cranes at Berth 144, construction of a new main gate, construction of a new maintenance and repair facility, sewer installation with the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, 5 acres of backland improvements at Berths 134-135, landscape installation at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the following activities: rip-rap placement for wharf improvements at Berths 144-147, 78-acre backland improvements at Berths 142-147, construction of new administration building, construction of new maintenance and repair facility, street removals at Harry Bridges Blvd., construction of a 46-acre railyard at Berth 200, grading/earthmoving for the new Harry Bridges Blvd landscaped area, and commuting of workers.

Table D1.1.112. Mitigated Peak Daily Emissions from Berths 136-147 Terminal Project Alternative 3 Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
Wharf Improvments at Berths 144-147							
Remove 2 Existing Cranes at Berth 144	3.8	10.3	93.8	0.1	4.2	4.2	3.9
Upgrade Existing Wharf	7.4	29.3	107.5	0.1	4.0	4.0	3.7
Install 3 Cranes at Berth 144	44.9	115.5	1,229.1	674.9	91.9	91.9	86.1
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	2.7	11.2	33.0	0.0	12.6	7.0	2.6
Construct New Main Gate	1.1	6.4	13.1	0.0	22.6	11.4	2.8
Improve/Pave Demolished Areas and Parking	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing Administration Building and Gate	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Construct a New Maintenance and Repair Facility-Berths 136-149							
Construct Maintenance and Repair Facility	3.0	13.0	36.9	0.0	34.8	17.9	5.0
Improve/Pave Demolished Areas and M&R	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing M&R Facility	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Harry Bridges Blvd. Realignment							
Street Removals	7.3	34.4	127.9	0.1	25.9	14.6	5.8
Street Improvements	24.0	92.3	346.0	0.5	23.7	18.0	12.8
Sewer Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Water Systems Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Storm Drain Installation	3.9	19.7	57.3	0.1	2.2	2.2	2.0
Construction of a 46-Acre Rail Yard at Berth 200	7.5	33.7	103.9	0.1	48.3	25.9	8.5
9 Acres of Backland Improvements at Berts 134-135	7.1	33.9	110.8	0.1	47.8	25.3	8.0
Construction of the Berths 142-147 12-Acre ICTF and 19-Acre Backlands							
Rail Track Removal	2.6	12.9	40.4	0.1	1.4	1.4	1.3
Rail Yard Construction	7.5	33.7	103.9	0.1	48.3	25.9	8.5
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Existing Cranes Removal at Berth 136	3.8	10.3	93.8	0.1	4.2	4.2	3.9
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	5.2	26.7	64.5	0.1	25.2	14.0	5.2
Grading/Earthmoving	9.1	42.7	149.5	0.2	93.0	48.0	13.5
Install Cranes at Berth 136 & Berth 144	44.3	108.7	1,240.9	674.9	92.2	92.2	86.4
Commuting of Workers (1)	1.0	11.6	1.1	0.0	7.4	7.1	6.6
Peak Daily Emissions (2) (3)	79	282	1,693	675	292	157	52
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The Urbemis model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: upgrade of exisiting wharf, installation of 3 cranes at Berth 144, construction of a new main gate, construction of a new maintenance and repair facility, sewer installation with the Harry Bridges Blvd. realignment, construction of a 46-acre railyard at Berth 200, 5 acres of backland improvements at Berths 134-135, landscape installation at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the following activities: 78-acre backland improvements at Berths 142-147, construction of new administration building, construction of new maintenance and repair facility, street removals at Harry Bridges Blvd., construction of a 46-acre railyard at Berth 200, grading/earthmoving for the new Harry Bridges Blvd landscaped area, and commuting of workers.

Table D1.1.113. Mitigated Peak Daily Emissions from Berths 136-147 Terminal Project Alternative 4 Construction Activities (2007-2010) .

Construction Project/Activity	Pounds Per Day						
	ROG	CO	NOx	SOx	PM	PM10	PM2.5
78 Acres of Backland Improvement at Berths 142-147							
Building Demolition	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Backland Improvements	7.1	33.9	110.8	0.1	69.8	36.1	10.2
Construct a New Administration Building, Main Gate, and Worker Parking Lot							
Construct Administration Building	2.7	11.2	33.0	0.0	12.6	7.0	2.6
Construct New Main Gate	1.1	6.4	13.1	0.0	22.6	11.4	2.8
Improve/Pave Demolished Areas and Parking	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing Administration Building and Gate	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Construct a New Maintenance and Repair Facility-Berths 136-149							
Construct Maintenance and Repair Facility	3.0	13.0	36.9	0.0	34.8	17.9	5.0
Improve/Pave Demolished Areas and M&R	7.1	33.9	110.8	0.1	58.8	30.7	9.1
Demolish Existing M&R Facility	5.0	22.0	89.8	0.1	78.2	39.6	10.1
Harry Bridges Blvd. Realignment							
Street Removals	7.3	34.4	127.9	0.1	25.9	14.6	5.8
Street Improvements	24.0	92.3	346.0	0.5	23.7	18.0	12.8
Sewer Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Water Systems Installation	2.0	11.7	26.5	0.0	1.2	1.2	1.1
Storm Drain Installation	3.9	19.7	57.3	0.1	2.2	2.2	2.0
9 Acres of Backland Improvements at Berts 134-135	7.1	33.9	110.8	0.1	47.8	25.3	8.0
Construction of Harry Bridges Blvd. Buffer							
Landscape Installation	5.2	26.7	64.5	0.1	25.2	14.0	5.2
Grading/Earthmoving	9.1	42.7	149.5	0.2	93.0	48.0	13.5
Commuting of Workers (1)	2.9	34.8	3.2	0.1	22.1	21.4	19.8
Peak Daily Emissions (2) (3)	49	228	679	1	258	145	57
SCAQMD Daily Significance Thresholds	75	550	100	150	NA	150	

Notes: (1)The Urbemis model produces particulate matter emissions in terms of PM10. Then, using the default fleet characteristics for percentage of gas (catalyst and no catalyst) and diesel vehicles, and ARB data for converting between different sized PM, values for PM and PM2.5 were calculated

(2) Peak daily CO, ROG, NOx, and SOx emissions assumed to occur from the following simultaneous activities: 78-acres of backland improvements at Berths 142-147, construction of a new administration building, construction of a new maintenance and repair facility, street improvements at the Harry Bridges Blvd. realignment, grading/earthmoving at the new Harry Bridges Blvd landscaped area, and commuting of workers.

(3) Peak particulate matter emissions are assumed to occur from the same set of activities that produce peak CO, ROG, NOx, and SOx emissions with one exception: instead of street improvements at the Harry Bridges Blvd. realignment, the street removals will be a contributor to the peak day.

APPENDIX D1 - SECTION 2
CRITERIA POLLUTANT EMISSIONS CALCULATIONS
Operations

Table D1.2-CB-1. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - CEQA Baseline.

Project Scenario/Ship Type	Annual Ship Visits	Annual Shifts	TEU Moves/ Ship Visit (1)	Hoteling Time/ Visit (Hours) (2)	Annual TEU Movements
Baseline - Year 2003					
Containerships 3,000 - 5,000 TEU	68		5,100	60.0	346,800
Containerships < 3,000 TEU	148	30	3,063	36.0	545,214
Subtotal	246				892,014
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	68		5,100	60	346,800
Containerships < 3,000 TEU	178		3,063	36	545,214
Subtotal	246				892,014
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	68		5,100	60	346,800
Containerships < 3,000 TEU	178		3,063	36	545,214
Subtotal	246				892,014
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	68		5,100	60	346,800
Containerships < 3,000 TEU	178		3,063	36	545,214
Subtotal	246				892,014
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	68		5,100	60	346,800
Containerships < 3,000 TEU	178		3,063	36	545,214
Subtotal	246				892,014

Notes: (1) Throughputs for vessels <3,000 and 3,000-5,000 TEUs based upon current and future expected operations at the Berths 136-147 terminal. Thrghput for 5,000-6,000 TEU vessels based upon average throughput of vessels >5000 TEUs at berths 121-131 in year 2001. Thrghput for 8,000-9,000 TEU vessels based upon an expected capacity of 8,800 TEUs (Samsung Heavy Industries 2003) * 1.43 (the ratio of throughput per ship visit/vessel capacity for vessels >5,000 TEUs that called at Berths 121-131 in 2001) = 12,584 TEUs/SV.

(2) Data provided by TraPac

Table D1.2-CB-2. Cargo Vessel Propulsion Engine Usage per One-Way Ship Trip in the POLA Fairway Zone - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Propulsion Max Hp (2)	Fairway (1) Load Factor (3)	Modal Hp	Distance (NM)	Speed (Kts) (4)	Hours Per Trip	Hp-Hrs/ Trip	kW-Hrs/ Trip (5)
Non-Compliance with VSRP (6)								
Containership 8,000 - 9,000 TEU	93,000	0.83	77,283	39.9	24.9	1.61	124,070	92,556
Containership 5,000 - 6,000 TEU	74,043	0.83	61,530	39.9	22.6	1.76	108,416	80,878
Containership 3,000 - 5,000 TEU	50,651	0.83	42,091	39.9	20.8	1.92	80,625	60,146
Containership < 3,000 TEU	26,525	0.83	22,043	39.9	18.2	2.19	48,229	35,979
General Cargo	10,993	0.83	9,135	38.9	14.7	2.64	24,156	18,021
Auto Carrier	15,418	0.83	12,813	39.6	17.6	2.24	28,736	21,437
Compliance with VSRP (7)								
Containership 8,000 - 9,000 TEU - Outside VSRPZ	93,000	0.83	77,283	17.9	24.9	0.72	55,661	41,523
Containership 8,000 - 9,000 TEU - In VSRPZ	93,000	0.09	8,694	22.0	12.0	1.83	15,940	11,891
Containership 8,000 - 9,000 TEU - Total kW-Hrs								53,414
Containership 5,000 - 6,000 TEU - Outside VSRPZ	74,043	0.83	61,530	17.9	22.6	0.79	48,638	36,284
Containership 5,000 - 6,000 TEU - In VSRPZ	74,043	0.12	9,152	22.0	12.0	1.83	16,779	12,517
Containership 5,000 - 6,000 TEU - Total kW-Hrs								48,801
Containership 3,000 - 5,000 TEU - Outside VSRPZ	50,651	0.83	42,091	17.9	20.8	0.86	36,170	26,983
Containership 3,000 - 5,000 TEU - In VSRPZ	50,651	0.16	8,043	22.0	12.0	1.83	14,746	11,000
Containership 3,000 - 5,000 TEU - Total kW-Hrs								37,983
Containership < 3,000 TEU - Outside VSRPZ	26,525	0.83	22,043	17.9	18.2	0.98	21,637	16,141
Containership < 3,000 TEU - In VSRPZ	26,525	0.24	6,278	22.0	12.0	1.83	11,509	8,586
Containership < 3,000 TEU - Total kW-Hrs								24,727
General Cargo - Outside VSRPZ	10,993	0.83	9,135	16.9	14.7	1.15	10,477	7,816
General Cargo - In VSRPZ	10,993	0.45	4,975	22.0	12.0	1.83	9,121	6,804
General Cargo - Total kW-Hrs								14,620
Auto Carrier - Outside VSRPZ	15,418	0.83	12,813	17.6	17.6	1.00	12,751	9,512
Auto Carrier - In VSRPZ	15,418	0.26	4,035	22.0	12.0	1.83	7,398	5,519
Auto Carrier - Total kW-Hrs								15,031

Notes: (1) Vessel route between the boundary of the SCAQMD waters and the Precautionary Area. Based upon data from the Port of Los Angeles Baseline Air Emissions Inventory (PEI) (Starcrest 2005) Table 2.8 and expected usage of fairway routes for each vessel type (see Table D1.2-CB-5a).

(2) 2005 PEI Table 2.11, except Samsung Heavy Industries 2003 for 8,000-9,000 TEU vessel.

(3) PEI page 68.

(4) Represents service speed, which is 94% of maximum speed (PEI page 68).

(5) 1 kW-Hr = 0.746 Hp-Hrs.

(6) Length of fairway within the Vessel Speed Reduction Program (VSRP) Zone (VSRPZ) = 22 nautical miles (NM).

(7) Applies to route within 20 nm of Pt. Fermin. Load factor derived from Propeller Law, where load factor = (actual speed/max. speed) ^{3} (PEI page 99).

Table D1.2-CB-3. Cargo Vessel Propulsion Engine Usage per One-Way Ship Trip in the POLA Precautionary Area - Berths 136-147 Terminal Project Alternatives.

	Precautionary Area (1)							
Vessel Type	Propulsion Max Hp	Load Factor (2)	Modal Hp	Distance (NM)	Speed (Kts) (3)	Hours	Hp-Hrs/ Trip	kW-Hrs/ Trip
Containership 8,000 - 9,000 TEU	93,000	0.07	6,697	10.4	11.0	0.95	6,332	4,723
Containership 5,000 - 6,000 TEU	74,043	0.10	7,049	10.4	11.0	0.95	6,665	4,972
Containership 3,000 - 5,000 TEU	50,651	0.12	6,195	10.4	11.0	0.95	5,857	4,370
Containership < 3,000 TEU	26,525	0.18	4,835	10.4	11.0	0.95	4,572	3,410
General Cargo	10,993	0.19	2,099	9.5	9.0	1.06	2,222	1,658
Auto Carrier	15,418	0.20	3,108	10.1	11.0	0.92	2,857	2,131

Notes: (1) Portion of the trip between the fairway and POLA breakwater.

(2) Load factor derived from Propeller Law, where load factor = (actual speed/max. speed) ^{3} (PEI page 99).

(3) Average transit speeds obtained from 2005 PEI Table 2.5.

Table D1.2-CB-4. Cargo Vessel Propulsion Engine Usage per One-Way Ship Trip within the POLA Breakwater - Berths 136-147 Terminal Project Alternatives.

Operational Mode/Vessel Type	Propulsion Max Hp	Load Factor (2)	Modal Hp	Hours/ Mode (3)	Hp-Hrs/ Trip	kW-Hrs/ Trip
Transit (1)						
Containership 8,000 - 9,000 TEU	93,000	0.037	3,441	0.75	2,581	1,925
Containership 5,000 - 6,000 TEU	74,043	0.037	2,740	0.75	2,055	1,533
Containership 3,000 - 5,000 TEU	50,651	0.037	1,874	0.75	1,406	1,049
Containership < 3,000 TEU	26,525	0.037	981	0.75	736	549
General Cargo	10,993	0.060	660	0.75	495	369
Auto Carrier	15,418	0.065	1,002	0.75	752	561
Docking						
Containership 8,000 - 9,000 TEU	93,000	0.020	1,860	0.21	381	284
Containership 5,000 - 6,000 TEU	74,043	0.020	1,481	0.21	304	226
Containership 3,000 - 5,000 TEU	50,651	0.020	1,013	0.21	208	155
Containership < 3,000 TEU	26,525	0.020	531	0.21	109	81
General Cargo	10,993	0.020	220	0.13	27	21
Auto Carrier	15,418	0.020	308	0.13	39	29

Notes: (1) Average one-way transit operations between the POLA breakwater and the Berth 136-149 Terminal.

(2) Transit load factors based upon the average of inbound and outbound load factors in PEI Table 2.46. Docking load factors obtained from PEI Table 2.46.

(3) One-way transit durations = 3.7 nm @ 5 kts. Docking durations obtained from PEI Table 2.51.

Table D1.2-CB-5a. Cargo Vessel Propulsion Engine Usage for Shifts within the POLA Breakwater - Berths 136-147 Terminal Project Alternatives.

Operational Mode/Vessel Type (1)	Propulsion Max Hp	Load Factor (2)	Modal Hp	Hours/ Mode (3)	Hp-Hrs/ Trip	kW-Hrs/ Trip
Transit						
Containership < 3,000 TEU	26,525	0.037	981	0.75	736	549
Docking						
Containership < 3,000 TEU	26,525	0.020	531	0.21	109	81

Notes: (1) Vessel usage within the POLA and to Berths 136-147. Equal to 1 transit + docking operation estimated in Table D1.2-CB-4.

Table D1.2-CB-5b. Cargo Vessel Transit Distances within the Fairway and Precautionary Areas - Berths 136-147 Terminal Project Alternatives.

	Fairway 1-way Route Length (1)/ Percent in Route (2)			
	North	West	South	Ave.
Vessel Type	39.5	43.5	36.0	Length
Container	90.0	10.0	-	39.9
General Cargo	60.0	10.0	30.0	38.9
Auto	80.0	10.0	10.0	39.6
	VSRP Zone 1-way Distance within Fairway/Percent in Route (2)			
	North	West	South	Ave.
Vessel Type	22.4	19.2	13.6	Length
Container	90.0	10.0	-	22.1
General Cargo	60.0	10.0	30.0	19.4
Auto	80.0	10.0	10.0	21.2
	Precautionary Area 1-way Route Length (1)/Percent in Route (2)			
	North (3)	West (3)	South (3)	Ave.
	10.4	10.4	7.5	Length
Container	90.0	10.0	-	10.4
General Cargo	60.0	10.0	30.0	9.5
Auto	80.0	10.0	10.0	10.1

Notes: (1) Route lengths in units of nautical miles (nm) (from PEI Table 2.8).

(2) Based upon expected transit distribution patterns (TraPac 2004).

(3) Revised from PEI Table 2.8 values, based upon review of nautical chart 18740, 40th edition (US Dept. of Commerce 2003).

Table D1.2-CB-6. Cargo Vessel Auxiliary Generator Usage per One-Way Fairway Transit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel (1)	Load Factor (1)	Hours/ Transit	kW-Hrs/ Transit
Non-Compliance with VSRP (3)				
Containership 8,000 - 9,000 TEU	13,501	0.13	1.61	2,818
Containership 5,000 - 6,000 TEU	12,431	0.13	1.76	2,847
Containership 3,000 - 5,000 TEU	8,137	0.13	1.92	2,026
Containership < 3,000 TEU	4,315	0.13	2.19	1,227
General Cargo	1,777	0.17	2.64	799
Auto Carrier	2,850	0.15	2.24	959
Compliance with VSRP (3)				
Containership 8,000 - 9,000 TEU	13,501	0.13	2.55	4,482
Containership 5,000 - 6,000 TEU	12,431	0.13	2.62	4,240
Containership 3,000 - 5,000 TEU	8,137	0.13	2.69	2,848
Containership < 3,000 TEU	4,315	0.13	2.81	1,579
General Cargo	1,777	0.17	2.98	900
Auto Carrier	2,850	0.15	2.83	1,209

Notes: (1) 2005 PEI Table 2.13

(3) See Table D1.2-CB-2 for estimated vessel transit durations within the fairway for each mode of ope

Table D1.2-CB-7. Cargo Vessel Auxiliary Generator Usage per One-Way Precautionary Area Transit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel	Load Factor (1)	Hours/ Transit	kW-Hrs/ Transit
Containership 8,000 - 9,000 TEU	13,501	0.25	0.95	3,191
Containership 5,000 - 6,000 TEU	12,431	0.25	0.95	2,938
Containership 3,000 - 5,000 TEU	8,137	0.25	0.95	1,923
Containership < 3,000 TEU	4,315	0.25	0.95	1,020
General Cargo	1,777	0.27	1.06	508
Auto Carrier	2,850	0.30	0.92	786

Notes: (1) 2005 PEI Table 2.13

Table D1.2-CB-8. Cargo Vessel Auxiliary Generator Usage per One-Way Transit and Docking within the POLA Breakwater - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel	Load Factor (1)	Hours/ Mode (2)	kW-Hrs/ Transit
Transit (1)				
Containership 8,000 - 9,000 TEU	13,501	0.50	0.75	5,063
Containership 5,000 - 6,000 TEU	12,431	0.50	0.75	4,662
Containership 3,000 - 5,000 TEU	8,137	0.47	0.75	2,887
Containership < 3,000 TEU	4,315	0.45	0.75	1,466
General Cargo	1,777	0.45	0.75	600
Auto Carrier	2,850	0.45	0.75	962
Docking				
Containership 8,000 - 9,000 TEU	13,501	0.50	0.21	1,384
Containership 5,000 - 6,000 TEU	12,431	0.50	0.21	1,274
Containership 3,000 - 5,000 TEU	8,137	0.47	0.21	789
Containership < 3,000 TEU	4,315	0.45	0.21	401
General Cargo	1,777	0.45	0.13	100
Auto Carrier	2,850	0.45	0.13	160

Notes: (1) 2005 PEI Table 2.13

(2) See Table D1.2-CB-4 for estimated vessel transit/docking durations within the Harbor.

Table D1.2-CB-9. Cargo Vessel Hoteling Auxiliary Generator Usage per Ship Visit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel	Load Factor (1)	Hours/ Visit (2)	kW-Hrs/ Visit
Containership 8,000 - 9,000 TEU	13,501	0.15	84.0	170,113
Containership 5,000 - 6,000 TEU	12,431	0.15	72.0	136,940
Containership 3,000 - 5,000 TEU	8,137	0.19	60.0	90,809
Containership < 3,000 TEU	4,315	0.21	36.0	32,155
General Cargo	1,777	0.22	39.8	15,559
Auto Carrier	2,850	0.26	17.4	12,893

Notes: (1) 2005 PEI Table 2.13

(2) From Table D1.2-CB-1, except PEI Table 2.24 for auto carrier and general cargo vessels.

Table D1.2-CB-10. Cargo Vessel Auxiliary Generator Usage per Shift within the POLA Breakwater - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel	Load Factor (1)	Hours/ Visit (1)	kW-Hrs/ Year
Transit (1)				
Containership < 3,000 TEU	4,315	0.45	0.75	1,466
Docking				
Containership < 3,000 TEU	4,315	0.45	0.21	401

Notes: (1) From Table D1.2-CB-8.

Table D1.2-CB-11. Cargo Vessel Auxiliary Generator Usage during Hoteling per Shift - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Auxiliary kW per Vessel (1)	Load Factor (2)	Hours/ Visit (1)	kW-Hrs/ Transit
Containership < 3,000 TEU	4,315	0.21	36.0	32,155

Notes: (1) From Table D1.2-CB-9.

Table D1.2-CB-12. Cargo Vessel Auxiliary Boiler Usage per Ship Visit - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Hourly Fuel Usage (1)
All Cargo Vessels	0.154
General Cargo	0.032
Auto Carrier	0.113

Notes: (1) Units in tons/hour of fuel consumption (2005 PEI Table 2.14).

This usage assumed for all vessel locations, except no usage in the fairway.

Table D1.2-CB-13. Baseline Year 2003 Cargo Vessel Tugboat Assist Usage - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Tugboat Max Hp (1)	Load Factor (2)	Hours/ Assist (3)	Hp-Hr/ Assist	Annual # of Assists (4)	Annual Hp-Hrs	Annual kW-Hrs
Containership 3,000 - 5,000 TEU	4,543	0.31	1.24	1,748	158	277,023	206,659
Containership < 3,000 TEU	4,543	0.31	1.24	1,748	237	414,031	308,867
Totals						691,054	515,526

Notes: (1) (Starcrest 2006)

(2) From PEI, Table 3.9.

(3) Duration 1-way vessel trip due to harbor transit and docking durations presented in Tables D1.2.4 and D1.2.5 times 1.3 to account for tug movement and assist time. General cargo and auto carrier vessels assumed to require the same tugboat assist usage as containerships <3,000 TEUs.

(4) Estimated by multiplying the ratio of 2003/2001 throughputs for the Berths 136-147 terminal by tug activitiy during the 2001 baseline year. All future project years would have 3 tug assists per ship visit.

Table D1.2-CB-14. Baseline Year 2003 Tugboat Aux. Generator Usage during Cargo Vessel Assists - Berths 136-147 Terminal Project Alternatives.

Vessel Type	Aux. Engine Hp (1)	Load Factor (2)	Hours/ Assist (3)	Hp-Hr/ Assist	Annual # of Assists	Annual Hp-Hrs	Annual kW-Hrs
Containership 3,000 - 5,000 TEU	258	0.43	1.61	179	158	28,369	21,163
Containership < 3,000 TEU	258	0.43	1.61	179	237	42,399	31,630
Totals						70,768	52,793

Notes: (1) (Starcrest 2006)

(2) From PEI Table 3.9.

(3) Duration = 1.3 times tug assist time in Table D1.2-CB-13 to account for usage when main engines are shut down in stand-by mode. General cargo/ auto carrier vessels would require the same usage as containerships <3,000 TEUs.

Table D1.2-CB-15. Emissions Factors for Vessels - Berths 136-147 Terminal Project Alternatives.

Operational Mode/Ship-Engine Type	Emission Factors (Gm/kW-Hr)					Source
	ROG	CO	NOx	SOx	DPM	
Cruise/Main Engine						
OGVs - Slow Speed Diesel	0.60	1.40	18.10	10.50	1.50	(1)
<20% Main Engine Load Emission Factors						
OGVs - Slow Speed Diesel 2% Load Adjustment Factor	31.62	10.00	4.63	1.00	7.29	(2)
OGVs - Slow Speed Diesel 3% Load Adjustment Factor	17.21	6.67	2.92	1.00	4.33	(2)
OGVs - Slow Speed Diesel 4% Load Adjustment Factor	11.18	5.00	2.21	1.00	3.09	(2)
OGVs - Slow Speed Diesel 5% Load Adjustment Factor	8.00	4.00	1.83	1.00	2.44	(2)
OGVs - Slow Speed Diesel 6% Load Adjustment Factor	6.09	3.33	1.60	1.00	2.04	(2)
OGVs - Slow Speed Diesel 7% Load Adjustment Factor	4.83	2.86	1.45	1.00	1.79	(2)
OGVs - Slow Speed Diesel 9% Load Adjustment Factor	3.31	2.22	1.27	1.00	1.48	(2)
OGVs - Slow Speed Diesel 10% Load Adjustment Factor	2.83	2.00	1.22	1.00	1.38	(2)
OGVs - Slow Speed Diesel 12% Load Adjustment Factor	2.15	1.67	1.14	1.00	1.24	(2)
OGVs - Slow Speed Diesel 16% Load Adjustment Factor	1.40	1.25	1.05	1.00	1.08	(2)
OGVs - Slow Speed Diesel 18% Load Adjustment Factor	1.17	1.11	1.02	1.00	1.04	(2)
OGVs - Slow Speed Diesel 19% Load Adjustment Factor	1.08	1.05	1.01	1.00	1.02	(2)
OGVs - Slow Speed Diesel 2% Load Emission Factor	18.97	14.00	83.80	10.50	10.94	(3)
OGVs - Slow Speed Diesel 3.7% Load Emission Factor	7.79	7.70	43.86	10.50	5.19	(3)
OGVs - Slow Speed Diesel 6.5% Load Emission Factor	3.28	4.33	27.60	10.50	2.87	(3)
OGVs - Slow Speed Diesel 7% Load Emission Factor	2.90	4.00	26.25	10.50	2.69	(3)
OGVs - Slow Speed Diesel 9% Load Emission Factor	1.99	3.11	22.99	10.50	2.22	(3)
OGVs - Slow Speed Diesel 10% Load Emission Factor	1.70	2.80	22.08	10.50	2.07	(3)
OGVs - Slow Speed Diesel 12% Load Emission Factor	1.29	2.34	20.63	10.50	1.86	(3)
OGVs - Slow Speed Diesel 16% Load Emission Factor	0.84	1.75	19.01	10.50	1.62	(3)
OGVs - Slow Speed Diesel 18% Load Emission Factor	0.70	1.55	18.46	10.50	1.56	(3)
OGVs - Slow Speed Diesel 19% Load Emission Factor	0.65	1.47	18.28	10.50	1.53	(3)
Tugboats - Diesel Main Engines Year 2003	0.37	1.87	12.49	0.80	0.49	(4)
Tugboats - Diesel Main Engines Year 2007	0.37	1.87	11.75	0.006	0.48	(4)
Tugboats - Diesel Main Engines Year 2015	0.36	1.87	10.04	0.006	0.43	(4)
Tugboats - Diesel Main Engines Year 2025	0.35	1.87	8.33	0.006	0.36	(4)
Tugboats - Diesel Main Engines Year 2038	0.35	1.87	7.47	0.006	0.33	(4)
Auxiliary Generators						
OGVs - Medium Speed Diesel - Residual Oil	0.40	1.10	14.70	12.30	1.50	(5)
OGVs - Medium Speed Diesel - Marine Diesel Oil @ 0.78% S	0.40	1.10	13.90	3.29	0.56	(5)
OGVs - Medium Speed Diesel - Marine Gas Oil @ 0.2% S	0.40	1.10	13.90	0.84	0.28	(5)
Tugboats - High Speed Diesel - Year 2003	0.27	1.67	9.94	0.80	0.46	(4)
Tugboats - High Speed Diesel - Year 2007	0.27	1.67	9.64	0.004	0.45	(4)
Tugboats - High Speed Diesel - Year 2015	0.27	1.67	8.91	0.004	0.40	(4)
Tugboats - High Speed Diesel - Year 2025	0.27	1.67	7.50	0.004	0.32	(4)
Tugboats - High Speed Diesel - Year 2038	0.27	1.67	6.80	0.004	0.28	(4)
Auxiliary Boilers						
Commercial Vessels	0.76	9.20	24.60	108.00	3.02	(6)

Notes: (1) Applies to OGV operations within the fairway and precautionary area (2005 PEI Table 2.6).

(2) Unitless adjustment factors from PEI Table 2.21 that are applied to OGV main power plant emission factors in PEI Table 2.20 t obtain emission factors for engine loads <20%.

(3) Calculated OGV main power plant low load emission factors.

(4) Composite EFs for category 1/2 diesel engines (Starcrest 2006). Average sulfur (S) content = 0.19% (PEI Section 3.2.2) in year 2003 and 15 ppm in year 2007+

(5) 2005 PEI Table 2.12. PM emission factors for medium speed diesel engnies burning 0.2% S marine gas, POLA diesel, and ULSD calculated by Starcrest (Starcrest 2006).

(6) Units in Lb/ton fuel from PEI Table 2.23. Original PM10 factor divided by 0.86 to produce DPM factor (Table 1.3-5 [EPA 1998])

Table D1.2-CB-16. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	5.01	11.60	148.54	85.95	12.33	11.55
Containership < 3,000 TEU	6.49	15.15	195.87	113.62	16.23	15.21
Subtotal	11.50	26.75	344.40	199.58	28.56	26.76
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	4.61	10.59	133.88	77.23	11.13	10.43
Containerships < 3,000 TEU	7.15	16.68	215.59	125.06	17.87	16.74
Subtotal	11.76	27.26	349.47	202.30	29.00	27.17
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	4.13	9.36	116.29	66.77	9.70	9.09
Containerships < 3,000 TEU	6.35	14.82	191.61	111.16	15.88	14.88
Subtotal	10.48	24.18	307.90	177.92	25.58	23.96
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	4.13	9.36	116.29	66.77	9.70	9.09
Containerships < 3,000 TEU	6.35	14.82	191.61	111.16	15.88	14.88
Subtotal	10.48	24.18	307.90	177.92	25.58	23.96
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	4.13	9.36	116.29	66.77	9.70	9.09
Containerships < 3,000 TEU	6.35	14.82	191.61	111.16	15.88	14.88
Subtotal	10.48	24.18	307.90	177.92	25.58	23.96

Note: (1) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-CB-17. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2-CB-18a. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containerships < 3,000 TEU	1.68	1.66	9.45	2.26	1.12	1.05
Subtotal	2.90	2.87	16.34	3.91	1.94	1.81
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containerships < 3,000 TEU	1.68	1.66	9.45	2.26	1.12	1.05
Subtotal	2.90	2.87	16.34	3.91	1.94	1.81
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containerships < 3,000 TEU	1.68	1.66	9.45	2.26	1.12	1.05
Subtotal	2.90	2.87	16.34	3.91	1.94	1.81
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containerships < 3,000 TEU	1.68	1.66	9.45	2.26	1.12	1.05
Subtotal	2.90	2.87	16.34	3.91	1.94	1.81

Table D1.2-CB-18b. Annual Cargo Vessel Emissions for Docking Activities -
Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containerships < 3,000 TEU	0.60	0.45	2.67	0.33	0.35	0.33
Subtotal	1.04	0.77	4.61	0.58	0.60	0.56
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containerships < 3,000 TEU	0.60	0.45	2.67	0.33	0.35	0.33
Subtotal	1.04	0.77	4.61	0.58	0.60	0.56
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containerships < 3,000 TEU	0.60	0.45	2.67	0.33	0.35	0.33
Subtotal	1.04	0.77	4.61	0.58	0.60	0.56
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containerships < 3,000 TEU	0.60	0.45	2.67	0.33	0.35	0.33
Subtotal	1.04	0.77	4.61	0.58	0.60	0.56

Table D1.2-CB-19. Annual Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Mode	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.28	0.28	1.59	0.38	0.19	0.18
Docking	0.10	0.08	0.45	0.06	0.06	0.05
Subtotal	0.38	0.35	2.04	0.44	0.25	0.23

Table D1.2-CB-20. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.13	0.37	4.92	4.12	0.50	0.47
Containership < 3,000 TEU	0.17	0.47	6.31	5.28	0.64	0.60
Subtotal	0.31	0.84	11.23	9.39	1.15	1.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.15	0.40	5.37	4.49	0.55	0.51
Containerships < 3,000 TEU	0.22	0.61	8.09	6.77	0.83	0.77
Subtotal	0.37	1.01	13.47	11.27	1.37	1.29
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.16	0.44	5.91	4.95	0.60	0.57
Containerships < 3,000 TEU	0.24	0.65	8.70	7.28	0.89	0.83
Subtotal	0.40	1.09	14.62	12.23	1.49	1.40
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.16	0.44	5.91	4.95	0.60	0.57
Containerships < 3,000 TEU	0.24	0.65	8.70	7.28	0.89	0.83
Subtotal	0.40	1.09	14.62	12.23	1.49	1.40
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.16	0.44	5.91	4.95	0.60	0.57
Containerships < 3,000 TEU	0.24	0.65	8.70	7.28	0.89	0.83
Subtotal	0.40	1.09	14.62	12.23	1.49	1.40

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-CB-21. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-CB-22a. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-CB-22b. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containerships < 3,000 TEU	0.06	0.17	2.27	1.45	0.19	0.17
Subtotal	0.11	0.30	3.98	2.55	0.33	0.30
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containerships < 3,000 TEU	0.06	0.17	2.27	1.45	0.19	0.17
Subtotal	0.11	0.30	3.98	2.55	0.33	0.30
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containerships < 3,000 TEU	0.06	0.17	2.27	1.45	0.19	0.17
Subtotal	0.11	0.30	3.98	2.55	0.33	0.30
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containerships < 3,000 TEU	0.06	0.17	2.27	1.45	0.19	0.17
Subtotal	0.11	0.30	3.98	2.55	0.33	0.30

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-CB-23. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling
Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2-CB-24. Annual Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - CEQA Baseline

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.02	0.05	0.70	0.45	0.06	0.05
Docking	0.01	0.01	0.19	0.12	0.02	0.01
Subtotal	0.02	0.07	0.89	0.57	0.07	0.07

Table D1.2-CB-25. Annual Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - CEQA Baseline

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership < 3,000 TEU	0.43	1.17	15.34	9.82	1.26	1.18
Subtotal	0.43	1.17	15.34	9.82	1.26	1.18

Table D1.2-CB-26. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - CEQA Baseline

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-CB-27. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2-CB-28a. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting withir the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2-CB-28b. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.14	0.61	0.02	0.02
Subtotal	0.01	0.07	0.19	0.84	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.14	0.61	0.02	0.02
Subtotal	0.01	0.07	0.19	0.84	0.02	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.14	0.61	0.02	0.02
Subtotal	0.01	0.07	0.19	0.84	0.02	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.14	0.61	0.02	0.02
Subtotal	0.01	0.07	0.19	0.84	0.02	0.02

Table D1.2-CB-29. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling ·
Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2-CB-30. Annual Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Mode	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.00	0.03	0.09	0.37	0.01	0.01
Docking	0.00	0.01	0.02	0.10	0.00	0.00
Hoteling	0.06	0.77	2.05	8.98	0.25	0.24
Subtotal	0.07	0.81	2.15	9.46	0.26	0.25

Table D1.2-CB-31. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.21	1.06	6.68	0.00	0.27	0.26
Project Year 2015						
Subtotal	0.20	1.06	5.71	0.00	0.24	0.23
Project Year 2025						
Subtotal	0.20	1.06	4.73	0.00	0.21	0.19
Project Year 2038						
Subtotal	0.20	1.06	4.24	0.00	0.19	0.18

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-CB-32. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - CEQA Baseline

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.02	0.10	0.56	0.00	0.03	0.02
Project Year 2015						
Subtotal (1)	0.02	0.10	0.52	0.00	0.02	0.02
Project Year 2025						
Subtotal (1)	0.02	0.10	0.44	0.00	0.02	0.02
Project Year 2038						
Subtotal (1)	0.02	0.10	0.40	0.00	0.02	0.02

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-CB-33. Annual Vessel Emissions - Berths 136-147 Terminal Project - CEQA Baseline

	Tons Per Year					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.68	465.24	55.81	52.30
Project Year 2007						
Ships - Fairway Transit (1)	12.12	28.27	362.93	213.56	30.37	28.46
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.22	1.16	7.24	0.00	0.30	0.28
Subtotal	24.57	60.84	662.54	469.33	56.47	52.91
Project Year 2015						
Ships - Fairway Transit (1)	10.88	25.28	322.51	190.15	27.07	25.36
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.22	1.16	6.22	0.00	0.27	0.25
Subtotal	23.33	57.85	621.11	445.92	53.14	49.79
Project Year 2025						
Ships - Fairway Transit (1)	10.88	25.28	322.51	190.15	27.07	25.36
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.22	1.16	5.17	0.00	0.23	0.21
Subtotal	23.32	57.85	620.06	445.92	53.09	49.75
Project Year 2038						
Ships - Fairway Transit (1)	10.88	25.28	322.51	190.15	27.07	25.36
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.21	1.16	4.64	0.00	0.20	0.19
Subtotal	23.32	57.85	619.53	445.92	53.07	49.73

Note: (1) Includes auxiliary power emissions.

Table D1.2-CB-34. Daily Vessel Emissions - Berths 136-147 Terminal Project - CEQA Baseline

	Pounds Per Day					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	-	-	-	-	-	-
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	127	323	3,546	2,528	301	282
Project Year 2007						
Ships - Fairway Transit (1)	66.4	154.9	1,988.7	1,170.2	166.4	155.9
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	-	-	-	-	-	-
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	39.7	0.0	1.6	1.5
Subtotal	128	327	3,583	2,551	304	285
Project Year 2015						
Ships - Fairway Transit (1)	59.6	138.5	1,767.2	1,041.9	148.3	139.0
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	-	-	-	-	-	-
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	34.1	0.0	1.5	1.4
Subtotal	121	311	3,356	2,422	286	268
Project Year 2025						
Ships - Fairway Transit (1)	59.6	138.5	1,767.2	1,041.9	148.3	139.0
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	-	-	-	-	-	-
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	28.3	0.0	1.2	1.2
Subtotal	121	311	3,350	2,422	286	268
Project Year 2038						
Ships - Fairway Transit (1)	59.6	138.5	1,767.2	1,041.9	148.3	139.0
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	-	-	-	-	-	-
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	25.4	0.0	1.1	1.0
Subtotal	121	311	3,348	2,422	286	268

Note: (1) Includes auxiliary power emissions.

Table D1.2-CB-35. On-Road Truck Trip Vehicle Miles Travelled - Berths 136-147 Terminal Project - CEQA Baseline

Year	B136-149 Throughput (TEUs)	B136-149 ICTF Thruput (TEUs) (1)	TEUs to Offsite Railyard (2)	TEUs to Local Deilveries	Truck Trips to Offsite Railyard (2)	Local Truck Trips	Truck Miles to Offsite Railyard (3)	Local Truck Trip Miles (4)	Composite VMT/ Truck Trip
Baseline - Year 2003	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2007	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2015	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2025	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2030	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3

(1) Annual throughput estimates from Rail Master Plan.

(2) = 50% of Berths 136-147 annual cargo throughput for all years.

(3) Assumes that 66% of cargo goes to Carson ICTF (4.5 miles) and 37% to LA railyards (18 miles) = 9.6 miles/trip

(4) Average of local/external-SCAB trip lengths (20/90) that originate from/are destined to the POLA.

Table D1.2-CB-36. ADT Estimates - Berths 136-147

Alternative/Project Year	Truck Trips		
	Annual	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,197,589	3,281	4,492
2015	1,197,589	3,281	4,492
2025	1,197,589	3,281	4,492
2030	1,197,589	3,281	4,492

(1) = annual trips/ 266.6 days.

Table D1.2-CB-37. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - CEQA Baseline

Activity/Project Scenario	Idling Time/ Trip (Hrs)	Miles/ Trip (1)	ADT	Idling Hrs/ Day	Miles/ Day
On-Terminal					
Year 2003 - Baseline	0.56	1.02	3,281	1,837	3,351
Year 2007	0.25	1.02	3,281	820	3,351
Year 2015	0.25	0.81	3,281	820	2,643
Year 2025	0.25	0.81	3,281	820	2,643
Year 2038	0.25	0.81	3,281	820	2,643
Off-Terminal					
Year 2003 - Baseline	0.30	32.3	3,281	984	106,028
Year 2007	0.30	32.3	3,281	984	106,028
Year 2015	0.30	32.3	3,281	984	106,028
Year 2025	0.30	32.3	3,281	984	106,028
Year 2038	0.30	32.3	3,281	984	106,028

(1) On-terminal mileage/trip based upon truck trip patterns through 2 terminal gates. Off-terminal miles/trip based on data presented in Table D1.2.34.

Table D1.2-CB-38. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - CEQA Baseline

Project Year/Mode	Emission Factors (Grams/Mile)					References
	ROG	CO	NOx	SOx	DPM	
Baseline - Year 2003						
On-road Truck - Idle	17.55	41.05	96.52	0.58	2.85	(1)
On-road Truck - 10 mph	10.50	23.83	38.13	0.26	3.89	(1)
On-road Truck - 25 mph	2.25	12.68	23.38	0.17	1.57	(1)
On-road Truck - 55 mph	1.41	5.38	23.09	0.14	1.16	(1)
On-road Trucks - Composite Off-Terminal	2.74	10.87	24.74	0.17	1.64	(2)
Project Year 2007						
On-road Truck - Idle	13.97	50.79	105.98	0.06	2.23	(1)
On-road Truck - 10 mph	10.25	21.47	38.74	0.03	3.11	(1)
On-road Truck - 25 mph	2.01	10.25	23.34	0.02	1.06	(1)
On-road Truck - 55 mph	1.27	4.29	23.71	0.02	0.76	(1)
On-road Trucks - Composite Off-Terminal	2.54	8.99	25.03	0.02	1.14	(2)
Project Year 2015						
On-road Truck - Idle	9.02	43.65	119.75	0.06	1.03	(1)
On-road Truck - 10 mph	5.71	11.89	26.30	0.03	1.17	(1)
On-road Truck - 25 mph	1.23	4.94	15.10	0.02	0.53	(1)
On-road Truck - 55 mph	0.69	3.47	12.61	0.02	0.66	(1)
On-road Trucks - Composite Off-Terminal	1.51	5.19	15.47	0.02	0.63	(3)
Project Year 2025						
On-road Truck - Idle	7.75	41.59	123.25	0.06	0.22	(1)
On-road Truck - 10 mph	2.01	4.36	8.93	0.03	0.17	(1)
On-road Truck - 25 mph	0.49	1.67	5.00	0.02	0.12	(1)
On-road Truck - 55 mph	0.25	1.72	3.58	0.02	0.20	(1)
On-road Trucks - Composite Off-Terminal	0.59	1.95	5.11	0.02	0.14	(4)
Project Year 2038						
On-road Truck - Idle	7.65	41.43	123.52	0.06	0.11	(1)
On-road Truck - 10 mph	1.58	3.44	6.86	0.03	0.11	(1)
On-road Truck - 25 mph	0.39	1.30	3.83	0.02	0.09	(1)
On-road Truck - 55 mph	0.19	1.40	2.69	0.02	0.14	(1)
On-road Trucks - Composite Off-Terminal	0.47	1.54	3.91	0.02	0.10	(4)

Notes: (1) From EMFAC2007 (ARB 2006). Units in grams/mile for each project year, at 60 degrees and 50% relative humidity, except idle factors in units of grams/hour.

Based on age distribution of year 2001/2005 POLA truck fleets for years 2003/2007+, as used in the PEIs (Starcrest

(2) Based on 10% at 10 miles per hour (mph), 50% at 25 mph, and 40% at 55 mph. Although not included in this composite emission factor, 30 minutes of idling mode included in emission estimates for each truck trip.

(3) Same as (2), except based on 10% at 10 miles per hour (mph), 60% at 25 mph, and 30% at 55 mph.

(4) Same as (3), except based on 10% at 10 miles per hour (mph), 70% at 25 mph, and 20% at 55 mph.

Table D1.2-CB-38a. Road Dust Emission Factors - Berths 136-147
Terminal Project Alternatives Scenarios.

Mode	Emission Factors (Grams/VMT)	
	PM10	PM2.5
Freeway Travel	0.15	0.03
Off-Terminal Surface Street Travel	0.55	0.09
On-Terminal Driving	8.14	1.38
Brake and Tire Wear	0.05	0.02

Notes: (1) Assuming 16.9% of PM10 produced from road dust is PM2.5.
(2) Assuming 42.9% of PM10 produced from brake and tire wear is PM2.5.

Table D1.2-CB-39. Road Dust Emissions for the Berths 136-147 Project - CEQA Baseline.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.1	10.2
Year 2007	60.1	10.2
Year 2015	47.4	8.0
Year 2025	47.4	8.0
Year 2038	47.4	8.0
Off-Terminal		
Year 2003 - Baseline	83.9	14.2
Year 2007	83.9	14.2
Year 2015	83.9	14.2
Year 2025	83.9	14.2
Year 2038	83.9	14.2
Combined On/Off-Terminal		
Year 2003 - Baseline	144.0	24.3
Year 2007	144.0	24.3
Year 2015	131.3	22.2
Year 2025	131.3	22.2
Year 2038	131.3	22.2

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2-CB-40. Brake and Tire Wear Emissions for the Berths Terminal Project - CEQA Baseline.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.4	0.2
Year 2007	0.4	0.2
Year 2015	0.3	0.1
Year 2025	0.3	0.1
Year 2038	0.3	0.1
Off-Terminal		
Year 2003 - Baseline	11.7	5.0
Year 2007	11.7	5.0
Year 2015	11.7	5.0
Year 2025	11.7	5.0
Year 2038	11.7	5.0
Combined On/Off-Terminal		
Year 2003 - Baseline	12.1	5.2
Year 2007	12.1	5.2
Year 2015	12.0	5.1
Year 2025	12.0	5.1
Year 2038	12.0	5.1

Table D1.2-CB-41. Total Non-Combustive Truck Generated PM E
for the Berths 136-147 Terminal Project - CEQA Baseline

	Daily Emissions (Pounds)	
Activity	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.5	10.3
Year 2007	60.5	10.3
Year 2015	47.7	8.1
Year 2025	47.7	8.1
Year 2038	47.7	8.1
Off-Terminal		
Year 2003 - Baseline	95.5	19.2
Year 2007	95.5	19.2
Year 2015	95.5	19.2
Year 2025	95.5	19.2
Year 2038	95.5	19.2
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	156	30
Year 2015	143	27
Year 2025	143	27
Year 2038	143	27

Table D1.2-CB-42. Daily Truck Emissions for the Berths 136-147 Terminal Project - CEQA Baseline.

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	25.3	91.9	191.7	0.1	4.0	3.7
Year 2007 - Driving	75.8	158.6	286.2	0.2	23.0	21.2
Subtotal - Year 2007	101.0	250.5	477.9	0.3	27.0	24.9
Year 2015 - Idling	16.3	78.9	216.6	0.1	1.9	1.7
Year 2015 - Driving	33.3	69.3	153.3	0.2	6.8	6.3
Subtotal - Year 2015	49.6	148.2	369.9	0.3	8.7	8.0
Year 2025 - Idling	14.0	75.2	222.9	0.1	0.4	0.4
Year 2025 - Driving	11.7	25.4	52.1	0.2	1.0	0.9
Subtotal - Year 2025	25.7	100.6	275.0	0.3	1.4	1.3
Year 2038 - Idling	13.8	74.9	223.4	0.1	0.2	0.2
Year 2038 - Driving	9.2	20.1	40.0	0.2	0.6	0.6
Subtotal - Year 2038	23.0	95.0	263.4	0.3	0.8	0.7
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	30.3	110.2	230.0	0.1	4.8	4.4
Year 2007 - Driving	593.5	2,101.3	5,851.7	4.5	267.6	246.2
Subtotal - Year 2007	623.8	2,211.5	6,081.7	4.7	272.4	250.6
Year 2015 - Idling	19.6	94.7	259.9	0.1	2.2	2.1
Year 2015 - Driving	353.6	1,214.5	3,617.5	4.6	147.6	135.8
Subtotal - Year 2015	373.2	1,309.2	3,877.4	4.8	149.9	137.9
Year 2025 - Idling	16.8	90.3	267.5	0.1	0.5	0.4
Year 2025 - Driving	138.4	454.9	1,194.8	4.7	33.2	30.6
Subtotal - Year 2025	155.2	545.2	1,462.3	4.9	33.7	31.0
Year 2038 - Idling	16.6	89.9	268.1	0.1	0.2	0.2
Year 2038 - Driving	109.4	359.1	913.1	4.7	23.1	21.3
Subtotal - Year 2038	126.0	449.1	1,181.1	4.9	23.3	21.5
Total Daily Truck Emissions by Project Year						
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	724.9	2,462.0	6,559.7	5.0	299.5	275.5
Year 2015	422.8	1,457.4	4,247.3	5.1	158.5	145.9
Year 2025	180.9	645.8	1,737.3	5.1	35.1	32.3
Year 2038	149.1	544.1	1,444.5	5.1	24.2	22.2

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2-CB-43. Equipment Usage Associated with One Outbound Train Trip at the Carson/Los Angeles ICTFs - Berths 136-147 Terminal Project Alternatives.

Equipment Type (1)	Hp	Load Factor	Number Active	Hourly Hp-Hr	Hours/ Trip	Total Hp-Hrs
Hostler	175	0.25	7	306	8.0	2,450
Top Picks	250	0.40	2	200	8.0	1,600
Haul Line Locomotive (2)	4,244	0.28	3	3,535	4.9	17,146
Haul Line Locomotive - Notch 1	4,244	0.05	3	637	2.0	1,273
Yard Locomotive	2,045	0.11	1	229	2.0	458

Notes: (1) Each outbound train trip (to inland locations) would carry 240 containers (444 TEUs).

(2) Based on a one-way trip distance between the Carson/Los Angeles ICTFs and exit of the SCAB (97 miles).

Table D1.2-CB-44. Equipment Usage Associated with One Inbound Train Trip at the Carson/Los Angeles ICTFs - Berths 136-147 Terminal Project Alternatives.

Equipment Type (1)	Hp	Load Factor	Number Active	Hourly Hp-Hr	Hours/ Trip	Total Hp-Hrs
Hostler	175	0.25	7	306	3.0	919
Top Picks	250	0.40	2	200	3.0	600
Haul Line Locomotive (2)	4,244	0.28	3	3,535	4.9	17,146
Haul Line Locomotive - Notch 1	4,244	0.05	3	637	1.0	637

Notes: (1) Each inbound train trip (into the POLA) would carry 90 containers (167 TEUs).

(2) Based on a one-way trip distance between the Carson/Los Angeles ICTFs and exit of the SCAB (97 miles).

Table D1.2-CB-45. Emission Factors for Rail/ICTF Equipment - Berths 136-147 Terminal Project Alternatives.

Project Scenario/	Emission Factors (Gm/Hp-Hr)						
Equipment - Horsepower	ROG	CO	NOx	SOx	PM	PM10	References
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	0.83	3.39	9.15	0.10	0.52	0.52	(1)
Terminal Equipment - 176-250 Hp	0.44	1.32	6.79	0.10	0.24	0.24	(1)
Line Haul Locomotive - Year 2003	0.61	1.28	10.66	0.69	0.32	0.32	(2)
Switch Yard Locomotive - Year 2003	1.28	1.83	17.40	0.11	0.44	0.44	(2)
Year 2007							
Terminal Equipment - 121-175 Hp	0.79	3.49	8.41	0.004	0.39	0.39	(1)
Terminal Equipment - 176-250 Hp	0.57	1.60	7.07	0.004	0.29	0.29	(1)
Line Haul Locomotive - Year 2007	0.55	1.28	7.61	0.69	0.29	0.29	(2)
Switch Yard Locomotive - Tier 2 Stds.	0.60	2.40	8.10	0.005	0.23	0.23	(3)
Switch Yard Locomotive - Year 2007	1.11	1.97	15.08	0.08	0.39	0.39	(4)
Year 2015							
Terminal Equipment - 121-175 Hp	0.32	3.16	4.25	0.004	0.18	0.18	(1)
Terminal Equipment - 176-250 Hp	0.25	1.22	3.73	0.004	0.15	0.15	(1)
Line Haul Locomotive - Year 2015	0.47	1.28	6.56	0.005	0.17	0.17	(6)
Switch Yard Locomotive - Year 2015	0.60	2.40	8.10	0.005	0.23	0.23	(5)
Year 2025							
Terminal Equipment - 121-175 Hp	0.10	3.07	0.92	0.004	0.03	0.03	(1)
Terminal Equipment - 176-250 Hp	0.10	1.12	0.58	0.004	0.03	0.03	(1)
Line Haul Locomotive - Year 2015	0.39	1.28	5.73	0.005	0.14	0.14	(6)
Switch Yard Locomotive - Year 2015	0.60	2.40	8.10	0.005	0.23	0.23	(5)
Year 2038							
Terminal Equipment - 121-175 Hp	0.08	3.07	0.30	0.004	0.02	0.02	(1)
Terminal Equipment - 176-250 Hp	0.09	1.12	0.32	0.004	0.02	0.02	(1)
Line Haul Locomotive - Year 2038	0.33	1.28	5.01	0.005	0.12	0.12	(6)
Switch Yard Locomotive - Year 2038	0.60	2.40	8.10	0.005	0.23	0.23	(5)

Notes: (1) Estimated with the use of the ARB OFFROAD Model with consideration of fleet turnover with adopted future EPA off-road emission standards. Based on equipment annual Hp-Hr usages at Berths 136-147 in year 2001 (Starcrest 2005).

(2) Represents national average emission factors for line haul/switch yard locomotives for a given year (EPA 1998). ROG = THC * 1.27. Year 2003 data for switch engines = 1999 values, as current PHL fleet is pre-1973 vintage (pre-Tier 0). Year 2003 line haul/switch loco diesel fuel assumed to be 0.22/0.035% sulfur (S) (PEI pages 223 and 229), although PM emission factors for switch locos not subsequently reduced, due to the antiquated age of the PHL engines.

(3) Locomotive Emissions Final Rulemaking (EPA 1997), except PM reduced by 4% to simulate use of ULSD.

(4) Assumes existing fleet is 75% Pre-Tier 0 and 25% Tier 2 standards + use of ULSD in all locomotives.

(5) Assumes 100% conversion of existing fleet to Tier 2 standard engines + use of ULSD.

(6) Represents average EPA emission factors for line haul locomotives for a given year + the use of 500 ppm S diesel by 2008 and ULSD by 2012, as stated in the EPA non-road diesel fuel rule. These fuels would produce 25/28% reductions in PM emissions from an assumed S fuel content of 0.2%.

Table D1.2-CB-46. Train Trip Generation Rates - Berths 136-147 Terminal Project - CEQA Baseline.

Project Scenario/Rail Yard	Annual Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2015	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2025	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2038	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731

Table D1.2-CB-47. Existing Locomotive Usage within the Pier A Rail Yard - Berths 136-149 Terminal-CEQA Baseline.

Equipment Type	Hp	Load Factor	Number Active	Hourly Hp-Hr	Hours/ Trip	Trips/ Day	Days/ Year	Annual Hp-Hr
Line Haul Locomotive	3,965	0.05	2	397	0.25	2	365	72,361
Yard Locomotive - Low UsageTrip	2,000	0.10	1	202	0.25	10	365	184,599
Yard Locomotive - Medium UsageTrip	2,000	0.10	1	202	0.50	8	365	295,358

Notes: (1) Activity data based on year 2003 annual usage.

Table D1.2-CB-48. Annual Train Emissions within the Existing Pier A Rail Yard - Berths 136-147 Terminal CEQA Baseline.

Project Year/Emission Source	Tons per Year						
	VOC	CO	NOx	SOx	PM	PM10	PM2.5
Year 2003 Baseline							
Line Haul Locomotive	0.05	0.10	0.85	0.06	0.03	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.37	3.54	0.02	0.09	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.60	5.66	0.04	0.14	0.14	0.13
Subtotal	0.73	1.07	10.06	0.11	0.26	0.26	0.24
Project Year 2007 (1)							
Line Haul Locomotive	0.05	0.12	0.70	0.06	0.03	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.46	3.53	0.02	0.09	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.74	5.64	0.03	0.15	0.15	0.13
Subtotal	0.73	1.32	9.87	0.11	0.26	0.26	0.24
Project Year 2015 (1)							
Line Haul Locomotive	0.04	0.12	0.60	0.00	0.02	0.02	0.01
Yard Locomotive - Low UsageTrip	0.14	0.56	1.90	0.00	0.05	0.05	0.05
Yard Locomotive - Medium UsageTrip	0.22	0.90	3.03	0.00	0.09	0.09	0.08
Subtotal	0.41	1.58	5.53	0.00	0.16	0.16	0.14
Project Year 2025 (1)							
Line Haul Locomotive	0.04	0.12	0.53	0.00	0.01	0.01	0.01
Yard Locomotive - Low UsageTrip	0.14	0.56	1.90	0.00	0.05	0.05	0.05
Yard Locomotive - Medium UsageTrip	0.22	0.90	3.03	0.00	0.09	0.09	0.08
Subtotal	0.40	1.58	5.45	0.00	0.15	0.15	0.14
Project Year 2038 (1)							
Line Haul Locomotive	0.03	0.12	0.46	0.00	0.01	0.01	0.01
Yard Locomotive - Low UsageTrip	0.14	0.56	1.90	0.00	0.05	0.05	0.05
Yard Locomotive - Medium UsageTrip	0.22	0.90	3.03	0.00	0.09	0.09	0.08
Subtotal	0.40	1.58	5.39	0.00	0.15	0.15	0.14

Note: (1) Assumes a 15% increase in activity between 2003 and 2006 and then steady.

Table D1.2-CB-49. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - CEQA Baseline Year 2003.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Carson or LA Railyards/Outbound						
Hostler	1.64	6.68	18.05	0.20	1.03	0.95
Top Picks	0.57	1.70	8.75	0.13	0.31	0.29
Line Haul Locomotive - Road Haul	8.42	17.67	147.18	9.57	4.42	4.06
Line Haul Locomotive - Notch 1	0.62	1.31	10.93	0.71	0.33	0.30
Yard Locomotive - Switching	0.47	0.67	6.42	0.04	0.16	0.15
Subtotal	11.72	28.04	191.33	10.66	6.25	5.75
Carson or LA Railyards/Inbound						
Hostler	0.61	2.50	6.77	0.08	0.39	0.35
Top Picks	0.21	0.64	3.28	0.05	0.12	0.11
Line Haul Locomotive - Road Haul	8.42	17.67	147.18	9.57	4.42	4.06
Line Haul Locomotive - Notch 1	0.31	0.66	5.46	0.36	0.16	0.15
Subtotal	9.56	21.47	162.69	10.06	5.09	4.68
Total Tons Per Year	21.28	49.52	354.02	20.72	11.34	10.43

Table D1.2-CB-50. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - CEQA Baseline Year 2007.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.57	6.88	16.59	0.01	0.77	0.71
Top Picks	0.73	2.06	9.11	0.01	0.37	0.34
Line Haul Locomotive - Road Haul	7.54	17.67	105.07	9.57	4.00	3.68
Line Haul Locomotive - Notch 1	0.56	1.31	7.80	0.71	0.30	0.27
Yard Locomotive - Switching	0.41	0.73	5.56	0.03	0.14	0.13
Subtotal	10.81	28.66	144.13	10.33	5.59	5.14
Carson or LA Railyards/Inbound						
Hostler	0.59	2.58	6.22	0.00	0.29	0.27
Top Picks	0.28	0.77	3.42	0.00	0.14	0.13
Line Haul Locomotive - Road Haul	7.54	17.67	105.07	9.57	4.00	3.68
Line Haul Locomotive - Notch 1	0.28	0.66	3.90	0.36	0.15	0.14
Subtotal	8.68	21.68	118.61	9.94	4.58	4.22
Total Tons Per Year	19.49	50.34	262.74	20.27	10.17	9.36

Table D1.2-CB-51. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - CEQA Baseline Year 2015.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.63	6.23	8.39	0.01	0.35	0.32
Top Picks	0.32	1.57	4.80	0.01	0.19	0.17
Line Haul Locomotive - Road Haul	6.49	17.67	90.57	0.07	2.39	2.19
Line Haul Locomotive - Notch 1	0.48	1.31	6.73	0.00	0.18	0.16
Yard Locomotive - Switching	0.22	0.89	2.99	0.00	0.08	0.08
Subtotal	8.15	27.67	113.47	0.09	3.18	2.93
Carson or LA Railyards/Inbound						
Hostler	0.24	2.34	3.15	0.00	0.13	0.12
Top Picks	0.12	0.59	1.80	0.00	0.07	0.06
Line Haul Locomotive - Road Haul	6.49	17.67	90.57	0.07	2.39	2.19
Line Haul Locomotive - Notch 1	0.24	0.66	3.36	0.00	0.09	0.08
Subtotal	7.09	21.25	98.88	0.07	2.68	2.46
Total Tons Per Year	15.23	48.92	212.35	0.16	5.86	5.39

Table D1.2-CB-52. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - CEQA Baseline Year 2025.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.19	6.06	1.82	0.01	0.06	0.05
Top Picks	0.12	1.45	0.75	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	5.44	17.67	79.06	0.07	1.99	1.83
Line Haul Locomotive - Notch 1	0.40	1.31	5.87	0.00	0.15	0.14
Yard Locomotive - Switching	0.22	0.89	2.99	0.00	0.08	0.08
Subtotal	6.38	27.38	90.49	0.09	2.31	2.13
Carson or LA Railyards/Inbound						
Hostler	0.07	2.27	0.68	0.00	0.02	0.02
Top Picks	0.05	0.54	0.28	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	5.44	17.67	79.06	0.07	1.99	1.83
Line Haul Locomotive - Notch 1	0.20	0.66	2.94	0.00	0.07	0.07
Subtotal	5.76	21.14	82.96	0.07	2.10	1.93
Total Tons Per Year	12.13	48.52	173.46	0.16	4.41	4.05

Table D1.2-CB-53. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - CEQA Baseline Year 2038.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.16	6.06	0.60	0.01	0.04	0.04
Top Picks	0.11	1.45	0.41	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	4.60	17.67	69.19	0.07	1.65	1.52
Line Haul Locomotive - Notch 1	0.34	1.31	5.14	0.00	0.12	0.11
Yard Locomotive - Switching	0.22	0.89	2.99	0.00	0.08	0.08
Subtotal	5.44	27.38	78.32	0.09	1.93	1.77
Carson or LA Railyards/Inbound						
Hostler	0.06	2.27	0.22	0.00	0.02	0.01
Top Picks	0.04	0.54	0.15	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	4.60	17.67	69.19	0.07	1.65	1.52
Line Haul Locomotive - Notch 1	0.17	0.66	2.57	0.00	0.06	0.06
Subtotal	4.88	21.14	72.13	0.07	1.74	1.60
Total Tons Per Year	10.31	48.52	150.45	0.16	3.66	3.37

Table D1.2-CB-54. Summary of Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons per Year					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.16	12.30	35.34	0.02	1.57	1.45
Trains	16.33	38.04	227.40	20.25	8.60	7.91
Subtotal	19.49	50.34	262.74	20.27	10.17	9.36
Project Year 2015						
ICTF Equipment	1.31	10.73	18.13	0.02	0.74	0.68
Trains	13.92	38.20	194.22	0.14	5.12	4.71
Subtotal	15.23	48.92	212.35	0.16	5.86	5.39
Project Year 2025						
ICTF Equipment	0.43	10.32	3.54	0.02	0.12	0.11
Trains	11.70	38.20	169.91	0.14	4.28	3.94
Subtotal	12.13	48.52	173.46	0.16	4.41	4.05
Project Year 2038						
ICTF Equipment	0.37	10.32	1.39	0.02	0.10	0.09
Trains	9.94	38.20	149.06	0.14	3.56	3.28
Subtotal	10.31	48.52	150.45	0.16	3.66	3.37

Table D1.2-CB-55. Emission Factors for Terminal Equipment - Berths 136-147
Terminal Project Alternatives.

Project Scenario/Equipment Horsepower	Emission Factors (1)					References
	ROG	CO	NOx	SOx	PM10	
Baseline - Year 2003						
Terminal Equipment - 121-175 Hp	0.83	3.39	9.15	0.10	0.52	(1)
Terminal Equipment - 176-250 Hp	0.44	1.32	6.79	0.10	0.24	(1)
Terminal Equipment - 250-500 Hp	0.44	1.47	6.98	0.10	0.22	(1)
Project Year 2007						
Terminal Equipment - 121-175 Hp	0.79	3.49	8.41	0.004	0.39	(3)
Terminal Equipment - 176-250 Hp	0.57	1.60	7.07	0.004	0.29	(3)
Terminal Equipment - 250-500 Hp	0.40	1.40	6.18	0.004	0.22	(3)
Project Year 2015						
Terminal Equipment - 121-175 Hp	0.32	3.16	4.25	0.004	0.18	(3)
Terminal Equipment - 176-250 Hp	0.25	1.22	3.73	0.004	0.15	(3)
Terminal Equipment - 250-500 Hp	0.20	1.11	3.20	0.004	0.13	(3)
Project Year 2025						
Terminal Equipment - 121-175 Hp	0.10	3.07	0.92	0.004	0.03	(3)
Terminal Equipment - 176-250 Hp	0.10	1.12	0.58	0.004	0.03	(3)
Terminal Equipment - 250-500 Hp	0.08	1.00	0.54	0.004	0.03	(3)
Project Year 2038						
Terminal Equipment - 121-175 Hp	0.08	3.07	0.30	0.004	0.02	(3)
Terminal Equipment - 176-250 Hp	0.09	1.12	0.32	0.004	0.02	(3)
Terminal Equipment - 250-500 Hp	0.07	1.00	0.29	0.004	0.02	(3)

Notes: (1) Data calculated from OFFROAD Emissions Model factors estimated for the year 2001 terminal equipment fleet (ARB 2004) with the use of an equipment replacement rate of 15 years and taking into consideration future off-road emission standards implementation schedule.

Table D1.2-CB-56. Terminal Equipment Annual Emissions - Berths 136-147 Terminal Project - CEQA Baseline.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	10,493,875	9.18	40.37	97.26	0.05	4.52	4.16
Terminal Equipment - 176-250 Hp	12,581,479	7.91	22.19	98.10	0.06	4.01	3.69
Terminal Equipment - 250-500 Hp	2,417,350	1.07	3.73	16.47	0.01	0.58	0.54
Subtotal	25,492,704	18.16	66.29	211.82	0.12	9.12	8.39
Project Year 2015							
Terminal Equipment - 121-175 Hp	10,493,875	3.70	36.52	49.18	0.05	2.04	1.88
Terminal Equipment - 176-250 Hp	12,581,479	3.49	16.92	51.68	0.06	2.03	1.86
Terminal Equipment - 250-500 Hp	2,417,350	0.53	2.95	8.52	0.01	0.36	0.33
Subtotal	25,492,704	7.73	56.38	109.38	0.12	4.43	4.07
Project Year 2025							
Terminal Equipment - 121-175 Hp	10,493,875	1.12	35.52	10.69	0.05	0.32	0.30
Terminal Equipment - 176-250 Hp	12,581,479	1.33	15.60	8.10	0.06	0.37	0.34
Terminal Equipment - 250-500 Hp	2,417,350	0.21	2.66	1.43	0.01	0.07	0.07
Subtotal	25,492,704	2.66	53.79	20.22	0.12	0.77	0.71
Project Year 2038							
Terminal Equipment - 121-175 Hp	10,493,875	0.91	35.52	3.50	0.05	0.24	0.22
Terminal Equipment - 176-250 Hp	12,581,479	1.23	15.60	4.45	0.06	0.33	0.31
Terminal Equipment - 250-500 Hp	2,417,350	0.19	2.66	0.77	0.01	0.05	0.04
Subtotal	25,492,704	2.33	53.79	8.72	0.12	0.62	0.57

Table D1.2-CB-57. Annual Operational Emissions - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	12.12	28.27	362.93	213.56	30.37	28.46
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.22	1.16	7.24	0.00	0.30	0.28
Terminal Equipment	18.16	66.29	211.82	0.12	9.12	8.39
On-road Trucks	132.29	449.32	1,197.14	0.91	83.13	55.67
Trains	16.33	38.04	227.40	20.25	8.60	7.91
Railyard Equipment	3.16	12.30	35.34	0.02	1.57	1.45
Commuting	1.55	20.84	2.72	0.02	2.27	2.09
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	196.79	648.95	2,346.84	490.77	161.42	128.66
Project Year 2015						
Ships - Fairway Transit (1)	10.88	25.28	322.51	190.15	27.07	25.36
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.22	1.16	6.22	0.00	0.27	0.25
Terminal Equipment	7.73	56.38	109.38	0.12	4.43	4.07
On-road Trucks	77.15	265.98	775.13	0.92	55.08	31.61
Trains	13.92	38.20	194.22	0.14	5.12	4.71
Railyard Equipment	1.31	10.73	18.13	0.02	0.74	0.68
Commuting	0.75	10.10	1.27	0.02	2.27	2.08
Pier A Railyard	0.41	1.58	5.53	0.00	0.16	0.14
Project Year 2015 Total	124.60	440.81	1,724.77	447.15	120.92	93.08
Project Year 2025						
Ships - Fairway Transit (1)	10.88	25.28	322.51	190.15	27.07	25.36
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.22	1.16	5.17	0.00	0.23	0.21
Terminal Equipment	2.66	53.79	20.22	0.12	0.77	0.71
On-road Trucks	33.02	117.86	317.06	0.94	32.55	10.88
Trains	11.70	38.20	169.91	0.14	4.28	3.94
Railyard Equipment	0.43	10.32	3.54	0.02	0.12	0.11
Commuting	0.56	7.33	0.87	0.01	2.26	2.08
Pier A Railyard	0.40	1.58	5.45	0.00	0.15	0.14
Project Year 2025 Total	72.10	286.92	1,137.12	447.16	93.24	67.61
Project Year 2038						
Ships - Fairway Transit (1)	10.88	25.28	322.51	190.15	27.07	25.36
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.21	1.16	4.64	0.00	0.20	0.19
Terminal Equipment	2.33	53.79	8.72	0.12	0.62	0.57
On-road Trucks	27.21	99.29	263.63	0.94	30.55	9.04
Trains	9.94	38.20	149.06	0.14	3.56	3.28
Railyard Equipment	0.37	10.32	1.39	0.02	0.10	0.09
Commuting	0.31	3.74	0.36	0.01	2.26	2.08
Pier A Railyard	0.40	1.58	5.39	0.00	0.15	0.14
Project Year 2038 Total	63.88	264.77	1,048.07	447.16	90.31	64.92

Note: (1) Includes auxiliary generator emissions.

Table D1.2-CB-58. Daily Operational Emissions - Berths 136-147 Terminal Project - CEQA Baseline - 365 days/year a

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	66	155	1,989	1,170	166	156
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	40	0	2	2
Terminal Equipment	99	363	1,161	1	50	46
On-road Trucks	725	2,462	6,560	5	456	305
Trains	89	208	1,246	111	47	43
Railyard Equipment	17	67	194	0	9	8
Commuting	9	114	15	0	12	11
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,078	3,556	12,859	2,689	885	705
Project Year 2015						
Ships - Fairway Transit (1)	60	139	1,767	1,042	148	139
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	34	0	1	1
Terminal Equipment	42	309	599	1	24	22
On-road Trucks	423	1,457	4,247	5	302	173
Trains	76	209	1,064	1	28	26
Railyard Equipment	7	59	99	0	4	4
Commuting	7	89	12	0	12	11
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	685	2,449	9,455	2,450	663	510
Project Year 2025						
Ships - Fairway Transit (1)	60	139	1,767	1,042	148	139
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	28	0	1	1
Terminal Equipment	15	295	111	1	4	4
On-road Trucks	181	646	1,737	5	178	60
Trains	64	209	931	1	23	22
Railyard Equipment	2	57	19	0	1	1
Commuting	4	55	7	0	12	11
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	396	1,587	6,233	2,450	511	370
Project Year 2038						
Ships - Fairway Transit (1)	60	139	1,767	1,042	148	139
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	25	0	1	1
Terminal Equipment	18	414	67	1	5	4
On-road Trucks	149	544	1,445	5	167	50
Trains	54	209	817	1	20	18
Railyard Equipment	2	57	8	0	1	0
Commuting	2	21	2	0	12	11
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	355	1,570	5,762	2,450	496	357
SCAQMD Daily Significance Threshold	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2-NFAB-Mit-1. Proposed Phase-In Mitigations Implementation Schedule - Berths 136-147 Terminal Pr

	Year/Compliance Rate Fraction of All Ship Visits				
Mitigation Measure	2007	2015	2025	2020	2038
VSRP	0.50	0.95	0.95	0.95	0.95
Non-VSRP	0.50	0.05	0.05	0.05	0.05
AMP		0.80	1.00	1.00	1.00
Non-AMP	1.00	0.20	-	-	-
Auxiliary Engines - 2.7% S RO	0.66	-	-	-	-
Auxiliary Engines - 0.78% S MGO	0.34	-			
Auxiliary Engines - 0.2% S MGO		1.00	1.00	1.00	1.00
OGV Main Engines - 2.7% S RO	1.00	-	-	-	-
OGV Main Engines - 0.5% S MGO					
OGV Main Engines - 0.2% S MGO		1.00	1.00	1.00	1.00
Slide Valves	-	0.95	0.95	0.95	0.95
Non-Slide Valves	1.00	0.05	0.05	0.05	0.05
Annex VI Compliant Vessels		0.35	0.75	0.90	0.90
Non-Annex VI Vessels	1.00	0.65	0.25	0.10	0.10

Table D1.2-NFAB-Mit-2. Cargo Vessel Propulsion Engine Usage per One-Way Ship Trip in the POLA Fairway Zone - Berths 136-147 Terminal Project Alternatives.

Mode/Vessel Type	Propulsion Max Hp (2)	Fairway (1) Load Factor (3)	Modal Hp	Distance (NM)	Speed (Kts) (4)	Hours Per Trip	Hp-Hrs/ Trip	kW-Hrs/ Trip (5)
Non-Compliance with VSRP								
Containership 8,000 - 9,000 TEU	93,000	0.83	77,283	39.9	24.9	1.61	124,070	92,556
Containership 5,000 - 6,000 TEU	74,043	0.83	61,530	39.9	22.6	1.76	108,416	80,878
Containership 3,000 - 5,000 TEU	50,651	0.83	42,091	39.9	20.8	1.92	80,625	60,146
Containership < 3,000 TEU	26,525	0.83	22,043	39.9	18.2	2.19	48,229	35,979
General Cargo	10,993	0.83	9,135	38.9	14.7	2.64	24,156	18,021
Auto Carrier	15,418	0.83	12,813	39.6	17.6	2.24	28,736	21,437
Compliance with VSRP within VSRP Zone (6)(7)								
Containership 8,000 - 9,000 TEU - Outside VSRPZ	93,000	0.83	77,283	17.9	24.9	0.72	55,661	41,523
Containership 8,000 - 9,000 TEU - In VSRPZ	93,000	0.09	8,694	22.0	12.0	1.83	15,940	11,891
Containership 8,000 - 9,000 TEU - Total kW-Hrs								53,414
Containership 5,000 - 6,000 TEU - Outside VSRPZ	74,043	0.83	61,530	17.9	22.6	0.79	48,638	36,284
Containership 5,000 - 6,000 TEU - In VSRPZ	74,043	0.12	9,152	22.0	12.0	1.83	16,779	12,517
Containership 5,000 - 6,000 TEU - Total kW-Hrs								48,801
Containership 3,000 - 5,000 TEU - Outside VSRPZ	50,651	0.83	42,091	17.9	20.8	0.86	36,170	26,983
Containership 3,000 - 5,000 TEU - In VSRPZ	50,651	0.16	8,043	22.0	12.0	1.83	14,746	11,000
Containership 3,000 - 5,000 TEU - Total kW-Hrs								37,983
Containership < 3,000 TEU - Outside VSRPZ	26,525	0.83	22,043	17.9	18.2	0.98	21,637	16,141
Containership < 3,000 TEU - In VSRPZ	26,525	0.24	6,278	22.0	12.0	1.83	11,509	8,586
Containership < 3,000 TEU - Total kW-Hrs								24,727
General Cargo - Outside VSRPZ	10,993	0.83	9,135	16.9	14.7	1.15	10,477	7,816
General Cargo - In VSRPZ	10,993	0.45	4,975	22.0	12.0	1.83	9,121	6,804
General Cargo - Total kW-Hrs								14,620
Auto Carrier - Outside VSRPZ	15,418	0.83	12,813	17.6	17.6	1.00	12,751	9,512
Auto Carrier - In VSRPZ	15,418	0.26	4,035	22.0	12.0	1.83	7,398	5,519
Auto Carrier - Total kW-Hrs								15,031
Compliance with VSRP within entire Fairway (8)								
Containership 8,000 - 9,000 TEU	93,000	0.09	8,694	39.9	12.0	3.33	28,909	21,566
Containership 5,000 - 6,000 TEU	74,043	0.12	9,152	39.9	12.0	3.33	30,430	22,701
Containership 3,000 - 5,000 TEU	50,651	0.16	8,043	39.9	12.0	3.33	26,743	19,951
Containership < 3,000 TEU	26,525	0.24	6,278	39.9	12.0	3.33	20,873	15,572
General Cargo	10,993	0.45	4,975	38.9	12.0	3.24	16,107	12,016
Auto Carrier	15,418	0.26	4,035	39.6	12.0	3.30	13,300	9,922

Notes: (1) Vessel route between the boundary of the SCAQMD waters and the Precautionary Area. Based upon data from the Port of Los Angeles Baseline Air Emissions Inventory (PEI) (Starcrest 2005) Table 2.8 and expected usage of fairway routes for each vessel type (see Table D1.2-NFAB-Mit-5a).

(2) 2005 PEI Table 2.11, except Samsung Heavy Industries 2003 for 8,000-9,000 TEU vessel.

(3) PEI page 68.

(4) Represents service speed, which is 94% of maximum speed (PEI page 68).

(5) 1 kW-Hr = 0.746 Hp-Hrs.

(6) Length of fairway within/outside the Vessel Speed Reduction Program (VSRP) Zone (VSRPZ) ~ 22/17.9 nautical miles (NM).

(7) Load factor derived from Propeller Law, where load factor = (actual speed/max. speed) ^{3} (PEI page 99).

Table D1.2-NFAB-Mit-3. Cargo Vessel Auxiliary Generator Usage per One-Way Fairway Transit - Berths 136-147 Terminal Project Alternatives.

Mode/Vessel Type	Auxiliary kW per Vessel (1)	Load Factor (1)	Hours/ Transit	kW-Hrs/ Transit
Non-Compliance with VSRP (3)				
Containership 8,000 - 9,000 TEU	13,501	0.13	1.61	2,818
Containership 5,000 - 6,000 TEU	12,431	0.13	1.76	2,847
Containership 3,000 - 5,000 TEU	8,137	0.13	1.92	2,026
Containership < 3,000 TEU	4,315	0.13	2.19	1,227
General Cargo	1,777	0.17	2.64	799
Auto Carrier	2,850	0.15	2.24	959
Compliance with VSRP within VSRP Zone (3)				
Containership 8,000 - 9,000 TEU	13,501	0.13	2.55	4,482
Containership 5,000 - 6,000 TEU	12,431	0.13	2.62	4,240
Containership 3,000 - 5,000 TEU	8,137	0.13	2.69	2,848
Containership < 3,000 TEU	4,315	0.13	2.81	1,579
General Cargo	1,777	0.17	2.98	900
Auto Carrier	2,850	0.15	2.83	1,209
Compliance with VSRP within entire Fairway (8)				
Containership 8,000 - 9,000 TEU	13,501	0.13	3.33	5,836
Containership 5,000 - 6,000 TEU	12,431	0.13	3.33	5,373
Containership 3,000 - 5,000 TEU	8,137	0.13	3.33	3,517
Containership < 3,000 TEU	4,315	0.13	3.33	1,865
General Cargo	1,777	0.17	3.24	978
Auto Carrier	2,850	0.15	3.30	1,409

Notes: (1) 2005 PEI Table 2.13

(3) See Table D1.2-NFAB-Mit-2 for estimated vessel transit durations within the fairway for each mode of operation.

Table D1.2-NFAB-Mit-4. OGV Main Engine Emission Factors Multipliers for Use of Slide Valves

Main Engine Load Factor	VOC	CO	NOx	SOx	PM
> 25%	0.70	1.00	0.70	1.00	0.75
<25%	0.15	1.00	0.70	1.00	0.40

Notes: (1) Reduction factors for slide valves at high main engine loads are from CARB for PM, and from MAN B&W for VOC and NOx.

(2) Slide valve reduction factors for VOC and PM at low loads are from "MV Sine Maersk Emission Measurements & Retrofit Control Technology Discussion", MAN B&W Diesel A/S, April 8, 2004. No data are provided for NOx at low loads, so the high load reduction factor was conservatively used.

Table D1.2-NFAB-Mit-4a. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - NEPA Baseline.

Project Scenario/Ship Type	Annual Ship Visits	Annual Shifts	TEU Moves/ Ship Visit (1)	Hoteling Time/ Visit (Hours) (2)	Annual TEU Movements
Baseline - Year 2003					
Containerships 3,000 - 5,000 TEU	68		5,100	60.0	346,800
Containerships < 3,000 TEU	148	30	3,063	36.0	545,214
Subtotal	246				892,014
Project Year 2007					
Containerships 5,000 - 6,000 TEU	22		8,017	72.0	176,374
Containerships 3,000 - 5,000 TEU	80		5,100	60.0	408,000
Containerships < 3,000 TEU	154		3,063	36.0	471,702
Subtotal	256				1,056,076
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	75		8,017	72.0	601,275
Containerships 3,000 - 5,000 TEU	91		5,100	60.0	464,100
Containerships < 3,000 TEU	139		3,063	36.0	425,757
Subtotal	305				1,491,132
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	136		8,017	72.0	1,090,312
Containerships 3,000 - 5,000 TEU	92		5,100	60.0	469,200
Containerships < 3,000 TEU	45		3,063	36.0	137,835
Subtotal	273				1,697,347
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	136		8,017	72.0	1,090,312
Containerships 3,000 - 5,000 TEU	92		5,100	60.0	469,200
Containerships < 3,000 TEU	45		3,063	36.0	137,835
Subtotal	273				1,697,347

Notes: (1) Throughputs for vessels <3,000 and 3,000-5,000 TEUs based upon current and future expected operations at the Berths 136-147 terminal. Thrghput for 5,000-6,000 TEU vessels based upon average throughput of vessels >5000 TEUs at berths 121-131 in year 2001. Thrghput for 8,000-9,000 TEU vessels based upon an expected capacity of 8,800 TEUs (Samsung Heavy Industries 2003) * 1.43 (the ratio of throughput per ship visit/vessel capacity for vessels >5,000 TEUs that called at Berths 121-131 in 2001) = 12,584 TEUs/SV.

(2) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006).

Table D1.2-NFAB-Mit-5. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - Vessels that Comply with Proposed VSRP.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.95	2.14	26.14	14.95	2.18	2.05
Containership < 3,000 TEU	1.21	2.82	36.51	21.18	3.03	2.83
Subtotal	2.16	4.96	62.65	36.13	5.21	4.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.92	1.94	22.19	12.43	1.88	1.77
Containerships 3,000 - 5,000 TEU	2.24	5.03	61.50	35.17	5.14	4.82
Containerships < 3,000 TEU	2.52	5.88	75.97	44.07	6.30	5.90
Subtotal	5.68	12.85	159.67	91.67	13.32	12.48
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.60	8.34	66.22	2.62	2.32	2.18
Containerships 3,000 - 5,000 TEU	3.19	6.65	65.04	2.79	2.16	2.02
Containerships < 3,000 TEU	2.72	6.35	73.84	3.33	2.38	2.23
Subtotal	10.51	21.34	205.10	8.75	6.86	6.43
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	8.34	15.12	120.08	4.75	4.21	3.94
Containerships 3,000 - 5,000 TEU	3.23	6.73	65.75	2.83	2.18	2.04
Containerships < 3,000 TEU	0.88	2.05	23.91	1.08	0.77	0.72
Subtotal	12.45	23.90	209.74	8.66	7.16	6.71
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	8.34	15.12	120.08	4.75	4.21	3.94
Containerships 3,000 - 5,000 TEU	3.23	6.73	65.75	2.83	2.18	2.04
Containerships < 3,000 TEU	0.88	2.05	23.91	1.08	0.77	0.72
Subtotal	12.45	23.90	209.74	8.66	7.16	6.71

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2-NFAB-Mit-6. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - Non-Compliant Vessels with the Proposed VSRP.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	4.06	9.47	122.40	71.01	10.14	9.50
Containership < 3,000 TEU	5.28	12.33	159.36	92.45	13.21	12.37
Subtotal	9.34	21.79	281.76	163.45	23.35	21.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.18	2.75	35.50	20.59	2.94	2.76
Containerships 3,000 - 5,000 TEU	3.18	7.43	96.00	55.69	7.96	7.45
Containerships < 3,000 TEU	3.66	8.55	110.55	64.13	9.16	8.58
Subtotal	8.02	18.72	242.05	140.41	20.06	18.80
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.40	0.94	10.89	0.49	0.35	0.33
Containerships 3,000 - 5,000 TEU	0.36	0.84	9.83	0.44	0.32	0.30
Containerships < 3,000 TEU	0.33	0.77	8.98	0.41	0.29	0.27
Subtotal	1.09	2.55	29.70	1.34	0.96	0.90
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.73	1.70	19.75	0.89	0.64	0.60
Containerships 3,000 - 5,000 TEU	0.37	0.85	9.94	0.45	0.32	0.30
Containerships < 3,000 TEU	0.11	0.25	2.91	0.13	0.09	0.09
Subtotal	1.20	2.80	32.59	1.47	1.05	0.98
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.73	1.70	19.75	0.89	0.64	0.60
Containerships 3,000 - 5,000 TEU	0.37	0.85	9.94	0.45	0.32	0.30
Containerships < 3,000 TEU	0.11	0.25	2.91	0.13	0.09	0.09
Subtotal	1.20	2.80	32.59	1.47	1.05	0.98

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2-NFAB-Mit-7. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.41	0.68	5.32	2.53	0.50	0.47
Containerships 3,000 - 5,000 TEU	0.99	1.80	15.90	8.09	1.43	1.34
Containerships < 3,000 TEU	0.81	1.80	21.38	12.16	1.81	1.69
Subtotal	2.22	4.28	42.60	22.78	3.74	3.50
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.40	2.30	16.34	0.60	0.60	0.56
Containerships 3,000 - 5,000 TEU	1.13	2.05	16.28	0.64	0.57	0.53
Containerships < 3,000 TEU	0.73	1.62	17.37	0.77	0.57	0.53
Subtotal	3.26	5.98	49.98	2.02	1.74	1.63
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	2.53	4.17	29.63	1.10	1.08	1.01
Containerships 3,000 - 5,000 TEU	1.14	2.07	16.46	0.65	0.58	0.54
Containerships < 3,000 TEU	0.24	0.53	5.62	0.25	0.18	0.17
Subtotal	3.91	6.77	51.71	2.00	1.84	1.73
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	2.53	4.17	29.63	1.10	1.08	1.01
Containerships 3,000 - 5,000 TEU	1.14	2.07	16.46	0.65	0.58	0.54
Containerships < 3,000 TEU	0.24	0.53	5.62	0.25	0.18	0.17
Subtotal	3.91	6.77	51.71	2.00	1.84	1.73

(2) Without slide valves

Table D1.2-NFAB-Mit-8. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.58	0.57	3.26	0.78	0.39	0.36
Containerships 3,000 - 5,000 TEU	1.44	1.42	8.11	1.94	0.96	0.90
Containerships < 3,000 TEU	1.45	1.44	8.18	1.96	0.97	0.91
Subtotal	3.47	3.43	19.55	4.68	2.31	2.17
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.98	1.95	10.00	0.19	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.64	1.62	8.30	0.15	0.38	0.36
Containerships < 3,000 TEU	1.31	1.30	6.64	0.12	0.31	0.29
Subtotal	4.93	4.87	24.95	0.46	1.15	1.08
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.58	3.54	18.14	0.34	0.84	0.78
Containerships 3,000 - 5,000 TEU	1.66	1.64	8.39	0.16	0.39	0.36
Containerships < 3,000 TEU	0.42	0.42	2.15	0.04	0.10	0.09
Subtotal	5.66	5.60	28.68	0.53	1.32	1.24
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.58	3.54	18.14	0.34	0.84	0.78
Containerships 3,000 - 5,000 TEU	1.66	1.64	8.39	0.16	0.39	0.36
Containerships < 3,000 TEU	0.42	0.42	2.15	0.04	0.10	0.09
Subtotal	5.66	5.60	28.68	0.53	1.32	1.24

Table D1.2-NFAB-Mit-9. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.21	0.15	0.92	0.12	0.12	0.11
Containerships 3,000 - 5,000 TEU	0.52	0.38	2.29	0.29	0.30	0.28
Containerships < 3,000 TEU	0.52	0.39	2.31	0.29	0.30	0.28
Subtotal	1.25	0.92	5.52	0.69	0.72	0.67
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.71	0.52	2.82	0.03	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.59	0.44	2.34	0.02	0.12	0.11
Containerships < 3,000 TEU	0.47	0.35	1.88	0.02	0.10	0.09
Subtotal	1.77	1.31	7.04	0.07	0.36	0.33
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.29	0.95	5.12	0.05	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.60	0.44	2.37	0.02	0.12	0.11
Containerships < 3,000 TEU	0.15	0.11	0.61	0.01	0.03	0.03
Subtotal	2.04	1.50	8.10	0.08	0.41	0.39
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.29	0.95	5.12	0.05	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.60	0.44	2.37	0.02	0.12	0.11
Containerships < 3,000 TEU	0.15	0.11	0.61	0.01	0.03	0.03
Subtotal	2.04	1.50	8.10	0.08	0.41	0.39

(2) Without slide valves

Table D1.2-NFAB-Mit-10. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - Vessels that Comply with VSRP.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.04	0.12	1.57	1.31	0.16	0.15
Containership < 3,000 TEU	0.05	0.14	1.89	1.58	0.19	0.18
Subtotal	0.09	0.26	3.46	2.90	0.35	0.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.04	0.11	1.51	1.26	0.15	0.14
Containerships 3,000 - 5,000 TEU	0.10	0.28	3.69	3.09	0.38	0.35
Containerships < 3,000 TEU	0.11	0.29	3.94	3.30	0.40	0.38
Subtotal	0.25	0.68	9.14	7.65	0.93	0.87
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.34	0.93	11.73	0.71	0.24	0.22
Containerships 3,000 - 5,000 TEU	0.27	0.74	9.32	0.57	0.19	0.18
Containerships < 3,000 TEU	0.22	0.60	7.55	0.46	0.15	0.14
Subtotal	0.82	2.26	28.60	1.74	0.57	0.54
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.61	1.68	21.27	1.29	0.43	0.40
Containerships 3,000 - 5,000 TEU	0.27	0.75	9.42	0.57	0.19	0.18
Containerships < 3,000 TEU	0.07	0.19	2.44	0.15	0.05	0.05
Subtotal	0.95	2.62	33.14	2.01	0.67	0.62
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.61	1.68	21.27	1.29	0.43	0.40
Containerships 3,000 - 5,000 TEU	0.27	0.75	9.42	0.57	0.19	0.18
Containerships < 3,000 TEU	0.07	0.19	2.44	0.15	0.05	0.05
Subtotal	0.95	2.62	33.14	2.01	0.67	0.62

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2-NFAB-Mit-11. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - Non-Compliant Vessels within VSRP.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.09	0.25	3.35	2.80	0.34	0.32
Containership < 3,000 TEU	0.12	0.33	4.42	3.69	0.45	0.42
Subtotal	0.21	0.58	7.76	6.50	0.79	0.74
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.02	0.85	0.10	0.10
Containerships 3,000 - 5,000 TEU	0.07	0.20	2.63	2.20	0.27	0.25
Containerships < 3,000 TEU	0.08	0.23	3.06	2.56	0.31	0.29
Subtotal	0.18	0.50	6.70	5.61	0.68	0.64
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.33	0.02	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.28	0.02	0.01	0.01
Containerships < 3,000 TEU	0.01	0.02	0.26	0.02	0.01	0.00
Subtotal	0.03	0.07	0.87	0.05	0.02	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.05	0.59	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.29	0.02	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.08	0.01	0.00	0.00
Subtotal	0.03	0.08	0.96	0.06	0.02	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.05	0.59	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.29	0.02	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.08	0.01	0.00	0.00
Subtotal	0.03	0.08	0.96	0.06	0.02	0.02

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2-NFAB-Mit-12. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.06	0.16	2.06	1.32	0.17	0.16
Containerships 3,000 - 5,000 TEU	0.14	0.37	4.89	3.13	0.40	0.38
Containerships < 3,000 TEU	0.14	0.38	5.00	3.20	0.41	0.38
Subtotal	0.33	0.91	11.95	7.65	0.98	0.92
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.19	0.53	6.75	0.41	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.15	0.42	5.36	0.33	0.11	0.10
Containerships < 3,000 TEU	0.13	0.34	4.34	0.26	0.09	0.08
Subtotal	0.47	1.30	16.46	1.00	0.33	0.31
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.34	0.94	11.87	0.72	0.24	0.22
Containerships 3,000 - 5,000 TEU	0.16	0.45	5.71	0.35	0.11	0.11
Containerships < 3,000 TEU	0.05	0.13	1.69	0.10	0.03	0.03
Subtotal	0.55	1.53	19.27	1.17	0.39	0.36
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.34	0.94	11.87	0.72	0.24	0.22
Containerships 3,000 - 5,000 TEU	0.16	0.45	5.71	0.35	0.11	0.11
Containerships < 3,000 TEU	0.05	0.13	1.69	0.10	0.03	0.03
Subtotal	0.55	1.53	19.27	1.17	0.39	0.36

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-NFAB-Mit-13. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.09	0.25	3.26	2.09	0.27	0.25
Containerships 3,000 - 5,000 TEU	0.20	0.56	7.35	4.70	0.60	0.56
Containerships < 3,000 TEU	0.20	0.55	7.18	4.60	0.59	0.55
Subtotal	0.49	1.36	17.79	11.39	1.46	1.36
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.31	0.85	10.71	0.65	0.22	0.20
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.05	0.49	0.16	0.15
Containerships < 3,000 TEU	0.18	0.49	6.24	0.38	0.13	0.12
Subtotal	0.72	1.98	25.01	1.52	0.50	0.47
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.56	1.54	19.43	1.18	0.39	0.37
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.14	0.49	0.16	0.15
Containerships < 3,000 TEU	0.06	0.16	2.02	0.12	0.04	0.04
Subtotal	0.85	2.34	29.59	1.80	0.59	0.56
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.56	1.54	19.43	1.18	0.39	0.37
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.14	0.49	0.16	0.15
Containerships < 3,000 TEU	0.06	0.16	2.02	0.12	0.04	0.04
Subtotal	0.85	2.34	29.59	1.80	0.59	0.56

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-NFAB-Mit-14. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.02	0.07	0.89	0.57	0.07	0.07
Containerships 3,000 - 5,000 TEU	0.06	0.15	2.01	1.29	0.16	0.15
Containerships < 3,000 TEU	0.05	0.15	1.96	1.26	0.16	0.15
Subtotal	0.13	0.37	4.86	3.11	0.40	0.37
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.08	0.23	2.93	0.18	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.06	0.17	2.20	0.13	0.04	0.04
Containerships < 3,000 TEU	0.05	0.14	1.71	0.10	0.03	0.03
Subtotal	0.20	0.54	6.84	0.42	0.14	0.13
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.15	0.42	5.31	0.32	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.06	0.18	2.22	0.14	0.04	0.04
Containerships < 3,000 TEU	0.02	0.04	0.55	0.03	0.01	0.01
Subtotal	0.23	0.64	8.09	0.49	0.16	0.15
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.15	0.42	5.31	0.32	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.06	0.18	2.22	0.14	0.04	0.04
Containerships < 3,000 TEU	0.02	0.04	0.55	0.03	0.01	0.01
Subtotal	0.23	0.64	8.09	0.49	0.16	0.15

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-NFAB-Mit-15. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.33	3.65	47.91	30.68	3.92	3.67
Containerships 3,000 - 5,000 TEU	3.20	8.81	115.54	73.98	9.46	8.86
Containerships < 3,000 TEU	2.18	6.00	78.75	50.43	6.45	6.04
Subtotal	6.71	18.47	242.21	155.08	19.82	18.57
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.91	2.49	31.47	1.91	0.63	0.59
Containerships 3,000 - 5,000 TEU	0.73	2.00	25.32	1.54	0.51	0.48
Containerships < 3,000 TEU	0.39	1.08	13.70	0.83	0.27	0.26
Subtotal	2.03	5.58	70.49	4.28	1.41	1.33
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2-NFAB-Mit-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - VSRP-Compliant.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2-NFAB-Mit-17. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - VSRP-Non-Compliant.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2-NFAB-Mit-18. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.08	0.35	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.29	1.26	0.04	0.03
Containerships < 3,000 TEU	0.02	0.21	0.55	2.42	0.07	0.06
Subtotal	0.03	0.34	0.92	4.03	0.11	0.11
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.10	0.27	1.18	0.03	0.03
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.43	0.04	0.04
Containerships < 3,000 TEU	0.02	0.19	0.50	2.19	0.06	0.06
Subtotal	0.03	0.41	1.09	4.80	0.13	0.13
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.18	0.49	2.14	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.45	0.04	0.04
Containerships < 3,000 TEU	0.00	0.06	0.16	0.71	0.02	0.02
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.18	0.49	2.14	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.45	0.04	0.04
Containerships < 3,000 TEU	0.00	0.06	0.16	0.71	0.02	0.02
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11

Table D1.2-NFAB-Mit-19. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.23	1.00	0.03	0.03
Containerships < 3,000 TEU	0.01	0.16	0.44	1.92	0.05	0.05
Subtotal	0.02	0.27	0.73	3.19	0.09	0.08
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.08	0.21	0.94	0.03	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.14	0.03	0.03
Containerships < 3,000 TEU	0.01	0.15	0.39	1.73	0.05	0.05
Subtotal	0.03	0.32	0.87	3.80	0.11	0.10
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.14	0.39	1.70	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.15	0.03	0.03
Containerships < 3,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.14	0.39	1.70	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.15	0.03	0.03
Containerships < 3,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09

Table D1.2-NFAB-Mit-20. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.08	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships < 3,000 TEU	0.00	0.04	0.12	0.53	0.01	0.01
Subtotal	0.01	0.07	0.20	0.87	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.06	0.26	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.04	0.11	0.47	0.01	0.01
Subtotal	0.01	0.09	0.24	1.04	0.03	0.03
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.04	0.11	0.46	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.03	0.15	0.00	0.00
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.04	0.11	0.46	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.03	0.15	0.00	0.00
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02

(2) Does not assume use of low-sulfur fuels.

Table D1.2-NFAB-Mit-21. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.09	1.12	3.00	13.17	0.37	0.35
Containerships 3,000 - 5,000 TEU	0.28	3.40	9.09	39.92	1.12	1.05
Containerships < 3,000 TEU	0.32	3.93	10.50	46.10	1.29	1.21
Subtotal	0.70	8.45	22.59	99.19	2.78	2.60
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.32	3.83	10.23	44.91	1.26	1.18
Containerships 3,000 - 5,000 TEU	0.32	3.87	10.34	45.41	1.27	1.19
Containerships < 3,000 TEU	0.29	3.54	9.48	41.61	1.16	1.09
Subtotal	0.93	11.24	30.05	131.93	3.69	3.46
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	6.94	18.55	81.43	2.28	2.14
Containerships 3,000 - 5,000 TEU	0.32	3.91	10.46	45.90	1.29	1.20
Containerships < 3,000 TEU	0.09	1.15	3.07	13.47	0.38	0.35
Subtotal	0.99	11.99	32.07	140.81	3.94	3.69
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	6.94	18.55	81.43	2.28	2.14
Containerships 3,000 - 5,000 TEU	0.32	3.91	10.46	45.90	1.29	1.20
Containerships < 3,000 TEU	0.09	1.15	3.07	13.47	0.38	0.35
Subtotal	0.99	11.99	32.07	140.81	3.94	3.69

(2) Does not assume use of low-sulfur fuels.

Table D1.2-NFAB-Mit-22. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.41	2.06	12.98	0.01	0.53	0.50
Project Year 2015						
Subtotal	0.47	2.46	13.21	0.01	0.57	0.53
Project Year 2025						
Subtotal	0.42	2.20	9.80	0.01	0.43	0.40
Project Year 2038						
Subtotal	0.41	2.20	8.80	0.01	0.39	0.36

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-NFAB-Mit-23. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.03	0.19	1.09	0.00	0.05	0.05
Project Year 2015						
Subtotal (1)	0.04	0.22	1.20	0.00	0.05	0.05
Project Year 2025						
Subtotal (1)	0.03	0.20	0.90	0.00	0.04	0.04
Project Year 2038						
Subtotal (1)	0.03	0.20	0.82	0.00	0.03	0.03

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-NFAB-Mit-24. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - Vessels that Comply with VSRP + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.89	8.34	47.35	2.62	1.00	0.94
Containerships 3,000 - 5,000 TEU	0.61	6.65	46.50	2.79	0.93	0.87
Containerships < 3,000 TEU	0.52	6.35	52.80	3.33	1.02	0.96
Subtotal	2.02	21.34	146.65	8.75	2.95	2.76
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.61	15.12	85.86	4.75	1.81	1.70
Containerships 3,000 - 5,000 TEU	0.62	6.73	47.01	2.83	0.94	0.88
Containerships < 3,000 TEU	0.17	2.05	17.09	1.08	0.33	0.31
Subtotal	2.40	23.90	149.96	8.66	3.08	2.88
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.61	15.12	85.86	4.75	1.81	1.70
Containerships 3,000 - 5,000 TEU	0.62	6.73	47.01	2.83	0.94	0.88
Containerships < 3,000 TEU	0.17	2.05	17.09	1.08	0.33	0.31
Subtotal	2.40	23.90	149.96	8.66	3.08	2.88

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2-NFAB-Mit-25. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - Non-Compliant Vessels within VSRP + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.29	0.94	7.79	0.49	0.27	0.25
Containerships 3,000 - 5,000 TEU	0.26	0.84	7.03	0.44	0.24	0.23
Containerships < 3,000 TEU	0.24	0.77	6.42	0.41	0.22	0.21
Subtotal	0.78	2.55	21.24	1.34	0.73	0.68
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.52	1.70	14.12	0.89	0.49	0.45
Containerships 3,000 - 5,000 TEU	0.26	0.85	7.10	0.45	0.24	0.23
Containerships < 3,000 TEU	0.08	0.25	2.08	0.13	0.07	0.07
Subtotal	0.86	2.80	23.30	1.47	0.80	0.75
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.52	1.70	14.12	0.89	0.49	0.45
Containerships 3,000 - 5,000 TEU	0.26	0.85	7.10	0.45	0.24	0.23
Containerships < 3,000 TEU	0.08	0.25	2.08	0.13	0.07	0.07
Subtotal	0.86	2.80	23.30	1.47	0.80	0.75

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2-NFAB-Mit-26. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.27	2.30	11.68	0.60	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.22	2.05	11.64	0.64	0.25	0.23
Containerships < 3,000 TEU	0.14	1.62	12.42	0.77	0.25	0.23
Subtotal	0.63	5.98	35.74	2.02	0.75	0.70
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.49	4.17	21.18	1.10	0.46	0.44
Containerships 3,000 - 5,000 TEU	0.22	2.07	11.77	0.65	0.25	0.23
Containerships < 3,000 TEU	0.05	0.53	4.02	0.25	0.08	0.07
Subtotal	0.75	6.77	36.97	2.00	0.79	0.74
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.49	4.17	21.18	1.10	0.46	0.44
Containerships 3,000 - 5,000 TEU	0.22	2.07	11.77	0.65	0.25	0.23
Containerships < 3,000 TEU	0.05	0.53	4.02	0.25	0.08	0.07
Subtotal	0.75	6.77	36.97	2.00	0.79	0.74

Table D1.2-NFAB-Mit-27. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.38	1.95	7.15	0.19	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.32	1.62	5.94	0.15	0.16	0.15
Containerships < 3,000 TEU	0.25	1.30	4.75	0.12	0.13	0.12
Subtotal	0.95	4.87	17.84	0.46	0.49	0.46
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	3.54	12.97	0.34	0.36	0.34
Containerships 3,000 - 5,000 TEU	0.32	1.64	6.00	0.16	0.17	0.16
Containerships < 3,000 TEU	0.08	0.42	1.54	0.04	0.04	0.04
Subtotal	1.09	5.60	20.51	0.53	0.57	0.53
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	3.54	12.97	0.34	0.36	0.34
Containerships 3,000 - 5,000 TEU	0.32	1.64	6.00	0.16	0.17	0.16
Containerships < 3,000 TEU	0.08	0.42	1.54	0.04	0.04	0.04
Subtotal	1.09	5.60	20.51	0.53	0.57	0.53

Table D1.2-NFAB-Mit-28. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - NEPA Baseline + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.14	0.52	2.02	0.03	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.11	0.44	1.68	0.02	0.05	0.05
Containerships < 3,000 TEU	0.09	0.35	1.34	0.02	0.04	0.04
Subtotal	0.34	1.31	5.04	0.07	0.15	0.14
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.25	0.95	3.66	0.05	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.11	0.44	1.69	0.02	0.05	0.05
Containerships < 3,000 TEU	0.03	0.11	0.43	0.01	0.01	0.01
Subtotal	0.39	1.50	5.79	0.08	0.18	0.17
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.25	0.95	3.66	0.05	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.11	0.44	1.69	0.02	0.05	0.05
Containerships < 3,000 TEU	0.03	0.11	0.43	0.01	0.01	0.01
Subtotal	0.39	1.50	5.79	0.08	0.18	0.17

Table D1.2-NFAB-Mit-29. Annual Vessel Emissions - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Emission Source	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.68	465.24	55.81	52.30
Project Year 2007						
Ships - Fairway Transit (1)	14.14	32.75	417.56	245.34	35.00	32.79
Ships - Precautionary Area Transit (1)	2.58	5.53	55.47	34.46	4.83	4.52
Ships - Harbor Transit (1)	3.99	5.06	38.06	19.26	3.86	3.62
Ships - Docking (1)	1.39	1.37	10.58	4.68	1.14	1.07
Ships - Hoteling Aux. Sources	7.41	26.92	264.80	254.28	22.60	21.17
Tugboats - Cargo Vessel Assist (1)	0.44	2.25	14.07	0.01	0.58	0.54
Subtotal	29.94	73.88	800.54	558.02	68.01	63.72
Project Year 2015						
Ships - Fairway Transit (1)	3.65	26.22	197.35	11.88	4.27	4.00
Ships - Precautionary Area Transit (1)	1.14	7.69	53.29	7.81	1.21	1.14
Ships - Harbor Transit (1)	1.69	7.17	43.71	5.79	1.10	1.03
Ships - Docking (1)	0.55	1.94	12.11	1.52	0.32	0.30
Ships - Hoteling Aux. Sources	2.96	16.82	100.54	136.21	5.11	4.79
Tugboats - Cargo Vessel Assist (1)	0.51	2.69	14.41	0.01	0.62	0.58
Subtotal	10.50	62.52	421.41	163.22	12.63	11.84
Project Year 2025						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.45	2.40	10.71	0.01	0.47	0.44
Subtotal	9.61	62.91	372.33	167.71	11.89	11.14
Project Year 2038						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.44	2.40	9.62	0.01	0.42	0.40
Subtotal	9.61	62.91	371.24	167.71	11.85	11.10

Note: (1) Includes auxiliary power emissions.

Table D1.2-NFAB-Mit-30. Daily Vessel Emissions - Berths 136-147 Terminal Project - NEPA Baseline .

Project Scenario/Emission Source	Pounds Per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	6.3	6.2	47.1	21.0	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,593	2,549	306	287
Project Year 2007						
Ships - Fairway Transit (1)	77.5	179.5	2,288.0	1,344.3	191.8	179.7
Ships - Precautionary Area Transit (1)	14.1	30.3	303.9	188.8	26.5	24.8
Ships - Harbor Transit (1)	21.9	27.7	208.6	105.6	21.1	19.8
Ships - Docking (1)	7.6	7.5	58.0	25.6	6.3	5.9
Ships - Hoteling Aux. Sources	40.6	147.5	1,451.0	1,393.3	123.8	116.0
Tugboats - Cargo Vessel Assist (1)	2.4	12.3	77.1	0.0	3.2	3.0
Subtotal	164	405	4,386	3,058	373	349
Project Year 2015						
Ships - Fairway Transit (1)	20.0	143.7	1,081.4	65.1	23.4	21.9
Ships - Precautionary Area Transit (1)	6.2	42.1	292.0	42.8	6.6	6.2
Ships - Harbor Transit (1)	9.3	39.3	239.5	31.7	6.0	5.7
Ships - Docking (1)	3.0	10.6	66.3	8.4	1.8	1.6
Ships - Hoteling Aux. Sources	16.2	92.1	550.9	746.4	28.0	26.2
Tugboats - Cargo Vessel Assist (1)	2.8	14.7	79.0	0.0	3.4	3.2
Subtotal	58	343	2,309	894	69	65
Project Year 2025						
Ships - Fairway Transit (1)	23.2	161.1	1,136.3	66.8	25.0	23.4
Ships - Precautionary Area Transit (1)	7.3	47.5	313.5	40.9	7.1	6.7
Ships - Harbor Transit (1)	10.8	45.1	278.7	31.4	6.9	6.5
Ships - Docking (1)	3.5	12.2	77.2	8.2	2.0	1.9
Ships - Hoteling Aux. Sources	5.4	65.7	175.7	771.5	21.6	20.2
Tugboats - Cargo Vessel Assist (1)	2.5	13.2	58.7	0.0	2.6	2.4
Subtotal	53	345	2,040	919	65	61
Project Year 2038						
Ships - Fairway Transit (1)	23.2	161.1	1,136.3	66.8	25.0	23.4
Ships - Precautionary Area Transit (1)	7.3	47.5	313.5	40.9	7.1	6.7
Ships - Harbor Transit (1)	10.8	45.1	278.7	31.4	6.9	6.5
Ships - Docking (1)	3.5	12.2	77.2	8.2	2.0	1.9
Ships - Hoteling Aux. Sources	5.4	65.7	175.7	771.5	21.6	20.2
Tugboats - Cargo Vessel Assist (1)	2.4	13.2	52.7	0.0	2.3	2.2
Subtotal	53	345	2,034	919	65	61

Note: (1) Includes auxiliary power emissions.

Table D1.2-NFAB-Mit-31. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - NEPA Baseline

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	ADT	Idling Hrs/ Day	Miles/ Day
On-Terminal					
Year 2003 - Baseline	0.56	1.02	3,281	1,837	3,351
Year 2007	0.25	1.02	4,012	1,003	4,097
Year 2015	0.25	0.81	3,538	884	2,850
Year 2025	0.25	0.81	3,288	822	2,649
Year 2038	0.25	0.81	3,288	822	2,649
Off-Terminal					
Year 2003 - Baseline	0.30	32.3	3,281	984	106,028
Year 2007	0.30	32.3	4,012	1,203	129,637
Year 2015	0.30	54.4	3,538	1,061	192,454
Year 2025	0.30	49.4	3,288	986	162,301
Year 2038	0.30	49.4	3,288	986	162,301

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2-NFAB-Mit-31a. On-Road Truck Mitigated Emission Factors - Berths 136-147 Terminal Project Alternatives Sce

Project Year/Mode - Diesel Trucks	Emission Factors (Grams/Mile)						References
	ROG	CO	NOx	SOx	DPM	PM10	
Baseline - Year 2003							
On-road Truck - Idle	17.55	41.05	96.52	0.58	2.85	2.85	(1)
On-road Truck - 10 mph	10.50	23.83	38.13	0.26	3.89	3.89	(1)
On-road Truck - 25 mph	2.25	12.68	23.38	0.17	1.57	1.57	(1)
On-road Truck - 55 mph	1.41	5.38	23.09	0.14	1.16	1.16	(1)
On-road Trucks - Composite Off-Terminal	2.74	10.87	24.74	0.17	1.64	1.64	(2)
Project Year 2007							
On-road Truck - Idle	10.55	34.44	117.47	0.07	1.28	1.28	(1)
On-road Truck - 10 mph	7.97	16.13	31.20	0.03	2.29	2.29	(1)
On-road Truck - 25 mph	1.51	7.27	18.67	0.02	0.70	0.70	(1)
On-road Truck - 55 mph	0.95	3.10	19.12	0.02	0.52	0.52	(1)
On-road Trucks - Composite Off-Terminal	1.93	6.48	20.10	0.02	0.79	0.79	(2)
Project Year 2015							
On-road Truck - Idle	7.19	30.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.15	2.50	4.13	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.94	2.31	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.01	1.62	0.02	0.10	0.10	(1)
On-road Trucks - Composite Off-Terminal	0.33	1.12	2.28	0.02	0.07	0.07	(3)
Project Year 2025							
On-road Truck - Idle	7.19	30.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.14	2.49	4.11	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.94	2.30	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.01	1.61	0.02	0.10	0.10	(1)
On-road Trucks - Composite Off-Terminal	0.32	1.12	2.27	0.02	0.07	0.07	(3)
Project Year 2038							
On-road Truck - Idle	7.19	31.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.13	2.47	4.07	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.93	2.27	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.00	1.60	0.02	0.09	0.09	(1)
On-road Trucks - Composite Off-Terminal	0.34	1.10	2.32	0.02	0.06	0.06	(4)
LNG-Powered Trucks - AllYears							
On-road Truck - Idle							

Notes: (1) From EMFAC2007 (ARB 2006). Units in grams/mile for each project year, at 60 degrees and 50% relative humidity, except idle factors in units of grams/hour. PM10 non-idle factors include combustive and tire and break wear emissions. Starting with year 2007, based on age distribution of year 2005 POLA truck fleet, as used in the 2005 PEI. Mitigation assumes that by 2012, all trucks will be model year 2007 or newer.

(2) Based on 10% at 10 miles per hour (mph), 50% at 25 mph, and 40% at 55 mph. Although not included in this composite emission factor, 30 minutes of idling mode included in emission estimates for each truck trip.

(3) Same as (2), except based on 10% at 10 miles per hour (mph), 60% at 25 mph, and 30% at 55 mph.

(4) Same as (2), except based on 10% at 10 miles per hour (mph), 70% at 25 mph, and 20% at 55 mph.

Table D1.2-NFAB-Mit-32. Daily Mitigated Truck Emissions for the Berths 136-147 Terminal Project - NEPA Baseline

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	23.3	76.2	259.8	0.1	2.8	2.6
Year 2007 - Driving	72.0	145.7	281.8	0.3	20.7	19.1
Subtotal - Year 2007	95.3	221.8	541.6	0.4	23.5	21.7
Year 2015 - Idling	14.0	58.7	249.4	0.1	0.2	0.2
Year 2015 - Driving	7.2	15.7	26.0	0.2	0.4	0.4
Subtotal - Year 2015	21.2	74.4	275.4	0.3	0.6	0.6
Year 2025 - Idling	13.0	54.6	231.8	0.1	0.2	0.2
Year 2025 - Driving	6.7	14.5	24.0	0.2	0.4	0.4
Subtotal - Year 2025	19.7	69.1	255.8	0.3	0.6	0.5
Year 2038 - Idling	13.0	56.4	231.8	0.1	0.2	0.2
Year 2038 - Driving	6.6	14.4	23.8	0.2	0.4	0.4
Subtotal - Year 2038	19.7	70.8	255.6	0.3	0.6	0.5
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	28.0	91.4	311.7	0.2	3.4	3.1
Year 2007 - Driving	552.6	1,853.5	5,745.5	5.5	225.9	207.8
Subtotal - Year 2007	580.6	1,944.9	6,057.2	5.7	229.2	210.9
Year 2015 - Idling	16.8	70.5	299.3	0.2	0.2	0.2
Year 2015 - Driving	138.0	475.2	969.1	8.4	29.3	26.9
Subtotal - Year 2015	154.8	545.7	1,268.4	8.6	29.5	27.1
Year 2025 - Idling	15.6	65.5	278.2	0.1	0.2	0.2
Year 2025 - Driving	115.9	399.4	813.5	7.1	24.7	22.7
Subtotal - Year 2025	131.5	464.9	1,091.6	7.2	24.9	22.9
Year 2038 - Idling	15.6	67.7	278.2	0.1	0.2	0.2
Year 2038 - Driving	120.1	394.0	829.5	7.2	22.9	21.1
Subtotal - Year 2038	135.7	461.7	1,107.7	7.4	23.1	21.3
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	675.9	2,166.8	6,598.8	6.1	252.8	232.6
Year 2015	176.0	620.1	1,543.7	8.9	30.1	27.7
Year 2025	151.2	534.1	1,347.5	7.5	25.5	23.4
Year 2038	155.4	532.6	1,363.3	7.7	23.7	21.8

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2-NFAB-Mit-32a. Road Dust Emissions for the Berths 136-147 Terminal Project - NEPA Baseline.

	Daily Emissions (Pounds)	
Activity	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.13	10.16
Year 2007	73.52	12.42
Year 2015	51.14	8.64
Year 2025	47.54	8.03
Year 2038	47.54	8.03
Off-Terminal	83.85	14.17
Year 2003 - Baseline	102.53	17.33
Year 2007	152.21	25.72
Year 2015	128.36	21.69
Year 2025	128.36	21.69
Year 2038		
Combined On/Off-Terminal	143.98	24.33
Year 2003 - Baseline	176.04	29.75
Year 2007	203.35	34.37
Year 2015	175.90	29.73
Year 2025	175.90	29.73
Year 2038		

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2-NFAB-Mit-32b. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - NEPA Baseline.

	Daily Emissions (Pounds)	
Activity	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.37	0.16
Year 2007	0.45	0.19
Year 2015	0.31	0.13
Year 2025	0.29	0.13
Year 2038	0.29	0.13
Off-Terminal		
Year 2003 - Baseline	11.69	5.01
Year 2007	14.29	6.13
Year 2015	21.21	9.10
Year 2025	17.89	7.67
Year 2038	17.89	7.67
Combined On/Off-Terminal		
Year 2003 - Baseline	12.06	5.17
Year 2007	14.74	6.32
Year 2015	21.53	9.24
Year 2025	18.18	7.80
Year 2038	18.18	7.80

Table D1.2-NFAB-Mit-32c. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - NEPA Baseline.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.50	10.32
Year 2007	73.97	12.62
Year 2015	51.46	8.78
Year 2025	47.83	8.16
Year 2038	47.83	8.16
Off-Terminal		
Year 2003 - Baseline	95.54	19.19
Year 2007	116.82	23.46
Year 2015	173.42	34.82
Year 2025	146.25	29.37
Year 2038	146.25	29.37
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	191	36
Year 2015	225	44
Year 2025	194	38
Year 2038	194	38

Table D1.2-NFAB-Mit-33. Mitigated Emission Factors for Rail/ICTF Equipment - Berths 136-147 Terminal Project Alternatives

Project Scenario/	Emission Factors (Gm/Hp-Hr)						
Equipment - Horsepower	ROG	CO	NOx	SOx	PM	PM10	References
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	0.83	3.39	9.15	0.10	0.52	0.52	(1)
Terminal Equipment - 176-250 Hp	0.44	1.32	6.79	0.10	0.24	0.24	(1)
Line Haul Locomotive - Year 2003	0.61	1.28	10.66	0.69	0.32	0.32	(2)
Switch Yard Locomotive - Year 2003	1.28	1.83	17.40	0.11	0.44	0.44	(2)
Year 2007							
Terminal Equipment - 121-175 Hp - U	0.79	3.49	8.41	0.004	0.39	0.39	(1)
Terminal Equipment - 176-250 Hp - U	0.57	1.60	7.07	0.004	0.29	0.29	(1)
Line Haul Locomotive - Year 2007	0.55	1.28	7.61	0.69	0.29	0.29	(2)
Switch Yard Locomotive - Tier 2 Stds.	0.60	2.40	8.10	0.005	0.23	0.23	(3)
Switch Yard Locomotive - Year 2007	1.11	1.97	15.08	0.08	0.39	0.39	(4)
Year 2015							
100-175 Hp - Tier 4 Standard	0.30	3.70	0.30	0.00	0.02	0.02	(7)
176-500 Hp - Tier 4 Standard	0.30	2.60	0.30	0.00	0.02	0.02	(7)
Line Haul Locomotive - Year 2015	0.47	1.28	6.56	0.005	0.17	0.17	(6)
Switch Yard Locomotive - Year 2015	0.60	2.40	0.81	0.005	0.02	0.02	(8)
Year 2025							
100-175 Hp - Tier 4 Standard	0.30	3.70	0.30	0.00	0.02	0.02	(7)
176-500 Hp - Tier 4 Standard	0.30	2.60	0.30	0.00	0.02	0.02	(7)
Line Haul Locomotive - Year 2015	0.39	1.28	5.73	0.005	0.14	0.14	(6)
Switch Yard Locomotive - Year 2015	0.60	2.40	0.81	0.005	0.02	0.02	(8)
Year 2038							
100-175 Hp - Tier 4 Standard	0.30	3.70	0.30	0.00	0.02	0.02	(7)
176-500 Hp - Tier 4 Standard	0.30	2.60	0.30	0.00	0.02	0.02	(7)
Line Haul Locomotive - Year 2038	0.33	1.28	5.01	0.005	0.12	0.12	(6)
Switch Yard Locomotive - Year 2038	0.60	2.40	0.81	0.005	0.02	0.02	(8)

Notes: (1) Estimated with the use of the ARB OFFROAD Model with consideration of fleet turnover with adopted future EPA off-road emission standards. See Table D2-??.

(2) Represents national average emission factors for line haul/switch yard locomotives for a given year (EPA 1998). ROG = THC * 1.27. Year 2003 data for switch engines = 1999 values, as current PHL fleet is pre-1973 vintage (pre-Tier 0). Year 2003 line haul/switch loco diesel fuel assumed to be 0.22/0.035% sulfur (S) (PEI pages 223 and 229), although PM emission factors for switc locos not subsequently reduced, due to the antiquated age of the PHL engines.

(3) Locomotive Emissions Final Rulemaking (EPA 1997), except PM reduced by 4% to simulate use of ULSD.

(4) Assumes fleet has an Mitigated Annual average of 75% Pre-Tier 0 and 25% Tier 2 standards + use of ULSD .

(5) Assumes 100% conversion of existing fleet to Tier 2 standard engines + use of ULSD.

(6) Represents average EPA emission factors for line haul locomotives for a given year + the use of 500 ppm S diesel by 2008 and ULSD by 2012, as stated in the EPA non-road diesel fuel rule. These fuels would produce 25/28% reductions in PM emissions from an assumed S fuel content of 0.2%.

(7) See Table D1.2-NFAB-Mit-33

(8) NOx/PM values reduced by 90% from switch engine Tier 2 standards (8.10/0.24).

Table D1.2-NFAB-Mit-33a. Train Trip Generation Rate
Terminal Project - NEPA Baseline

Project Scenario/Rail Yard	Mitigated Annual Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	865
Year 2015	
To/from Berths 136-147 ICTF	905
To/from Carson/LA Rail Yards	20
Year 2025	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	203
Year 2038	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	203

Table D1.2-NFAB-Mit-34. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - NEPA Baseline Year 2007.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.85	8.15	19.64	0.01	0.91	0.84
Top Picks	0.87	2.44	10.79	0.01	0.44	0.41
Line Haul Locomotive - Road Haul	8.93	20.92	124.39	11.34	4.74	4.36
Line Haul Locomotive - Notch 1	0.66	1.55	9.24	0.84	0.35	0.32
Yard Locomotive - Switching	0.49	0.86	6.58	0.04	0.17	0.16
Subtotal	12.80	33.93	170.64	12.23	6.62	6.09
Carson or LA Railyards/Inbound						
Hostler	0.70	3.06	7.36	0.00	0.34	0.32
Top Picks	0.33	0.92	4.05	0.00	0.17	0.15
Line Haul Locomotive - Road Haul	8.93	20.92	124.39	11.34	4.74	4.36
Line Haul Locomotive - Notch 1	0.33	0.78	4.62	0.42	0.18	0.16
Subtotal	10.28	25.67	140.42	11.76	5.42	4.99
Total Tons Per Year	23.08	59.60	311.06	23.99	12.04	11.08

Table D1.2-NFAB-Mit-35. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - NEPA Baseline Year 2015.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.73	9.05	0.73	0.01	0.04	0.03
Top Picks	0.48	4.15	0.48	0.01	0.02	0.02
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Yard Locomotive - Switching	0.26	1.04	0.35	0.00	0.01	0.01
Subtotal	10.47	38.76	127.23	0.11	3.38	3.11
Berths 136-147/Inbound						
Hostler	0.28	3.39	0.28	0.00	0.01	0.01
Top Picks	0.18	1.56	0.18	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Subtotal	9.46	29.47	126.12	0.10	3.33	3.07
Carson or LA Railyards/Outbound						
Hostler	0.02	0.20	0.02	0.00	0.00	0.00
Top Picks	0.01	0.09	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.18	0.49	2.51	0.00	0.07	0.06
Line Haul Locomotive - Notch 1	0.01	0.04	0.19	0.00	0.00	0.00
Yard Locomotive - Switching	0.01	0.02	0.01	0.00	0.00	0.00
Subtotal	0.23	0.85	2.74	0.00	0.07	0.07
Carson or LA Railyards/Inbound						
Hostler	0.01	0.08	0.01	0.00	0.00	0.00
Top Picks	0.00	0.03	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.18	0.49	2.51	0.00	0.07	0.06
Line Haul Locomotive - Notch 1	0.01	0.02	0.09	0.00	0.00	0.00
Subtotal	0.20	0.62	2.62	0.00	0.07	0.06
Total Tons Per Year	20.36	69.70	258.71	0.21	6.86	6.31

Table D1.2-NFAB-Mit-36. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - NEPA Baseline Year 2025.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	11.43	49.15	141.07	0.14	3.59	3.30
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Subtotal	10.14	37.37	139.67	0.12	3.53	3.24
Carson or LA Railyards/Outbound						
Hostler	0.16	2.03	0.16	0.00	0.01	0.01
Top Picks	0.11	0.93	0.11	0.00	0.01	0.00
Line Haul Locomotive - Road Haul	1.51	4.91	21.96	0.02	0.55	0.51
Line Haul Locomotive - Notch 1	0.11	0.36	1.63	0.00	0.04	0.04
Yard Locomotive - Switching	0.06	0.25	0.08	0.00	0.00	0.00
Subtotal	1.96	8.48	23.95	0.02	0.61	0.56
Carson or LA Railyards/Inbound						
Hostler	0.06	0.76	0.06	0.00	0.00	0.00
Top Picks	0.04	0.35	0.04	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.51	4.91	21.96	0.02	0.55	0.51
Line Haul Locomotive - Notch 1	0.06	0.18	0.82	0.00	0.02	0.02
Subtotal	1.67	6.20	22.88	0.02	0.58	0.53
Total Tons Per Year	25.19	101.19	327.57	0.31	8.30	7.64

Table D1.2-NFAB-Mit-37. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - NEPA Baseline Year 2038.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	9.97	49.15	123.70	0.14	2.99	2.75
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Subtotal	8.68	37.37	122.29	0.12	2.93	2.69
Carson or LA Railyards/Outbound						
Hostler	0.16	2.03	0.16	0.00	0.01	0.01
Top Picks	0.11	0.93	0.11	0.00	0.01	0.00
Line Haul Locomotive - Road Haul	1.28	4.91	19.22	0.02	0.46	0.42
Line Haul Locomotive - Notch 1	0.09	0.36	1.43	0.00	0.03	0.03
Yard Locomotive - Switching	0.06	0.25	0.08	0.00	0.00	0.00
Subtotal	1.71	8.48	21.00	0.02	0.51	0.47
Carson or LA Railyards/Inbound						
Hostler	0.06	0.76	0.06	0.00	0.00	0.00
Top Picks	0.04	0.35	0.04	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.28	4.91	19.22	0.02	0.46	0.42
Line Haul Locomotive - Notch 1	0.05	0.18	0.71	0.00	0.02	0.02
Subtotal	1.43	6.20	20.03	0.02	0.48	0.44
Total Tons Per Year	21.78	101.19	287.03	0.31	6.90	6.35

Table D1.2-NFAB-Mit-38. Summary of Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - NEPA Baseline.

Project Scenario/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.74	14.56	41.84	0.02	1.86	1.71
Trains	19.33	45.04	269.22	23.97	10.18	9.36
Subtotal	23.08	59.60	311.06	23.99	12.04	11.08
Project Year 2015						
ICTF Equipment	1.70	18.55	1.70	0.03	0.09	0.08
Trains	18.65	51.14	257.01	0.19	6.77	6.23
Subtotal	20.36	69.70	258.71	0.21	6.86	6.31
Project Year 2025						
ICTF Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Trains	22.71	74.11	325.08	0.27	8.18	7.52
Subtotal	25.19	101.19	327.57	0.31	8.30	7.64
Project Year 2038						
ICTF Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Trains	19.29	74.11	284.54	0.27	6.78	6.24
Subtotal	21.78	101.19	287.03	0.31	6.90	6.35

Table D1.2-NFAB-Mit-39. Mitigated Annual Train Emissions from the Relocated Pier A Rail Yard - Berths 136-147 Terminal Project Alternatives.

Project Year/Emission Source	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Line Haul Locomotive	0.05	0.10	0.85	0.06	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.37	3.54	0.02	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.60	5.66	0.04	0.14	0.13
Subtotal	0.73	1.07	10.06	0.11	0.26	0.24
Project Year 2007						
Line Haul Locomotive	0.05	0.12	0.70	0.06	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.46	3.53	0.02	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.74	5.64	0.03	0.15	0.13
Subtotal	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2015						
Line Haul Locomotive	0.04	0.12	0.60	0.00	0.02	0.01
Yard Locomotive - Low UsageTrip	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.41	1.58	1.09	0.00	0.03	0.03
Project Year 2025						
Line Haul Locomotive	0.04	0.12	0.53	0.00	0.01	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.40	1.58	1.02	0.00	0.03	0.03
Project Year 2038						
Line Haul Locomotive	0.03	0.12	0.46	0.00	0.01	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.40	1.58	0.95	0.00	0.02	0.02

Note: (1) Yard locomotive NOx/PM emissions reduced 90% from Tier 2 standard levels.

Table D1.2-NFAB-Mit-40. Future Baseline Diesel-Powered Unmitigated Emission Factors for Terminal Equipmer Berths 136-147 Terminal Project Alternatives.

Project Scenario/Equipment Horsepower	Emission Factors (1)					References
	ROG	CO	NOx	SOx	PM10	
Baseline - Year 2003						
Terminal Equipment - 121-175 Hp	0.83	3.39	9.15	0.10	0.52	(1)
Terminal Equipment - 176-250 Hp	0.44	1.32	6.79	0.10	0.24	(1)
Terminal Equipment - 250-500 Hp	0.44	1.47	6.98	0.10	0.22	(1)
Project Year 2007						
Terminal Equipment - 121-175 Hp	0.79	3.49	8.41	0.004	0.39	(1)
Terminal Equipment - 176-250 Hp	0.57	1.60	7.07	0.004	0.29	(1)
Terminal Equipment - 250-500 Hp	0.40	1.40	6.18	0.004	0.22	(1)
Project Year 2015						
Terminal Equipment - 121-175 Hp	0.32	3.16	4.25	0.004	0.18	(1)
Terminal Equipment - 176-250 Hp	0.25	1.22	3.73	0.004	0.15	(1)
Terminal Equipment - 250-500 Hp	0.20	1.11	3.20	0.004	0.13	(1)
Project Year 2025						
Terminal Equipment - 121-175 Hp	0.10	3.07	0.92	0.004	0.03	(1)
Terminal Equipment - 176-250 Hp	0.10	1.12	0.58	0.004	0.03	(1)
Terminal Equipment - 250-500 Hp	0.08	1.00	0.54	0.004	0.03	(1)
Project Year 2038						
Terminal Equipment - 121-175 Hp	0.08	3.07	0.30	0.004	0.02	(1)
Terminal Equipment - 176-250 Hp	0.09	1.12	0.32	0.004	0.02	(1)
Terminal Equipment - 250-500 Hp	0.07	1.00	0.29	0.004	0.02	(1)

Notes: (1) Data calculated from OFFROAD Emissions Model factors estimated for the year 2001 terminal equipment fleet (ARB 2004) with the use of an equipment replacement rate of 15 years and taking into consideration future off-road emission standards implementation schedule and equipment deterioration factors.

Table D1.2-NFAB-Mit-41. Tiers 2-4 Emission Standards for Terminal Equipment - Berths 136-147 Terminal Project Alternatives.

Mitigation Scenario/Equipment Horsepower	Emission Factors (Gm/Hp-Hr)					References
	ROG	CO	NOx	SOx	PM10	
EPA Tier 4 Off-road Diesel Engine Standards						
100-175 Hp	0.30	3.70	0.30	0.004	0.015	(1)
176-500 Hp	0.30	2.60	0.30	0.004	0.015	(1)

Notes: (1) NOx/PM = Tier 4 off-road standards from EPA Rule. CO/NMHC = Tier 2 or 3 stds, as there are no Tier 4 stds for these.

Table D1.2-NFAB-Mit-42. Terminal Equipment Annual Mitigated Emissions - Berths 136-147 Terminal Project - NEPA Baseline.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons) (1)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	12,423,941	10.87	47.79	115.14	0.06	5.35	4.93
Terminal Equipment - 176-250 Hp	14,895,504	9.36	26.27	116.14	0.07	4.75	4.37
Terminal Equipment - 250-500 Hp	2,861,956	1.27	4.42	19.50	0.01	0.69	0.63
Subtotal	30,181,402	21.50	78.48	250.78	0.15	10.79	9.93
Project Year 2015							
Terminal Equipment - 121-175 Hp	17,542,048	5.80	61.05	5.80	0.09	0.29	0.27
Terminal Equipment - 176-250 Hp	21,031,785	5.84	28.28	6.95	0.10	0.35	0.32
Terminal Equipment - 250-500 Hp	4,040,954	0.89	4.92	1.34	0.02	0.07	0.06
Subtotal	42,614,787	12.53	94.25	14.09	0.21	0.70	0.65
Project Year 2025							
Terminal Equipment - 121-175 Hp	19,968,013	2.14	67.59	6.60	0.10	0.33	0.30
Terminal Equipment - 176-250 Hp	23,940,360	2.53	29.69	7.92	0.12	0.40	0.36
Terminal Equipment - 250-500 Hp	4,599,795	0.40	5.07	1.52	0.02	0.08	0.07
Subtotal	48,508,168	5.07	102.34	16.04	0.24	0.80	0.74
Project Year 2038 (2)							
Terminal Equipment - 121-175 Hp	19,968,013	2.14	67.59	6.60	0.10	0.33	0.30
Terminal Equipment - 176-250 Hp	23,940,360	2.53	29.69	7.92	0.12	0.40	0.36
Terminal Equipment - 250-500 Hp	4,599,795	0.40	5.07	1.52	0.02	0.08	0.07
Subtotal	48,508,168	5.07	102.34	16.04	0.24	0.80	0.74

Note: (1) Mitigations begin in year 2010 and are complete by 2015.

(2) In years 2025 & 2038, Hp-Hrs increased an additional 23% to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

Table D1.2-NFAB-Mit-43. Mitigated Annual Operational Emissions - Berths 136-147 Terminal Project - NEPA Basel

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2007						
Ships - Fairway Transit (1)	14.14	32.75	417.56	245.34	35.00	32.79
Ships - Precautionary Area Transit (1)	2.58	5.53	55.47	34.46	4.83	4.52
Ships - Harbor Transit (1)	3.99	5.06	38.06	19.26	3.86	3.62
Ships - Docking (1)	1.39	1.37	10.58	4.68	1.14	1.07
Ships - Hoteling Aux. Sources	7.41	26.92	264.80	254.28	22.60	21.17
Tugboats - Cargo Vessel Assist (1)	0.44	2.25	14.07	0.01	0.58	0.54
Terminal Equipment	21.50	78.48	250.78	0.15	10.79	9.93
On-road Trucks	123.35	395.44	1,204.28	1.12	80.95	49.03
Trains	19.33	45.04	269.22	23.97	10.18	9.36
Railyard Equipment	3.74	14.56	41.84	0.02	1.86	1.71
Commuting	1.90	25.50	3.33	0.02	2.78	2.56
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	200.49	634.22	2,579.86	583.42	174.84	136.56
Project Year 2015						
Ships - Fairway Transit (1)	3.65	26.22	197.35	11.88	4.27	4.00
Ships - Precautionary Area Transit (1)	1.14	7.69	53.29	7.81	1.21	1.14
Ships - Harbor Transit (1)	1.69	7.17	43.71	5.79	1.10	1.03
Ships - Docking (1)	0.55	1.94	12.11	1.52	0.32	0.30
Ships - Hoteling Aux. Sources	2.96	16.82	100.54	136.21	5.11	4.79
Tugboats - Cargo Vessel Assist (1)	0.51	2.69	14.41	0.01	0.62	0.58
Terminal Equipment	12.53	94.25	14.09	0.21	0.70	0.65
On-road Trucks	32.12	113.18	281.73	1.62	46.54	13.01
Trains	18.65	51.14	257.01	0.19	6.77	6.23
Railyard Equipment	1.70	18.55	1.70	0.03	0.09	0.08
Commuting	2.16	29.46	3.80	0.02	4.10	3.77
Pier A Railyard	0.41	1.58	5.53	0.00	0.03	0.03
Project Year 2015 Total	78.07	370.68	985.28	165.28	70.86	35.60
Project Year 2025						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.45	2.40	10.71	0.01	0.47	0.44
Terminal Equipment	5.07	102.34	16.04	0.24	0.80	0.74
On-road Trucks	27.60	97.47	245.91	1.37	40.07	11.12
Trains	22.71	74.11	325.08	0.27	8.18	7.52
Railyard Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Commuting	1.48	19.87	2.50	0.03	4.46	4.10
Pier A Railyard	0.40	1.58	1.02	0.00	0.03	0.03
Project Year 2025 Total	69.35	385.36	965.37	169.66	65.55	34.77
Project Year 2038						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.44	2.40	9.62	0.01	0.42	0.40
Terminal Equipment	5.07	102.34	16.04	0.24	0.80	0.74
On-road Trucks	28.36	97.19	248.80	1.40	39.75	10.83
Trains	19.29	74.11	284.54	0.27	6.78	6.24
Railyard Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Commuting	0.76	9.15	0.87	0.03	5.51	5.07
Pier A Railyard	0.40	1.58	0.95	0.00	0.02	0.02
Project Year 2038 Total	65.96	374.36	924.93	169.69	64.84	34.11

Note: (1) Includes auxiliary generator emissions.

Table D1.2-NFAB-Mit-44. Mitigated Average Daily Operational Emissions - Berths 136-147 Terminal Project - NEPA Baseline - 365 days/year all sources.

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2007						
Ships - Fairway Transit (1)	77	179	2,288	1,344	192	180
Ships - Precautionary Area Transit (1)	14	30	304	189	26	25
Ships - Harbor Transit (1)	22	28	209	106	21	20
Ships - Docking (1)	8	7	58	26	6	6
Ships - Hoteling Aux. Sources	41	147	1,451	1,393	124	116
Tugboats - Cargo Vessel Assist (1)	2	12	77	0	3	3
Terminal Equipment	118	430	1,374	1	59	54
On-road Trucks	676	2,167	6,599	6	444	269
Trains	106	247	1,475	131	56	51
Railyard Equipment	21	80	229	0	10	9
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,099	3,475	14,136	3,197	958	748
Project Year 2015						
Ships - Fairway Transit (1)	20	144	1,081	65	23	22
Ships - Precautionary Area Transit (1)	6	42	292	43	7	6
Ships - Harbor Transit (1)	9	39	240	32	6	6
Ships - Docking (1)	3	11	66	8	2	2
Ships - Hoteling Aux. Sources	16	92	551	746	28	26
Tugboats - Cargo Vessel Assist (1)	3	15	79	0	3	3
Terminal Equipment	69	516	77	1	4	4
On-road Trucks	176	620	1,544	9	255	71
Trains	102	280	1,408	1	37	34
Railyard Equipment	9	102	9	0	0	0
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	0	0
Project Year 2015 Total	428	2,031	5,399	906	388	195
Project Year 2025						
Ships - Fairway Transit (1)	23	161	1,136	67	25	23
Ships - Precautionary Area Transit (1)	7	47	314	41	7	7
Ships - Harbor Transit (1)	11	45	279	31	7	6
Ships - Docking (1)	3	12	77	8	2	2
Ships - Hoteling Aux. Sources	5	66	176	772	22	20
Tugboats - Cargo Vessel Assist (1)	2	13	59	0	3	2
Terminal Equipment	28	561	88	1	4	4
On-road Trucks	151	534	1,347	8	220	61
Trains	124	406	1,781	1	45	41
Railyard Equipment	14	148	14	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	6	0	0	0
Project Year 202 Total	380	2,112	5,290	930	359	191
Project Year 2038 Total						
Ships - Fairway Transit (1)	23	161	1,136	67	25	23
Ships - Precautionary Area Transit (1)	7	47	314	41	7	7
Ships - Harbor Transit (1)	11	45	279	31	7	6
Ships - Docking (1)	3	12	77	8	2	2
Ships - Hoteling Aux. Sources	5	66	176	772	22	20
Tugboats - Cargo Vessel Assist (1)	2	13	53	0	2	2
Terminal Equipment	39	787	123	2	6	6
On-road Trucks	155	533	1,363	8	218	59
Trains	106	406	1,559	1	37	34
Railyard Equipment	14	148	14	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	5	0	0	0
Project Year 2038 Total	373	2,278	5,104	930	357	189
SCAQMD Daily Significance Threshold	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2-PP-1. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Proposed Project

Project Scenario/Ship Type	Annual Ship Visits	Annual Shifts	TEU Moves/ Ship Visit (1)	Hoteling Time/ Visit (Hours) (2)	Annual TEU Movements
Baseline - Year 2003					
Containerships 3,000 - 5,000 TEU	68		5,100	60.0	346,800
Containerships < 3,000 TEU	148	30	3,063	36.0	545,214
Subtotal	246				892,014
Project Year 2007					
Containerships 5,000 - 6,000 TEU	26		8,017	72.0	208,442
Containerships 3,000 - 5,000 TEU	80		5,100	60.0	408,000
Containerships < 3,000 TEU	155		3,063	36.0	474,765
Subtotal	261				1,091,207
Project Year 2015					
Containerships 8,000 - 9,000 TEU	42		12,584	84.0	528,528
Containerships 5,000 - 6,000 TEU	72		8,017	72.0	577,224
Containerships 3,000 - 5,000 TEU	67		5,100	60.0	341,700
Containerships < 3,000 TEU	98		3,063	36.0	300,174
Subtotal	279				1,747,626
Project Year 2025					
Containerships 8,000 - 9,000 TEU	79		12,584	84.0	994,136
Containerships 5,000 - 6,000 TEU	111		8,017	72.0	889,887
Containerships 3,000 - 5,000 TEU	66		5,100	60.0	336,600
Containerships < 3,000 TEU	55		3,063	36.0	168,465
Subtotal	311				2,389,088
Project Year 2038					
Containerships 8,000 - 9,000 TEU	79		12,584	84.0	994,136
Containerships 5,000 - 6,000 TEU	111		8,017	72.0	889,887
Containerships 3,000 - 5,000 TEU	66		5,100	60.0	336,600
Containerships < 3,000 TEU	55		3,063	36.0	168,465
Subtotal	311				2,389,088

Notes: (1) Throughputs for vessels <3,000 and 3,000-5,000 TEUs based upon current and future expected operations at the Berths 136-147 terminal. Thrghput for 5,000-6,000 TEU vessels based upon average throughput of vessels >5000 TEUs at berths 121-131 in year 2001. Thrghput for 8,000-9,000 TEU vessels based upon an expected capacity of 8,800 TEUs (Samsung Heavy Industries 2003) * 1.43 (the ratio of throughput per ship visit/vessel capacity for vessels >5,000 TEUs that called at Berths 121-131 in 2001) = 12,584 TEUs/SV.

(2) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006).

Table D1.2-PP-2. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	5.01	11.60	148.54	85.95	12.33	11.55
Containership < 3,000 TEU	6.49	15.15	195.87	113.62	16.23	15.21
Subtotal	11.50	26.75	344.40	199.58	28.56	26.76
Project Year 2007						
Containerships 5,000 - 6,000 TEU	2.48	5.54	68.18	39.02	5.70	5.34
Containerships 3,000 - 5,000 TEU	5.42	12.45	157.50	90.86	13.10	12.27
Containerships < 3,000 TEU	6.22	14.52	187.73	108.90	15.56	14.58
Subtotal	14.13	32.51	413.41	238.79	34.36	32.19
Project Year 2015						
Containerships 8,000 - 9,000 TEU	4.62	9.44	106.94	59.54	9.14	8.56
Containerships 5,000 - 6,000 TEU	6.36	13.76	162.66	92.03	13.72	12.85
Containerships 3,000 - 5,000 TEU	4.07	9.23	114.57	65.78	9.55	8.95
Containerships < 3,000 TEU	3.50	8.16	105.49	61.20	8.74	8.19
Subtotal	18.55	40.59	489.68	278.55	41.16	38.56
Project Year 2025						
Containerships 8,000 - 9,000 TEU	8.70	17.76	201.15	111.99	17.19	16.11
Containerships 5,000 - 6,000 TEU	9.80	21.22	250.77	141.87	21.15	19.82
Containerships 3,000 - 5,000 TEU	4.01	9.09	112.86	64.80	9.41	8.82
Containerships < 3,000 TEU	1.96	4.58	59.21	34.35	4.91	4.60
Subtotal	24.47	52.65	624.00	353.02	52.66	49.34
Project Year 2038						
Containerships 8,000 - 9,000 TEU	8.70	17.76	201.15	111.99	17.19	16.11
Containerships 5,000 - 6,000 TEU	9.80	21.22	250.77	141.87	21.15	19.82
Containerships 3,000 - 5,000 TEU	4.01	9.09	112.86	64.80	9.41	8.82
Containerships < 3,000 TEU	1.96	4.58	59.21	34.35	4.91	4.60
Subtotal	24.47	52.65	624.00	353.02	52.66	49.34

Note: (1) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-PP-3. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.48	0.80	6.29	2.99	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.99	1.80	15.90	8.09	1.43	1.34
Containerships < 3,000 TEU	0.82	1.81	21.52	12.24	1.82	1.70
Subtotal	2.30	4.41	43.71	23.32	3.84	3.60
Project Year 2015						
Containerships 8,000 - 9,000 TEU	1.27	1.75	11.48	4.59	1.17	1.10
Containerships 5,000 - 6,000 TEU	1.34	2.21	17.43	8.29	1.63	1.53
Containerships 3,000 - 5,000 TEU	0.83	1.51	13.32	6.78	1.20	1.12
Containerships < 3,000 TEU	0.52	1.15	13.60	7.74	1.15	1.08
Subtotal	3.96	6.61	55.83	27.39	5.16	4.83
Project Year 2025						
Containerships 8,000 - 9,000 TEU	2.38	3.29	21.59	8.64	2.21	2.07
Containerships 5,000 - 6,000 TEU	2.07	3.41	26.87	12.78	2.52	2.36
Containerships 3,000 - 5,000 TEU	0.82	1.49	13.12	6.68	1.18	1.11
Containerships < 3,000 TEU	0.29	0.64	7.63	4.34	0.65	0.60
Subtotal	5.56	8.83	69.21	32.43	6.56	6.14
Project Year 2038						
Containerships 8,000 - 9,000 TEU	2.38	3.29	21.59	8.64	2.21	2.07
Containerships 5,000 - 6,000 TEU	2.07	3.41	26.87	12.78	2.52	2.36
Containerships 3,000 - 5,000 TEU	0.82	1.49	13.12	6.68	1.18	1.11
Containerships < 3,000 TEU	0.29	0.64	7.63	4.34	0.65	0.60
Subtotal	5.56	8.83	69.21	32.43	6.56	6.14

Table D1.2-PP-4. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.68	0.68	3.85	0.92	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.44	1.42	8.11	1.94	0.96	0.90
Containerships < 3,000 TEU	1.46	1.45	8.23	1.97	0.97	0.91
Subtotal	3.59	3.55	20.19	4.83	2.39	2.24
Project Year 2015						
Containerships 8,000 - 9,000 TEU	1.39	1.37	7.82	1.87	0.93	0.87
Containerships 5,000 - 6,000 TEU	1.90	1.87	10.67	2.55	1.26	1.18
Containerships 3,000 - 5,000 TEU	1.21	1.19	6.79	1.63	0.80	0.75
Containerships < 3,000 TEU	0.92	0.91	5.20	1.25	0.62	0.58
Subtotal	5.42	5.35	30.48	7.30	3.61	3.38
Project Year 2025						
Containerships 8,000 - 9,000 TEU	2.61	2.58	14.71	3.52	1.74	1.63
Containerships 5,000 - 6,000 TEU	2.92	2.89	16.45	3.94	1.95	1.83
Containerships 3,000 - 5,000 TEU	1.19	1.17	6.69	1.60	0.79	0.74
Containerships < 3,000 TEU	0.52	0.51	2.92	0.70	0.35	0.32
Subtotal	7.24	7.16	40.77	9.76	4.83	4.52
Project Year 2038						
Containerships 8,000 - 9,000 TEU	2.61	2.58	14.71	3.52	1.74	1.63
Containerships 5,000 - 6,000 TEU	2.92	2.89	16.45	3.94	1.95	1.83
Containerships 3,000 - 5,000 TEU	1.19	1.17	6.69	1.60	0.79	0.74
Containerships < 3,000 TEU	0.52	0.51	2.92	0.70	0.35	0.32
Subtotal	7.24	7.16	40.77	9.76	4.83	4.52

Table D1.2-PP-5. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.25	0.18	1.09	0.14	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.52	0.38	2.29	0.29	0.30	0.28
Containerships < 3,000 TEU	0.53	0.39	2.32	0.29	0.30	0.28
Subtotal	1.29	0.95	5.70	0.71	0.74	0.70
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.50	0.37	2.21	0.28	0.29	0.27
Containerships 5,000 - 6,000 TEU	0.68	0.50	3.01	0.38	0.39	0.37
Containerships 3,000 - 5,000 TEU	0.43	0.32	1.92	0.24	0.25	0.23
Containerships < 3,000 TEU	0.33	0.25	1.47	0.18	0.19	0.18
Subtotal	1.95	1.44	8.61	1.08	1.12	1.05
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.94	0.69	4.15	0.52	0.54	0.51
Containerships 5,000 - 6,000 TEU	1.05	0.78	4.64	0.58	0.61	0.57
Containerships 3,000 - 5,000 TEU	0.43	0.32	1.89	0.24	0.25	0.23
Containerships < 3,000 TEU	0.19	0.14	0.82	0.10	0.11	0.10
Subtotal	2.61	1.92	11.51	1.44	1.50	1.41
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.94	0.69	4.15	0.52	0.54	0.51
Containerships 5,000 - 6,000 TEU	1.05	0.78	4.64	0.58	0.61	0.57
Containerships 3,000 - 5,000 TEU	0.43	0.32	1.89	0.24	0.25	0.23
Containerships < 3,000 TEU	0.19	0.14	0.82	0.10	0.11	0.10
Subtotal	2.61	1.92	11.51	1.44	1.50	1.41

Table D1.2-PP-6. Annual Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.28	0.28	1.59	0.38	0.19	0.18
Docking	0.10	0.08	0.45	0.06	0.06	0.05
Subtotal	0.38	0.35	2.04	0.44	0.25	0.23

Table D1.2-PP-7. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.13	0.37	4.92	4.12	0.50	0.47
Containership < 3,000 TEU	0.17	0.47	6.31	5.28	0.64	0.60
Subtotal	0.31	0.84	11.23	9.39	1.15	1.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.08	0.22	2.99	2.50	0.30	0.29
Containerships 3,000 - 5,000 TEU	0.17	0.47	6.32	5.29	0.64	0.60
Containerships < 3,000 TEU	0.19	0.53	7.05	5.90	0.72	0.67
Subtotal	0.44	1.22	16.35	13.68	1.67	1.56
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.15	0.42	5.65	4.73	0.58	0.54
Containerships 5,000 - 6,000 TEU	0.25	0.69	9.24	7.73	0.94	0.88
Containerships 3,000 - 5,000 TEU	0.16	0.44	5.83	4.88	0.59	0.56
Containerships < 3,000 TEU	0.13	0.36	4.79	4.01	0.49	0.46
Subtotal	0.69	1.91	25.51	21.35	2.60	2.44
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.29	0.79	10.62	8.89	1.08	1.02
Containerships 5,000 - 6,000 TEU	0.39	1.07	14.25	11.92	1.45	1.36
Containerships 3,000 - 5,000 TEU	0.16	0.43	5.74	4.80	0.59	0.55
Containerships < 3,000 TEU	0.07	0.20	2.69	2.25	0.27	0.26
Subtotal	0.91	2.49	33.30	27.87	3.40	3.18
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.29	0.79	10.62	8.89	1.08	1.02
Containerships 5,000 - 6,000 TEU	0.39	1.07	14.25	11.92	1.45	1.36
Containerships 3,000 - 5,000 TEU	0.16	0.43	5.74	4.80	0.59	0.55
Containerships < 3,000 TEU	0.07	0.20	2.69	2.25	0.27	0.26
Subtotal	0.91	2.49	33.30	27.87	3.40	3.18

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-PP-8. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.07	0.19	2.43	1.56	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.14	0.37	4.89	3.13	0.40	0.38
Containerships < 3,000 TEU	0.14	0.38	5.03	3.22	0.41	0.39
Subtotal	0.34	0.94	12.35	7.91	1.01	0.95
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.12	0.33	4.26	2.73	0.35	0.33
Containerships 5,000 - 6,000 TEU	0.19	0.51	6.73	4.31	0.55	0.52
Containerships 3,000 - 5,000 TEU	0.11	0.31	4.10	2.62	0.34	0.31
Containerships < 3,000 TEU	0.09	0.24	3.18	2.04	0.26	0.24
Subtotal	0.51	1.39	18.27	11.70	1.50	1.40
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.22	0.61	8.02	5.13	0.66	0.61
Containerships 5,000 - 6,000 TEU	0.29	0.79	10.37	6.64	0.85	0.80
Containerships 3,000 - 5,000 TEU	0.11	0.31	4.04	2.59	0.33	0.31
Containerships < 3,000 TEU	0.05	0.14	1.78	1.14	0.15	0.14
Subtotal	0.67	1.85	24.21	15.50	1.98	1.86
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.22	0.61	8.02	5.13	0.66	0.61
Containerships 5,000 - 6,000 TEU	0.29	0.79	10.37	6.64	0.85	0.80
Containerships 3,000 - 5,000 TEU	0.11	0.31	4.04	2.59	0.33	0.31
Containerships < 3,000 TEU	0.05	0.14	1.78	1.14	0.15	0.14
Subtotal	0.67	1.85	24.21	15.50	1.98	1.86

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-PP-9. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	0.29	3.86	2.47	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.20	0.56	7.35	4.70	0.60	0.56
Containerships < 3,000 TEU	0.20	0.55	7.23	4.63	0.59	0.55
Subtotal	0.51	1.40	18.43	11.80	1.51	1.41
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.19	0.52	6.76	4.33	0.55	0.52
Containerships 5,000 - 6,000 TEU	0.30	0.81	10.68	6.84	0.87	0.82
Containerships 3,000 - 5,000 TEU	0.17	0.47	6.15	3.94	0.50	0.47
Containerships < 3,000 TEU	0.13	0.35	4.57	2.93	0.37	0.35
Subtotal	0.78	2.15	28.16	18.03	2.30	2.16
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.35	0.97	12.72	8.15	1.04	0.98
Containerships 5,000 - 6,000 TEU	0.46	1.25	16.46	10.54	1.35	1.26
Containerships 3,000 - 5,000 TEU	0.17	0.46	6.06	3.88	0.50	0.46
Containerships < 3,000 TEU	0.07	0.20	2.56	1.64	0.21	0.20
Subtotal	1.05	2.88	37.81	24.21	3.09	2.90
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.35	0.97	12.72	8.15	1.04	0.98
Containerships 5,000 - 6,000 TEU	0.46	1.25	16.46	10.54	1.35	1.26
Containerships 3,000 - 5,000 TEU	0.17	0.46	6.06	3.88	0.50	0.46
Containerships < 3,000 TEU	0.07	0.20	2.56	1.64	0.21	0.20
Subtotal	1.05	2.88	37.81	24.21	3.09	2.90

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-PP-10. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.05	0.67	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.06	0.15	2.01	1.29	0.16	0.15
Containerships < 3,000 TEU	0.05	0.15	1.98	1.26	0.16	0.15
Subtotal	0.14	0.38	5.04	3.23	0.41	0.39
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.05	0.14	1.85	1.18	0.15	0.14
Containerships 5,000 - 6,000 TEU	0.08	0.22	2.92	1.87	0.24	0.22
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.68	1.08	0.14	0.13
Containerships < 3,000 TEU	0.03	0.10	1.25	0.80	0.10	0.10
Subtotal	0.21	0.59	7.70	4.93	0.63	0.59
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.10	0.27	3.48	2.23	0.28	0.27
Containerships 5,000 - 6,000 TEU	0.12	0.34	4.50	2.88	0.37	0.34
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.66	1.06	0.14	0.13
Containerships < 3,000 TEU	0.02	0.05	0.70	0.45	0.06	0.05
Subtotal	0.29	0.79	10.33	6.62	0.85	0.79
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.10	0.27	3.48	2.23	0.28	0.27
Containerships 5,000 - 6,000 TEU	0.12	0.34	4.50	2.88	0.37	0.34
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.66	1.06	0.14	0.13
Containerships < 3,000 TEU	0.02	0.05	0.70	0.45	0.06	0.05
Subtotal	0.29	0.79	10.33	6.62	0.85	0.79

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-PP-11. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.57	4.32	56.62	36.26	4.63	4.34
Containerships 3,000 - 5,000 TEU	3.20	8.81	115.54	73.98	9.46	8.86
Containerships < 3,000 TEU	2.20	6.04	79.27	50.75	6.49	6.08
Subtotal	6.97	19.17	251.43	160.99	20.58	19.28
Project Year 2015						
Containerships 8,000 - 9,000 TEU	3.15	8.66	113.63	72.76	9.30	8.71
Containerships 5,000 - 6,000 TEU	4.35	11.96	156.81	100.40	12.83	12.02
Containerships 3,000 - 5,000 TEU	2.68	7.38	96.76	61.96	7.92	7.42
Containerships < 3,000 TEU	1.39	3.82	50.12	32.09	4.10	3.84
Subtotal	11.57	31.82	417.32	267.20	34.15	32.00
Project Year 2025						
Containerships 8,000 - 9,000 TEU	5.93	16.29	213.73	136.85	17.49	16.39
Containerships 5,000 - 6,000 TEU	6.70	18.43	241.74	154.79	19.78	18.54
Containerships 3,000 - 5,000 TEU	2.64	7.27	95.32	61.03	7.80	7.31
Containerships < 3,000 TEU	0.78	2.14	28.13	18.01	2.30	2.16
Subtotal	16.05	44.14	578.92	370.68	47.38	44.39
Project Year 2038						
Containerships 8,000 - 9,000 TEU	5.93	16.29	213.73	136.85	17.49	16.39
Containerships 5,000 - 6,000 TEU	6.70	18.43	241.74	154.79	19.78	18.54
Containerships 3,000 - 5,000 TEU	2.64	7.27	95.32	61.03	7.80	7.31
Containerships < 3,000 TEU	0.78	2.14	28.13	18.01	2.30	2.16
Subtotal	16.05	44.14	578.92	370.68	47.38	44.39

Table D1.2-PP-12. Annual Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.02	0.05	0.70	0.45	0.06	0.05
Docking	0.01	0.01	0.19	0.12	0.02	0.01
Subtotal	0.02	0.07	0.89	0.57	0.07	0.07

Table D1.2-PP-13. Annual Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership < 3,000 TEU	0.43	1.17	15.34	9.82	1.26	1.18
Subtotal	0.43	1.17	15.34	9.82	1.26	1.18

Table D1.2-PP-14. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2-PP-15. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.41	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.29	1.26	0.04	0.03
Containerships < 3,000 TEU	0.02	0.21	0.56	2.44	0.07	0.06
Subtotal	0.03	0.35	0.93	4.10	0.11	0.11
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.06	0.15	0.66	0.02	0.02
Containerships 5,000 - 6,000 TEU	0.01	0.10	0.26	1.13	0.03	0.03
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.24	1.05	0.03	0.03
Containerships < 3,000 TEU	0.01	0.13	0.35	1.54	0.04	0.04
Subtotal	0.03	0.37	1.00	4.39	0.12	0.12
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.01	0.11	0.28	1.24	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.15	0.40	1.75	0.05	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.24	1.04	0.03	0.03
Containerships < 3,000 TEU	0.01	0.07	0.20	0.86	0.02	0.02
Subtotal	0.03	0.42	1.11	4.89	0.14	0.13
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.01	0.11	0.28	1.24	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.15	0.40	1.75	0.05	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.24	1.04	0.03	0.03
Containerships < 3,000 TEU	0.01	0.07	0.20	0.86	0.02	0.02
Subtotal	0.03	0.42	1.11	4.89	0.14	0.13

Table D1.2-PP-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.07	0.32	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.23	1.00	0.03	0.03
Containerships < 3,000 TEU	0.01	0.16	0.44	1.93	0.05	0.05
Subtotal	0.02	0.28	0.74	3.26	0.09	0.09
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.04	0.12	0.52	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.01	0.08	0.20	0.90	0.03	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.07	0.19	0.84	0.02	0.02
Containerships < 3,000 TEU	0.01	0.10	0.28	1.22	0.03	0.03
Subtotal	0.02	0.30	0.79	3.48	0.10	0.09
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.01	0.08	0.22	0.99	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.32	1.38	0.04	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.07	0.19	0.82	0.02	0.02
Containerships < 3,000 TEU	0.00	0.06	0.16	0.69	0.02	0.02
Subtotal	0.03	0.33	0.88	3.88	0.11	0.10
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.01	0.08	0.22	0.99	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.32	1.38	0.04	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.07	0.19	0.82	0.02	0.02
Containerships < 3,000 TEU	0.00	0.06	0.16	0.69	0.02	0.02
Subtotal	0.03	0.33	0.88	3.88	0.11	0.10

Table D1.2-PP-17. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.12	0.53	0.01	0.01
Subtotal	0.01	0.08	0.20	0.89	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.03	0.14	0.00	0.00
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.06	0.25	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.03	0.08	0.33	0.01	0.01
Subtotal	0.01	0.08	0.22	0.95	0.03	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.38	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Subtotal	0.01	0.09	0.24	1.06	0.03	0.03
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.38	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Subtotal	0.01	0.09	0.24	1.06	0.03	0.03

Table D1.2-PP-18. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	1.33	3.55	15.57	0.44	0.41
Containerships 3,000 - 5,000 TEU	0.28	3.40	9.09	39.92	1.12	1.05
Containerships < 3,000 TEU	0.33	3.95	10.57	46.40	1.30	1.22
Subtotal	0.72	8.68	23.21	101.89	2.85	2.67
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.21	2.50	6.68	29.34	0.82	0.77
Containerships 5,000 - 6,000 TEU	0.30	3.67	9.82	43.11	1.21	1.13
Containerships 3,000 - 5,000 TEU	0.24	2.85	7.61	33.43	0.94	0.88
Containerships < 3,000 TEU	0.21	2.50	6.68	29.34	0.82	0.77
Subtotal	0.95	11.52	30.80	135.22	3.79	3.55
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.39	4.70	12.57	55.18	1.54	1.45
Containerships 5,000 - 6,000 TEU	0.47	5.66	15.14	66.46	1.86	1.74
Containerships 3,000 - 5,000 TEU	0.23	2.81	7.50	32.93	0.92	0.86
Containerships < 3,000 TEU	0.12	1.40	3.75	16.47	0.46	0.43
Subtotal	1.20	14.57	38.96	171.04	4.79	4.49
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.39	4.70	12.57	55.18	1.54	1.45
Containerships 5,000 - 6,000 TEU	0.47	5.66	15.14	66.46	1.86	1.74
Containerships 3,000 - 5,000 TEU	0.23	2.81	7.50	32.93	0.92	0.86
Containerships < 3,000 TEU	0.12	1.40	3.75	16.47	0.46	0.43
Subtotal	1.20	14.57	38.96	171.04	4.79	4.49

Table D1.2-PP-19. Annual Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.00	0.03	0.09	0.37	0.01	0.01
Docking	0.00	0.01	0.02	0.10	0.00	0.00
Hoteling	0.06	0.77	2.05	8.98	0.25	0.24
Subtotal	0.07	0.81	2.15	9.46	0.26	0.25

Table D1.2-PP-20. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.41	2.11	13.23	0.01	0.54	0.51
Project Year 2015						
Subtotal	0.43	2.25	12.08	0.01	0.52	0.48
Project Year 2025						
Subtotal	0.47	2.51	11.17	0.01	0.49	0.46
Project Year 2038						
Subtotal	0.47	2.51	10.02	0.01	0.44	0.41

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-PP-21. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.03	0.19	1.11	0.00	0.05	0.05
Project Year 2015						
Subtotal (1)	0.03	0.21	1.10	0.00	0.05	0.05
Project Year 2025						
Subtotal (1)	0.04	0.23	1.03	0.00	0.04	0.04
Project Year 2038						
Subtotal (1)	0.04	0.23	0.93	0.00	0.04	0.04

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-PP-22. Annual Vessel Emissions - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.68	465.24	55.81	52.30
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.77	252.47	36.03	33.76
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Subtotal	30.93	76.23	826.04	575.41	70.19	65.76
Project Year 2015						
Ships - Fairway Transit (1)	19.24	42.50	515.19	299.89	43.76	41.00
Ships - Precautionary Area Transit (1)	4.49	8.38	75.10	43.48	6.78	6.35
Ships - Harbor Transit (1)	6.22	7.80	59.44	28.81	6.01	5.63
Ships - Docking (1)	2.17	2.11	16.52	6.96	1.78	1.67
Ships - Hoteling Aux. Sources	12.52	43.33	448.11	402.42	37.94	35.55
Tugboats - Cargo Vessel Assist (1)	0.47	2.46	13.18	0.01	0.57	0.53
Subtotal	45.11	106.57	1,127.53	781.57	96.83	90.73
Project Year 2025						
Ships - Fairway Transit (1)	25.37	55.14	657.30	380.88	56.06	52.53
Ships - Precautionary Area Transit (1)	6.27	11.09	94.54	52.83	8.67	8.13
Ships - Harbor Transit (1)	8.32	10.37	79.46	37.85	8.03	7.52
Ships - Docking (1)	2.90	2.80	22.08	9.12	2.38	2.23
Ships - Hoteling Aux. Sources	17.25	58.71	617.88	541.72	52.17	48.88
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	12.20	0.01	0.53	0.50
Subtotal	60.62	140.85	1,483.46	1,022.40	127.84	119.78
Project Year 2038						
Ships - Fairway Transit (1)	25.37	55.14	657.30	380.88	56.06	52.53
Ships - Precautionary Area Transit (1)	6.27	11.09	94.54	52.83	8.67	8.13
Ships - Harbor Transit (1)	8.32	10.37	79.46	37.85	8.03	7.52
Ships - Docking (1)	2.90	2.80	22.08	9.12	2.38	2.23
Ships - Hoteling Aux. Sources	17.25	58.71	617.88	541.72	52.17	48.88
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	10.95	0.01	0.48	0.45
Subtotal	60.62	140.85	1,482.21	1,022.40	127.78	119.73

Note: (1) Includes auxiliary power emissions.

Table D1.2-PP-23. Daily Vessel Emissions - Berths 136-147 Terminal Project - Proposed Project.

	Pounds Per Day					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	6.3	6.2	47.1	21.0	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,593	2,549	306	287
Project Year 2007						
Ships - Fairway Transit (1)	79.8	184.9	2,354.9	1,383.4	197.4	185.0
Ships - Precautionary Area Transit (1)	14.6	31.2	312.3	193.6	27.2	25.5
Ships - Harbor Transit (1)	22.6	28.6	215.7	109.0	21.9	20.5
Ships - Docking (1)	7.9	7.7	59.9	26.5	6.5	6.1
Ships - Hoteling Aux. Sources	42.1	152.6	1,504.9	1,440.4	128.4	120.3
Tugboats - Cargo Vessel Assist (1)	2.4	12.6	78.6	0.0	3.2	3.0
Subtotal	169	418	4,526	3,153	385	360
Project Year 2015						
Ships - Fairway Transit (1)	105.4	232.9	2,822.9	1,643.3	239.8	224.7
Ships - Precautionary Area Transit (1)	24.6	45.9	411.5	238.2	37.1	34.8
Ships - Harbor Transit (1)	34.1	42.7	325.7	157.9	32.9	30.9
Ships - Docking (1)	11.9	11.5	90.5	38.1	9.8	9.1
Ships - Hoteling Aux. Sources	68.6	237.5	2,455.4	2,205.1	207.9	194.8
Tugboats - Cargo Vessel Assist (1)	2.6	13.5	72.2	0.0	3.1	2.9
Subtotal	247	584	6,178	4,283	531	497
Project Year 2025						
Ships - Fairway Transit (1)	139.0	302.1	3,601.6	2,087.0	307.2	287.8
Ships - Precautionary Area Transit (1)	34.3	60.8	518.0	289.5	47.5	44.5
Ships - Harbor Transit (1)	45.6	56.8	435.4	207.4	44.0	41.2
Ships - Docking (1)	15.9	15.3	121.0	50.0	13.0	12.2
Ships - Hoteling Aux. Sources	94.5	321.7	3,385.6	2,968.3	285.8	267.8
Tugboats - Cargo Vessel Assist (1)	2.8	15.0	66.9	0.0	2.9	2.7
Subtotal	332	772	8,129	5,602	700	656
Project Year 2038						
Ships - Fairway Transit (1)	139.0	302.1	3,601.6	2,087.0	307.2	287.8
Ships - Precautionary Area Transit (1)	34.3	60.8	518.0	289.5	47.5	44.5
Ships - Harbor Transit (1)	45.6	56.8	435.4	207.4	44.0	41.2
Ships - Docking (1)	15.9	15.3	121.0	50.0	13.0	12.2
Ships - Hoteling Aux. Sources	94.5	321.7	3,385.6	2,968.3	285.8	267.8
Tugboats - Cargo Vessel Assist (1)	2.8	15.0	60.0	0.0	2.6	2.5
Subtotal	332	772	8,122	5,602	700	656

Note: (1) Includes auxiliary power emissions.

Table D1.2-PP-24. On-Road Truck Trip Vehicle Miles Travelled - Berths 136-147 Terminal Project - Proposed Project.

Year	B136-147 Throughput (TEUs)	B136-147 ICTF Thruput (TEUs) (1)	TEUs to Offsite Railyard (2)	TEUs to Local Deilveries	Truck Trips to Offsite Railyard (2)	Local Truck Trips (3)	Truck Miles to Offsite Railyard (4)	Local Truck Trip Miles (5)	Composite VMT/ Truck Trip
Baseline - Year 2003	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2007	1,091,200	-	545,600	545,600	756,532	756,532	9.6	55.0	32.3
Year 2015	1,747,500	552,709	109,594	1,085,198	147,412	1,459,681	9.6	55.0	50.8
Year 2025	2,389,000	700,810	174,397	1,513,793	194,253	1,686,148	9.6	55.0	50.3
Year 2038	2,389,000	700,810	174,397	1,513,793	194,253	1,686,148	9.6	55.0	50.3

(1) Annual throughput estimates from Rail Master Plan.

(2) Based on 50/50/26.8/6.7/7.3% of Berths 136-147 annual cargo throughput for years 2003/2007/2010/2015/2030.

(3) Based on 50/50/61.4/62.1/63.4% of Berths 136-147 annual cargo throughput for years 2003/2007/2010/2015/2030.

(4) Assumes that 66% of cargo goes to Carson ICTF (4.5 miles) and 37% to LA railyards (18 miles) = 9.6 miles/trip

(5) Average of local/external-SCAB trip lengths (20/90) that originate from/are destined to the POLA.

Table D1.2-PP-25. ADT Estimates - Berths 136-147 - Proposed Project.

Alternative/Project Year	Truck Trips		
	Annual	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,513,063	4,145	5,675
2015	1,620,197	4,439	6,077
2025	1,880,401	5,152	7,053
2038	1,880,401	5,152	7,053

(1) = annual trips/ 266.6 days.

Table D1.2-PP-26. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Proposed Project.

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	ADT	Idling Hrs/ Day	Miles/ Day
On-Terminal					
Year 2003 - Baseline	0.56	1.02	3,281	1,837	3,351
Year 2007	0.25	1.02	4,145	1,036	4,233
Year 2015	0.25	0.81	4,403	1,101	3,547
Year 2025	0.25	0.81	5,152	1,288	4,150
Year 2038	0.25	0.81	5,152	1,288	4,150
Off-Terminal					
Year 2003 - Baseline	0.30	32.3	3,281	984	106,028
Year 2007	0.30	32.3	4,145	1,244	133,958
Year 2015	0.30	50.8	4,403	1,321	223,841
Year 2025	0.30	50.3	5,152	1,546	259,202
Year 2038	0.30	50.3	5,152	1,546	259,202

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2-PP-27. Daily Truck Emissions for the Berths 136-147 Terminal Project - Proposed Project.

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	31.9	116.1	242.2	0.1	5.1	4.7
Year 2007 - Driving	95.7	200.4	361.7	0.3	29.1	26.7
Subtotal - Year 2007	127.6	316.5	603.8	0.4	34.2	31.4
Year 2015 - Idling	21.9	105.9	290.7	0.2	2.5	2.3
Year 2015 - Driving	44.6	93.0	205.7	0.2	9.1	8.4
Subtotal - Year 2015	66.5	198.9	496.4	0.4	11.6	10.7
Year 2025 - Idling	22.0	118.1	350.0	0.2	0.6	0.6
Year 2025 - Driving	18.4	39.9	81.7	0.3	1.5	1.4
Subtotal - Year 2025	40.4	158.0	431.8	0.5	2.2	2.0
Year 2038 - Idling	21.7	117.7	350.8	0.2	0.3	0.3
Year 2038 - Driving	14.4	31.5	62.8	0.3	1.0	0.9
Subtotal - Year 2038	36.2	149.2	413.5	0.5	1.3	1.2
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	38.3	139.3	290.6	0.2	6.1	5.6
Year 2007 - Driving	749.9	2,654.8	7,393.2	5.7	338.1	311.1
Subtotal - Year 2007	788.2	2,794.1	7,683.8	5.9	344.2	316.7
Year 2015 - Idling	26.3	127.1	348.8	0.2	3.0	2.8
Year 2015 - Driving	420.5	2,563.9	7,637.1	9.8	311.7	286.8
Subtotal - Year 2015	446.8	2,691.1	7,985.9	10.0	314.7	289.5
Year 2025 - Idling	26.4	141.7	420.0	0.2	0.8	0.7
Year 2025 - Driving	210.3	1,112.1	2,921.0	11.5	81.2	74.7
Subtotal - Year 2025	236.7	1,253.8	3,341.0	11.8	82.0	75.4
Year 2038 - Idling	26.1	141.2	420.9	0.2	0.4	0.4
Year 2038 - Driving	267.5	878.0	2,232.1	11.5	56.5	52.0
Subtotal - Year 2038	293.6	1,019.2	2,653.1	11.8	56.9	52.3
Total Daily Truck Emissions by Project Year						
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	915.8	3,110.6	8,287.7	6.3	378.4	348.1
Year 2015	513.3	2,890.0	8,482.2	10.3	326.3	300.2
Year 2025	277.2	1,411.8	3,772.7	12.2	84.2	77.4
Year 2038	329.8	1,168.4	3,066.6	12.2	58.1	53.5

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2-PP-28. Road Dust Emissions for the Berths 136-147 Terminal Project - Proposed Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.1	10.2
Year 2007	76.0	12.8
Year 2015	63.7	10.8
Year 2025	74.5	12.6
Year 2038	74.5	12.6
Off-Terminal		
Year 2003 - Baseline	83.9	14.2
Year 2007	105.9	17.9
Year 2015	177.0	29.9
Year 2025	205.0	34.6
Year 2038	205.0	34.6
Combined On/Off-Terminal		
Year 2003 - Baseline	144.0	24.3
Year 2007	181.9	30.7
Year 2015	240.7	40.7
Year 2025	279.5	47.2
Year 2038	279.5	47.2

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2-PP-29. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Proposed Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.4	0.2
Year 2007	0.5	0.2
Year 2015	0.4	0.2
Year 2025	0.5	0.2
Year 2038	0.5	0.2
Off-Terminal		
Year 2003 - Baseline	11.7	5.0
Year 2007	14.8	6.3
Year 2015	24.7	10.6
Year 2025	28.6	12.3
Year 2038	28.6	12.3
Combined On/Off-Terminal		
Year 2003 - Baseline	12.1	5.2
Year 2007	15.2	6.5
Year 2015	25.1	10.8
Year 2025	29.0	12.5
Year 2038	29.0	12.5

Table D1.2-PP-30. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Proposed Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.5	10.3
Year 2007	76.4	13.0
Year 2015	64.0	10.9
Year 2025	74.9	12.8
Year 2038	74.9	12.8
Off-Terminal		
Year 2003 - Baseline	95.5	19.2
Year 2007	120.7	24.2
Year 2015	201.7	40.5
Year 2025	233.6	46.9
Year 2038	233.6	46.9
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	197	37
Year 2015	266	51
Year 2025	309	60
Year 2038	309	60

Table D1.2-PP-31. Train Trip Generation Rates - Berths 136-147
Terminal Project - Proposed Project

Project Scenario/Rail Yard	Annual Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	894
Year 2015	
To/from Berths 136-147 ICTF	905
To/from Carson/LA Rail Yards	180
Year 2025	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	286
Year 2038	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	286

Table D1.2-PP-31a. Equipment Usage Associated with One Outbound Train Trip at the Berths 136-147 ICTF - Berths 136-147 Terminal Project Alternatives

Equipment Type (1)	Hp	Load Factor	Number Active	Hourly Hp-Hr	Hours/ Trip	Total Hp-Hrs
Hostler	175	0.25	7	306	8.0	2,450
Top Picks	250	0.40	2	200	8.0	1,600
Haul Line Locomotive (2)	4,244	0.28	3	3,535	5.3	18,560
Haul Line Locomotive - Notch 1	4,244	0.05	3	637	1.0	637
Yard Locomotive	2,045	0.11	1	229	1.9	435

Notes: (1) Each outbound train trip (to inland locations) would carry 240 containers (444 TEUs).

(2) Based on a one-way trip distance of 105 miles between Berths 136-147 terminal ICTF and exit of the SCAB.

Table D1.2-PP-31b. Equipment Usage Associated with One Inbound Train Trip at the Berths 136-147 ICTF - Berths 136-147 Terminal Project Alternatives

Equipment Type (1)	Hp	Load Factor	Number Active	Hourly Hp-Hr	Hours/ Trip	Total Hp-Hrs
Hostler	175	0.25	7	306	3.0	919
Top Picks	250	0.40	2	200	3.0	600
Haul Line Locomotive (2)	4,244	0.28	3	3,535	5.3	18,560
Haul Line Locomotive - Notch 1	4,244	0.05	3	637	1.0	637

Notes: (1) Each inbound train trip (into the POLA) would carry 90 containers (167 TEUs).

(2) Based on a one-way trip distance of 105 miles between Berths 136-147 terminal ICTF and exit of the SCAB.

Table D1.2-PP-32. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Baseline Year 2003.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Carson or LA Railyards/Outbound						
Hostler	1.64	6.68	18.05	0.20	1.03	0.95
Top Picks	0.57	1.70	8.75	0.13	0.31	0.29
Line Haul Locomotive - Road Haul	8.42	17.67	147.18	9.57	4.42	4.06
Line Haul Locomotive - Notch 1	0.62	1.31	10.93	0.71	0.33	0.30
Yard Locomotive - Switching	0.47	0.67	6.42	0.04	0.16	0.15
Subtotal	11.72	28.04	191.33	10.66	6.25	5.75
Carson or LA Railyards/Inbound						
Hostler	0.61	2.50	6.77	0.08	0.39	0.35
Top Picks	0.21	0.64	3.28	0.05	0.12	0.11
Line Haul Locomotive - Road Haul	8.42	17.67	147.18	9.57	4.42	4.06
Line Haul Locomotive - Notch 1	0.31	0.66	5.46	0.36	0.16	0.15
Subtotal	9.56	21.47	162.69	10.06	5.09	4.68
Total Tons Per Year	21.28	49.52	354.02	20.72	11.34	10.43

Table D1.2-PP-33. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2007.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.92	8.42	20.29	0.01	0.94	0.87
Top Picks	0.90	2.52	11.15	0.01	0.46	0.42
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.68	1.61	9.54	0.87	0.36	0.33
Yard Locomotive - Switching	0.50	0.89	6.80	0.04	0.17	0.16
Subtotal	13.22	35.06	176.32	12.64	6.84	6.29
Carson or LA Railyards/Inbound						
Hostler	0.72	3.16	7.61	0.00	0.35	0.33
Top Picks	0.34	0.95	4.18	0.00	0.17	0.16
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.34	0.80	4.77	0.43	0.18	0.17
Subtotal	10.62	26.53	145.10	12.15	5.60	5.16
Total Tons Per Year	23.85	61.59	321.42	24.79	12.44	11.45

Table D1.2-PP-34. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2015.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.78	7.72	10.39	0.01	0.43	0.40
Top Picks	0.40	1.95	5.95	0.01	0.23	0.21
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Yard Locomotive - Switching	0.26	1.04	3.52	0.00	0.10	0.09
Subtotal	10.45	35.23	145.53	0.11	4.07	3.75
Berths 136-147/Inbound						
Hostler	0.29	2.89	3.90	0.00	0.16	0.15
Top Picks	0.15	0.73	2.23	0.00	0.09	0.08
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Subtotal	9.45	28.15	131.80	0.10	3.56	3.27
Carson or LA Railyards/Outbound						
Hostler	0.16	1.53	2.06	0.00	0.09	0.08
Top Picks	0.08	0.39	1.18	0.00	0.05	0.04
Line Haul Locomotive - Road Haul	1.59	4.34	22.26	0.02	0.59	0.54
Line Haul Locomotive - Notch 1	0.12	0.32	1.65	0.00	0.04	0.04
Yard Locomotive - Switching	0.05	0.22	0.73	0.00	0.02	0.02
Subtotal	2.00	6.80	27.88	0.02	0.78	0.72
Carson or LA Railyards/Inbound						
Hostler	0.06	0.57	0.77	0.00	0.03	0.03
Top Picks	0.03	0.14	0.44	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	1.59	4.34	22.26	0.02	0.59	0.54
Line Haul Locomotive - Notch 1	0.06	0.16	0.83	0.00	0.02	0.02
Subtotal	1.74	5.22	24.30	0.02	0.66	0.60
Total Tons Per Year	23.64	75.40	329.51	0.25	9.07	8.35

Table D1.2-PP-35. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2025.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.30	9.52	2.86	0.01	0.09	0.08
Top Picks	0.19	2.28	1.18	0.01	0.05	0.05
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Yard Locomotive - Switching	0.33	1.32	4.46	0.00	0.13	0.12
Subtotal	10.39	44.21	147.60	0.14	3.77	3.46
Berths 136-147/Inbound						
Hostler	0.11	3.57	1.07	0.01	0.03	0.03
Top Picks	0.07	0.85	0.44	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Subtotal	9.75	35.52	140.61	0.12	3.55	3.27
Carson or LA Railyards/Outbound						
Hostler	0.07	2.37	0.71	0.00	0.02	0.02
Top Picks	0.05	0.57	0.29	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	2.13	6.91	30.92	0.03	0.78	0.72
Line Haul Locomotive - Notch 1	0.16	0.51	2.30	0.00	0.06	0.05
Yard Locomotive - Switching	0.09	0.35	1.17	0.00	0.03	0.03
Subtotal	2.49	10.71	35.39	0.03	0.90	0.83
Carson or LA Railyards/Inbound						
Hostler	0.03	0.89	0.27	0.00	0.01	0.01
Top Picks	0.02	0.21	0.11	0.00	0.01	0.00
Line Haul Locomotive - Road Haul	2.13	6.91	30.92	0.03	0.78	0.72
Line Haul Locomotive - Notch 1	0.08	0.26	1.15	0.00	0.03	0.03
Subtotal	2.25	8.27	32.44	0.03	0.82	0.75
Total Tons Per Year	24.88	98.70	356.04	0.33	9.04	8.32

Table D1.2-PP-36. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2038.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.24	9.52	0.94	0.01	0.06	0.06
Top Picks	0.18	2.28	0.65	0.01	0.05	0.04
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Yard Locomotive - Switching	0.33	1.32	4.46	0.00	0.13	0.12
Subtotal	8.85	44.21	127.76	0.14	3.14	2.89
Berths 136-147/Inbound						
Hostler	0.09	3.57	0.35	0.01	0.02	0.02
Top Picks	0.07	0.85	0.24	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Subtotal	8.26	35.52	122.31	0.12	2.94	2.71
Carson or LA Railyards/Outbound						
Hostler	0.06	2.37	0.23	0.00	0.02	0.01
Top Picks	0.04	0.57	0.16	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	1.80	6.91	27.05	0.03	0.64	0.59
Line Haul Locomotive - Notch 1	0.13	0.51	2.01	0.00	0.05	0.04
Yard Locomotive - Switching	0.09	0.35	1.17	0.00	0.03	0.03
Subtotal	2.13	10.71	30.63	0.03	0.75	0.69
Carson or LA Railyards/Inbound						
Hostler	0.02	0.89	0.09	0.00	0.01	0.01
Top Picks	0.02	0.21	0.06	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.80	6.91	27.05	0.03	0.64	0.59
Line Haul Locomotive - Notch 1	0.07	0.26	1.00	0.00	0.02	0.02
Subtotal	1.91	8.27	28.21	0.03	0.68	0.62
Total Tons Per Year	21.15	98.70	308.91	0.33	7.51	6.91

Table D1.2-PP-37. Summary of Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project.

	Tons per Year					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Subtotal	23.85	61.59	321.42	24.79	12.44	11.45
Project Year 2015						
ICTF Equipment	1.95	15.93	26.93	0.03	1.10	1.01
Trains	21.68	59.47	302.58	0.22	7.98	7.34
Subtotal	23.64	75.40	329.51	0.25	9.07	8.35
Project Year 2025						
ICTF Equipment	0.85	20.26	6.95	0.04	0.24	0.22
Trains	24.03	78.44	349.09	0.29	8.80	8.09
Subtotal	24.88	98.70	356.04	0.33	9.04	8.32
Project Year 2038						
ICTF Equipment	0.73	20.26	2.72	0.04	0.19	0.18
Trains	20.42	78.44	306.19	0.29	7.32	6.73
Subtotal	21.15	98.70	308.91	0.33	7.51	6.91

Table D1.2-PP-38. Terminal Equipment Annual Emissions - Berths 136-147 Terminal Project - Proposed Project

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	12,837,231	11.23	49.38	118.97	0.06	5.53	5.09
Terminal Equipment - 176-250 Hp	15,391,012	9.67	27.15	120.01	0.07	4.91	4.52
Terminal Equipment - 250-500 Hp	2,957,161	1.31	4.56	20.15	0.01	0.71	0.66
Subtotal	31,185,404	22.21	81.10	259.13	0.15	11.15	10.26
Project Year 2015							
Terminal Equipment - 121-175 Hp	20,559,507	7.25	71.55	96.34	0.10	4.00	3.68
Terminal Equipment - 176-250 Hp	24,649,524	6.84	33.15	101.25	0.12	3.97	3.65
Terminal Equipment - 250-500 Hp	4,736,050	1.04	5.77	16.70	0.02	0.70	0.65
Subtotal	49,945,082	15.14	110.46	214.30	0.24	8.67	7.98
Project Year 2025							
Terminal Equipment - 121-175 Hp	34,539,516	3.70	116.92	35.18	0.17	1.07	0.98
Terminal Equipment - 176-250 Hp	41,410,653	4.37	51.35	26.67	0.20	1.23	1.13
Terminal Equipment - 250-500 Hp	7,956,460	0.70	8.76	4.69	0.04	0.24	0.22
Subtotal	83,906,628	8.77	177.03	66.55	0.41	2.53	2.33
Project Year 2038 (1)							
Terminal Equipment - 121-175 Hp	34,539,516	3.00	116.92	11.52	0.17	0.79	0.72
Terminal Equipment - 176-250 Hp	41,410,653	4.03	51.35	14.63	0.20	1.09	1.01
Terminal Equipment - 250-500 Hp	7,956,460	0.64	8.76	2.54	0.04	0.16	0.15
Subtotal	83,906,628	7.67	177.03	28.68	0.41	2.04	1.88

Note: (1) In year 2030 and beyond, Hp-Hrs increased an additional 19% to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

Table D1.2-PP-39. Annual Operational Emissions - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.77	252.47	36.03	33.76
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Terminal Equipment	22.21	81.10	259.13	0.15	11.15	10.26
On-road Trucks	167.13	567.68	1,512.50	1.15	105.03	70.33
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Railyard Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Commuting	1.90	25.50	3.33	0.02	2.78	2.56
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	246.75	813.41	2,932.29	601.64	201.85	160.60
Project Year 2015						
Ships - Fairway Transit (1)	19.24	42.50	515.19	299.89	43.76	41.00
Ships - Precautionary Area Transit (1)	4.49	8.38	75.10	43.48	6.78	6.35
Ships - Harbor Transit (1)	6.22	7.80	59.44	28.81	6.01	5.63
Ships - Docking (1)	2.17	2.11	16.52	6.96	1.78	1.67
Ships - Hoteling Aux. Sources	12.52	43.33	448.11	402.42	37.94	35.55
Tugboats - Cargo Vessel Assist (1)	0.47	2.46	13.18	0.01	0.57	0.53
Terminal Equipment	15.14	110.46	214.30	0.24	8.67	7.98
On-road Trucks	93.68	527.42	1,548.01	1.89	108.05	64.17
Trains	21.68	59.47	302.58	0.22	7.98	7.34
Railyard Equipment	1.95	15.93	26.93	0.03	1.10	1.01
Commuting	2.16	29.46	3.80	0.02	4.10	3.77
Pier A Railyard	0.41	1.58	5.53	0.00	0.16	0.14
Project Year 2015 Total	180.14	850.90	3,228.68	783.97	226.88	175.15
Project Year 2025						
Ships - Fairway Transit (1)	25.37	55.14	657.30	380.88	56.06	52.53
Ships - Precautionary Area Transit (1)	6.27	11.09	94.54	52.83	8.67	8.13
Ships - Harbor Transit (1)	8.32	10.37	79.46	37.85	8.03	7.52
Ships - Docking (1)	2.90	2.80	22.08	9.12	2.38	2.23
Ships - Hoteling Aux. Sources	17.25	58.71	617.88	541.72	52.17	48.88
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	12.20	0.01	0.53	0.50
Terminal Equipment	8.77	177.03	66.55	0.41	2.53	2.33
On-road Trucks	50.58	257.66	688.52	2.23	71.66	25.02
Trains	24.03	78.44	349.09	0.29	8.80	8.09
Railyard Equipment	0.85	20.26	6.95	0.04	0.24	0.22
Commuting	1.48	19.87	2.50	0.03	4.46	4.10
Pier A Railyard	0.40	1.58	5.45	0.00	0.15	0.14
Project Year 2025 Total	146.74	695.68	2,602.52	1,025.40	215.68	159.70
Project Year 2038						
Ships - Fairway Transit (1)	25.37	55.14	657.30	380.88	56.06	52.53
Ships - Precautionary Area Transit (1)	6.27	11.09	94.54	52.83	8.67	8.13
Ships - Harbor Transit (1)	8.32	10.37	79.46	37.85	8.03	7.52
Ships - Docking (1)	2.90	2.80	22.08	9.12	2.38	2.23
Ships - Hoteling Aux. Sources	17.25	58.71	617.88	541.72	52.17	48.88
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	10.95	0.01	0.48	0.45
Terminal Equipment	7.67	177.03	28.68	0.41	2.04	1.88
On-road Trucks	60.18	213.22	559.65	2.23	66.91	20.65
Trains	20.42	78.44	306.19	0.29	7.32	6.73
Railyard Equipment	0.73	20.26	2.72	0.04	0.19	0.18
Commuting	0.76	9.15	0.87	0.03	5.51	5.07
Pier A Railyard	0.40	1.58	5.39	0.00	0.15	0.14
Project Year 2038 Total	150.77	640.52	2,385.72	1,025.40	209.91	154.38

Note: (1) Includes auxiliary generator emissions.

Table D1.2-PP-40. Daily Operational Emissions - Berths 136-147 Terminal Project - Proposed Project - 365

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	80	185	2,355	1,383	197	185
Ships - Precautionary Area Transit (1)	15	31	312	194	27	26
Ships - Harbor Transit (1)	23	29	216	109	22	20
Ships - Docking (1)	8	8	60	26	6	6
Ships - Hoteling Aux. Sources	42	153	1,505	1,440	128	120
Tugboats - Cargo Vessel Assist (1)	2	13	79	0	3	3
Terminal Equipment	122	444	1,420	1	61	56
On-road Trucks	916	3,111	8,288	6	576	385
Trains	109	255	1,524	136	58	53
Railyard Equipment	21	82	237	0	11	10
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,352	4,457	16,067	3,297	1,106	880
Net Change from Existing Conditions	167	380	2,596	573	84	49
Net Change from NFAB Year 2007	253	982	1,931	100	148	132
Project Year 2015						
Ships - Fairway Transit (1)	105	233	2,823	1,643	240	225
Ships - Precautionary Area Transit (1)	25	46	411	238	37	35
Ships - Harbor Transit (1)	34	43	326	158	33	31
Ships - Docking (1)	12	12	91	38	10	9
Ships - Hoteling Aux. Sources	69	237	2,455	2,205	208	195
Tugboats - Cargo Vessel Assist (1)	3	13	72	0	3	3
Terminal Equipment	83	605	1,174	1	48	44
On-road Trucks	513	2,890	8,482	10	592	352
Trains	119	326	1,658	1	44	40
Railyard Equipment	11	87	148	0	6	6
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	987	4,662	17,691	4,296	1,243	960
Net Change from Existing Conditions	(198)	586	4,220	1,572	221	129
Net Change from NFAB Year 2015	559	2,631	12,293	3,390	855	765
Project Year 2025						
Ships - Fairway Transit (1)	139	302	3,602	2,087	307	288
Ships - Precautionary Area Transit (1)	34	61	518	289	48	45
Ships - Harbor Transit (1)	46	57	435	207	44	41
Ships - Docking (1)	16	15	121	50	13	12
Ships - Hoteling Aux. Sources	95	322	3,386	2,968	286	268
Tugboats - Cargo Vessel Assist (1)	3	15	67	0	3	3
Terminal Equipment	48	970	365	2	14	13
On-road Trucks	277	1,412	3,773	12	393	137
Trains	132	430	1,913	2	48	44
Railyard Equipment	5	111	38	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	804	3,812	14,260	5,619	1,182	875
Net Change from Existing Conditions	(381)	(265)	789	2,895	160	44
Net Change from NFAB Year 2025	424	1,700	8,971	4,689	823	685
Project Year 2038						
Ships - Fairway Transit (1)	139	302	3,602	2,087	307	288
Ships - Precautionary Area Transit (1)	34	61	518	289	48	45
Ships - Harbor Transit (1)	46	57	435	207	44	41
Ships - Docking (1)	16	15	121	50	13	12
Ships - Hoteling Aux. Sources	95	322	3,386	2,968	286	268
Tugboats - Cargo Vessel Assist (1)	3	15	60	0	3	2
Terminal Equipment	59	1,362	221	3	16	14
On-road Trucks	330	1,168	3,067	12	367	113
Trains	112	430	1,678	2	40	37
Railyard Equipment	4	111	15	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	843	3,901	13,136	5,620	1,155	850
Net Change from Existing Conditions	(342)	(175)	(336)	2,896	133	19
Net Change from NFAB Year 2038	470	1,624	8,032	4,689	798	662
SCAQMD Daily Significance Threshold	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2-NP-1. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alt 1 - No Project

Project Scenario/Ship Type	Annual Ship Visits	Annual Shifts	TEU Moves/ Ship Visit (1)	Hoteling Time/ Visit (Hours) (2)	Annual TEU Movements
Baseline - Year 2003					
Containerships 3,000 - 5,000 TEU	68		5,100	60.0	346,800
Containerships < 3,000 TEU	148	30	3,063	36.0	545,214
Subtotal	246				892,014
Project Year 2007					
Containerships 5,000 - 6,000 TEU	26		8,017	72.0	208,442
Containerships 3,000 - 5,000 TEU	80		5,100	60.0	408,000
Containerships < 3,000 TEU	155		3,063	36.0	474,765
Subtotal	261				1,091,207
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	55		8,017	72.0	440,935
Containerships 3,000 - 5,000 TEU	121		5,100	60.0	617,100
Containerships < 3,000 TEU	97		3,063	36.0	297,111
Subtotal	273				1,355,146
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	136		8,017	72.0	1,090,312
Containerships 3,000 - 5,000 TEU	92		5,100	60.0	469,200
Containerships < 3,000 TEU	45		3,063	36.0	137,835
Subtotal	273				1,697,347
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	136		8,017	72.0	1,090,312
Containerships 3,000 - 5,000 TEU	92		5,100	60.0	469,200
Containerships < 3,000 TEU	45		3,063	36.0	137,835
Subtotal	273				1,697,347

Notes: (1) Throughputs for vessels <3,000 and 3,000-5,000 TEUs based upon current and future expected operations at the Berths 136-147 terminal. Thrghput for 5,000-6,000 TEU vessels based upon average throughput of vessels >5000 TEUs at berths 121-131 in year 2001. Thrghput for 8,000-9,000 TEU vessels based upon an expected capacity of 8,800 TEUs (Samsung Heavy Industries 2003) * 1.43 (the ratio of throughput per ship visit/vessel capacity for vessels >5,000 TEUs that called at Berths 121-131 in 2001) = 12,584 TEUs/SV.

(2) Assume 4 cranes @ 25 lifts/hr *1.7 TEUs/box * 16 hr/day = 2720 TEUs transfered/day * 1.04 for non-cargo transfer be
However, by year 2038, cranes would operate for 21 hours/day = 3,060 TEUs transfered/day, except 3,825 TEUs lifted/day for the 8-9,000 TEU vessels.

Table D1.2-NP-2. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	5.01	11.60	148.54	85.95	12.33	11.55
Containership < 3,000 TEU	6.49	15.15	195.87	113.62	16.23	15.21
Subtotal	11.50	26.75	344.40	199.58	28.56	26.76
Project Year 2007						
Containerships 5,000 - 6,000 TEU	2.48	5.54	68.18	39.02	5.70	5.34
Containerships 3,000 - 5,000 TEU	5.42	12.45	157.50	90.86	13.10	12.27
Containerships < 3,000 TEU	6.22	14.52	187.73	108.90	15.56	14.58
Subtotal	14.13	32.51	413.41	238.79	34.36	32.19
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.85	10.51	124.26	70.30	10.48	9.82
Containerships 3,000 - 5,000 TEU	7.35	16.66	206.92	118.80	17.25	16.17
Containerships < 3,000 TEU	3.46	8.08	104.42	60.57	8.65	8.11
Subtotal	15.67	35.25	435.59	249.68	36.39	34.09
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	12.00	25.99	307.26	173.83	25.91	24.28
Containerships 3,000 - 5,000 TEU	5.59	12.67	157.33	90.33	13.12	12.29
Containerships < 3,000 TEU	1.61	3.75	48.44	28.10	4.01	3.76
Subtotal	19.20	42.41	513.02	292.26	43.05	40.33
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	12.00	25.99	307.26	173.83	25.91	24.28
Containerships 3,000 - 5,000 TEU	5.59	12.67	157.33	90.33	13.12	12.29
Containerships < 3,000 TEU	1.61	3.75	48.44	28.10	4.01	3.76
Subtotal	19.20	42.41	513.02	292.26	43.05	40.33

Table D1.2-NP-3. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.48	0.80	6.29	2.99	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.99	1.80	15.90	8.09	1.43	1.34
Containerships < 3,000 TEU	0.82	1.81	21.52	12.24	1.82	1.70
Subtotal	2.30	4.41	43.71	23.32	3.84	3.60
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.02	1.69	13.31	6.33	1.25	1.17
Containerships 3,000 - 5,000 TEU	1.50	2.73	24.05	12.24	2.17	2.03
Containerships < 3,000 TEU	0.51	1.13	13.46	7.66	1.14	1.07
Subtotal	3.04	5.55	50.83	26.23	4.55	4.27
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	2.53	4.17	32.92	15.65	3.09	2.89
Containerships 3,000 - 5,000 TEU	1.14	2.07	18.29	9.31	1.65	1.54
Containerships < 3,000 TEU	0.24	0.53	6.25	3.55	0.53	0.49
Subtotal	3.91	6.77	57.45	28.51	5.26	4.93
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	2.53	4.17	32.92	15.65	3.09	2.89
Containerships 3,000 - 5,000 TEU	1.14	2.07	18.29	9.31	1.65	1.54
Containerships < 3,000 TEU	0.24	0.53	6.25	3.55	0.53	0.49
Subtotal	3.91	6.77	57.45	28.51	5.26	4.93

Table D1.2-NP-4. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.68	0.68	3.85	0.92	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.44	1.42	8.11	1.94	0.96	0.90
Containerships < 3,000 TEU	1.46	1.45	8.23	1.97	0.97	0.91
Subtotal	3.59	3.55	20.19	4.83	2.39	2.24
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.45	1.43	8.15	1.95	0.97	0.90
Containerships 3,000 - 5,000 TEU	2.18	2.15	12.27	2.94	1.45	1.36
Containerships < 3,000 TEU	0.92	0.90	5.15	1.23	0.61	0.57
Subtotal	4.54	4.49	25.57	6.12	3.03	2.84
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.58	3.54	20.16	4.83	2.39	2.24
Containerships 3,000 - 5,000 TEU	1.66	1.64	9.33	2.23	1.10	1.03
Containerships < 3,000 TEU	0.42	0.42	2.39	0.57	0.28	0.27
Subtotal	5.66	5.60	31.87	7.63	3.77	3.54
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.58	3.54	20.16	4.83	2.39	2.24
Containerships 3,000 - 5,000 TEU	1.66	1.64	9.33	2.23	1.10	1.03
Containerships < 3,000 TEU	0.42	0.42	2.39	0.57	0.28	0.27
Subtotal	5.66	5.60	31.87	7.63	3.77	3.54

Table D1.2-NP-5. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.25	0.18	1.09	0.14	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.52	0.38	2.29	0.29	0.30	0.28
Containerships < 3,000 TEU	0.53	0.39	2.32	0.29	0.30	0.28
Subtotal	1.29	0.95	5.70	0.71	0.74	0.70
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.52	0.38	2.30	0.29	0.30	0.28
Containerships 3,000 - 5,000 TEU	0.78	0.58	3.46	0.43	0.45	0.42
Containerships < 3,000 TEU	0.33	0.24	1.45	0.18	0.19	0.18
Subtotal	1.63	1.21	7.22	0.90	0.94	0.88
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.29	0.95	5.69	0.71	0.74	0.70
Containerships 3,000 - 5,000 TEU	0.60	0.44	2.63	0.33	0.34	0.32
Containerships < 3,000 TEU	0.15	0.11	0.67	0.08	0.09	0.08
Subtotal	2.04	1.50	9.00	1.13	1.17	1.10
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.29	0.95	5.69	0.71	0.74	0.70
Containerships 3,000 - 5,000 TEU	0.60	0.44	2.63	0.33	0.34	0.32
Containerships < 3,000 TEU	0.15	0.11	0.67	0.08	0.09	0.08
Subtotal	2.04	1.50	9.00	1.13	1.17	1.10

Table D1.2-NP-6. Annual Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.28	0.28	1.59	0.38	0.19	0.18
Docking	0.10	0.08	0.45	0.06	0.06	0.05
Subtotal	0.38	0.35	2.04	0.44	0.25	0.23

Table D1.2-NP-7. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.13	0.37	4.92	4.12	0.50	0.47
Containership < 3,000 TEU	0.17	0.47	6.31	5.28	0.64	0.60
Subtotal	0.31	0.84	11.23	9.39	1.15	1.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.08	0.22	2.99	2.50	0.30	0.29
Containerships 3,000 - 5,000 TEU	0.17	0.47	6.32	5.29	0.64	0.60
Containerships < 3,000 TEU	0.19	0.53	7.05	5.90	0.72	0.67
Subtotal	0.44	1.22	16.35	13.68	1.67	1.56
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.19	0.53	7.06	5.91	0.72	0.68
Containerships 3,000 - 5,000 TEU	0.29	0.79	10.52	8.81	1.07	1.01
Containerships < 3,000 TEU	0.13	0.35	4.74	3.97	0.48	0.45
Subtotal	0.61	1.67	22.33	18.68	2.28	2.13
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.48	1.31	17.46	14.61	1.78	1.67
Containerships 3,000 - 5,000 TEU	0.22	0.60	8.00	6.70	0.82	0.77
Containerships < 3,000 TEU	0.06	0.16	2.20	1.84	0.22	0.21
Subtotal	0.75	2.07	27.66	23.15	2.82	2.64
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.48	1.31	17.46	14.61	1.78	1.67
Containerships 3,000 - 5,000 TEU	0.22	0.60	8.00	6.70	0.82	0.77
Containerships < 3,000 TEU	0.06	0.16	2.20	1.84	0.22	0.21
Subtotal	0.75	2.07	27.66	23.15	2.82	2.64

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-NP-8. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.07	0.19	2.43	1.56	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.14	0.37	4.89	3.13	0.40	0.38
Containerships < 3,000 TEU	0.14	0.38	5.03	3.22	0.41	0.39
Subtotal	0.34	0.94	12.35	7.91	1.01	0.95
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.14	0.39	5.14	3.29	0.42	0.39
Containerships 3,000 - 5,000 TEU	0.21	0.56	7.40	4.74	0.61	0.57
Containerships < 3,000 TEU	0.09	0.24	3.15	2.01	0.26	0.24
Subtotal	0.43	1.20	15.69	10.05	1.28	1.20
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.35	0.97	12.71	8.14	1.04	0.97
Containerships 3,000 - 5,000 TEU	0.16	0.43	5.63	3.60	0.46	0.43
Containerships < 3,000 TEU	0.04	0.11	1.46	0.93	0.12	0.11
Subtotal	0.55	1.51	19.80	12.68	1.62	1.52
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.35	0.97	12.71	8.14	1.04	0.97
Containerships 3,000 - 5,000 TEU	0.16	0.43	5.63	3.60	0.46	0.43
Containerships < 3,000 TEU	0.04	0.11	1.46	0.93	0.12	0.11
Subtotal	0.55	1.51	19.80	12.68	1.62	1.52

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-NP-9. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	0.29	3.86	2.47	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.20	0.56	7.35	4.70	0.60	0.56
Containerships < 3,000 TEU	0.20	0.55	7.23	4.63	0.59	0.55
Subtotal	0.51	1.40	18.43	11.80	1.51	1.41
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.23	0.62	8.16	5.22	0.67	0.63
Containerships 3,000 - 5,000 TEU	0.31	0.85	11.11	7.11	0.91	0.85
Containerships < 3,000 TEU	0.13	0.34	4.52	2.90	0.37	0.35
Subtotal	0.66	1.81	23.79	15.23	1.95	1.82
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.56	1.54	20.17	12.91	1.65	1.55
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.45	5.41	0.69	0.65
Containerships < 3,000 TEU	0.06	0.16	2.10	1.34	0.17	0.16
Subtotal	0.85	2.34	30.71	19.66	2.51	2.35
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.56	1.54	20.17	12.91	1.65	1.55
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.45	5.41	0.69	0.65
Containerships < 3,000 TEU	0.06	0.16	2.10	1.34	0.17	0.16
Subtotal	0.85	2.34	30.71	19.66	2.51	2.35

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-NP-10. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.05	0.67	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.06	0.15	2.01	1.29	0.16	0.15
Containerships < 3,000 TEU	0.05	0.15	1.98	1.26	0.16	0.15
Subtotal	0.14	0.38	5.04	3.23	0.41	0.39
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.06	0.17	2.23	1.43	0.18	0.17
Containerships 3,000 - 5,000 TEU	0.08	0.23	3.04	1.94	0.25	0.23
Containerships < 3,000 TEU	0.03	0.09	1.24	0.79	0.10	0.09
Subtotal	0.18	0.50	6.50	4.16	0.53	0.50
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.15	0.42	5.51	3.53	0.45	0.42
Containerships 3,000 - 5,000 TEU	0.06	0.18	2.31	1.48	0.19	0.18
Containerships < 3,000 TEU	0.02	0.04	0.57	0.37	0.05	0.04
Subtotal	0.23	0.64	8.39	5.37	0.69	0.64
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.15	0.42	5.51	3.53	0.45	0.42
Containerships 3,000 - 5,000 TEU	0.06	0.18	2.31	1.48	0.19	0.18
Containerships < 3,000 TEU	0.02	0.04	0.57	0.37	0.05	0.04
Subtotal	0.23	0.64	8.39	5.37	0.69	0.64

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-NP-11. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.57	4.32	56.62	36.26	4.63	4.34
Containerships 3,000 - 5,000 TEU	3.20	8.81	115.54	73.98	9.46	8.86
Containerships < 3,000 TEU	2.20	6.04	79.27	50.75	6.49	6.08
Subtotal	6.97	19.17	251.43	160.99	20.58	19.28
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.32	9.13	119.78	76.70	9.80	9.19
Containerships 3,000 - 5,000 TEU	4.84	13.32	174.75	111.89	14.30	13.40
Containerships < 3,000 TEU	1.38	3.78	49.61	31.76	4.06	3.80
Subtotal	9.54	26.24	344.14	220.35	28.16	26.39
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	8.21	22.58	296.19	189.65	24.24	22.71
Containerships 3,000 - 5,000 TEU	3.68	10.13	132.87	85.07	10.87	10.19
Containerships < 3,000 TEU	0.64	1.75	23.01	14.73	1.88	1.76
Subtotal	12.53	34.47	452.07	289.46	37.00	34.67
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	8.21	22.58	296.19	189.65	24.24	22.71
Containerships 3,000 - 5,000 TEU	3.68	10.13	132.87	85.07	10.87	10.19
Containerships < 3,000 TEU	0.64	1.75	23.01	14.73	1.88	1.76
Subtotal	12.53	34.47	452.07	289.46	37.00	34.67

Table D1.2-NP-12. Annual Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.02	0.05	0.70	0.45	0.06	0.05
Docking	0.01	0.01	0.19	0.12	0.02	0.01
Subtotal	0.02	0.07	0.89	0.57	0.07	0.07

Table D1.2-NP-13. Annual Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership < 3,000 TEU	0.43	1.17	15.34	9.82	1.26	1.18
Subtotal	0.43	1.17	15.34	9.82	1.26	1.18

Table D1.2-NP-14. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-NP-15. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.41	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.29	1.26	0.04	0.03
Containerships < 3,000 TEU	0.02	0.21	0.56	2.44	0.07	0.06
Subtotal	0.03	0.35	0.93	4.10	0.11	0.11
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.07	0.20	0.86	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.16	0.43	1.90	0.05	0.05
Containerships < 3,000 TEU	0.01	0.13	0.35	1.53	0.04	0.04
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.18	0.49	2.14	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.45	0.04	0.04
Containerships < 3,000 TEU	0.00	0.06	0.16	0.71	0.02	0.02
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.18	0.49	2.14	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.45	0.04	0.04
Containerships < 3,000 TEU	0.00	0.06	0.16	0.71	0.02	0.02
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11

Table D1.2-NP-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.07	0.32	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.23	1.00	0.03	0.03
Containerships < 3,000 TEU	0.01	0.16	0.44	1.93	0.05	0.05
Subtotal	0.02	0.28	0.74	3.26	0.09	0.09
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.06	0.16	0.69	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.13	0.34	1.51	0.04	0.04
Containerships < 3,000 TEU	0.01	0.10	0.28	1.21	0.03	0.03
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.14	0.39	1.70	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.15	0.03	0.03
Containerships < 3,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.14	0.39	1.70	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.15	0.03	0.03
Containerships < 3,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09

Table D1.2-NP-17. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.12	0.53	0.01	0.01
Subtotal	0.01	0.08	0.20	0.89	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.04	0.09	0.41	0.01	0.01
Containerships < 3,000 TEU	0.00	0.03	0.08	0.33	0.01	0.01
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.04	0.11	0.46	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.03	0.15	0.00	0.00
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.04	0.11	0.46	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.03	0.15	0.00	0.00
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02

Table D1.2-NP-18. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	1.33	3.55	15.57	0.44	0.41
Containerships 3,000 - 5,000 TEU	0.28	3.40	9.09	39.92	1.12	1.05
Containerships < 3,000 TEU	0.33	3.95	10.57	46.40	1.30	1.22
Subtotal	0.72	8.68	23.21	101.89	2.85	2.67
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.23	2.81	7.50	32.93	0.92	0.86
Containerships 3,000 - 5,000 TEU	0.42	5.14	13.75	60.37	1.69	1.58
Containerships < 3,000 TEU	0.20	2.47	6.61	29.04	0.81	0.76
Subtotal	0.86	10.42	27.87	122.34	3.42	3.21
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	6.94	18.55	81.43	2.28	2.14
Containerships 3,000 - 5,000 TEU	0.32	3.91	10.46	45.90	1.29	1.20
Containerships < 3,000 TEU	0.09	1.15	3.07	13.47	0.38	0.35
Subtotal	0.99	11.99	32.07	140.81	3.94	3.69
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	6.94	18.55	81.43	2.28	2.14
Containerships 3,000 - 5,000 TEU	0.32	3.91	10.46	45.90	1.29	1.20
Containerships < 3,000 TEU	0.09	1.15	3.07	13.47	0.38	0.35
Subtotal	0.99	11.99	32.07	140.81	3.94	3.69

Table D1.2-NP-19. Annual Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.00	0.03	0.09	0.37	0.01	0.01
Docking	0.00	0.01	0.02	0.10	0.00	0.00
Hoteling	0.06	0.77	2.05	8.98	0.25	0.24
Subtotal	0.07	0.81	2.15	9.46	0.26	0.25

Table D1.2-NP-20. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.41	2.11	13.23	0.01	0.54	0.51
Project Year 2015						
Subtotal	0.42	2.20	11.82	0.01	0.51	0.47
Project Year 2025						
Subtotal	0.42	2.20	9.80	0.01	0.43	0.40
Project Year 2038						
Subtotal	0.41	2.20	8.80	0.01	0.39	0.36

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-NP-21. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.03	0.19	1.11	0.00	0.05	0.05
Project Year 2015						
Subtotal (1)	0.03	0.20	1.07	0.00	0.05	0.05
Project Year 2025						
Subtotal (1)	0.03	0.20	0.90	0.00	0.04	0.04
Project Year 2038						
Subtotal (1)	0.03	0.20	0.82	0.00	0.03	0.03

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-NP-22. Annual Vessel Emissions - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.68	465.24	55.81	52.30
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.77	252.47	36.03	33.76
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Subtotal	30.93	76.23	826.04	575.41	70.19	65.76
Project Year 2015						
Ships - Fairway Transit (1)	16.28	36.92	457.92	268.36	38.67	36.23
Ships - Precautionary Area Transit (1)	3.50	7.11	67.50	40.57	5.96	5.58
Ships - Harbor Transit (1)	5.23	6.59	50.13	24.76	5.07	4.75
Ships - Docking (1)	1.82	1.78	13.93	6.00	1.50	1.41
Ships - Hoteling Aux. Sources	10.40	36.66	372.01	342.69	31.59	29.60
Tugboats - Cargo Vessel Assist (1)	0.46	2.40	12.90	0.01	0.55	0.52
Subtotal	37.69	91.47	974.38	682.38	83.34	78.09
Project Year 2025						
Ships - Fairway Transit (1)	19.95	44.48	540.69	315.41	45.87	42.98
Ships - Precautionary Area Transit (1)	4.49	8.65	78.23	45.48	7.00	6.56
Ships - Harbor Transit (1)	6.54	8.23	63.36	30.70	6.38	5.98
Ships - Docking (1)	2.28	2.22	17.60	7.43	1.89	1.77
Ships - Hoteling Aux. Sources	13.52	46.46	484.14	430.26	40.94	38.36
Tugboats - Cargo Vessel Assist (1)	0.45	2.40	10.71	0.01	0.47	0.44
Subtotal	47.23	112.44	1,194.73	829.29	102.55	96.09
Project Year 2038						
Ships - Fairway Transit (1)	19.95	44.48	540.69	315.41	45.87	42.98
Ships - Precautionary Area Transit (1)	4.49	8.65	78.23	45.48	7.00	6.56
Ships - Harbor Transit (1)	6.54	8.23	63.36	30.70	6.38	5.98
Ships - Docking (1)	2.28	2.22	17.60	7.43	1.89	1.77
Ships - Hoteling Aux. Sources	13.52	46.46	484.14	430.26	40.94	38.36
Tugboats - Cargo Vessel Assist (1)	0.44	2.40	9.62	0.01	0.42	0.40
Subtotal	47.23	112.44	1,193.64	829.29	102.50	96.04

Note: (1) Includes auxiliary power emissions.

Table D1.2-NP-23. Daily Vessel Emissions - Berths 136-147 Terminal Project - Alt 1 - No Project.

	Pounds Per Day					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	6.3	6.2	47.1	21.0	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,593	2,549	306	287
Project Year 2007						
Ships - Fairway Transit (1)	79.8	184.9	2,354.9	1,383.4	197.4	185.0
Ships - Precautionary Area Transit (1)	14.6	31.2	312.3	193.6	27.2	25.5
Ships - Harbor Transit (1)	22.6	28.6	215.7	109.0	21.9	20.5
Ships - Docking (1)	7.9	7.7	59.9	26.5	6.5	6.1
Ships - Hoteling Aux. Sources	42.1	152.6	1,504.9	1,440.4	128.4	120.3
Tugboats - Cargo Vessel Assist (1)	2.4	12.6	78.6	0.0	3.2	3.0
Subtotal	169	418	4,526	3,153	385	360
Project Year 2015						
Ships - Fairway Transit (1)	89.2	202.3	2,509.2	1,470.5	211.9	198.5
Ships - Precautionary Area Transit (1)	19.2	39.0	369.8	222.3	32.6	30.6
Ships - Harbor Transit (1)	28.6	36.1	274.7	135.7	27.8	26.0
Ships - Docking (1)	10.0	9.8	76.3	32.9	8.2	7.7
Ships - Hoteling Aux. Sources	57.0	200.9	2,038.4	1,877.8	173.1	162.2
Tugboats - Cargo Vessel Assist (1)	2.5	13.2	70.7	0.0	3.0	2.8
Subtotal	207	501	5,339	3,739	457	428
Project Year 2025						
Ships - Fairway Transit (1)	109.3	243.7	2,962.7	1,728.3	251.3	235.5
Ships - Precautionary Area Transit (1)	24.6	47.4	428.6	249.2	38.4	36.0
Ships - Harbor Transit (1)	35.8	45.1	347.2	168.2	35.0	32.8
Ships - Docking (1)	12.5	12.2	96.5	40.7	10.3	9.7
Ships - Hoteling Aux. Sources	74.1	254.6	2,652.8	2,357.6	224.3	210.2
Tugboats - Cargo Vessel Assist (1)	2.5	13.2	58.7	0.0	2.6	2.4
Subtotal	259	616	6,546	4,544	562	526
Project Year 2038						
Ships - Fairway Transit (1)	109.3	243.7	2,962.7	1,728.3	251.3	235.5
Ships - Precautionary Area Transit (1)	24.6	47.4	428.6	249.2	38.4	36.0
Ships - Harbor Transit (1)	35.8	45.1	347.2	168.2	35.0	32.8
Ships - Docking (1)	12.5	12.2	96.5	40.7	10.3	9.7
Ships - Hoteling Aux. Sources	74.1	254.6	2,652.8	2,357.6	224.3	210.2
Tugboats - Cargo Vessel Assist (1)	2.4	13.2	52.7	0.0	2.3	2.2
Subtotal	259	616	6,540	4,544	562	526

Note: (1) Includes auxiliary power emissions.

Table D1.2-NP-24. On-Road Truck Trip Vehicle Miles Travelled - Berths 136-147 Terminal Project - Alt 1 - No Project.

Year	B136-149 Throughput (TEUs)	B136-149 ICTF Thruput (TEUs) (1)	TEUs to Offsite Railyard (2)	TEUs to Local Deilveries	Truck Trips to Offsite Railyard (2)	Local Truck Trips	Truck Miles to Offsite Railyard (3)	Local Truck Trip Miles (4)	Composite VMT/ Truck Trip
Baseline - Year 2003	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2007	1,091,200	-	545,600	545,600	756,532	756,532	9.6	55.0	32.3
Year 2015	1,355,200	-	677,600	677,600	939,564	939,564	9.6	55.0	32.3
Year 2025	1,697,000	-	848,500	848,500	980,698	980,698	9.6	55.0	32.3
Year 2038	1,697,000	-	848,500	848,500	980,698	980,698	9.6	55.0	32.3

(1) Annual throughput estimates from Rail Master Plan.

(2) = 50% of Berths 136-147 annual cargo throughput for all years.

(3) Assumes that 66% of cargo goes to Carson ICTF (4.5 miles) and 37% to LA railyards (18 miles) = 9.6 miles/trip

(5) Average of local/external-SCAB trip lengths (20/90) that originate from/are destined to the POLA.

Table D1.2-NP-25. ADT Estimates - Berths 136-147 Alt 1 - No Project

Alternative/Project Year	Truck Trips		
	Annual	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,513,063	4,145	5,675
2015	1,879,127	5,148	7,048
2025	1,961,395	5,374	7,357
2038	1,961,395	5,374	7,357

(1) = annual trips/ 266.6 days.

Table D1.2-NP-26. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Alt 1 - No Project.

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	ADT	Idling Hrs/ Day	Miles/ Day
On-Terminal					
Year 2003 - Baseline	0.56	1.02	3,281	1,837	3,351
Year 2007	0.25	1.02	4,145	1,036	4,233
Year 2015	0.25	0.81	5,148	1,287	4,147
Year 2025	0.25	0.81	5,374	1,343	4,329
Year 2038	0.25	0.81	5,374	1,343	4,329
Off-Terminal					
Year 2003 - Baseline	0.30	32.3	3,281	984	106,028
Year 2007	0.30	32.3	4,145	1,244	133,958
Year 2015	0.30	32.3	5,148	1,544	166,367
Year 2025	0.30	32.3	5,374	1,612	173,651
Year 2038	0.30	32.3	5,374	1,612	173,651

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2-NP-34.

Table D1.2-NP-27. Daily Truck Emissions for the Berths 136-147 Terminal Project - Alt 1 - No Project.

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	31.9	116.1	242.2	0.1	5.1	4.7
Year 2007 - Driving	95.7	200.4	361.7	0.3	29.1	26.7
Subtotal - Year 2007	127.6	316.5	603.8	0.4	34.2	31.4
Year 2015 - Idling	25.6	123.9	339.9	0.2	2.9	2.7
Year 2015 - Driving	52.2	108.7	240.5	0.3	10.7	9.8
Subtotal - Year 2015	77.8	232.6	580.4	0.5	13.6	12.5
Year 2025 - Idling	23.0	123.2	365.1	0.2	0.7	0.6
Year 2025 - Driving	19.2	41.6	85.3	0.3	1.6	1.5
Subtotal - Year 2025	42.2	164.8	450.4	0.5	2.3	2.1
Year 2038 - Idling	22.7	122.7	365.9	0.2	0.3	0.3
Year 2038 - Driving	15.1	32.9	65.5	0.3	1.0	0.9
Subtotal - Year 2038	37.7	155.6	431.4	0.5	1.3	1.2
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	38.3	139.3	290.6	0.2	6.1	5.6
Year 2007 - Driving	749.9	2,654.8	7,393.2	5.7	338.1	311.1
Subtotal - Year 2007	788.2	2,794.1	7,683.8	5.9	344.2	316.7
Year 2015 - Idling	30.7	148.6	407.8	0.2	3.5	3.2
Year 2015 - Driving	312.6	1,905.6	5,676.1	7.3	231.7	213.1
Subtotal - Year 2015	343.3	2,054.3	6,084.0	7.5	235.2	216.4
Year 2025 - Idling	27.6	147.8	438.1	0.2	0.8	0.7
Year 2025 - Driving	140.9	745.0	1,956.9	7.7	54.4	50.1
Subtotal - Year 2025	168.5	892.9	2,395.0	8.0	55.2	50.8
Year 2038 - Idling	27.2	147.3	439.1	0.2	0.4	0.4
Year 2038 - Driving	179.2	588.2	1,495.4	7.7	37.8	34.8
Subtotal - Year 2038	206.4	735.5	1,934.5	8.0	38.2	35.2
Total Daily Truck Emissions by Project Year						
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	915.8	3,110.6	8,287.7	6.3	378.4	348.1
Year 2015	421.1	2,286.9	6,664.4	7.9	248.8	228.9
Year 2025	210.6	1,057.7	2,845.3	8.4	57.5	52.9
Year 2038	244.1	891.1	2,365.8	8.4	39.6	36.4

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2-NP-28. Road Dust Emissions for the Berths 136-147 Project - Alt 1 - No Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.13	10.16
Year 2007	75.97	12.84
Year 2015	74.43	12.58
Year 2025	77.69	13.13
Year 2038	77.69	13.13
Off-Terminal		
Year 2003 - Baseline	83.85	14.17
Year 2007	105.94	17.90
Year 2015	131.58	22.24
Year 2025	137.34	23.21
Year 2038	137.34	23.21
Combined On/Off-Terminal		
Year 2003 - Baseline	143.98	24.33
Year 2007	181.91	30.74
Year 2015	206.00	34.81
Year 2025	215.02	36.34
Year 2038	215.02	36.34

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2-NP-29. Brake and Tire Wear Emissions for the Berths Terminal Project - Alt 1 - No Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.37	0.16
Year 2007	0.47	0.20
Year 2015	0.46	0.20
Year 2025	0.48	0.20
Year 2038	0.48	0.20
Off-Terminal		
Year 2003 - Baseline	11.69	5.01
Year 2007	14.77	6.33
Year 2015	18.34	7.87
Year 2025	19.14	8.21
Year 2038	19.14	8.21
Combined On/Off-Terminal		
Year 2003 - Baseline	12.06	5.17
Year 2007	15.23	6.53
Year 2015	18.80	8.06
Year 2025	19.62	8.42
Year 2038	19.62	8.42

Table D1.2-NP-30. Total Non-Combustive Truck Generated PM E
for the Berths 136-147 Terminal Project - Alt 1 - No Proje

	Daily Emissions (Pounds)	
Activity	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.50	10.32
Year 2007	76.43	13.04
Year 2015	74.88	12.77
Year 2025	78.16	13.33
Year 2038	78.16	13.33
Off-Terminal		
Year 2003 - Baseline	95.54	19.19
Year 2007	120.71	24.24
Year 2015	149.91	30.10
Year 2025	156.48	31.42
Year 2038	156.48	31.42
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	197	37
Year 2015	225	43
Year 2025	235	45
Year 2038	235	45

Table D1.2-NP-31. Train Trip Generation Rates - Berths 136-147
Terminal Project - Alt 1 - No Project

Project Scenario/Rail Yard	Annual Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	894
Year 2015	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	1,110
Year 2025	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	1,390
Year 2038	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	1,390

Table D1.2-NP-32. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project Alt 1 - No Project Year 2007.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.92	8.42	20.29	0.01	0.94	0.87
Top Picks	0.90	2.52	11.15	0.01	0.46	0.42
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.68	1.61	9.54	0.87	0.36	0.33
Yard Locomotive - Switching	0.50	0.89	6.80	0.04	0.17	0.16
Subtotal	13.22	35.06	176.32	12.64	6.84	6.29
Carson or LA Railyards/Inbound						
Hostler	0.72	3.16	7.61	0.00	0.35	0.33
Top Picks	0.34	0.95	4.18	0.00	0.17	0.16
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.34	0.80	4.77	0.43	0.18	0.17
Subtotal	10.62	26.53	145.10	12.15	5.60	5.16
Total Tons Per Year	23.85	61.59	321.42	24.79	12.44	11.45

Table D1.2-NP-33. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project Alt 1 - No Project Year 2015.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.96	9.46	12.74	0.01	0.53	0.49
Top Picks	0.49	2.39	7.29	0.01	0.29	0.26
Line Haul Locomotive - Road Haul	9.86	26.85	137.61	0.10	3.62	3.33
Line Haul Locomotive - Notch 1	0.73	1.99	10.22	0.01	0.27	0.25
Yard Locomotive - Switching	0.34	1.34	4.54	0.00	0.13	0.12
Subtotal	12.38	42.04	172.40	0.13	4.84	4.45
Carson or LA Railyards/Inbound						
Hostler	0.36	3.55	4.78	0.00	0.20	0.18
Top Picks	0.18	0.90	2.74	0.00	0.11	0.10
Line Haul Locomotive - Road Haul	9.86	26.85	137.61	0.10	3.62	3.33
Line Haul Locomotive - Notch 1	0.37	1.00	5.11	0.00	0.13	0.12
Subtotal	10.77	32.29	150.23	0.11	4.06	3.74
Total Tons Per Year	23.14	74.33	322.63	0.24	8.90	8.19

Table D1.2-NP-34. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project Alt 1 - No Project Year 2025.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.36	11.53	3.47	0.02	0.11	0.10
Top Picks	0.23	2.76	1.43	0.01	0.07	0.06
Line Haul Locomotive - Road Haul	10.34	33.62	150.41	0.12	3.78	3.48
Line Haul Locomotive - Notch 1	0.77	2.50	11.17	0.01	0.28	0.26
Yard Locomotive - Switching	0.42	1.68	5.68	0.00	0.16	0.15
Subtotal	12.13	52.09	172.17	0.16	4.40	4.04
Carson or LA Railyards/Inbound						
Hostler	0.14	4.32	1.30	0.01	0.04	0.04
Top Picks	0.09	1.03	0.54	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	10.34	33.62	150.41	0.12	3.78	3.48
Line Haul Locomotive - Notch 1	0.38	1.25	5.58	0.00	0.14	0.13
Subtotal	10.95	40.23	157.84	0.14	3.99	3.67
Total Tons Per Year	23.08	92.31	330.00	0.30	8.38	7.71

Table D1.2-NP-35. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project Alt 1 - No Project Year 2038.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.30	11.53	1.14	0.02	0.08	0.07
Top Picks	0.22	2.76	0.79	0.01	0.06	0.05
Line Haul Locomotive - Road Haul	8.76	33.62	131.63	0.12	3.13	2.88
Line Haul Locomotive - Notch 1	0.65	2.50	9.77	0.01	0.23	0.21
Yard Locomotive - Switching	0.42	1.68	5.68	0.00	0.16	0.15
Subtotal	10.34	52.09	149.00	0.16	3.66	3.37
Carson or LA Railyards/Inbound						
Hostler	0.11	4.32	0.43	0.01	0.03	0.03
Top Picks	0.08	1.03	0.29	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	8.76	33.62	131.63	0.12	3.13	2.88
Line Haul Locomotive - Notch 1	0.33	1.25	4.89	0.00	0.12	0.11
Subtotal	9.28	40.23	137.23	0.14	3.30	3.04
Total Tons Per Year	19.62	92.31	286.24	0.30	6.97	6.41

Table D1.2-NP-36. Summary of Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project Alt 1 - No Project.

	Tons per Year					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Subtotal	23.85	61.59	321.42	24.79	12.44	11.45
Project Year 2015						
ICTF Equipment	2.00	16.30	27.55	0.03	1.12	1.03
Trains	21.15	58.04	295.08	0.21	7.78	7.16
Subtotal	23.14	74.33	322.63	0.24	8.90	8.19
Project Year 2025						
ICTF Equipment	0.82	19.64	6.74	0.04	0.24	0.22
Trains	22.26	72.67	323.27	0.27	8.15	7.50
Subtotal	23.08	92.31	330.00	0.30	8.38	7.71
Project Year 2038						
ICTF Equipment	0.70	19.64	2.64	0.04	0.19	0.17
Trains	18.92	72.67	283.60	0.27	6.78	6.24
Subtotal	19.62	92.31	286.24	0.30	6.97	6.41

Table D1.2-NP-37. Terminal Equipment Annual Emissions - Berths 136-147 Terminal Project Alt 1 - No Project.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	12,837,231	11.23	49.38	118.97	0.06	5.53	5.09
Terminal Equipment - 176-250 Hp	15,391,012	9.67	27.15	120.01	0.07	4.91	4.52
Terminal Equipment - 250-500 Hp	2,957,161	1.31	4.56	20.15	0.01	0.71	0.66
Subtotal	31,185,404	22.21	81.10	259.13	0.15	11.15	10.26
Project Year 2015							
Terminal Equipment - 121-175 Hp	15,942,275	5.62	55.48	74.71	0.08	3.10	2.85
Terminal Equipment - 176-250 Hp	19,113,760	5.31	25.70	78.51	0.09	3.08	2.83
Terminal Equipment - 250-500 Hp	3,672,433	0.81	4.47	12.95	0.02	0.55	0.50
Subtotal	38,728,468	11.74	85.66	166.17	0.19	6.72	6.19
Project Year 2025							
Terminal Equipment - 121-175 Hp	24,066,561	2.58	81.47	24.52	0.12	0.74	0.68
Terminal Equipment - 176-250 Hp	28,854,255	3.04	35.78	18.58	0.14	0.86	0.79
Terminal Equipment - 250-500 Hp	5,543,929	0.49	6.11	3.27	0.03	0.17	0.15
Subtotal	58,464,745	6.11	123.35	46.37	0.28	1.77	1.62
Project Year 2038 (1)							
Terminal Equipment - 121-175 Hp	24,066,561	2.09	81.47	8.02	0.12	0.55	0.50
Terminal Equipment - 176-250 Hp	28,854,255	2.81	35.78	10.19	0.14	0.76	0.70
Terminal Equipment - 250-500 Hp	5,543,929	0.45	6.11	1.77	0.03	0.11	0.10
Subtotal	58,464,745	5.35	123.35	19.99	0.28	1.42	1.31

Note: (1) Hp-Hr usage increased by 21% in year 2030 and beyond to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

Table D1.2-NP-38. Annual Operational Emissions - Berths 136-147 Terminal Project Alt 1 - No Project.

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.77	252.47	36.03	33.76
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Terminal Equipment	22.21	81.10	259.13	0.15	11.15	10.26
On-road Trucks	167.13	567.68	1,512.50	1.15	105.03	70.33
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Railyard Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Commuting	1.64	22.05	2.88	0.02	2.40	2.21
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	246.49	809.96	2,931.84	601.64	201.48	160.25
Project Year 2015						
Ships - Fairway Transit (1)	16.28	36.92	457.92	268.36	38.67	36.23
Ships - Precautionary Area Transit (1)	3.50	7.11	67.50	40.57	5.96	5.58
Ships - Harbor Transit (1)	5.23	6.59	50.13	24.76	5.07	4.75
Ships - Docking (1)	1.82	1.78	13.93	6.00	1.50	1.41
Ships - Hoteling Aux. Sources	10.40	36.66	372.01	342.69	31.59	29.60
Tugboats - Cargo Vessel Assist (1)	0.46	2.40	12.90	0.01	0.55	0.52
Terminal Equipment	11.74	85.66	166.17	0.19	6.72	6.19
On-road Trucks	76.84	417.35	1,216.25	1.45	86.42	49.59
Trains	21.15	58.04	295.08	0.21	7.78	7.16
Railyard Equipment	2.00	16.30	27.55	0.03	1.12	1.03
Commuting	1.46	19.89	2.57	0.01	2.77	2.55
Pier A Railyard	0.41	1.58	5.53	0.00	0.16	0.14
Project Year 2015 Total	151.28	690.27	2,687.53	684.28	188.31	144.74
Project Year 2025						
Ships - Fairway Transit (1)	19.95	44.48	540.69	315.41	45.87	42.98
Ships - Precautionary Area Transit (1)	4.49	8.65	78.23	45.48	7.00	6.56
Ships - Harbor Transit (1)	6.54	8.23	63.36	30.70	6.38	5.98
Ships - Docking (1)	2.28	2.22	17.60	7.43	1.89	1.77
Ships - Hoteling Aux. Sources	13.52	46.46	484.14	430.26	40.94	38.36
Tugboats - Cargo Vessel Assist (1)	0.45	2.40	10.71	0.01	0.47	0.44
Terminal Equipment	6.11	123.35	46.37	0.28	1.77	1.62
On-road Trucks	38.44	193.03	519.27	1.54	53.31	17.82
Trains	22.26	72.67	323.27	0.27	8.15	7.50
Railyard Equipment	0.82	19.64	6.74	0.04	0.24	0.22
Commuting	1.14	15.34	1.93	0.02	3.44	3.17
Pier A Railyard	0.40	1.58	5.45	0.00	0.15	0.14
Project Year 2025 Total	116.40	538.05	2,097.76	831.44	169.60	126.55
Project Year 2038						
Ships - Fairway Transit (1)	19.95	44.48	540.69	315.41	45.87	42.98
Ships - Precautionary Area Transit (1)	4.49	8.65	78.23	45.48	7.00	6.56
Ships - Harbor Transit (1)	6.54	8.23	63.36	30.70	6.38	5.98
Ships - Docking (1)	2.28	2.22	17.60	7.43	1.89	1.77
Ships - Hoteling Aux. Sources	13.52	46.46	484.14	430.26	40.94	38.36
Tugboats - Cargo Vessel Assist (1)	0.44	2.40	9.62	0.01	0.42	0.40
Terminal Equipment	5.35	123.35	19.99	0.28	1.42	1.31
On-road Trucks	44.56	162.62	431.76	1.54	50.04	14.81
Trains	18.92	72.67	283.60	0.27	6.78	6.24
Railyard Equipment	0.70	19.64	2.64	0.04	0.19	0.17
Commuting	0.54	6.50	0.62	0.02	3.92	3.60
Pier A Railyard	0.40	1.58	5.39	0.00	0.15	0.14
Project Year 2038 Total	117.69	498.80	1,937.63	831.44	165.00	122.31

Note: (1) Includes auxiliary generator emissions.

Table D1.2-NP-39. Daily Operational Emissions - Berths 136-147 Terminal Project Alt 1 - No Project - 365 days/year all sources

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	80	185	2,355	1,383	197	185
Ships - Precautionary Area Transit (1)	15	31	312	194	27	26
Ships - Harbor Transit (1)	23	29	216	109	22	20
Ships - Docking (1)	8	8	60	26	6	6
Ships - Hoteling Aux. Sources	42	153	1,505	1,440	128	120
Tugboats - Cargo Vessel Assist (1)	2	13	79	0	3	3
Terminal Equipment	122	444	1,420	1	61	56
On-road Trucks	916	3,111	8,288	6	576	385
Trains	109	255	1,524	136	58	53
Railyard Equipment	21	82	237	0	11	10
Commuting	9	121	16	0	13	12
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,351	4,438	16,065	3,297	1,104	878
Net Change from Existing Conditions	166	361	2,593	573	82	47
Net Change from NFAB Year 2007	252	963	1,929	100	146	130
Project Year 2015						
Ships - Fairway Transit (1)	89	202	2,509	1,470	212	199
Ships - Precautionary Area Transit (1)	19	39	370	222	33	31
Ships - Harbor Transit (1)	29	36	275	136	28	26
Ships - Docking (1)	10	10	76	33	8	8
Ships - Hoteling Aux. Sources	57	201	2,038	1,878	173	162
Tugboats - Cargo Vessel Assist (1)	3	13	71	0	3	3
Terminal Equipment	64	469	911	1	37	34
On-road Trucks	421	2,287	6,664	8	474	272
Trains	116	318	1,617	1	43	39
Railyard Equipment	11	89	151	0	6	6
Commuting	8	109	14	0	15	14
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	829	3,782	14,726	3,749	1,032	793
Net Change from Existing Conditions	(356)	(294)	1,254	1,026	10	(38)
Net Change from NFAB Year 2015	401	1,751	9,327	2,844	644	598
Project Year 2015						
Ships - Fairway Transit (1)	109	244	2,963	1,728	251	236
Ships - Precautionary Area Transit (1)	25	47	429	249	38	36
Ships - Harbor Transit (1)	36	45	347	168	35	33
Ships - Docking (1)	12	12	96	41	10	10
Ships - Hoteling Aux. Sources	74	255	2,653	2,358	224	210
Tugboats - Cargo Vessel Assist (1)	2	13	59	0	3	2
Terminal Equipment	33	676	254	2	10	9
On-road Trucks	211	1,058	2,845	8	292	98
Trains	122	398	1,771	1	45	41
Railyard Equipment	5	108	37	0	1	1
Commuting	6	84	11	0	19	17
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	638	2,948	11,495	4,556	929	693
Net Change from Existing Conditions	(547)	(1,129)	(1,977)	1,832	(92)	(138)
Net Change from NFAB Year 2025	258	837	6,205	3,626	570	503
Project Year 2038						
Ships - Fairway Transit (1)	109	244	2,963	1,728	251	236
Ships - Precautionary Area Transit (1)	25	47	429	249	38	36
Ships - Harbor Transit (1)	36	45	347	168	35	33
Ships - Docking (1)	12	12	96	41	10	10
Ships - Hoteling Aux. Sources	74	255	2,653	2,358	224	210
Tugboats - Cargo Vessel Assist (1)	2	13	53	0	2	2
Terminal Equipment	29	676	110	2	8	7
On-road Trucks	244	891	2,366	8	274	81
Trains	104	398	1,554	1	37	34
Railyard Equipment	4	108	14	0	1	1
Commuting	3	36	3	0	21	0
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	645	2,733	10,617	4,556	904	650
Net Change from Existing Conditions	(540)	(1,344)	(2,855)	1,832	(118)	(181)
Net Change from NFAB Year 2038	272	455	5,514	3,626	547	462
SCAQMD Daily Significance Thresholds	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2-Alt3-1. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alternative 3

Project Scenario/Ship Type	Annual Ship Visits	Annual Shifts	TEU Moves/ Ship Visit (1)	Hoteling Time/ Visit (Hours) (2)	Annual TEU Movements
Baseline - Year 2003					
Containerships 3,000 - 5,000 TEU	68		5,100	60.0	346,800
Containerships < 3,000 TEU	148	30	3,063	36.0	545,214
Subtotal	246				892,014
Project Year 2007					
Containerships 5,000 - 6,000 TEU	26		8,017	72.0	208,442
Containerships 3,000 - 5,000 TEU	79		5,100	60.0	402,900
Containerships < 3,000 TEU	151		3,063	36.0	462,513
Subtotal	256				1,073,855
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	75		8,017	72.0	601,275
Containerships 3,000 - 5,000 TEU	91		5,100	60.0	464,100
Containerships < 3,000 TEU	139		3,063	36.0	425,757
Subtotal	305				1,491,132
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	164		8,017	72.0	1,314,788
Containerships 3,000 - 5,000 TEU	104		5,100	60.0	530,400
Containerships < 3,000 TEU	62		3,063	36.0	189,906
Subtotal	330				2,035,094
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	164		8,017	72.0	1,314,788
Containerships 3,000 - 5,000 TEU	104		5,100	60.0	530,400
Containerships < 3,000 TEU	62		3,063	36.0	189,906
Subtotal	330				2,035,094

Notes: (1) Throughputs for vessels <3,000 and 3,000-5,000 TEUs based upon current and future expected operations at the Berths 136-147 terminal. Thrghput for 5,000-6,000 TEU vessels based upon average throughput of vessels >5000 TEUs at berths 121-131 in year 2001. Thrghput for 8,000-9,000 TEU vessels based upon an expected capacity of 8,800 TEUs (Samsung Heavy Industries 2003) * 1.43 (the ratio of throughput per ship visit/vessel capacity for vessels >5,000 TEUs that called at Berths 121-131 in 2001) = 12,584 TEUs/SV.

(2) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006).

Table D1.2-Alt3-2. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	5.01	11.60	148.54	85.95	12.33	11.55
Containership < 3,000 TEU	6.49	15.15	195.87	113.62	16.23	15.21
Subtotal	11.50	26.75	344.40	199.58	28.56	26.76
Project Year 2007						
Containerships 5,000 - 6,000 TEU	2.48	5.54	68.18	39.02	5.70	5.34
Containerships 3,000 - 5,000 TEU	5.36	12.30	155.54	89.72	12.93	12.12
Containerships < 3,000 TEU	6.06	14.15	182.89	106.09	15.16	14.20
Subtotal	13.90	31.98	406.60	234.84	33.79	31.66
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	6.62	14.33	169.44	95.86	14.29	13.39
Containerships 3,000 - 5,000 TEU	5.53	12.53	155.62	89.35	12.98	12.16
Containerships < 3,000 TEU	4.96	11.57	149.63	86.80	12.40	11.62
Subtotal	17.11	38.44	474.69	272.01	39.67	37.17
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	14.48	31.34	370.51	209.62	31.25	29.28
Containerships 3,000 - 5,000 TEU	6.32	14.32	177.85	102.11	14.83	13.90
Containerships < 3,000 TEU	2.21	5.16	66.74	38.72	5.53	5.18
Subtotal	23.01	50.83	615.10	350.45	51.61	48.36
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	14.48	31.34	370.51	209.62	31.25	29.28
Containerships 3,000 - 5,000 TEU	6.32	14.32	177.85	102.11	14.83	13.90
Containerships < 3,000 TEU	2.21	5.16	66.74	38.72	5.53	5.18
Subtotal	23.01	50.83	615.10	350.45	51.61	48.36

Note: (1) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-Alt3-3. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.48	0.80	6.29	2.99	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.98	1.78	15.70	7.99	1.42	1.33
Containerships < 3,000 TEU	0.80	1.76	20.96	11.92	1.77	1.66
Subtotal	2.26	4.34	42.96	22.90	3.78	3.54
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.40	2.30	18.15	8.63	1.70	1.59
Containerships 3,000 - 5,000 TEU	1.13	2.05	18.09	9.20	1.63	1.53
Containerships < 3,000 TEU	0.73	1.62	19.29	10.97	1.63	1.53
Subtotal	3.26	5.98	55.54	28.81	4.96	4.65
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.05	5.03	39.70	18.88	3.72	3.49
Containerships 3,000 - 5,000 TEU	1.29	2.34	20.67	10.52	1.86	1.75
Containerships < 3,000 TEU	0.33	0.72	8.61	4.89	0.73	0.68
Subtotal	4.67	8.10	68.97	34.29	6.31	5.91
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.05	5.03	39.70	18.88	3.72	3.49
Containerships 3,000 - 5,000 TEU	1.29	2.34	20.67	10.52	1.86	1.75
Containerships < 3,000 TEU	0.33	0.72	8.61	4.89	0.73	0.68
Subtotal	4.67	8.10	68.97	34.29	6.31	5.91

Table D1.2-Alt3-4. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.68	0.68	3.85	0.92	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.42	1.41	8.01	1.92	0.95	0.89
Containerships < 3,000 TEU	1.42	1.41	8.02	1.92	0.95	0.89
Subtotal	3.53	3.49	19.88	4.76	2.35	2.21
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.98	1.95	11.11	2.66	1.32	1.23
Containerships 3,000 - 5,000 TEU	1.64	1.62	9.23	2.21	1.09	1.02
Containerships < 3,000 TEU	1.31	1.30	7.38	1.77	0.87	0.82
Subtotal	4.93	4.87	27.72	6.64	3.28	3.08
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.32	4.27	24.30	5.82	2.88	2.70
Containerships 3,000 - 5,000 TEU	1.87	1.85	10.54	2.52	1.25	1.17
Containerships < 3,000 TEU	0.58	0.58	3.29	0.79	0.39	0.37
Subtotal	6.78	6.70	38.14	9.13	4.52	4.23
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.32	4.27	24.30	5.82	2.88	2.70
Containerships 3,000 - 5,000 TEU	1.87	1.85	10.54	2.52	1.25	1.17
Containerships < 3,000 TEU	0.58	0.58	3.29	0.79	0.39	0.37
Subtotal	6.78	6.70	38.14	9.13	4.52	4.23

Table D1.2-Alt3-5. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.25	0.18	1.09	0.14	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.51	0.38	2.26	0.28	0.30	0.28
Containerships < 3,000 TEU	0.51	0.38	2.26	0.28	0.30	0.28
Subtotal	1.27	0.94	5.61	0.70	0.73	0.69
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.71	0.52	3.14	0.39	0.41	0.38
Containerships 3,000 - 5,000 TEU	0.59	0.44	2.60	0.33	0.34	0.32
Containerships < 3,000 TEU	0.47	0.35	2.08	0.26	0.27	0.25
Subtotal	1.77	1.31	7.83	0.98	1.02	0.96
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.55	1.15	6.86	0.86	0.90	0.84
Containerships 3,000 - 5,000 TEU	0.67	0.50	2.98	0.37	0.39	0.36
Containerships < 3,000 TEU	0.21	0.16	0.93	0.12	0.12	0.11
Subtotal	2.44	1.80	10.77	1.35	1.41	1.32
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.55	1.15	6.86	0.86	0.90	0.84
Containerships 3,000 - 5,000 TEU	0.67	0.50	2.98	0.37	0.39	0.36
Containerships < 3,000 TEU	0.21	0.16	0.93	0.12	0.12	0.11
Subtotal	2.44	1.80	10.77	1.35	1.41	1.32

Table D1.2-Alt3-6. Annual Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.28	0.28	1.59	0.38	0.19	0.18
Docking	0.10	0.08	0.45	0.06	0.06	0.05
Subtotal	0.38	0.35	2.04	0.44	0.25	0.23

Table D1.2-Alt3-7. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.13	0.37	4.92	4.12	0.50	0.47
Containership < 3,000 TEU	0.17	0.47	6.31	5.28	0.64	0.60
Subtotal	0.31	0.84	11.23	9.39	1.15	1.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.08	0.22	2.99	2.50	0.30	0.29
Containerships 3,000 - 5,000 TEU	0.17	0.47	6.24	5.22	0.64	0.60
Containerships < 3,000 TEU	0.19	0.51	6.87	5.75	0.70	0.66
Subtotal	0.44	1.20	16.09	13.47	1.64	1.54
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.26	0.72	9.63	8.06	0.98	0.92
Containerships 3,000 - 5,000 TEU	0.22	0.59	7.92	6.62	0.81	0.76
Containerships < 3,000 TEU	0.18	0.51	6.80	5.69	0.69	0.65
Subtotal	0.66	1.82	24.34	20.37	2.48	2.33
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	1.58	21.06	17.62	2.15	2.01
Containerships 3,000 - 5,000 TEU	0.25	0.68	9.05	7.57	0.92	0.86
Containerships < 3,000 TEU	0.08	0.23	3.03	2.54	0.31	0.29
Subtotal	0.90	2.48	33.13	27.72	3.38	3.17
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	1.58	21.06	17.62	2.15	2.01
Containerships 3,000 - 5,000 TEU	0.25	0.68	9.05	7.57	0.92	0.86
Containerships < 3,000 TEU	0.08	0.23	3.03	2.54	0.31	0.29
Subtotal	0.90	2.48	33.13	27.72	3.38	3.17

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-Alt3-8. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.07	0.19	2.43	1.56	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.13	0.37	4.83	3.09	0.40	0.37
Containerships < 3,000 TEU	0.14	0.37	4.90	3.14	0.40	0.38
Subtotal	0.34	0.93	12.16	7.79	1.00	0.93
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.19	0.53	7.01	4.49	0.57	0.54
Containerships 3,000 - 5,000 TEU	0.15	0.42	5.57	3.56	0.46	0.43
Containerships < 3,000 TEU	0.13	0.34	4.51	2.89	0.37	0.35
Subtotal	0.47	1.30	17.09	10.94	1.40	1.31
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.42	1.17	15.33	9.81	1.25	1.18
Containerships 3,000 - 5,000 TEU	0.18	0.49	6.36	4.07	0.52	0.49
Containerships < 3,000 TEU	0.06	0.15	2.01	1.29	0.16	0.15
Subtotal	0.66	1.81	23.70	15.18	1.94	1.82
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.42	1.17	15.33	9.81	1.25	1.18
Containerships 3,000 - 5,000 TEU	0.18	0.49	6.36	4.07	0.52	0.49
Containerships < 3,000 TEU	0.06	0.15	2.01	1.29	0.16	0.15
Subtotal	0.66	1.81	23.70	15.18	1.94	1.82

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-Alt3-9. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	0.29	3.86	2.47	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.20	0.55	7.25	4.64	0.59	0.56
Containerships < 3,000 TEU	0.20	0.54	7.04	4.51	0.58	0.54
Subtotal	0.50	1.38	18.15	11.62	1.49	1.39
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.31	0.85	11.12	7.12	0.91	0.85
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.36	5.35	0.68	0.64
Containerships < 3,000 TEU	0.18	0.49	6.48	4.15	0.53	0.50
Subtotal	0.72	1.98	25.96	16.62	2.12	1.99
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.67	1.85	24.32	15.57	1.99	1.86
Containerships 3,000 - 5,000 TEU	0.26	0.73	9.55	6.11	0.78	0.73
Containerships < 3,000 TEU	0.08	0.22	2.89	1.85	0.24	0.22
Subtotal	1.02	2.80	36.76	23.54	3.01	2.82
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.67	1.85	24.32	15.57	1.99	1.86
Containerships 3,000 - 5,000 TEU	0.26	0.73	9.55	6.11	0.78	0.73
Containerships < 3,000 TEU	0.08	0.22	2.89	1.85	0.24	0.22
Subtotal	1.02	2.80	36.76	23.54	3.01	2.82

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-Alt3-10. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.05	0.67	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.05	0.15	1.98	1.27	0.16	0.15
Containerships < 3,000 TEU	0.05	0.15	1.92	1.23	0.16	0.15
Subtotal	0.14	0.38	4.96	3.18	0.41	0.38
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.08	0.23	3.04	1.95	0.25	0.23
Containerships 3,000 - 5,000 TEU	0.06	0.17	2.28	1.46	0.19	0.18
Containerships < 3,000 TEU	0.05	0.14	1.77	1.13	0.14	0.14
Subtotal	0.20	0.54	7.10	4.54	0.58	0.54
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.18	0.51	6.65	4.26	0.54	0.51
Containerships 3,000 - 5,000 TEU	0.07	0.20	2.61	1.67	0.21	0.20
Containerships < 3,000 TEU	0.02	0.06	0.79	0.51	0.06	0.06
Subtotal	0.28	0.77	10.05	6.43	0.82	0.77
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.18	0.51	6.65	4.26	0.54	0.51
Containerships 3,000 - 5,000 TEU	0.07	0.20	2.61	1.67	0.21	0.20
Containerships < 3,000 TEU	0.02	0.06	0.79	0.51	0.06	0.06
Subtotal	0.28	0.77	10.05	6.43	0.82	0.77

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-Alt3-11. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.57	4.32	56.62	36.26	4.63	4.34
Containerships 3,000 - 5,000 TEU	3.16	8.70	114.09	73.05	9.34	8.75
Containerships < 3,000 TEU	2.14	5.89	77.22	49.44	6.32	5.92
Subtotal	6.87	18.90	247.94	158.75	20.29	19.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.53	12.45	163.34	104.59	13.37	12.53
Containerships 3,000 - 5,000 TEU	3.64	10.02	131.42	84.15	10.76	10.08
Containerships < 3,000 TEU	1.97	5.42	71.08	45.51	5.82	5.45
Subtotal	10.14	27.89	365.85	234.25	29.94	28.05
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	9.90	27.23	357.17	228.69	29.23	27.39
Containerships 3,000 - 5,000 TEU	4.16	11.45	150.20	96.17	12.29	11.52
Containerships < 3,000 TEU	0.88	2.42	31.71	20.30	2.59	2.43
Subtotal	14.95	41.10	539.08	345.17	44.12	41.34
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	9.90	27.23	357.17	228.69	29.23	27.39
Containerships 3,000 - 5,000 TEU	4.16	11.45	150.20	96.17	12.29	11.52
Containerships < 3,000 TEU	0.88	2.42	31.71	20.30	2.59	2.43
Subtotal	14.95	41.10	539.08	345.17	44.12	41.34

Table D1.2-Alt3-12. Annual Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.02	0.05	0.70	0.45	0.06	0.05
Docking	0.01	0.01	0.19	0.12	0.02	0.01
Subtotal	0.02	0.07	0.89	0.57	0.07	0.07

Table D1.2-Alt3-13. Annual Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership < 3,000 TEU	0.43	1.17	15.34	9.82	1.26	1.18
Subtotal	0.43	1.17	15.34	9.82	1.26	1.18

Table D1.2-Alt3-14. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-Alt3-15. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.41	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.28	1.24	0.03	0.03
Containerships < 3,000 TEU	0.02	0.20	0.54	2.37	0.07	0.06
Subtotal	0.03	0.34	0.92	4.03	0.11	0.11
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.10	0.27	1.18	0.03	0.03
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.43	0.04	0.04
Containerships < 3,000 TEU	0.02	0.19	0.50	2.19	0.06	0.06
Subtotal	0.03	0.41	1.09	4.80	0.13	0.13
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.22	0.59	2.58	0.07	0.07
Containerships 3,000 - 5,000 TEU	0.01	0.14	0.37	1.64	0.05	0.04
Containerships < 3,000 TEU	0.01	0.08	0.22	0.97	0.03	0.03
Subtotal	0.04	0.44	1.18	5.19	0.15	0.14
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.22	0.59	2.58	0.07	0.07
Containerships 3,000 - 5,000 TEU	0.01	0.14	0.37	1.64	0.05	0.04
Containerships < 3,000 TEU	0.01	0.08	0.22	0.97	0.03	0.03
Subtotal	0.04	0.44	1.18	5.19	0.15	0.14

Table D1.2-Alt3-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.07	0.32	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.08	0.22	0.99	0.03	0.03
Containerships < 3,000 TEU	0.01	0.16	0.43	1.88	0.05	0.05
Subtotal	0.02	0.27	0.73	3.19	0.09	0.08
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.08	0.21	0.94	0.03	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.14	0.03	0.03
Containerships < 3,000 TEU	0.01	0.15	0.39	1.73	0.05	0.05
Subtotal	0.03	0.32	0.87	3.80	0.11	0.10
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.17	0.47	2.05	0.06	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.30	1.30	0.04	0.03
Containerships < 3,000 TEU	0.01	0.07	0.18	0.77	0.02	0.02
Subtotal	0.03	0.35	0.94	4.12	0.12	0.11
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.17	0.47	2.05	0.06	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.30	1.30	0.04	0.03
Containerships < 3,000 TEU	0.01	0.07	0.18	0.77	0.02	0.02
Subtotal	0.03	0.35	0.94	4.12	0.12	0.11

Table D1.2-Alt3-17. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships < 3,000 TEU	0.00	0.04	0.12	0.51	0.01	0.01
Subtotal	0.01	0.07	0.20	0.87	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.06	0.26	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.04	0.11	0.47	0.01	0.01
Subtotal	0.01	0.09	0.24	1.04	0.03	0.03
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.08	0.35	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.21	0.01	0.01
Subtotal	0.01	0.10	0.26	1.13	0.03	0.03
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.08	0.35	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.21	0.01	0.01
Subtotal	0.01	0.10	0.26	1.13	0.03	0.03

Table D1.2-Alt3-18. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	1.33	3.55	15.57	0.44	0.41
Containerships 3,000 - 5,000 TEU	0.28	3.36	8.98	39.42	1.10	1.03
Containerships < 3,000 TEU	0.32	3.85	10.30	45.21	1.27	1.19
Subtotal	0.71	8.53	22.82	100.19	2.80	2.63
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.32	3.83	10.23	44.91	1.26	1.18
Containerships 3,000 - 5,000 TEU	0.32	3.87	10.34	45.41	1.27	1.19
Containerships < 3,000 TEU	0.29	3.54	9.48	41.61	1.16	1.09
Subtotal	0.93	11.24	30.05	131.93	3.69	3.46
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	8.36	22.37	98.20	2.75	2.58
Containerships 3,000 - 5,000 TEU	0.37	4.42	11.82	51.89	1.45	1.36
Containerships < 3,000 TEU	0.13	1.58	4.23	18.56	0.52	0.49
Subtotal	1.19	14.37	38.41	168.65	4.72	4.42
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	8.36	22.37	98.20	2.75	2.58
Containerships 3,000 - 5,000 TEU	0.37	4.42	11.82	51.89	1.45	1.36
Containerships < 3,000 TEU	0.13	1.58	4.23	18.56	0.52	0.49
Subtotal	1.19	14.37	38.41	168.65	4.72	4.42

Table D1.2-Alt3-19. Annual Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.00	0.03	0.09	0.37	0.01	0.01
Docking	0.00	0.01	0.02	0.10	0.00	0.00
Hoteling	0.06	0.77	2.05	8.98	0.25	0.24
Subtotal	0.07	0.81	2.15	9.46	0.26	0.25

Table D1.2-Alt3-20. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.41	2.06	12.98	0.01	0.53	0.50
Project Year 2015						
Subtotal	0.47	2.46	13.21	0.01	0.57	0.53
Project Year 2025						
Subtotal	0.50	2.66	11.85	0.01	0.52	0.48
Project Year 2038						
Subtotal	0.50	2.66	10.63	0.01	0.47	0.44

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-Alt3-21. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.03	0.19	1.09	0.00	0.05	0.05
Project Year 2015						
Subtotal (1)	0.04	0.22	1.20	0.00	0.05	0.05
Project Year 2025						
Subtotal (1)	0.04	0.24	1.09	0.00	0.05	0.04
Project Year 2038						
Subtotal (1)	0.04	0.24	0.99	0.00	0.04	0.04

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-Alt3-22. Annual Vessel Emissions - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.68	465.24	55.81	52.30
Project Year 2007						
Ships - Fairway Transit (1)	14.33	33.19	422.69	248.31	35.44	33.20
Ships - Precautionary Area Transit (1)	2.63	5.61	56.03	34.72	4.88	4.58
Ships - Harbor Transit (1)	4.06	5.15	38.76	19.57	3.93	3.68
Ships - Docking (1)	1.41	1.39	10.77	4.75	1.16	1.09
Ships - Hoteling Aux. Sources	7.58	27.44	270.76	258.94	23.10	21.64
Tugboats - Cargo Vessel Assist (1)	0.44	2.25	14.07	0.01	0.58	0.54
Subtotal	30.45	75.03	813.08	566.30	69.09	64.73
Project Year 2015						
Ships - Fairway Transit (1)	17.77	40.26	499.03	292.38	42.15	39.49
Ships - Precautionary Area Transit (1)	3.77	7.69	73.71	44.55	6.50	6.09
Ships - Harbor Transit (1)	5.67	7.17	54.54	27.06	5.51	5.17
Ships - Docking (1)	1.98	1.94	15.16	6.56	1.63	1.53
Ships - Hoteling Aux. Sources	11.07	39.13	395.90	366.18	33.63	31.51
Tugboats - Cargo Vessel Assist (1)	0.51	2.69	14.41	0.01	0.62	0.58
Subtotal	40.77	98.87	1,052.75	736.73	90.04	84.37
Project Year 2025						
Ships - Fairway Transit (1)	23.91	53.31	648.23	378.17	54.99	51.53
Ships - Precautionary Area Transit (1)	5.37	10.35	93.86	54.65	8.40	7.87
Ships - Harbor Transit (1)	7.83	9.85	75.83	36.78	7.64	7.16
Ships - Docking (1)	2.72	2.66	21.07	8.91	2.26	2.12
Ships - Hoteling Aux. Sources	16.13	55.47	577.49	513.82	48.84	45.76
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	12.95	0.01	0.56	0.53
Subtotal	56.50	134.54	1,429.43	992.34	122.69	114.96
Project Year 2038						
Ships - Fairway Transit (1)	23.91	53.31	648.23	378.17	54.99	51.53
Ships - Precautionary Area Transit (1)	5.37	10.35	93.86	54.65	8.40	7.87
Ships - Harbor Transit (1)	7.83	9.85	75.83	36.78	7.64	7.16
Ships - Docking (1)	2.72	2.66	21.07	8.91	2.26	2.12
Ships - Hoteling Aux. Sources	16.13	55.47	577.49	513.82	48.84	45.76
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	11.62	0.01	0.51	0.48
Subtotal	56.49	134.54	1,428.11	992.34	122.63	114.91

Note: (1) Includes auxiliary power emissions.

Table D1.2-Alt3-23. Daily Vessel Emissions - Berths 136-147 Terminal Project - Alternative 3.

	Pounds Per Day					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	6.3	6.2	47.1	21.0	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,593	2,549	306	287
Project Year 2007						
Ships - Fairway Transit (1)	78.5	181.9	2,316.1	1,360.6	194.2	181.9
Ships - Precautionary Area Transit (1)	14.4	30.7	307.0	190.2	26.8	25.1
Ships - Harbor Transit (1)	22.2	28.2	212.4	107.3	21.5	20.2
Ships - Docking (1)	7.7	7.6	59.0	26.0	6.4	6.0
Ships - Hoteling Aux. Sources	41.5	150.3	1,483.6	1,418.9	126.6	118.6
Tugboats - Cargo Vessel Assist (1)	2.4	12.3	77.1	0.0	3.2	3.0
Subtotal	167	411	4,455	3,103	379	355
Project Year 2015						
Ships - Fairway Transit (1)	97.4	220.6	2,734.4	1,602.1	231.0	216.4
Ships - Precautionary Area Transit (1)	20.6	42.1	403.9	244.1	35.6	33.3
Ships - Harbor Transit (1)	31.1	39.3	298.9	148.3	30.2	28.3
Ships - Docking (1)	10.8	10.6	83.1	36.0	8.9	8.4
Ships - Hoteling Aux. Sources	60.7	214.4	2,169.3	2,006.4	184.3	172.7
Tugboats - Cargo Vessel Assist (1)	2.8	14.7	79.0	0.0	3.4	3.2
Subtotal	223	542	5,768	4,037	493	462
Project Year 2025						
Ships - Fairway Transit (1)	131.0	292.1	3,552.0	2,072.2	301.3	282.3
Ships - Precautionary Area Transit (1)	29.4	56.7	514.3	299.5	46.0	43.1
Ships - Harbor Transit (1)	42.9	54.0	415.5	201.6	41.9	39.2
Ships - Docking (1)	14.9	14.6	115.5	48.8	12.4	11.6
Ships - Hoteling Aux. Sources	88.4	303.9	3,164.3	2,815.4	267.6	250.7
Tugboats - Cargo Vessel Assist (1)	3.0	15.9	70.9	0.1	3.1	2.9
Subtotal	310	737	7,833	5,437	672	630
Project Year 2038						
Ships - Fairway Transit (1)	131.0	292.1	3,552.0	2,072.2	301.3	282.3
Ships - Precautionary Area Transit (1)	29.4	56.7	514.3	299.5	46.0	43.1
Ships - Harbor Transit (1)	42.9	54.0	415.5	201.6	41.9	39.2
Ships - Docking (1)	14.9	14.6	115.5	48.8	12.4	11.6
Ships - Hoteling Aux. Sources	88.4	303.9	3,164.3	2,815.4	267.6	250.7
Tugboats - Cargo Vessel Assist (1)	2.9	15.9	63.7	0.1	2.8	2.6
Subtotal	310	737	7,825	5,437	672	630

Note: (1) Includes auxiliary power emissions.

Table D1.2-Alt3-24. On-Road Truck Trip Vehicle Miles Travelled - Berths 136-147 Terminal Project - Alternative 3.

Year	B136-147 Throughput (TEUs)	B136-147 ICTF Thruput (TEUs) (1)	TEUs to Offsite Railyard (2)	TEUs to Local Deilveries	Truck Trips to Offsite Railyard (2)	Local Truck Trips (3)	Truck Miles to Offsite Railyard (4)	Local Truck Trip Miles (5)	Composite VMT/ Truck Trip
Baseline - Year 2003	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2007	1,073,600	-	536,800	536,800	744,330	744,330	9.6	55.0	32.3
Year 2015	1,491,000	552,709	12,380	925,911	17,037	1,274,210	9.6	55.0	54.4
Year 2025	2,035,000	700,810	148,555	1,185,635	162,151	1,294,142	9.6	55.0	49.9
Year 2038	2,035,000	700,810	148,555	1,185,635	162,151	1,294,142	9.6	55.0	49.9

(1) Annual throughput estimates from Rail Master Plan.

(2) Based on 50/50/26.8/6.7/7.3% of Berths 136-147 annual cargo throughput for years 2003/2007/2010/2015/2030.

(3) Based on 50/50/61.4/62.1/63.4% of Berths 136-147 annual cargo throughput for years 2003/2007/2010/2015/2030.

(4) Assumes that 66% of cargo goes to Carson ICTF (4.5 miles) and 37% to LA railyards (18 miles) = 9.6 miles/trip

(5) Average of local/external-SCAB trip lengths (20/90) that originate from/are destined to the POLA.

Table D1.2-Alt3-25. ADT Estimates - Berths 136-147 Terminal Project - Alternative 3.

Alternative/Project Year	Truck Trips		
	Annual	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,488,659	4,079	5,584
2015	1,291,160	3,537	4,843
2025	1,456,293	3,990	5,462
2038	1,456,293	3,990	5,462

(1) = annual trips/ 266.6 days.

Table D1.2-Alt3-26. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Alternative 3

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	ADT	Idling Hrs/ Day	Miles/ Day
On-Terminal					
Year 2003 - Baseline	0.56	1.02	3,281	1,837	3,351
Year 2007	0.25	1.02	4,079	1,020	4,165
Year 2015	0.25	0.81	3,538	884	2,850
Year 2025	0.25	0.81	3,990	997	3,214
Year 2038	0.25	0.81	3,990	997	3,214
Off-Terminal					
Year 2003 - Baseline	0.30	32.3	3,281	984	106,028
Year 2007	0.30	32.3	4,079	1,224	131,797
Year 2015	0.30	54.4	3,538	1,061	192,454
Year 2025	0.30	49.9	3,990	1,197	199,286
Year 2038	0.30	49.9	3,990	1,197	199,286

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2-Alt3-27. Daily Truck Emissions for the Berths 136-147 Terminal Project - Alternative 3.

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.53	10.61
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.44
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	31.4	114.2	238.3	0.1	5.0	4.61
Year 2007 - Driving	94.2	197.2	355.8	0.3	28.6	26.31
Subtotal - Year 2007	125.6	311.4	594.1	0.4	33.6	30.9
Year 2015 - Idling	17.6	85.1	233.5	0.1	2.0	1.84
Year 2015 - Driving	35.9	74.7	165.3	0.2	7.3	6.75
Subtotal - Year 2015	53.5	159.8	398.8	0.3	9.3	8.6
Year 2025 - Idling	17.0	91.5	271.1	0.1	0.5	0.45
Year 2025 - Driving	14.3	30.9	63.3	0.2	1.2	1.10
Subtotal - Year 2025	31.3	122.4	334.4	0.4	1.7	1.6
Year 2038 - Idling	16.8	91.1	271.7	0.1	0.2	0.23
Year 2038 - Driving	11.2	24.4	48.6	0.2	0.7	0.68
Subtotal - Year 2038	28.0	115.5	320.3	0.4	1.0	0.9
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.68
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.15
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	37.7	137.0	285.9	0.2	6.0	5.53
Year 2007 - Driving	737.8	2,612.0	7,273.9	5.6	332.6	306.03
Subtotal - Year 2007	775.5	2,749.0	7,559.9	5.8	338.7	311.6
Year 2015 - Idling	21.1	102.1	280.3	0.1	2.4	2.21
Year 2015 - Driving	361.6	2,204.4	6,566.2	8.4	268.0	246.55
Subtotal - Year 2015	382.7	2,306.6	6,846.4	8.6	270.4	248.8
Year 2025 - Idling	20.5	109.8	325.3	0.2	0.6	0.54
Year 2025 - Driving	161.7	855.0	2,245.8	8.9	62.4	57.45
Subtotal - Year 2025	182.2	964.8	2,571.0	9.0	63.0	58.0
Year 2038 - Idling	20.2	109.4	326.0	0.2	0.3	0.27
Year 2038 - Driving	205.7	675.0	1,716.1	8.9	43.4	39.94
Subtotal - Year 2038	225.9	784.4	2,042.1	9.0	43.7	40.2
Total Daily Truck Emissions by Project Year						
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	901.0	3,060.4	8,154.0	6.2	372.3	342.5
Year 2015	436.1	2,466.4	7,245.2	8.9	279.7	257.4
Year 2025	213.5	1,087.2	2,905.4	9.4	64.7	59.5
Year 2038	253.9	899.9	2,362.4	9.4	44.7	41.1

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2-Alt3-28. Road Dust Emissions for the Berths 136-147 Terminal Project - Alternative 3.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.13	10.16
Year 2007	74.74	12.63
Year 2015	51.14	8.64
Year 2025	57.68	9.75
Year 2038	57.68	9.75
Off-Terminal		
Year 2003 - Baseline	83.85	14.17
Year 2007	104.24	17.62
Year 2015	152.21	25.72
Year 2025	157.61	26.64
Year 2038	157.61	26.64
Combined On/Off-Terminal		
Year 2003 - Baseline	143.98	24.33
Year 2007	178.98	30.25
Year 2015	203.35	34.37
Year 2025	215.29	36.38
Year 2038	215.29	36.38

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2-Alt3-29. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Alternative 3.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.37	0.16
Year 2007	0.46	0.20
Year 2015	0.31	0.13
Year 2025	0.35	0.15
Year 2038	0.35	0.15
Off-Terminal		
Year 2003 - Baseline	11.69	5.01
Year 2007	14.53	6.23
Year 2015	21.21	9.10
Year 2025	21.97	9.42
Year 2038	21.97	9.42
Combined On/Off-Terminal		
Year 2003 - Baseline	12.06	5.17
Year 2007	14.99	6.43
Year 2015	21.53	9.24
Year 2025	22.32	9.58
Year 2038	22.32	9.58

Table D1.2-Alt3-30. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Alternative 3.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.50	10.32
Year 2007	75.20	12.83
Year 2015	51.46	8.78
Year 2025	58.03	9.90
Year 2038	58.03	9.90
Off-Terminal		
Year 2003 - Baseline	95.54	19.19
Year 2007	118.76	23.85
Year 2015	173.42	34.82
Year 2025	179.58	36.06
Year 2038	179.58	36.06
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	194	37
Year 2015	225	44
Year 2025	238	46
Year 2038	238	46

Table D1.2-Alt3-31. Train Trip Generation Rates - Berths 136-147
Terminal Project - Alternative 3

Project Scenario/Rail Yard	Annual Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	879
Year 2015	
To/from Berths 136-147 ICTF	905
To/from Carson/LA Rail Yards	20
Year 2025	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	243
Year 2038	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	243

Table D1.2-Alt3-32. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 3 Year 2007.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.88	8.29	19.97	0.01	0.93	0.85
Top Picks	0.88	2.48	10.97	0.01	0.45	0.41
Line Haul Locomotive - Road Haul	9.08	21.27	126.46	11.52	4.82	4.43
Line Haul Locomotive - Notch 1	0.67	1.58	9.39	0.86	0.36	0.33
Yard Locomotive - Switching	0.49	0.88	6.69	0.04	0.17	0.16
Subtotal	13.01	34.49	173.48	12.43	6.73	6.19
Carson or LA Railyards/Inbound						
Hostler	0.71	3.11	7.49	0.00	0.35	0.32
Top Picks	0.33	0.93	4.11	0.00	0.17	0.15
Line Haul Locomotive - Road Haul	9.08	21.27	126.46	11.52	4.82	4.43
Line Haul Locomotive - Notch 1	0.34	0.79	4.70	0.43	0.18	0.16
Subtotal	10.45	26.10	142.76	11.96	5.51	5.07
Total Tons Per Year	23.46	60.59	316.24	24.39	12.24	11.26

Table D1.2-Alt3-33. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 3 Year 2015.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.78	7.72	10.39	0.01	0.43	0.40
Top Picks	0.40	1.95	5.95	0.01	0.23	0.21
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Yard Locomotive - Switching	0.26	1.04	3.52	0.00	0.10	0.09
Subtotal	10.45	35.23	145.53	0.11	4.07	3.75
Berths 136-147/Inbound						
Hostler	0.29	2.89	3.90	0.00	0.16	0.15
Top Picks	0.15	0.73	2.23	0.00	0.09	0.08
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Subtotal	9.45	28.15	131.80	0.10	3.56	3.27
Carson or LA Railyards/Outbound						
Hostler	0.02	0.17	0.23	0.00	0.01	0.01
Top Picks	0.01	0.04	0.13	0.00	0.01	0.00
Line Haul Locomotive - Road Haul	0.18	0.49	2.51	0.00	0.07	0.06
Line Haul Locomotive - Notch 1	0.01	0.04	0.19	0.00	0.00	0.00
Yard Locomotive - Switching	0.01	0.02	0.08	0.00	0.00	0.00
Subtotal	0.23	0.77	3.15	0.00	0.09	0.08
Carson or LA Railyards/Inbound						
Hostler	0.01	0.06	0.09	0.00	0.00	0.00
Top Picks	0.00	0.02	0.05	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.18	0.49	2.51	0.00	0.07	0.06
Line Haul Locomotive - Notch 1	0.01	0.02	0.09	0.00	0.00	0.00
Subtotal	0.20	0.59	2.74	0.00	0.07	0.07
Total Tons Per Year	20.32	64.73	283.22	0.21	7.80	7.17

Table D1.2-Alt3-34. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 3 Year 2025.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.30	9.52	2.86	0.01	0.09	0.08
Top Picks	0.19	2.28	1.18	0.01	0.05	0.05
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Yard Locomotive - Switching	0.33	1.32	4.46	0.00	0.13	0.12
Subtotal	10.39	44.21	147.60	0.14	3.77	3.46
Berths 136-147/Inbound						
Hostler	0.11	3.57	1.07	0.01	0.03	0.03
Top Picks	0.07	0.85	0.44	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Subtotal	9.75	35.52	140.61	0.12	3.55	3.27
Carson or LA Railyards/Outbound						
Hostler	0.06	2.02	0.61	0.00	0.02	0.02
Top Picks	0.04	0.48	0.25	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	1.81	5.89	26.33	0.02	0.66	0.61
Line Haul Locomotive - Notch 1	0.13	0.44	1.96	0.00	0.05	0.05
Yard Locomotive - Switching	0.07	0.29	1.00	0.00	0.03	0.03
Subtotal	2.12	9.12	30.14	0.03	0.77	0.71
Carson or LA Railyards/Inbound						
Hostler	0.02	0.76	0.23	0.00	0.01	0.01
Top Picks	0.02	0.18	0.09	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.81	5.89	26.33	0.02	0.66	0.61
Line Haul Locomotive - Notch 1	0.07	0.22	0.98	0.00	0.02	0.02
Subtotal	1.92	7.04	27.63	0.02	0.70	0.64
Total Tons Per Year	24.18	95.89	345.99	0.32	8.78	8.08

Table D1.2-Alt3-35. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 3 Year 2038.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.24	9.52	0.94	0.01	0.06	0.06
Top Picks	0.18	2.28	0.65	0.01	0.05	0.04
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Yard Locomotive - Switching	0.33	1.32	4.46	0.00	0.13	0.12
Subtotal	8.85	44.21	127.76	0.14	3.14	2.89
Berths 136-147/Inbound						
Hostler	0.09	3.57	0.35	0.01	0.02	0.02
Top Picks	0.07	0.85	0.24	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Subtotal	8.26	35.52	122.31	0.12	2.94	2.71
Carson or LA Railyards/Outbound						
Hostler	0.05	2.02	0.20	0.00	0.01	0.01
Top Picks	0.04	0.48	0.14	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	1.53	5.89	23.05	0.02	0.55	0.50
Line Haul Locomotive - Notch 1	0.11	0.44	1.71	0.00	0.04	0.04
Yard Locomotive - Switching	0.07	0.29	1.00	0.00	0.03	0.03
Subtotal	1.81	9.12	26.09	0.03	0.64	0.59
Carson or LA Railyards/Inbound						
Hostler	0.02	0.76	0.07	0.00	0.01	0.00
Top Picks	0.01	0.18	0.05	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.53	5.89	23.05	0.02	0.55	0.50
Line Haul Locomotive - Notch 1	0.06	0.22	0.86	0.00	0.02	0.02
Subtotal	1.62	7.04	24.03	0.02	0.58	0.53
Total Tons Per Year	20.55	95.89	300.19	0.32	7.30	6.71

Table D1.2-Alt3-36. Summary of Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 3.

	Tons per Year					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.81	14.81	42.54	0.02	1.89	1.74
Trains	19.65	45.79	273.70	24.37	10.35	9.52
Subtotal	23.46	60.59	316.24	24.39	12.24	11.26
Project Year 2015						
ICTF Equipment	1.66	13.59	22.98	0.03	0.93	0.86
Trains	18.65	51.14	260.25	0.19	6.86	6.31
Subtotal	20.32	64.73	283.22	0.21	7.80	7.17
Project Year 2025						
ICTF Equipment	0.82	19.66	6.75	0.04	0.24	0.22
Trains	23.35	76.23	339.24	0.28	8.55	7.87
Subtotal	24.18	95.89	345.99	0.32	8.78	8.08
Project Year 2038						
ICTF Equipment	0.71	19.66	2.64	0.04	0.19	0.17
Trains	19.84	76.23	297.55	0.28	7.11	6.54
Subtotal	20.55	95.89	300.19	0.32	7.30	6.71

Table D1.2-Alt3-37. Terminal Equipment Annual Emissions - Berths 136-147 Terminal Project - Alternative 3.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons) ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	12,633,098	11.05	48.60	117.08	0.06	5.44	5.01
Terminal Equipment - 176-250 Hp	15,146,270	9.52	26.72	118.10	0.07	4.83	4.44
Terminal Equipment - 250-500 Hp	2,910,137	1.29	4.49	19.83	0.01	0.70	0.64
Subtotal	30,689,504	21.86	79.81	255.01	0.15	10.98	10.10
Project Year 2015							
Terminal Equipment - 121-175 Hp	17,542,048	6.19	61.05	82.20	0.09	3.41	3.14
Terminal Equipment - 176-250 Hp	21,031,785	5.84	28.28	86.39	0.10	3.39	3.12
Terminal Equipment - 250-500 Hp	4,040,954	0.89	4.92	14.25	0.02	0.60	0.55
Subtotal	42,614,787	12.91	94.25	182.84	0.21	7.40	6.81
Project Year 2025							
Terminal Equipment - 121-175 Hp	26,137,689	2.80	88.48	26.63	0.13	0.81	0.74
Terminal Equipment - 176-250 Hp	31,337,404	3.31	38.86	20.18	0.15	0.93	0.85
Terminal Equipment - 250-500 Hp	6,021,030	0.53	6.63	3.55	0.03	0.18	0.17
Subtotal	63,496,123	6.63	133.97	50.36	0.31	1.92	1.76
Project Year 2038 (1)							
Terminal Equipment - 121-175 Hp	26,137,689	2.27	88.48	8.71	0.13	0.60	0.55
Terminal Equipment - 176-250 Hp	31,337,404	3.05	38.86	11.07	0.15	0.83	0.76
Terminal Equipment - 250-500 Hp	6,021,030	0.49	6.63	1.92	0.03	0.12	0.11
Subtotal	63,496,123	5.81	133.97	21.71	0.31	1.54	1.42

Note: (1) In year 2030 and beyond, Hp-Hrs increased an additional 6% to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

Table D1.2-Alt3-38. Annual Operational Emissions - Berths 136-147 Terminal Project - Alternative 3.

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	14.33	33.19	422.69	248.31	35.44	33.20
Ships - Precautionary Area Transit (1)	2.63	5.61	56.03	34.72	4.88	4.58
Ships - Harbor Transit (1)	4.06	5.15	38.76	19.57	3.93	3.68
Ships - Docking (1)	1.41	1.39	10.77	4.75	1.16	1.09
Ships - Hoteling Aux. Sources	7.58	27.44	270.76	258.94	23.10	21.64
Tugboats - Cargo Vessel Assist (1)	0.44	2.25	14.07	0.01	0.58	0.54
Terminal Equipment	21.86	79.81	255.01	0.15	10.98	10.10
On-road Trucks	164.44	558.53	1,488.10	1.14	103.34	69.20
Trains	19.65	45.79	273.70	24.37	10.35	9.52
Railyard Equipment	3.81	14.81	42.54	0.02	1.89	1.74
Commuting	1.87	25.09	3.28	0.02	2.74	2.52
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	242.81	800.36	2,885.57	592.11	198.64	158.05
Project Year 2015						
Ships - Fairway Transit (1)	17.77	40.26	499.03	292.38	42.15	39.49
Ships - Precautionary Area Transit (1)	3.77	7.69	73.71	44.55	6.50	6.09
Ships - Harbor Transit (1)	5.67	7.17	54.54	27.06	5.51	5.17
Ships - Docking (1)	1.98	1.94	15.16	6.56	1.63	1.53
Ships - Hoteling Aux. Sources	11.07	39.13	395.90	366.18	33.63	31.51
Tugboats - Cargo Vessel Assist (1)	0.51	2.69	14.41	0.01	0.62	0.58
Terminal Equipment	12.91	94.25	182.84	0.21	7.40	6.81
On-road Trucks	79.59	450.12	1,322.26	1.62	92.09	54.93
Trains	18.65	51.14	260.25	0.19	6.86	6.31
Railyard Equipment	1.66	13.59	22.98	0.03	0.93	0.86
Commuting	1.81	24.62	3.18	0.02	3.43	3.15
Pier A Railyard	0.41	1.58	5.53	0.00	0.16	0.14
Project Year 2015 Total	155.80	734.17	2,849.78	738.79	200.91	156.57
Project Year 2025						
Ships - Fairway Transit (1)	23.91	53.31	648.23	378.17	54.99	51.53
Ships - Precautionary Area Transit (1)	5.37	10.35	93.86	54.65	8.40	7.87
Ships - Harbor Transit (1)	7.83	9.85	75.83	36.78	7.64	7.16
Ships - Docking (1)	2.72	2.66	21.07	8.91	2.26	2.12
Ships - Hoteling Aux. Sources	16.13	55.47	577.49	513.82	48.84	45.76
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	12.95	0.01	0.56	0.53
Terminal Equipment	6.63	133.97	50.36	0.31	1.92	1.76
On-road Trucks	38.96	198.41	530.24	1.71	55.18	19.26
Trains	23.35	76.23	339.24	0.28	8.55	7.87
Railyard Equipment	0.82	19.66	6.75	0.04	0.24	0.22
Commuting	1.26	16.88	2.12	0.03	3.79	3.48
Pier A Railyard	0.40	1.58	5.45	0.00	0.15	0.14
Project Year 2025 Total	127.93	581.25	2,363.60	994.71	192.51	147.68
Project Year 2038						
Ships - Fairway Transit (1)	23.91	53.31	648.23	378.17	54.99	51.53
Ships - Precautionary Area Transit (1)	5.37	10.35	93.86	54.65	8.40	7.87
Ships - Harbor Transit (1)	7.83	9.85	75.83	36.78	7.64	7.16
Ships - Docking (1)	2.72	2.66	21.07	8.91	2.26	2.12
Ships - Hoteling Aux. Sources	16.13	55.47	577.49	513.82	48.84	45.76
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	11.62	0.01	0.51	0.48
Terminal Equipment	5.81	133.97	21.71	0.31	1.54	1.42
On-road Trucks	46.33	164.23	431.14	1.71	51.52	15.89
Trains	19.84	76.23	297.55	0.28	7.11	6.54
Railyard Equipment	0.71	19.66	2.64	0.04	0.19	0.17
Commuting	0.65	7.79	0.74	0.03	4.70	4.32
Pier A Railyard	0.40	1.58	5.39	0.00	0.15	0.14
Project Year 2038 Total	130.22	538.00	2,187.28	994.71	187.84	143.39

Note: (1) Includes auxiliary generator emissions.

Table D1.2-Alt3-39. Daily Operational Emissions - Berths 136-147 Terminal Project - Alternative 3 - 365 days/year all sources.

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	79	182	2,316	1,361	194	182
Ships - Precautionary Area Transit (1)	14	31	307	190	27	25
Ships - Harbor Transit (1)	22	28	212	107	22	20
Ships - Docking (1)	8	8	59	26	6	6
Ships - Hoteling Aux. Sources	42	150	1,484	1,419	127	119
Tugboats - Cargo Vessel Assist (1)	2	12	77	0	3	3
Terminal Equipment	120	437	1,397	1	60	55
On-road Trucks	901	3,060	8,154	6	566	379
Trains	108	251	1,500	134	57	52
Railyard Equipment	21	81	233	0	10	10
Commuting	10	137	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,330	4,386	15,811	3,244	1,088	866
Net Change from Existing Conditions	146	309	2,340	521	67	35
Net Change from NFAB Year 2007	232	910	1,675	48	130	118
Project Year 2015						
Ships - Fairway Transit (1)	97	221	2,734	1,602	231	216
Ships - Precautionary Area Transit (1)	21	42	404	244	36	33
Ships - Harbor Transit (1)	31	39	299	148	30	28
Ships - Docking (1)	11	11	83	36	9	8
Ships - Hoteling Aux. Sources	61	214	2,169	2,006	184	173
Tugboats - Cargo Vessel Assist (1)	3	15	79	0	3	3
Terminal Equipment	71	516	1,002	1	41	37
On-road Trucks	436	2,466	7,245	9	505	301
Trains	102	280	1,426	1	38	35
Railyard Equipment	9	74	126	0	5	5
Commuting	10	135	17	0	19	17
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	854	4,023	15,615	4,048	1,101	858
Net Change from Existing Conditions	(331)	(54)	2,144	1,325	79	27
Net Change from NFAB Year 2015	426	1,992	10,216	3,142	713	663
Project Year 2025						
Ships - Fairway Transit (1)	131	292	3,552	2,072	301	282
Ships - Precautionary Area Transit (1)	29	57	514	299	46	43
Ships - Harbor Transit (1)	43	54	416	202	42	39
Ships - Docking (1)	15	15	115	49	12	12
Ships - Hoteling Aux. Sources	88	304	3,164	2,815	268	251
Tugboats - Cargo Vessel Assist (1)	3	16	71	0	3	3
Terminal Equipment	36	734	276	2	11	10
On-road Trucks	213	1,087	2,905	9	302	106
Trains	128	418	1,859	2	47	43
Railyard Equipment	5	108	37	0	1	1
Commuting	7	92	12	0	21	19
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	701	3,185	12,951	5,450	1,055	809
Net Change from Existing Conditions	(484)	(892)	(520)	2,727	33	(22)
Net Change from NFAB Year 2025	321	1,073	7,662	4,521	696	619
Project Year 2038						
Ships - Fairway Transit (1)	131	292	3,552	2,072	301	282
Ships - Precautionary Area Transit (1)	29	57	514	299	46	43
Ships - Harbor Transit (1)	43	54	416	202	42	39
Ships - Docking (1)	15	15	115	49	12	12
Ships - Hoteling Aux. Sources	88	304	3,164	2,815	268	251
Tugboats - Cargo Vessel Assist (1)	3	16	64	0	3	3
Terminal Equipment	45	1,031	167	2	12	11
On-road Trucks	254	900	2,362	9	282	87
Trains	109	418	1,630	2	39	36
Railyard Equipment	4	108	14	0	1	1
Commuting	4	43	4	0	26	24
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	726	3,244	12,033	5,451	1,033	789
Net Change from Existing Conditions	(459)	(832)	(1,439)	2,727	11	(42)
Net Change from NFAB Year 2038	354	967	6,930	4,521	676	600
SCAQMD Daily Significance Threshold	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2-Alt4-1. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alternative 4

Project Scenario/Ship Type	Annual Ship Visits	Annual Shifts	TEU Moves/ Ship Visit (1)	Hoteling Time/ Visit (Hours) (2)	Annual TEU Movements
Baseline - Year 2003					
Containerships 3,000 - 5,000 TEU	68		5,100	60.0	346,800
Containerships < 3,000 TEU	148	30	3,063	36.0	545,214
Subtotal	246				892,014
Project Year 2007					
Containerships 5,000 - 6,000 TEU	14		8,017	72.0	112,238
Containerships 3,000 - 5,000 TEU	18		5,100	60.0	91,800
Containerships < 3,000 TEU	49		3,063	36.0	150,087
Subtotal	81				354,125
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	26		8,017	72.0	208,442
Containerships 3,000 - 5,000 TEU	27		5,100	60.0	137,700
Containerships < 3,000 TEU	50		3,063	36.0	153,150
Subtotal	103				499,292
General Cargo	19		15,810	39.8	300,390
Auto Carrier	15		2,027	17.4	30,405
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	53		8,017	72.0	424,901
Containerships 3,000 - 5,000 TEU	15		5,100	60.0	76,500
Containerships < 3,000 TEU	21		3,063	36.0	64,323
Subtotal	89				565,724
General Cargo	19		15,810	39.8	300,390
Auto Carrier	15		2,027	17.4	30,405
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	53		8,017	72.0	424,901
Containerships 3,000 - 5,000 TEU	15		5,100	60.0	76,500
Containerships < 3,000 TEU	21		3,063	36.0	64,323
Subtotal	89				565,724
General Cargo	19		15,810	39.8	300,390
Auto Carrier	15		2,027	17.4	30,405

Notes: (1) Throughputs for vessels <3,000 and 3,000-5,000 TEUs based upon current and future expected operations at the Berths 136-147 terminal. Thrghput for 5,000-6,000 TEU vessels based upon average throughput of vessels >5000 TEUs at berths 121-131 in year 2001.

(2) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, and 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day.
8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006).

Table D1.2-Alt4-2. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	5.01	11.60	148.54	85.95	12.33	11.55
Containership < 3,000 TEU	6.49	15.15	195.87	113.62	16.23	15.21
Subtotal	11.50	26.75	344.40	199.58	28.56	26.76
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.33	2.98	36.71	21.01	3.07	2.88
Containerships 3,000 - 5,000 TEU	1.22	2.80	35.44	20.44	2.95	2.76
Containerships < 3,000 TEU	1.97	4.59	59.35	34.43	4.92	4.61
Subtotal	4.52	10.38	131.50	75.88	10.94	10.25
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	2.30	4.97	58.74	33.23	4.95	4.64
Containerships 3,000 - 5,000 TEU	1.64	3.72	46.17	26.51	3.85	3.61
Containerships < 3,000 TEU	1.78	4.16	53.82	31.22	4.46	4.18
General Cargo	0.38	0.90	11.60	6.73	0.96	0.90
Auto Carrier	0.32	0.76	9.76	5.66	0.81	0.76
Subtotal	6.43	14.50	180.10	103.36	15.03	14.09
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.68	10.13	119.74	67.74	10.10	9.46
Containerships 3,000 - 5,000 TEU	0.91	2.07	25.65	14.73	2.14	2.00
Containerships < 3,000 TEU	0.75	1.75	22.61	13.11	1.87	1.76
General Cargo	0.39	0.91	11.73	6.80	0.97	0.91
Auto Carrier	0.33	0.77	9.96	5.78	0.83	0.77
Subtotal	7.06	15.62	189.68	108.16	15.91	14.91
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.68	10.13	119.74	67.74	10.10	9.46
Containerships 3,000 - 5,000 TEU	0.91	2.07	25.65	14.73	2.14	2.00
Containerships < 3,000 TEU	0.75	1.75	22.61	13.11	1.87	1.76
General Cargo	0.39	0.91	11.73	6.80	0.97	0.91
Auto Carrier	0.33	0.77	9.96	5.78	0.83	0.77
Subtotal	7.06	15.62	189.68	108.16	15.91	14.91

Note: (1) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-Alt4-3. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.26	0.43	3.39	1.61	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.22	0.41	3.58	1.82	0.32	0.30
Containerships < 3,000 TEU	0.26	0.57	6.80	3.87	0.57	0.54
Subtotal	0.74	1.41	13.77	7.30	1.21	1.14
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.48	0.80	6.29	2.99	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.34	0.61	5.37	2.73	0.48	0.45
Containerships < 3,000 TEU	0.26	0.58	6.94	3.95	0.59	0.55
General Cargo	0.05	0.10	1.27	0.73	0.11	0.10
Auto Carrier	0.04	0.10	1.28	0.74	0.11	0.10
Subtotal	1.17	2.19	21.15	11.14	1.87	1.75
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.99	1.63	12.83	6.10	1.20	1.13
Containerships 3,000 - 5,000 TEU	0.19	0.34	2.98	1.52	0.27	0.25
Containerships < 3,000 TEU	0.11	0.25	2.92	1.66	0.25	0.23
General Cargo	0.05	0.10	1.27	0.73	0.11	0.10
Auto Carrier	0.04	0.10	1.28	0.74	0.11	0.10
Subtotal	1.37	2.41	21.27	10.74	1.93	1.81
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.99	1.63	12.83	6.10	1.20	1.13
Containerships 3,000 - 5,000 TEU	0.19	0.34	2.98	1.52	0.27	0.25
Containerships < 3,000 TEU	0.11	0.25	2.92	1.66	0.25	0.23
General Cargo	0.05	0.10	1.27	0.73	0.11	0.10
Auto Carrier	0.04	0.10	1.28	0.74	0.11	0.10
Subtotal	1.37	2.41	21.27	10.74	1.93	1.81

Table D1.2-Alt4-4. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.37	0.36	2.07	0.50	0.25	0.23
Containerships 3,000 - 5,000 TEU	0.32	0.32	1.82	0.44	0.22	0.20
Containerships < 3,000 TEU	0.46	0.46	2.60	0.62	0.31	0.29
Subtotal	1.16	1.14	6.50	1.56	0.77	0.72
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.68	0.68	3.85	0.92	0.46	0.43
Containerships 3,000 - 5,000 TEU	0.49	0.48	2.74	0.66	0.32	0.30
Containerships < 3,000 TEU	0.47	0.47	2.65	0.64	0.31	0.29
General Cargo	0.06	0.07	0.45	0.16	0.05	0.04
Auto Carrier	0.06	0.08	0.51	0.19	0.05	0.05
Subtotal	1.76	1.78	10.20	2.57	1.20	1.12
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.40	1.38	7.85	1.88	0.93	0.87
Containerships 3,000 - 5,000 TEU	0.27	0.27	1.52	0.36	0.18	0.17
Containerships < 3,000 TEU	0.20	0.20	1.11	0.27	0.13	0.12
General Cargo	0.06	0.07	0.45	0.16	0.05	0.04
Auto Carrier	0.06	0.08	0.51	0.19	0.05	0.05
Subtotal	1.98	1.99	11.45	2.87	1.34	1.26
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.40	1.38	7.85	1.88	0.93	0.87
Containerships 3,000 - 5,000 TEU	0.27	0.27	1.52	0.36	0.18	0.17
Containerships < 3,000 TEU	0.20	0.20	1.11	0.27	0.13	0.12
General Cargo	0.06	0.07	0.45	0.16	0.05	0.04
Auto Carrier	0.06	0.08	0.51	0.19	0.05	0.05
Subtotal	1.98	1.99	11.45	2.87	1.34	1.26

Table D1.2-Alt4-5. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.13	0.10	0.59	0.07	0.08	0.07
Containerships 3,000 - 5,000 TEU	0.12	0.09	0.52	0.06	0.07	0.06
Containerships < 3,000 TEU	0.17	0.12	0.73	0.09	0.10	0.09
Subtotal	0.42	0.31	1.84	0.23	0.24	0.22
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.25	0.18	1.09	0.14	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.17	0.13	0.77	0.10	0.10	0.09
Containerships < 3,000 TEU	0.17	0.13	0.75	0.09	0.10	0.09
General Cargo	0.02	0.01	0.07	0.01	0.01	0.01
Auto Carrier	0.02	0.01	0.08	0.01	0.01	0.01
Subtotal	0.63	0.46	2.76	0.35	0.36	0.34
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Containerships 3,000 - 5,000 TEU	0.10	0.07	0.43	0.05	0.06	0.05
Containerships < 3,000 TEU	0.07	0.05	0.31	0.04	0.04	0.04
General Cargo	0.02	0.01	0.07	0.01	0.01	0.01
Auto Carrier	0.02	0.01	0.08	0.01	0.01	0.01
Subtotal	0.70	0.52	3.11	0.39	0.41	0.38
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Containerships 3,000 - 5,000 TEU	0.10	0.07	0.43	0.05	0.06	0.05
Containerships < 3,000 TEU	0.07	0.05	0.31	0.04	0.04	0.04
General Cargo	0.02	0.01	0.07	0.01	0.01	0.01
Auto Carrier	0.02	0.01	0.08	0.01	0.01	0.01
Subtotal	0.70	0.52	3.11	0.39	0.41	0.38

Table D1.2-Alt4-6. Annual Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.28	0.28	1.59	0.38	0.19	0.18
Docking	0.10	0.08	0.45	0.06	0.06	0.05
Subtotal	0.38	0.35	2.04	0.44	0.25	0.23

Table D1.2-Alt4-7. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.13	0.37	4.92	4.12	0.50	0.47
Containership < 3,000 TEU	0.17	0.47	6.31	5.28	0.64	0.60
Subtotal	0.31	0.84	11.23	9.39	1.15	1.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.04	0.12	1.61	1.35	0.16	0.15
Containerships 3,000 - 5,000 TEU	0.04	0.11	1.42	1.19	0.15	0.14
Containerships < 3,000 TEU	0.06	0.17	2.23	1.86	0.23	0.21
Subtotal	0.14	0.39	5.26	4.40	0.54	0.50
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.09	0.25	3.34	2.79	0.34	0.32
Containerships 3,000 - 5,000 TEU	0.06	0.18	2.35	1.96	0.24	0.22
Containerships < 3,000 TEU	0.07	0.18	2.44	2.05	0.25	0.23
General Cargo	0.01	0.04	0.54	0.45	0.06	0.05
Auto Carrier	0.02	0.04	0.56	0.47	0.06	0.05
Subtotal	0.25	0.69	9.24	7.73	0.94	0.88
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.19	0.51	6.80	5.69	0.69	0.65
Containerships 3,000 - 5,000 TEU	0.04	0.10	1.30	1.09	0.13	0.12
Containerships < 3,000 TEU	0.03	0.08	1.03	0.86	0.10	0.10
General Cargo	0.01	0.04	0.54	0.45	0.05	0.05
Auto Carrier	0.02	0.04	0.56	0.47	0.06	0.05
Subtotal	0.28	0.77	10.23	8.56	1.04	0.98
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.19	0.51	6.80	5.69	0.69	0.65
Containerships 3,000 - 5,000 TEU	0.04	0.10	1.30	1.09	0.13	0.12
Containerships < 3,000 TEU	0.03	0.08	1.03	0.86	0.10	0.10
General Cargo	0.01	0.04	0.54	0.45	0.05	0.05
Auto Carrier	0.02	0.04	0.56	0.47	0.06	0.05
Subtotal	0.28	0.77	10.23	8.56	1.04	0.98

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-Alt4-8. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.04	0.10	1.31	0.84	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.03	0.08	1.10	0.71	0.09	0.08
Containerships < 3,000 TEU	0.04	0.12	1.59	1.02	0.13	0.12
Subtotal	0.11	0.30	4.00	2.56	0.33	0.31
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.07	0.19	2.43	1.56	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.65	1.06	0.14	0.13
Containerships < 3,000 TEU	0.04	0.12	1.62	1.04	0.13	0.12
General Cargo	0.01	0.02	0.31	0.20	0.03	0.02
Auto Carrier	0.01	0.03	0.37	0.24	0.03	0.03
Subtotal	0.18	0.49	6.39	4.09	0.52	0.49
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.14	0.38	4.95	3.17	0.41	0.38
Containerships 3,000 - 5,000 TEU	0.03	0.07	0.92	0.59	0.08	0.07
Containerships < 3,000 TEU	0.02	0.05	0.68	0.44	0.06	0.05
General Cargo	0.01	0.02	0.31	0.20	0.03	0.02
Auto Carrier	0.01	0.03	0.37	0.24	0.03	0.03
Subtotal	0.20	0.55	7.23	4.63	0.59	0.55
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.14	0.38	4.95	3.17	0.41	0.38
Containerships 3,000 - 5,000 TEU	0.03	0.07	0.92	0.59	0.08	0.07
Containerships < 3,000 TEU	0.02	0.05	0.68	0.44	0.06	0.05
General Cargo	0.01	0.02	0.31	0.20	0.03	0.02
Auto Carrier	0.01	0.03	0.37	0.24	0.03	0.03
Subtotal	0.20	0.55	7.23	4.63	0.59	0.55

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-Alt4-9. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.06	0.16	2.08	1.33	0.17	0.16
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.65	1.06	0.14	0.13
Containerships < 3,000 TEU	0.06	0.17	2.28	1.46	0.19	0.18
Subtotal	0.17	0.46	6.01	3.85	0.49	0.46
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.11	0.29	3.86	2.47	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.07	0.19	2.48	1.59	0.20	0.19
Containerships < 3,000 TEU	0.06	0.18	2.33	1.49	0.19	0.18
General Cargo	0.01	0.03	0.36	0.23	0.03	0.03
Auto Carrier	0.01	0.03	0.46	0.29	0.04	0.04
Subtotal	0.26	0.72	9.49	6.07	0.78	0.73
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.22	0.60	7.86	5.03	0.64	0.60
Containerships 3,000 - 5,000 TEU	0.04	0.11	1.38	0.88	0.11	0.11
Containerships < 3,000 TEU	0.03	0.07	0.98	0.63	0.08	0.08
General Cargo	0.01	0.03	0.36	0.23	0.03	0.03
Auto Carrier	0.01	0.03	0.46	0.29	0.04	0.04
Subtotal	0.31	0.84	11.04	7.07	0.90	0.85
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.22	0.60	7.86	5.03	0.64	0.60
Containerships 3,000 - 5,000 TEU	0.04	0.11	1.38	0.88	0.11	0.11
Containerships < 3,000 TEU	0.03	0.07	0.98	0.63	0.08	0.08
General Cargo	0.01	0.03	0.36	0.23	0.03	0.03
Auto Carrier	0.01	0.03	0.46	0.29	0.04	0.04
Subtotal	0.31	0.84	11.04	7.07	0.90	0.85

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-Alt4-10. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.02	0.04	0.57	0.36	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.03	0.45	0.29	0.04	0.03
Containerships < 3,000 TEU	0.02	0.05	0.62	0.40	0.05	0.05
Subtotal	0.05	0.13	1.64	1.05	0.13	0.13
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.05	0.67	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.02	0.05	0.68	0.43	0.06	0.05
Containerships < 3,000 TEU	0.02	0.05	0.64	0.41	0.05	0.05
General Cargo	0.00	0.00	0.06	0.04	0.00	0.00
Auto Carrier	0.00	0.01	0.08	0.05	0.01	0.01
Subtotal	0.07	0.19	2.51	1.60	0.21	0.19
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.06	0.16	2.15	1.38	0.18	0.16
Containerships 3,000 - 5,000 TEU	0.01	0.03	0.38	0.24	0.03	0.03
Containerships < 3,000 TEU	0.01	0.02	0.27	0.17	0.02	0.02
General Cargo	0.00	0.00	0.06	0.04	0.00	0.00
Auto Carrier	0.00	0.01	0.08	0.05	0.01	0.01
Subtotal	0.08	0.22	2.93	1.88	0.24	0.22
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.06	0.16	2.15	1.38	0.18	0.16
Containerships 3,000 - 5,000 TEU	0.01	0.03	0.38	0.24	0.03	0.03
Containerships < 3,000 TEU	0.01	0.02	0.27	0.17	0.02	0.02
General Cargo	0.00	0.00	0.06	0.04	0.00	0.00
Auto Carrier	0.00	0.01	0.08	0.05	0.01	0.01
Subtotal	0.08	0.22	2.93	1.88	0.24	0.22

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2-Alt4-11. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.85	2.32	30.49	19.52	2.50	2.34
Containerships 3,000 - 5,000 TEU	0.72	1.98	26.00	16.64	2.13	1.99
Containerships < 3,000 TEU	0.69	1.91	25.06	16.04	2.05	1.92
Subtotal	2.26	6.22	81.54	52.21	6.67	6.25
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.57	4.32	56.62	36.26	4.63	4.34
Containerships 3,000 - 5,000 TEU	1.08	2.97	38.99	24.97	3.19	2.99
Containerships < 3,000 TEU	0.71	1.95	25.57	16.37	2.09	1.96
General Cargo	0.13	0.36	4.70	3.01	0.38	0.36
Auto Carrier	0.09	0.23	3.08	1.97	0.25	0.24
Subtotal	3.58	9.83	128.97	82.58	10.55	9.89
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.20	8.80	115.43	73.91	9.45	8.85
Containerships 3,000 - 5,000 TEU	0.60	1.65	21.66	13.87	1.77	1.66
Containerships < 3,000 TEU	0.30	0.82	10.74	6.88	0.88	0.82
General Cargo	0.13	0.36	4.70	3.01	0.38	0.36
Auto Carrier	0.09	0.23	3.08	1.97	0.25	0.24
Subtotal	4.31	11.86	155.61	99.63	12.73	11.93
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.20	8.80	115.43	73.91	9.45	8.85
Containerships 3,000 - 5,000 TEU	0.60	1.65	21.66	13.87	1.77	1.66
Containerships < 3,000 TEU	0.30	0.82	10.74	6.88	0.88	0.82
General Cargo	0.13	0.36	4.70	3.01	0.38	0.36
Auto Carrier	0.09	0.23	3.08	1.97	0.25	0.24
Subtotal	4.31	11.86	155.61	99.63	12.73	11.93

Table D1.2-Alt4-12. Annual Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.02	0.05	0.70	0.45	0.06	0.05
Docking	0.01	0.01	0.19	0.12	0.02	0.01
Subtotal	0.02	0.07	0.89	0.57	0.07	0.07

Table D1.2-Alt4-13. Annual Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership < 3,000 TEU	0.43	1.17	15.34	9.82	1.26	1.18
Subtotal	0.43	1.17	15.34	9.82	1.26	1.18

Table D1.2-Alt4-14. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
General Cargo	-	-	-	-	-	-
Auto Carrier	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
General Cargo	-	-	-	-	-	-
Auto Carrier	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
General Cargo	-	-	-	-	-	-
Auto Carrier	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2-Alt4-15. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.28	0.01	0.01
Containerships < 3,000 TEU	0.01	0.07	0.18	0.77	0.02	0.02
Subtotal	0.01	0.11	0.29	1.27	0.04	0.03
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.41	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.04	0.10	0.42	0.01	0.01
Containerships < 3,000 TEU	0.01	0.07	0.18	0.79	0.02	0.02
General Cargo	0.00	0.01	0.02	0.07	0.00	0.00
Auto Carrier	0.00	0.01	0.04	0.17	0.00	0.00
Subtotal	0.01	0.16	0.42	1.86	0.05	0.05
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.07	0.19	0.83	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.24	0.01	0.01
Containerships < 3,000 TEU	0.00	0.03	0.08	0.33	0.01	0.01
General Cargo	0.00	0.01	0.02	0.07	0.00	0.00
Auto Carrier	0.00	0.01	0.04	0.17	0.00	0.00
Subtotal	0.01	0.14	0.37	1.64	0.05	0.04
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.07	0.19	0.83	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.24	0.01	0.01
Containerships < 3,000 TEU	0.00	0.03	0.08	0.33	0.01	0.01
General Cargo	0.00	0.01	0.02	0.07	0.00	0.00
Auto Carrier	0.00	0.01	0.04	0.17	0.00	0.00
Subtotal	0.01	0.14	0.37	1.64	0.05	0.04

Table D1.2-Alt4-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.04	0.17	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.22	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.14	0.61	0.02	0.02
Subtotal	0.01	0.09	0.23	1.01	0.03	0.03
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.07	0.32	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.08	0.34	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.14	0.62	0.02	0.02
General Cargo	0.00	0.00	0.01	0.05	0.00	0.00
Auto Carrier	0.00	0.01	0.03	0.14	0.00	0.00
Subtotal	0.01	0.13	0.34	1.47	0.04	0.04
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.06	0.15	0.66	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Containerships < 3,000 TEU	0.00	0.02	0.06	0.26	0.01	0.01
General Cargo	0.00	0.00	0.01	0.05	0.00	0.00
Auto Carrier	0.00	0.01	0.03	0.14	0.00	0.00
Subtotal	0.01	0.11	0.30	1.30	0.04	0.03
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.06	0.15	0.66	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Containerships < 3,000 TEU	0.00	0.02	0.06	0.26	0.01	0.01
General Cargo	0.00	0.00	0.01	0.05	0.00	0.00
Auto Carrier	0.00	0.01	0.03	0.14	0.00	0.00
Subtotal	0.01	0.11	0.30	1.30	0.04	0.03

Table D1.2-Alt4-17. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.01	0.05	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.01	0.06	0.00	0.00
Containerships < 3,000 TEU	0.00	0.01	0.04	0.17	0.00	0.00
Subtotal	0.00	0.02	0.06	0.28	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships < 3,000 TEU	0.00	0.01	0.04	0.17	0.00	0.00
General Cargo	0.00	0.00	0.00	0.01	0.00	0.00
Auto Carrier	0.00	0.00	0.01	0.02	0.00	0.00
Subtotal	0.00	0.03	0.09	0.38	0.01	0.01
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.04	0.18	0.01	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.01	0.05	0.00	0.00
Containerships < 3,000 TEU	0.00	0.01	0.02	0.07	0.00	0.00
General Cargo	0.00	0.00	0.00	0.01	0.00	0.00
Auto Carrier	0.00	0.00	0.01	0.02	0.00	0.00
Subtotal	0.00	0.03	0.08	0.33	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.04	0.18	0.01	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.01	0.05	0.00	0.00
Containerships < 3,000 TEU	0.00	0.01	0.02	0.07	0.00	0.00
General Cargo	0.00	0.00	0.00	0.01	0.00	0.00
Auto Carrier	0.00	0.00	0.01	0.02	0.00	0.00
Subtotal	0.00	0.03	0.08	0.33	0.01	0.01

Table D1.2-Alt4-18. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.06	0.71	1.91	8.38	0.23	0.22
Containerships 3,000 - 5,000 TEU	0.06	0.77	2.05	8.98	0.25	0.24
Containerships < 3,000 TEU	0.10	1.25	3.34	14.67	0.41	0.38
Subtotal	0.23	2.73	7.30	32.03	0.90	0.84
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.11	1.33	3.55	15.57	0.44	0.41
Containerships 3,000 - 5,000 TEU	0.09	1.15	3.07	13.47	0.38	0.35
Containerships < 3,000 TEU	0.11	1.28	3.41	14.97	0.42	0.39
General Cargo	0.01	0.11	0.30	1.31	0.04	0.03
Auto Carrier	0.01	0.14	0.36	1.59	0.04	0.04
Subtotal	0.33	4.00	10.68	46.91	1.31	1.23
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.22	2.70	7.23	31.73	0.89	0.83
Containerships 3,000 - 5,000 TEU	0.05	0.64	1.70	7.48	0.21	0.20
Containerships < 3,000 TEU	0.04	0.54	1.43	6.29	0.18	0.16
General Cargo	0.01	0.11	0.30	1.31	0.04	0.03
Auto Carrier	0.01	0.14	0.36	1.59	0.04	0.04
Subtotal	0.34	4.12	11.03	48.40	1.35	1.27
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.22	2.70	7.23	31.73	0.89	0.83
Containerships 3,000 - 5,000 TEU	0.05	0.64	1.70	7.48	0.21	0.20
Containerships < 3,000 TEU	0.04	0.54	1.43	6.29	0.18	0.16
General Cargo	0.01	0.11	0.30	1.31	0.04	0.03
Auto Carrier	0.01	0.14	0.36	1.59	0.04	0.04
Subtotal	0.34	4.12	11.03	48.40	1.35	1.27

Table D1.2-Alt4-19. Annual Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Mode	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	0.00	0.03	0.09	0.37	0.01	0.01
Docking	0.00	0.01	0.02	0.10	0.00	0.00
Hoteling	0.06	0.77	2.05	8.98	0.25	0.24
Subtotal	0.07	0.81	2.15	9.46	0.26	0.25

Table D1.2-Alt4-20. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.17	0.88	5.50	0.00	0.22	0.21
Project Year 2015						
Subtotal	0.29	1.48	7.95	0.01	0.34	0.32
Project Year 2025						
Subtotal	0.25	1.33	5.92	0.00	0.26	0.24
Project Year 2038						
Subtotal	0.25	1.33	5.31	0.00	0.23	0.22

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-Alt4-21. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.01	0.08	0.46	0.00	0.02	0.02
Project Year 2015						
Subtotal (1)	0.02	0.14	0.72	0.00	0.03	0.03
Project Year 2025						
Subtotal (1)	0.02	0.12	0.55	0.00	0.02	0.02
Project Year 2038						
Subtotal (1)	0.02	0.12	0.50	0.00	0.02	0.02

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2-Alt4-22. Annual Vessel Emissions - Berths 136-147 Terminal Project - Alternative 4.

	Tons Per Year					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.68	465.24	55.81	52.30
Project Year 2007						
Ships - Fairway Transit (1)	4.66	10.77	136.75	80.28	11.47	10.75
Ships - Precautionary Area Transit (1)	0.86	1.82	18.06	11.13	1.58	1.48
Ships - Harbor Transit (1)	1.33	1.69	12.74	6.42	1.29	1.21
Ships - Docking (1)	0.46	0.46	3.54	1.56	0.38	0.36
Ships - Hoteling Aux. Sources	2.49	8.95	88.84	84.25	7.57	7.09
Tugboats - Cargo Vessel Assist (1)	0.19	0.96	5.97	0.00	0.25	0.23
Subtotal	9.99	24.63	265.91	183.64	22.54	21.12
Project Year 2015						
Ships - Fairway Transit (1)	6.68	15.19	189.34	111.09	15.98	14.97
Ships - Precautionary Area Transit (1)	1.36	2.84	27.95	17.09	2.45	2.29
Ships - Harbor Transit (1)	2.03	2.62	20.03	10.12	2.01	1.89
Ships - Docking (1)	0.70	0.68	5.35	2.33	0.58	0.54
Ships - Hoteling Aux. Sources	3.91	13.83	139.65	129.48	11.87	11.12
Tugboats - Cargo Vessel Assist (1)	0.31	1.62	8.68	0.01	0.37	0.35
Subtotal	14.98	36.78	391.00	270.11	33.25	31.16
Project Year 2025						
Ships - Fairway Transit (1)	7.34	16.39	199.91	116.72	16.95	15.88
Ships - Precautionary Area Transit (1)	1.58	3.10	28.88	17.01	2.57	2.41
Ships - Harbor Transit (1)	2.30	2.95	22.78	11.23	2.28	2.14
Ships - Docking (1)	0.79	0.77	6.12	2.60	0.66	0.61
Ships - Hoteling Aux. Sources	4.65	15.99	166.63	148.04	14.09	13.20
Tugboats - Cargo Vessel Assist (1)	0.27	1.45	6.47	0.00	0.28	0.26
Subtotal	16.93	40.65	430.79	295.61	36.83	34.51
Project Year 2038						
Ships - Fairway Transit (1)	7.34	16.39	199.91	116.72	16.95	15.88
Ships - Precautionary Area Transit (1)	1.58	3.10	28.88	17.01	2.57	2.41
Ships - Harbor Transit (1)	2.30	2.95	22.78	11.23	2.28	2.14
Ships - Docking (1)	0.79	0.77	6.12	2.60	0.66	0.61
Ships - Hoteling Aux. Sources	4.65	15.99	166.63	148.04	14.09	13.20
Tugboats - Cargo Vessel Assist (1)	0.27	1.45	5.81	0.00	0.26	0.24
Subtotal	16.93	40.65	430.13	295.61	36.80	34.48

Note: (1) Includes auxiliary power emissions.

Table D1.2-Alt4-23. Daily Vessel Emissions - Berths 136-147 Terminal Project - Alternative 4.

	Pounds Per Day					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.8	17.3	16.2
Ships - Docking (1)	6.3	6.2	47.1	21.0	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,145.8	1,141.8	98.2	92.0
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,593	2,549	306	287
Project Year 2007						
Ships - Fairway Transit (1)	25.6	59.0	749.3	439.9	62.9	58.9
Ships - Precautionary Area Transit (1)	4.7	10.0	98.9	61.0	8.6	8.1
Ships - Harbor Transit (1)	7.3	9.2	69.8	35.2	7.1	6.6
Ships - Docking (1)	2.5	2.5	19.4	8.5	2.1	2.0
Ships - Hoteling Aux. Sources	13.6	49.0	486.8	461.6	41.5	38.9
Tugboats - Cargo Vessel Assist (1)	1.0	5.2	32.7	0.0	1.4	1.3
Subtotal	55	135	1,457	1,006	124	116
Project Year 2015						
Ships - Fairway Transit (1)	36.6	83.3	1,037.5	608.7	87.5	82.0
Ships - Precautionary Area Transit (1)	7.5	15.5	153.2	93.6	13.4	12.6
Ships - Harbor Transit (1)	11.1	14.4	109.7	55.4	11.0	10.3
Ships - Docking (1)	3.8	3.8	29.3	12.8	3.2	3.0
Ships - Hoteling Aux. Sources	21.4	75.8	765.2	709.5	65.0	60.9
Tugboats - Cargo Vessel Assist (1)	1.7	8.9	47.5	0.0	2.0	1.9
Subtotal	82	202	2,142	1,480	182	171
Project Year 2025						
Ships - Fairway Transit (1)	40.2	89.8	1,095.4	639.6	92.9	87.0
Ships - Precautionary Area Transit (1)	8.7	17.0	158.2	93.2	14.1	13.2
Ships - Harbor Transit (1)	12.6	16.1	124.8	61.5	12.5	11.7
Ships - Docking (1)	4.3	4.2	33.5	14.2	3.6	3.4
Ships - Hoteling Aux. Sources	25.5	87.6	913.1	811.2	77.2	72.3
Tugboats - Cargo Vessel Assist (1)	1.5	8.0	35.4	0.0	1.5	1.4
Subtotal	93	223	2,360	1,620	202	189
Project Year 2038						
Ships - Fairway Transit (1)	40.2	89.8	1,095.4	639.6	92.9	87.0
Ships - Precautionary Area Transit (1)	8.7	17.0	158.2	93.2	14.1	13.2
Ships - Harbor Transit (1)	12.6	16.1	124.8	61.5	12.5	11.7
Ships - Docking (1)	4.3	4.2	33.5	14.2	3.6	3.4
Ships - Hoteling Aux. Sources	25.5	87.6	913.1	811.2	77.2	72.3
Tugboats - Cargo Vessel Assist (1)	1.5	8.0	31.8	0.0	1.4	1.3
Subtotal	93	223	2,357	1,620	202	189

Note: (1) Includes auxiliary power emissions.

Table D1.2-Alt4-24. Container Truck Trip Vehicle Miles Travelled - Berths 136-147 Terminal Project - Alternative 4.

Year	TEUs to Offsite Railyard (1)	TEUs to Local Deilveries (1)	Truck Trips to Offsite Railyard (1)	Local Truck Trips (1)	Truck Miles to Offsite Railyard (2)	Local Truck Trip Miles (3)	Composite VMT/ Truck Trip
Baseline - Year 2003	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2007	177,000	177,000	245,429	245,429	9.6	55.0	32.3
Year 2015	249,600	249,600	346,097	346,097	9.6	55.0	32.3
Year 2025	282,850	282,850	326,919	326,919	9.6	55.0	32.3
Year 2038	282,850	282,850	326,919	326,919	9.6	55.0	32.3

Notes: (1) Assumed to be 50% of Berths 136-147 annual cargo throughput.

(2) Assumes an even split to Carson ICTF (4.5 miles) and LA railyards (18 miles) = 11.3 miles/trip

(3) Average of local/external-SCAB trip lengths (20/90) that originate from/are destined to the POLA.

Table D1.2-Alt4-25. ADT Estimates - Berths 136-147 Terminal Project - Alternative 4

Cargo Type/Project Year	Truck Trips		
	Annual	ADT	Peak Daily (1)
Container			
2003 - Baseline	1,197,589	3,281	4,492
2007	490,858	1,345	1,841
2015	692,193	1,896	2,596
2025	653,837	1,791	2,453
2038	653,837	1,791	2,453
General Cargo			
2003 - Baseline		-	-
2007		-	-
2015	12,516	34	47
2025	12,516	34	47
2038	12,516	34	47
Auto			
2003 - Baseline		-	-
2007		-	-
2015	6,081	17	23
2025	6,081	17	23
2038	6,081	17	23

Note: (1) = annual trips/ 266.6 days.

Table D1.2-Alt4-26. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Alternative 4.

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	ADT	Idling Hrs/ Day	Miles/ Day
On-Terminal All Truck Types					
Year 2003 - Baseline	0.56	1.02	3,281	1,837	3,351
Year 2007	0.25	1.02	1,345	336	1,373
Year 2015	0.25	0.81	1,947	487	1,569
Year 2025	0.25	0.81	1,842	461	1,484
Year 2038	0.25	0.81	1,842	461	1,484
Off-Terminal - Container Trucks					
Year 2003 - Baseline	0.30	32.3	3,281	984	106,028
Year 2007	0.30	32.3	1,345	403	43,458
Year 2015	0.30	32.3	1,896	569	61,283
Year 2025	0.30	32.3	1,791	537	57,887
Year 2038	0.30	32.3	1,791	537	57,887
Off-Terminal - General Cargo Trucks					
Year 2003 - Baseline	0.30	15.0	-	-	-
Year 2007	0.30	15.0	-	-	-
Year 2015	0.30	15.0	34	10	514
Year 2025	0.30	15.0	34	10	514
Year 2038	0.30	15.0	34	10	514
Off-Terminal - Auto Trucks					
Year 2003 - Baseline	0.30	10.0	-	-	-
Year 2007	0.30	10.0	-	-	-
Year 2015	0.30	10.0	17	5	167
Year 2025	0.30	10.0	17	5	167
Year 2038	0.30	10.0	17	5	167

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2-Alt4-27. Daily Truck Emissions for the Berths 136-147 Terminal Project - Alternative 4.

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	10.4	37.6	78.6	0.0	1.7	1.5
Year 2007 - Driving	31.0	65.0	117.3	0.1	9.4	8.7
Subtotal - Year 2007	41.4	102.7	195.9	0.1	11.1	10.2
Year 2015 - Idling	9.7	46.9	128.6	0.1	1.1	1.0
Year 2015 - Driving	19.7	41.1	91.0	0.1	4.0	3.7
Subtotal - Year 2015	29.4	88.0	219.5	0.2	5.1	4.7
Year 2025 - Idling	7.9	42.2	125.2	0.1	0.2	0.2
Year 2025 - Driving	6.6	14.3	29.2	0.1	0.6	0.5
Subtotal - Year 2025	14.5	56.5	154.4	0.2	0.8	0.7
Year 2038 - Idling	7.8	42.1	125.4	0.1	0.1	0.1
Year 2038 - Driving	5.2	11.3	22.4	0.1	0.3	0.3
Subtotal - Year 2038	12.9	53.3	147.9	0.2	0.5	0.4
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	12.4	45.2	94.3	0.1	2.0	1.8
Year 2007 - Driving	243.3	861.3	2,398.4	1.9	109.7	100.9
Subtotal - Year 2007	255.7	906.4	2,492.7	1.9	111.7	102.7
Year 2015 - Idling	11.6	56.2	154.3	0.1	1.3	1.2
Year 2015 - Driving	116.4	709.7	2,114.1	2.7	86.3	79.4
Subtotal - Year 2015	128.0	766.0	2,268.4	2.8	87.6	80.6
Year 2025 - Idling	9.4	50.7	150.2	0.1	0.3	0.3
Year 2025 - Driving	47.5	251.3	660.0	2.6	18.4	16.9
Subtotal - Year 2025	57.0	302.0	810.2	2.7	18.6	17.1
Year 2038 - Idling	9.3	50.5	150.5	0.1	0.1	0.1
Year 2038 - Driving	60.4	198.4	504.4	2.6	12.8	11.7
Subtotal - Year 2038	69.8	248.9	654.9	2.7	12.9	11.9
Total Daily Truck Emissions by Project Year						
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	297.1	1,009.1	2,688.6	2.1	122.7	112.9
Year 2015	157.5	854.0	2,487.9	3.0	92.7	85.3
Year 2025	71.4	358.5	964.6	2.8	19.4	17.9
Year 2038	82.7	302.2	802.8	2.8	13.4	12.3

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2-Alt4-28. Road Dust Emissions for the Berths 136-147 Project - Proposed Action.

Activity	Daily Emissions (Pounds) PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.1	10.2
Year 2007	76.0	12.8
Year 2015	63.7	10.8
Year 2025	74.5	12.6
Year 2038	74.5	12.6
Off-Terminal		
Year 2003 - Baseline	83.9	14.2
Year 2007	105.9	17.9
Year 2015	177.0	29.9
Year 2025	205.0	34.6
Year 2038	205.0	34.6
Off-Terminal - General Cargo Trucks		
Year 2003 - Baseline	-	-
Year 2007	-	-
Year 2015	0.4	0.1
Year 2025	0.4	0.1
Year 2030	0.4	0.1
Off-Terminal - Auto Trucks		
Year 2003 - Baseline	-	-
Year 2007	-	-
Year 2015	0.1	0.0
Year 2025	0.1	0.0
Year 2030	0.1	0.0
Combined On/Off-Terminal		
Year 2003 - Baseline	144.0	24.3
Year 2007	181.9	30.7
Year 2015	241.2	40.8
Year 2025	280.0	47.3
Year 2038	280.0	47.3

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2-Alt4-29. Brake and Tire Wear Emissions for the Berth Terminal Project - Proposed Action.

Activity	Daily Emissions (Pounds) PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.4	0.2
Year 2007	0.5	0.2
Year 2015	0.4	0.2
Year 2025	0.5	0.2
Year 2038	0.5	0.2
Off-Terminal		
Year 2003 - Baseline	11.7	5.0
Year 2007	14.8	6.3
Year 2015	24.7	10.6
Year 2025	28.6	12.3
Year 2038	28.6	12.3
Off-Terminal - General Cargo Trucks		
Year 2003 - Baseline	-	-
Year 2007	-	-
Year 2015	0.1	0.0
Year 2025	0.1	0.0
Year 2030	0.1	0.0
Off-Terminal - Auto Trucks		
Year 2003 - Baseline	-	-
Year 2007	-	-
Year 2015	0.0	0.0
Year 2025	0.0	0.0
Year 2030	0.0	0.0
Combined On/Off-Terminal		
Year 2003 - Baseline	12.1	5.2
Year 2007	15.2	6.5
Year 2015	25.1	10.8
Year 2025	29.1	12.5
Year 2038	29.1	12.5

Table D1.2-Alt4-30. Total Non-Combustive Truck Generated PM I
for the Berths 136-147 Terminal Project - Proposed Actic

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.5	10.3
Year 2007	76.4	13.0
Year 2015	64.0	10.9
Year 2025	74.9	12.8
Year 2038	74.9	12.8
Off-Terminal		
Year 2003 - Baseline	95.5	19.2
Year 2007	120.7	24.2
Year 2015	201.7	40.5
Year 2025	233.6	46.9
Year 2038	233.6	46.9
Off-Terminal - General Cargo Trucks		
Year 2003 - Baseline	-	-
Year 2007	-	-
Year 2015	0.5	0.1
Year 2025	0.5	0.1
Year 2030	0.5	0.1
Off-Terminal - Auto Trucks		
Year 2003 - Baseline	-	-
Year 2007	-	-
Year 2015	0.2	0.0
Year 2025	0.2	0.0
Year 2030	0.2	0.0
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	197	37
Year 2015	266	52
Year 2025	309	60
Year 2038	309	60

Table D1.2-Alt4-31. Train Trip Generation Rates - Berths 136-147
Terminal Project - Alternative 4

Project Scenario/Rail Yard	Annual Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	290
Year 2015	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	409
Year 2025	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	463
Year 2038	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	463

Table D1.2-Alt4-32. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 4 Year 2007.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.62	2.73	6.58	0.00	0.31	0.28
Top Picks	0.29	0.82	3.62	0.00	0.15	0.14
Line Haul Locomotive - Road Haul	2.99	7.01	41.70	3.80	1.59	1.46
Line Haul Locomotive - Notch 1	0.22	0.52	3.10	0.28	0.12	0.11
Yard Locomotive - Switching	0.16	0.29	2.21	0.01	0.06	0.05
Subtotal	4.29	11.37	57.20	4.10	2.22	2.04
Carson or LA Railyards/Inbound						
Hostler	0.23	1.02	2.47	0.00	0.11	0.11
Top Picks	0.11	0.31	1.36	0.00	0.06	0.05
Line Haul Locomotive - Road Haul	2.99	7.01	41.70	3.80	1.59	1.46
Line Haul Locomotive - Notch 1	0.11	0.26	1.55	0.14	0.06	0.05
Subtotal	3.45	8.61	47.07	3.94	1.82	1.67
Total Tons Per Year	7.74	19.98	104.27	8.04	4.04	3.71

Table D1.2-Alt4-33. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 4 Year 2015.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.35	3.49	4.69	0.00	0.19	0.18
Top Picks	0.18	0.88	2.69	0.00	0.11	0.10
Line Haul Locomotive - Road Haul	3.63	9.89	50.69	0.04	1.34	1.23
Line Haul Locomotive - Notch 1	0.27	0.73	3.76	0.00	0.10	0.09
Yard Locomotive - Switching	0.12	0.50	1.67	0.00	0.05	0.04
Subtotal	4.56	15.49	63.51	0.05	1.78	1.64
Carson or LA Railyards/Inbound						
Hostler	0.13	1.31	1.76	0.00	0.07	0.07
Top Picks	0.07	0.33	1.01	0.00	0.04	0.04
Line Haul Locomotive - Road Haul	3.63	9.89	50.69	0.04	1.34	1.23
Line Haul Locomotive - Notch 1	0.13	0.37	1.88	0.00	0.05	0.05
Subtotal	3.97	11.89	55.34	0.04	1.50	1.38
Total Tons Per Year	8.53	27.38	118.85	0.09	3.28	3.02

Table D1.2-Alt4-34. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 4 Year 2025.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.12	3.84	1.16	0.01	0.04	0.03
Top Picks	0.08	0.92	0.48	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	3.45	11.21	50.14	0.04	1.26	1.16
Line Haul Locomotive - Notch 1	0.26	0.83	3.72	0.00	0.09	0.09
Yard Locomotive - Switching	0.14	0.56	1.89	0.00	0.05	0.05
Subtotal	4.04	17.36	57.39	0.05	1.47	1.35
Carson or LA Railyards/Inbound						
Hostler	0.05	1.44	0.43	0.00	0.01	0.01
Top Picks	0.03	0.34	0.18	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	3.45	11.21	50.14	0.04	1.26	1.16
Line Haul Locomotive - Notch 1	0.13	0.42	1.86	0.00	0.05	0.04
Subtotal	3.65	13.41	52.62	0.05	1.33	1.22
Total Tons Per Year	7.69	30.77	110.01	0.10	2.79	2.57

Table D1.2-Alt4-35. Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 4 Year 2038.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.10	3.84	0.38	0.01	0.03	0.02
Top Picks	0.07	0.92	0.26	0.00	0.02	0.02
Line Haul Locomotive - Road Haul	2.92	11.21	43.88	0.04	1.04	0.96
Line Haul Locomotive - Notch 1	0.22	0.83	3.26	0.00	0.08	0.07
Yard Locomotive - Switching	0.14	0.56	1.89	0.00	0.05	0.05
Subtotal	3.45	17.36	49.67	0.05	1.22	1.12
Carson or LA Railyards/Inbound						
Hostler	0.04	1.44	0.14	0.00	0.01	0.01
Top Picks	0.03	0.34	0.10	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	2.92	11.21	43.88	0.04	1.04	0.96
Line Haul Locomotive - Notch 1	0.11	0.42	1.63	0.00	0.04	0.04
Subtotal	3.09	13.41	45.75	0.05	1.10	1.01
Total Tons Per Year	6.54	30.77	95.42	0.10	2.32	2.14

Table D1.2-Alt4-36. Summary of Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 4.

	Tons per Year					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	1.26	4.88	14.03	0.01	0.62	0.57
Trains	6.48	15.10	90.25	8.03	3.41	3.14
Subtotal	7.74	19.98	104.27	8.04	4.04	3.71
Project Year 2015						
ICTF Equipment	0.74	6.00	10.15	0.01	0.41	0.38
Trains	7.79	21.38	108.70	0.08	2.87	2.64
Subtotal	8.53	27.38	118.85	0.09	3.28	3.02
Project Year 2025						
ICTF Equipment	0.27	6.55	2.25	0.01	0.08	0.07
Trains	7.42	24.23	107.76	0.09	2.72	2.50
Subtotal	7.69	30.77	110.01	0.10	2.79	2.57
Project Year 2038						
ICTF Equipment	0.23	6.55	0.88	0.01	0.06	0.06
Trains	6.31	24.23	94.54	0.09	2.26	2.08
Subtotal	6.54	30.77	95.42	0.10	2.32	2.14

Table D1.2-Alt4-37. Container Terminal Equipment Annual Emissions - Berths 136-147 Terminal Project
Alternative 4

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	4,166,015	3.64	16.03	38.61	0.02	1.80	1.65
Terminal Equipment - 176-250 Hp	4,994,783	3.14	8.81	38.95	0.02	1.59	1.47
Terminal Equipment - 250-500 Hp	959,676	0.42	1.48	6.54	0.00	0.23	0.21
Subtotal	10,120,473	7.21	26.32	84.09	0.05	3.62	3.33
Project Year 2015							
Terminal Equipment - 121-175 Hp	5,873,795	2.07	20.44	27.53	0.03	1.14	1.05
Terminal Equipment - 176-250 Hp	7,042,302	1.95	9.47	28.93	0.03	1.13	1.04
Terminal Equipment - 250-500 Hp	1,353,077	0.30	1.65	4.77	0.01	0.20	0.19
Subtotal	14,269,174	4.32	31.56	61.22	0.07	2.48	2.28
Project Year 2025							
Terminal Equipment - 121-175 Hp	6,655,318	0.71	22.53	6.78	0.03	0.21	0.19
Terminal Equipment - 176-250 Hp	7,979,297	0.84	9.89	5.14	0.04	0.24	0.22
Terminal Equipment - 250-500 Hp	1,533,107	0.13	1.69	0.90	0.01	0.05	0.04
Subtotal	16,167,722	1.69	34.11	12.82	0.08	0.49	0.45
Project Year 2038 (1)							
Terminal Equipment - 121-175 Hp	6,655,318	0.58	22.53	2.22	0.03	0.15	0.14
Terminal Equipment - 176-250 Hp	7,979,297	0.78	9.89	2.82	0.04	0.21	0.19
Terminal Equipment - 250-500 Hp	1,533,107	0.12	1.69	0.49	0.01	0.03	0.03
Subtotal	16,167,722	1.48	34.11	5.53	0.08	0.39	0.36

Table D1.2-Alt4-38. Break Bulk Terminal Equipment Annual Emissions - Berths 136-147 Terminal Project Alternative 4

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015							
Terminal Equipment - 121-175 Hp	293,690	0.10	1.02	1.38	0.00	0.06	0.05
Terminal Equipment - 176-250 Hp	352,115	0.10	0.47	1.45	0.00	0.06	0.05
Terminal Equipment - 250-500 Hp	67,654	0.01	0.08	0.24	0.00	0.01	0.01
Subtotal	713,459	0.22	1.58	3.06	0.00	0.12	0.11
Project Year 2025							
Terminal Equipment - 121-175 Hp	332,766	0.04	1.13	0.34	0.00	0.01	0.01
Terminal Equipment - 176-250 Hp	398,965	0.04	0.49	0.26	0.00	0.01	0.01
Terminal Equipment - 250-500 Hp	76,655	0.01	0.08	0.05	0.00	0.00	0.00
Subtotal	808,386	0.08	1.71	0.64	0.00	0.02	0.02
Project Year 2038 (1)							
Terminal Equipment - 121-175 Hp	332,766	0.03	1.13	0.11	0.00	0.01	0.01
Terminal Equipment - 176-250 Hp	398,965	0.04	0.49	0.14	0.00	0.01	0.01
Terminal Equipment - 250-500 Hp	76,655	0.01	0.08	0.02	0.00	0.00	0.00
Subtotal	808,386	0.07	1.71	0.28	0.00	0.02	0.02

Note: (1) Assumed to = 5% of the annual container terminal equipment usages.

Table D1.2-Alt4-39. Auto Terminal Source Annual Emissions - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
All Project Years							
Terminal Equipment		0.04	0.50	0.21	0.00	0.00	0.00
Autos		0.01	0.16	0.01	0.00	0.00	0.00
Subtotal		0.05	0.66	0.23	0.00	0.0013	0.0012

Note: (1) From PEI Tables 4.6 and 4.8, then factored by 30,400/256,467. Based upon 2001 emission factors.

Table D1.2-Alt4-40. Combined Terminal Source Annual Emissions - Berths 136-147 Terminal Project - Alternative 4.

Project Scenario/Equipment Horsepower		Annual Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Container Terminal Equipment		16.89	61.43	218.65	2.89	9.98	9.18
Subtotal		16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Container Terminal Equipment		7.21	26.32	84.09	0.05	3.62	3.33
Subtotal		7.21	26.32	84.09	0.05	3.62	3.33
Project Year 2015							
Container Terminal Equipment		4.32	31.56	61.22	0.07	2.48	2.28
Break Bulk Terminal Equipment		0.22	1.58	3.06	0.00	0.12	0.11
Auto Terminal Equipment		0.05	0.66	0.23	0.00	0.00	0.00
Subtotal		4.59	33.79	64.51	0.08	2.60	2.39
Project Year 2025							
Container Terminal Equipment		1.69	34.11	12.82	0.08	0.49	0.45
Break Bulk Terminal Equipment		0.08	1.71	0.64	0.00	0.02	0.02
Auto Terminal Equipment		0.05	0.66	0.23	0.00	0.00	0.00
Subtotal		1.83	36.47	13.69	0.09	0.51	0.47
Project Year 2038 (1)							
Container Terminal Equipment		1.48	34.11	5.53	0.08	0.39	0.36
Break Bulk Terminal Equipment		0.07	1.71	0.28	0.00	0.02	0.02
Auto Terminal Equipment		0.05	0.66	0.23	0.00	0.00	0.00
Subtotal		1.61	36.47	6.03	0.09	0.41	0.38

Table D1.2-Alt4-41. Annual Operational Emissions - Berths 136-147 Terminal Project Alternative 4.

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	4.66	10.77	136.75	80.28	11.47	10.75
Ships - Precautionary Area Transit (1)	0.86	1.82	18.06	11.13	1.58	1.48
Ships - Harbor Transit (1)	1.33	1.69	12.74	6.42	1.29	1.21
Ships - Docking (1)	0.46	0.46	3.54	1.56	0.38	0.36
Ships - Hoteling Aux. Sources	2.49	8.95	88.84	84.25	7.57	7.09
Tugboats - Cargo Vessel Assist (1)	0.19	0.96	5.97	0.00	0.25	0.23
Terminal Equipment	7.21	26.32	84.09	0.05	3.62	3.33
On-road Trucks	54.22	184.16	490.67	0.37	58.38	27.41
Trains	6.48	15.10	90.25	8.03	3.41	3.14
Railyard Equipment	1.26	4.88	14.03	0.01	0.62	0.57
Commuting	0.61	8.13	1.06	0.01	0.89	0.82
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	80.49	264.55	955.88	192.23	89.72	56.63
Project Year 2015						
Ships - Fairway Transit (1)	6.68	15.19	189.34	111.09	15.98	14.97
Ships - Precautionary Area Transit (1)	1.36	2.84	27.95	17.09	2.45	2.29
Ships - Harbor Transit (1)	2.03	2.62	20.03	10.12	2.01	1.89
Ships - Docking (1)	0.70	0.68	5.35	2.33	0.58	0.54
Ships - Hoteling Aux. Sources	3.91	13.83	139.65	129.48	11.87	11.12
Tugboats - Cargo Vessel Assist (1)	0.31	1.62	8.68	0.01	0.37	0.35
Terminal Equipment	4.59	33.79	64.51	0.08	2.60	2.39
On-road Trucks	28.73	155.85	454.04	0.54	65.54	24.98
Trains	7.79	21.38	108.70	0.08	2.87	2.64
Railyard Equipment	0.74	6.00	10.15	0.01	0.41	0.38
Commuting	0.60	8.19	1.06	0.01	1.14	1.05
Pier A Railyard	0.41	1.58	5.53	0.00	0.16	0.14
Project Year 2015 Total	57.85	263.57	1,034.98	270.83	105.97	62.74
Project Year 2025						
Ships - Fairway Transit (1)	7.34	16.39	199.91	116.72	16.95	15.88
Ships - Precautionary Area Transit (1)	1.58	3.10	28.88	17.01	2.57	2.41
Ships - Harbor Transit (1)	2.30	2.95	22.78	11.23	2.28	2.14
Ships - Docking (1)	0.79	0.77	6.12	2.60	0.66	0.61
Ships - Hoteling Aux. Sources	4.65	15.99	166.63	148.04	14.09	13.20
Tugboats - Cargo Vessel Assist (1)	0.27	1.45	6.47	0.00	0.28	0.26
Terminal Equipment	1.83	36.47	13.69	0.09	0.51	0.47
On-road Trucks	13.04	65.42	176.04	0.52	59.96	14.17
Trains	7.42	24.23	107.76	0.09	2.72	2.50
Railyard Equipment	0.27	6.55	2.25	0.01	0.08	0.07
Commuting	0.42	5.61	0.71	0.01	1.26	1.16
Pier A Railyard	0.40	1.58	5.45	0.00	0.15	0.14
Project Year 2025 Total	40.31	180.50	736.69	296.33	101.51	53.03
Project Year 2038 Total						
Ships - Fairway Transit (1)	7.34	16.39	199.91	116.72	16.95	15.88
Ships - Precautionary Area Transit (1)	1.58	3.10	28.88	17.01	2.57	2.41
Ships - Harbor Transit (1)	2.30	2.95	22.78	11.23	2.28	2.14
Ships - Docking (1)	0.79	0.77	6.12	2.60	0.66	0.61
Ships - Hoteling Aux. Sources	4.65	15.99	166.63	148.04	14.09	13.20
Tugboats - Cargo Vessel Assist (1)	0.27	1.45	5.81	0.00	0.26	0.24
Terminal Equipment	1.61	36.47	6.03	0.09	0.41	0.38
On-road Trucks	15.09	55.16	146.51	0.52	58.85	13.16
Trains	6.31	24.23	94.54	0.09	2.26	2.08
Railyard Equipment	0.23	6.55	0.88	0.01	0.06	0.06
Commuting	0.18	2.17	0.21	0.01	1.31	1.20
Pier A Railyard	0.40	1.58	5.39	0.00	0.15	0.14
Project Year 2038 Total	40.74	166.79	683.68	296.33	99.85	51.50

Note: (1) Includes auxiliary generator emissions.

Table D1.2-Alt4-42. Daily Operational Emissions - Berths 136-147 Terminal Project - Alternative 4 - 365 days/year all sources.

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	26	59	749	440	63	59
Ships - Precautionary Area Transit (1)	5	10	99	61	9	8
Ships - Harbor Transit (1)	7	9	70	35	7	7
Ships - Docking (1)	3	2	19	9	2	2
Ships - Hoteling Aux. Sources	14	49	487	462	41	39
Tugboats - Cargo Vessel Assist (1)	1	5	33	0	1	1
Terminal Equipment	39	144	461	0	20	18
On-road Trucks	297	1,009	2,689	2	320	150
Trains	36	83	495	44	19	17
Railyard Equipment	7	27	77	0	3	3
Commuting	3	45	6	0	5	4
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	441	1,450	5,238	1,053	492	310
Net Change from Existing Conditions	(744)	(2,627)	(8,234)	(1,670)	(530)	(521)
Net Change from NFAB Year 2007	(658)	(2,026)	(8,899)	(2,143)	(466)	(438)
Project Year 2015						
Ships - Fairway Transit (1)	37	83	1,037	609	88	82
Ships - Precautionary Area Transit (1)	7	16	153	94	13	13
Ships - Harbor Transit (1)	11	14	110	55	11	10
Ships - Docking (1)	4	4	29	13	3	3
Ships - Hoteling Aux. Sources	21	76	765	709	65	61
Tugboats - Cargo Vessel Assist (1)	2	9	48	0	2	2
Terminal Equipment	25	185	353	0	14	13
On-road Trucks	157	854	2,488	3	359	137
Trains	43	117	596	0	16	14
Railyard Equipment	4	33	56	0	2	2
Commuting	3	45	6	0	6	6
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	317	1,444	5,671	1,484	581	344
Net Change from Existing Conditions	(868)	(2,633)	(7,801)	(1,240)	(441)	(487)
Net Change from NFAB Year 2015	(111)	(587)	272	578	192	149
Project Year 2025						
Ships - Fairway Transit (1)	40	90	1,095	640	93	87
Ships - Precautionary Area Transit (1)	9	17	158	93	14	13
Ships - Harbor Transit (1)	13	16	125	62	13	12
Ships - Docking (1)	4	4	34	14	4	3
Ships - Hoteling Aux. Sources	26	88	913	811	77	72
Tugboats - Cargo Vessel Assist (1)	1	8	35	0	2	1
Terminal Equipment	10	200	75	0	3	3
On-road Trucks	71	358	965	3	329	78
Trains	41	133	590	0	15	14
Railyard Equipment	2	36	12	0	0	0
Commuting	2	31	4	0	7	6
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	221	989	4,037	1,624	556	291
Net Change from Existing Conditions	(964)	(3,088)	(9,435)	(1,100)	(466)	(541)
Net Change from NFAB Year 2025	(159)	(1,123)	(1,253)	694	197	100
Project Year 2038 Total						
Ships - Fairway Transit (1)	40	90	1,095	640	93	87
Ships - Precautionary Area Transit (1)	9	17	158	93	14	13
Ships - Harbor Transit (1)	13	16	125	62	13	12
Ships - Docking (1)	4	4	34	14	4	3
Ships - Hoteling Aux. Sources	26	88	913	811	77	72
Tugboats - Cargo Vessel Assist (1)	1	8	32	0	1	1
Terminal Equipment	12	281	46	1	3	3
On-road Trucks	83	302	803	3	322	72
Trains	35	133	518	0	12	11
Railyard Equipment	1	36	5	0	0	0
Commuting	1	12	1	0	7	7
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	227	995	3,760	1,624	548	283
Net Change from Existing Conditions	(958)	(3,082)	(9,712)	(1,100)	(474)	(548)
Net Change from NFAB Year 2038	(146)	(1,283)	(1,344)	694	191	94
SCAQMD Daily Significance Threshold	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt5-1. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alternative 5

Project Scenario/Ship Type	Annual Ship Visits	Annual Shifts	TEU Moves/ Ship Visit (1)	Hoteling Time/ Visit (Hours) (2)	Annual TEU Movements
Baseline - Year 2003					
Containerships 3,000 - 5,000 TEU	68		5,100	60.0	346,800
Containerships < 3,000 TEU	148	30	3,063	36.0	545,214
Subtotal	246				892,014
Project Year 2007					
Containerships 5,000 - 6,000 TEU	26		8,017	72.0	208,442
Containerships 3,000 - 5,000 TEU	80		5,100	60.0	408,000
Containerships < 3,000 TEU	155		3,063	36.0	474,765
Subtotal	261				1,091,207
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	55		8,017	72.0	440,935
Containerships 3,000 - 5,000 TEU	121		5,100	60.0	617,100
Containerships < 3,000 TEU	97		3,063	36.0	297,111
Subtotal	273				1,355,146
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	136		8,017	72.0	1,090,312
Containerships 3,000 - 5,000 TEU	92		5,100	60.0	469,200
Containerships < 3,000 TEU	45		3,063	36.0	137,835
Subtotal	273				1,697,347
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-		12,584	84.0	-
Containerships 5,000 - 6,000 TEU	136		8,017	72.0	1,090,312
Containerships 3,000 - 5,000 TEU	92		5,100	60.0	469,200
Containerships < 3,000 TEU	45		3,063	36.0	137,835
Subtotal	273				1,697,347

Notes: (1) Throughputs for vessels <3,000 and 3,000-5,000 TEUs based upon current and future expected operations at the Berths 136-147 terminal. Thrghput for 5,000-6,000 TEU vessels based upon average throughput of vessels >5000 TEUs at berths 121-131 in year 2001. Thrghput for 8,000-9,000 TEU vessels based upon an expected capacity of 8,800 TEUs (Samsung Heavy Industries 2003) * 1.43 (the ratio of throughput per ship visit/vessel capacity for vessels >5,000 TEUs that called at Berths 121-131 in 2001) = 12,584 TEUs/SV.

(2) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006).

Table D1.2.Alt5-2. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147
Terminal Project Alternative 5 - Vessels that Comply with Proposed VSRP.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.95	2.14	26.14	14.95	2.18	2.05
Containership < 3,000 TEU	1.21	2.82	36.51	21.18	3.03	2.83
Subtotal	2.16	4.96	62.65	36.13	5.21	4.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.09	2.29	26.22	14.69	2.23	2.09
Containerships 3,000 - 5,000 TEU	2.24	5.03	61.50	35.17	5.14	4.82
Containerships < 3,000 TEU	2.53	5.91	76.47	44.36	6.34	5.94
Subtotal	5.86	13.24	164.19	94.21	13.70	12.84
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.37	6.11	48.56	1.92	1.70	1.60
Containerships 3,000 - 5,000 TEU	4.25	8.85	86.48	3.72	2.87	2.69
Containerships < 3,000 TEU	1.90	4.43	51.53	2.33	1.66	1.56
Subtotal	9.52	19.39	186.57	7.96	6.23	5.84
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	8.34	15.12	120.08	4.75	4.21	3.94
Containerships 3,000 - 5,000 TEU	3.23	6.73	65.75	2.83	2.18	2.04
Containerships < 3,000 TEU	0.88	2.05	23.91	1.08	0.77	0.72
Subtotal	12.45	23.90	209.74	8.66	7.16	6.71
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	8.34	15.12	120.08	4.75	4.21	3.94
Containerships 3,000 - 5,000 TEU	3.23	6.73	65.75	2.83	2.18	2.04
Containerships < 3,000 TEU	0.88	2.05	23.91	1.08	0.77	0.72
Subtotal	12.45	23.90	209.74	8.66	7.16	6.71

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2.Alt5-3. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147
Terminal Project Alternative 5 - Non-Compliant Vessels with the Proposed VSRP.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	4.06	9.47	122.40	71.01	10.14	9.50
Containership < 3,000 TEU	5.28	12.33	159.36	92.45	13.21	12.37
Subtotal	9.34	21.79	281.76	163.45	23.35	21.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.39	3.25	41.95	24.34	3.48	3.26
Containerships 3,000 - 5,000 TEU	3.18	7.43	96.00	55.69	7.96	7.45
Containerships < 3,000 TEU	3.69	8.61	111.26	64.55	9.22	8.64
Subtotal	8.26	19.28	249.22	144.57	20.65	19.35
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.29	0.69	7.99	0.36	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.48	1.12	13.07	0.59	0.42	0.39
Containerships < 3,000 TEU	0.23	0.54	6.27	0.28	0.20	0.19
Subtotal	1.01	2.35	27.32	1.23	0.88	0.83
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.73	1.70	19.75	0.89	0.64	0.60
Containerships 3,000 - 5,000 TEU	0.37	0.85	9.94	0.45	0.32	0.30
Containerships < 3,000 TEU	0.11	0.25	2.91	0.13	0.09	0.09
Subtotal	1.20	2.80	32.59	1.47	1.05	0.98
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.73	1.70	19.75	0.89	0.64	0.60
Containerships 3,000 - 5,000 TEU	0.37	0.85	9.94	0.45	0.32	0.30
Containerships < 3,000 TEU	0.11	0.25	2.91	0.13	0.09	0.09
Subtotal	1.20	2.80	32.59	1.47	1.05	0.98

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2.Alt5-4. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.48	0.80	6.29	2.99	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.99	1.80	15.90	8.09	1.43	1.34
Containerships < 3,000 TEU	0.82	1.81	21.52	12.24	1.82	1.70
Subtotal	2.30	4.41	43.71	23.32	3.84	3.60
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.02	1.69	11.98	0.44	0.44	0.41
Containerships 3,000 - 5,000 TEU	1.50	2.73	21.65	0.86	0.76	0.71
Containerships < 3,000 TEU	0.51	1.13	12.12	0.54	0.40	0.37
Subtotal	3.04	5.55	45.75	1.84	1.59	1.49
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	2.53	4.17	29.63	1.10	1.08	1.01
Containerships 3,000 - 5,000 TEU	1.14	2.07	16.46	0.65	0.58	0.54
Containerships < 3,000 TEU	0.24	0.53	5.62	0.25	0.18	0.17
Subtotal	3.91	6.77	51.71	2.00	1.84	1.73
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	2.53	4.17	29.63	1.10	1.08	1.01
Containerships 3,000 - 5,000 TEU	1.14	2.07	16.46	0.65	0.58	0.54
Containerships < 3,000 TEU	0.24	0.53	5.62	0.25	0.18	0.17
Subtotal	3.91	6.77	51.71	2.00	1.84	1.73

(2) Without slide valves

Table D1.2.Alt5-5. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.68	0.68	3.85	0.92	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.44	1.42	8.11	1.94	0.96	0.90
Containerships < 3,000 TEU	1.46	1.45	8.23	1.97	0.97	0.91
Subtotal	3.59	3.55	20.19	4.83	2.39	2.24
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.45	1.43	7.34	0.14	0.34	0.32
Containerships 3,000 - 5,000 TEU	2.18	2.15	11.04	0.21	0.51	0.48
Containerships < 3,000 TEU	0.92	0.90	4.63	0.09	0.21	0.20
Subtotal	4.54	4.49	23.01	0.43	1.06	0.99
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.58	3.54	18.14	0.34	0.84	0.78
Containerships 3,000 - 5,000 TEU	1.66	1.64	8.39	0.16	0.39	0.36
Containerships < 3,000 TEU	0.42	0.42	2.15	0.04	0.10	0.09
Subtotal	5.66	5.60	28.68	0.53	1.32	1.24
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.58	3.54	18.14	0.34	0.84	0.78
Containerships 3,000 - 5,000 TEU	1.66	1.64	8.39	0.16	0.39	0.36
Containerships < 3,000 TEU	0.42	0.42	2.15	0.04	0.10	0.09
Subtotal	5.66	5.60	28.68	0.53	1.32	1.24

Table D1.2.Alt5-6. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.25	0.18	1.09	0.14	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.52	0.38	2.29	0.29	0.30	0.28
Containerships < 3,000 TEU	0.53	0.39	2.32	0.29	0.30	0.28
Subtotal	1.29	0.95	5.70	0.71	0.74	0.70
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.52	0.38	2.07	0.02	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.78	0.58	3.12	0.03	0.16	0.15
Containerships < 3,000 TEU	0.33	0.24	1.31	0.01	0.07	0.06
Subtotal	1.63	1.21	6.50	0.06	0.33	0.31
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.29	0.95	5.12	0.05	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.60	0.44	2.37	0.02	0.12	0.11
Containerships < 3,000 TEU	0.15	0.11	0.61	0.01	0.03	0.03
Subtotal	2.04	1.50	8.10	0.08	0.41	0.39
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.29	0.95	5.12	0.05	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.60	0.44	2.37	0.02	0.12	0.11
Containerships < 3,000 TEU	0.15	0.11	0.61	0.01	0.03	0.03
Subtotal	2.04	1.50	8.10	0.08	0.41	0.39

(2) Without slide valves

Table D1.2.Alt5-7. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Alternative 5 - Vessels that Comply with VSRP.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.04	0.12	1.54	0.99	0.13	0.12
Containership < 3,000 TEU	0.05	0.14	1.86	1.19	0.15	0.14
Subtotal	0.09	0.26	3.40	2.18	0.28	0.26
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.05	0.13	1.75	1.12	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.10	0.28	3.62	2.32	0.30	0.28
Containerships < 3,000 TEU	0.11	0.30	3.89	2.49	0.32	0.30
Subtotal	0.26	0.71	9.27	5.94	0.76	0.71
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.25	0.68	8.60	0.52	0.17	0.16
Containerships 3,000 - 5,000 TEU	0.36	0.98	12.39	0.75	0.25	0.23
Containerships < 3,000 TEU	0.15	0.42	5.27	0.32	0.11	0.10
Subtotal	0.76	2.08	26.26	1.60	0.53	0.49
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.61	1.68	21.27	1.29	0.43	0.40
Containerships 3,000 - 5,000 TEU	0.27	0.75	9.42	0.57	0.19	0.18
Containerships < 3,000 TEU	0.07	0.19	2.44	0.15	0.05	0.05
Subtotal	0.95	2.62	33.14	2.01	0.67	0.62
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.61	1.68	21.27	1.29	0.43	0.40
Containerships 3,000 - 5,000 TEU	0.27	0.75	9.42	0.57	0.19	0.18
Containerships < 3,000 TEU	0.07	0.19	2.44	0.15	0.05	0.05
Subtotal	0.95	2.62	33.14	2.01	0.67	0.62

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2.Alt5-8. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Alternative 5 - Non-Compliant Vessels within VSRP.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.09	0.25	3.35	2.80	0.34	0.32
Containership < 3,000 TEU	0.12	0.33	4.42	3.69	0.45	0.42
Subtotal	0.21	0.58	7.76	6.50	0.79	0.74
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.09	1.20	1.00	0.12	0.11
Containerships 3,000 - 5,000 TEU	0.07	0.20	2.63	2.20	0.27	0.25
Containerships < 3,000 TEU	0.08	0.23	3.08	2.58	0.31	0.29
Subtotal	0.19	0.52	6.91	5.78	0.70	0.66
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.02	0.24	0.01	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.01	0.03	0.38	0.02	0.01	0.01
Containerships < 3,000 TEU	0.01	0.01	0.18	0.01	0.00	0.00
Subtotal	0.02	0.06	0.80	0.05	0.02	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.05	0.59	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.29	0.02	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.08	0.01	0.00	0.00
Subtotal	0.03	0.08	0.96	0.06	0.02	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.05	0.59	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.29	0.02	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.08	0.01	0.00	0.00
Subtotal	0.03	0.08	0.96	0.06	0.02	0.02

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt5-9. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.07	0.19	2.43	1.56	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.14	0.37	4.89	3.13	0.40	0.38
Containerships < 3,000 TEU	0.14	0.38	5.03	3.22	0.41	0.39
Subtotal	0.34	0.94	12.35	7.91	1.01	0.95
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.14	0.39	4.95	0.30	0.10	0.09
Containerships 3,000 - 5,000 TEU	0.21	0.56	7.13	0.43	0.14	0.13
Containerships < 3,000 TEU	0.09	0.24	3.03	0.18	0.06	0.06
Subtotal	0.43	1.20	15.12	0.92	0.30	0.28
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.34	0.94	11.87	0.72	0.24	0.22
Containerships 3,000 - 5,000 TEU	0.16	0.45	5.71	0.35	0.11	0.11
Containerships < 3,000 TEU	0.05	0.13	1.69	0.10	0.03	0.03
Subtotal	0.55	1.53	19.27	1.17	0.39	0.36
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.34	0.94	11.87	0.72	0.24	0.22
Containerships 3,000 - 5,000 TEU	0.16	0.45	5.71	0.35	0.11	0.11
Containerships < 3,000 TEU	0.05	0.13	1.69	0.10	0.03	0.03
Subtotal	0.55	1.53	19.27	1.17	0.39	0.36

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt5-10. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	0.29	3.86	2.47	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.20	0.56	7.35	4.70	0.60	0.56
Containerships < 3,000 TEU	0.20	0.55	7.23	4.63	0.59	0.55
Subtotal	0.51	1.40	18.43	11.80	1.51	1.41
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.23	0.62	7.86	0.48	0.16	0.15
Containerships 3,000 - 5,000 TEU	0.31	0.85	10.70	0.65	0.21	0.20
Containerships < 3,000 TEU	0.13	0.34	4.36	0.26	0.09	0.08
Subtotal	0.66	1.81	22.92	1.39	0.46	0.43
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.56	1.54	19.43	1.18	0.39	0.37
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.14	0.49	0.16	0.15
Containerships < 3,000 TEU	0.06	0.16	2.02	0.12	0.04	0.04
Subtotal	0.85	2.34	29.59	1.80	0.59	0.56
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.56	1.54	19.43	1.18	0.39	0.37
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.14	0.49	0.16	0.15
Containerships < 3,000 TEU	0.06	0.16	2.02	0.12	0.04	0.04
Subtotal	0.85	2.34	29.59	1.80	0.59	0.56

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt5-11. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.05	0.67	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.06	0.15	2.01	1.29	0.16	0.15
Containerships < 3,000 TEU	0.05	0.15	1.98	1.26	0.16	0.15
Subtotal	0.14	0.38	5.04	3.23	0.41	0.39
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.06	0.17	2.15	0.13	0.04	0.04
Containerships 3,000 - 5,000 TEU	0.08	0.23	2.93	0.18	0.06	0.06
Containerships < 3,000 TEU	0.03	0.09	1.19	0.07	0.02	0.02
Subtotal	0.18	0.50	6.26	0.38	0.13	0.12
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.15	0.42	5.31	0.32	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.06	0.18	2.22	0.14	0.04	0.04
Containerships < 3,000 TEU	0.02	0.04	0.55	0.03	0.01	0.01
Subtotal	0.23	0.64	8.09	0.49	0.16	0.15
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.15	0.42	5.31	0.32	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.06	0.18	2.22	0.14	0.04	0.04
Containerships < 3,000 TEU	0.02	0.04	0.55	0.03	0.01	0.01
Subtotal	0.23	0.64	8.09	0.49	0.16	0.15

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt5-12. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.57	4.32	56.62	36.26	4.63	4.34
Containerships 3,000 - 5,000 TEU	3.20	8.81	115.54	73.98	9.46	8.86
Containerships < 3,000 TEU	2.20	6.04	79.27	50.75	6.49	6.08
Subtotal	6.97	19.17	251.43	160.99	20.58	19.28
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.66	1.83	23.08	1.40	0.46	0.43
Containerships 3,000 - 5,000 TEU	0.97	2.66	33.67	2.05	0.68	0.63
Containerships < 3,000 TEU	0.28	0.76	9.56	0.58	0.19	0.18
Subtotal	1.91	5.25	66.31	4.03	1.33	1.25
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.Alt5-13. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 5 - VSRP-Compliant.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-14. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 5 - VSRP-Non-Compliant.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-15. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.41	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.29	1.26	0.04	0.03
Containerships < 3,000 TEU	0.02	0.21	0.56	2.44	0.07	0.06
Subtotal	0.03	0.35	0.93	4.10	0.11	0.11
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.07	0.20	0.86	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.16	0.43	1.90	0.05	0.05
Containerships < 3,000 TEU	0.01	0.13	0.35	1.53	0.04	0.04
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.18	0.49	2.14	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.45	0.04	0.04
Containerships < 3,000 TEU	0.00	0.06	0.16	0.71	0.02	0.02
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.18	0.49	2.14	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.45	0.04	0.04
Containerships < 3,000 TEU	0.00	0.06	0.16	0.71	0.02	0.02
Subtotal	0.03	0.37	0.98	4.29	0.12	0.11

Table D1.2.Alt5-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.07	0.32	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.23	1.00	0.03	0.03
Containerships < 3,000 TEU	0.01	0.16	0.44	1.93	0.05	0.05
Subtotal	0.02	0.28	0.74	3.26	0.09	0.09
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.06	0.16	0.69	0.02	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.13	0.34	1.51	0.04	0.04
Containerships < 3,000 TEU	0.01	0.10	0.28	1.21	0.03	0.03
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.14	0.39	1.70	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.15	0.03	0.03
Containerships < 3,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.14	0.39	1.70	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.15	0.03	0.03
Containerships < 3,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Subtotal	0.02	0.29	0.78	3.41	0.10	0.09

Table D1.2.Alt5-17. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.12	0.53	0.01	0.01
Subtotal	0.01	0.08	0.20	0.89	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.04	0.09	0.41	0.01	0.01
Containerships < 3,000 TEU	0.00	0.03	0.08	0.33	0.01	0.01
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.04	0.11	0.46	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.03	0.15	0.00	0.00
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.04	0.11	0.46	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.03	0.15	0.00	0.00
Subtotal	0.01	0.08	0.21	0.93	0.03	0.02

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-18. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	1.33	3.55	15.57	0.44	0.41
Containerships 3,000 - 5,000 TEU	0.28	3.40	9.09	39.92	1.12	1.05
Containerships < 3,000 TEU	0.33	3.95	10.57	46.40	1.30	1.22
Subtotal	0.72	8.68	23.21	101.89	2.85	2.67
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.23	2.81	7.50	32.93	0.92	0.86
Containerships 3,000 - 5,000 TEU	0.42	5.14	13.75	60.37	1.69	1.58
Containerships < 3,000 TEU	0.20	2.47	6.61	29.04	0.81	0.76
Subtotal	0.86	10.42	27.87	122.34	3.42	3.21
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	6.94	18.55	81.43	2.28	2.14
Containerships 3,000 - 5,000 TEU	0.32	3.91	10.46	45.90	1.29	1.20
Containerships < 3,000 TEU	0.09	1.15	3.07	13.47	0.38	0.35
Subtotal	0.99	11.99	32.07	140.81	3.94	3.69
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.57	6.94	18.55	81.43	2.28	2.14
Containerships 3,000 - 5,000 TEU	0.32	3.91	10.46	45.90	1.29	1.20
Containerships < 3,000 TEU	0.09	1.15	3.07	13.47	0.38	0.35
Subtotal	0.99	11.99	32.07	140.81	3.94	3.69

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-19. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.41	2.11	13.23	0.01	0.54	0.51
Project Year 2015						
Subtotal	0.42	2.20	11.82	0.01	0.51	0.47
Project Year 2025						
Subtotal	0.42	2.20	9.80	0.01	0.43	0.40
Project Year 2038						
Subtotal	0.41	2.20	8.80	0.01	0.39	0.36

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt5-20. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.03	0.19	1.11	0.00	0.05	0.05
Project Year 2015						
Subtotal (1)	0.03	0.20	1.07	0.00	0.05	0.05
Project Year 2025						
Subtotal (1)	0.03	0.20	0.90	0.00	0.04	0.04
Project Year 2038						
Subtotal (1)	0.03	0.20	0.82	0.00	0.03	0.03

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt5-21. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147
Terminal Project Alternative 5 - Vessels that Comply with VSRP + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.65	6.11	34.72	1.92	0.73	0.69
Containerships 3,000 - 5,000 TEU	0.82	8.85	61.83	3.72	1.23	1.16
Containerships < 3,000 TEU	0.37	4.43	36.85	2.33	0.71	0.67
Subtotal	1.83	19.39	133.40	7.96	2.68	2.51
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.61	15.12	85.86	4.75	1.81	1.70
Containerships 3,000 - 5,000 TEU	0.62	6.73	47.01	2.83	0.94	0.88
Containerships < 3,000 TEU	0.17	2.05	17.09	1.08	0.33	0.31
Subtotal	2.40	23.90	149.96	8.66	3.08	2.88
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.61	15.12	85.86	4.75	1.81	1.70
Containerships 3,000 - 5,000 TEU	0.62	6.73	47.01	2.83	0.94	0.88
Containerships < 3,000 TEU	0.17	2.05	17.09	1.08	0.33	0.31
Subtotal	2.40	23.90	149.96	8.66	3.08	2.88

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt5-22. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147
Terminal Project Alternative 5 - Non-Compliant Vessels within VSRP + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.21	0.69	5.71	0.36	0.20	0.18
Containerships 3,000 - 5,000 TEU	0.34	1.12	9.34	0.59	0.32	0.30
Containerships < 3,000 TEU	0.17	0.54	4.48	0.28	0.15	0.14
Subtotal	0.72	2.35	19.54	1.23	0.67	0.63
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.52	1.70	14.12	0.89	0.49	0.45
Containerships 3,000 - 5,000 TEU	0.26	0.85	7.10	0.45	0.24	0.23
Containerships < 3,000 TEU	0.08	0.25	2.08	0.13	0.07	0.07
Subtotal	0.86	2.80	23.30	1.47	0.80	0.75
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.52	1.70	14.12	0.89	0.49	0.45
Containerships 3,000 - 5,000 TEU	0.26	0.85	7.10	0.45	0.24	0.23
Containerships < 3,000 TEU	0.08	0.25	2.08	0.13	0.07	0.07
Subtotal	0.86	2.80	23.30	1.47	0.80	0.75

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt5-23. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.20	1.69	8.57	0.44	0.19	0.18
Containerships 3,000 - 5,000 TEU	0.29	2.73	15.48	0.86	0.33	0.31
Containerships < 3,000 TEU	0.10	1.13	8.66	0.54	0.17	0.16
Subtotal	0.59	5.55	32.71	1.84	0.69	0.64
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.49	4.17	21.18	1.10	0.46	0.44
Containerships 3,000 - 5,000 TEU	0.22	2.07	11.77	0.65	0.25	0.23
Containerships < 3,000 TEU	0.05	0.53	4.02	0.25	0.08	0.07
Subtotal	0.75	6.77	36.97	2.00	0.79	0.74
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.49	4.17	21.18	1.10	0.46	0.44
Containerships 3,000 - 5,000 TEU	0.22	2.07	11.77	0.65	0.25	0.23
Containerships < 3,000 TEU	0.05	0.53	4.02	0.25	0.08	0.07
Subtotal	0.75	6.77	36.97	2.00	0.79	0.74

Table D1.2.Alt5-24. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.28	1.43	5.25	0.14	0.15	0.14
Containerships 3,000 - 5,000 TEU	0.42	2.15	7.89	0.21	0.22	0.20
Containerships < 3,000 TEU	0.18	0.90	3.31	0.09	0.09	0.09
Subtotal	0.87	4.49	16.45	0.43	0.46	0.43
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	3.54	12.97	0.34	0.36	0.34
Containerships 3,000 - 5,000 TEU	0.32	1.64	6.00	0.16	0.17	0.16
Containerships < 3,000 TEU	0.08	0.42	1.54	0.04	0.04	0.04
Subtotal	1.09	5.60	20.51	0.53	0.57	0.53
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	3.54	12.97	0.34	0.36	0.34
Containerships 3,000 - 5,000 TEU	0.32	1.64	6.00	0.16	0.17	0.16
Containerships < 3,000 TEU	0.08	0.42	1.54	0.04	0.04	0.04
Subtotal	1.09	5.60	20.51	0.53	0.57	0.53

Table D1.2.Alt5-25. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.10	0.38	1.48	0.02	0.05	0.04
Containerships 3,000 - 5,000 TEU	0.15	0.58	2.23	0.03	0.07	0.06
Containerships < 3,000 TEU	0.06	0.24	0.94	0.01	0.03	0.03
Subtotal	0.31	1.21	4.65	0.06	0.14	0.13
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.25	0.95	3.66	0.05	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.11	0.44	1.69	0.02	0.05	0.05
Containerships < 3,000 TEU	0.03	0.11	0.43	0.01	0.01	0.01
Subtotal	0.39	1.50	5.79	0.08	0.18	0.17
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.25	0.95	3.66	0.05	0.11	0.10
Containerships 3,000 - 5,000 TEU	0.11	0.44	1.69	0.02	0.05	0.05
Containerships < 3,000 TEU	0.03	0.11	0.43	0.01	0.01	0.01
Subtotal	0.39	1.50	5.79	0.08	0.18	0.17

Table D1.2.Alt5-26. Annual Vessel Emissions - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Emission Source	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.57	208.25	29.63	27.76
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.88	15.72	3.14	2.94
Ships - Docking (1)	1.16	1.13	8.59	3.81	0.93	0.87
Ships - Hoteling Aux. Sources	5.86	21.86	208.85	205.61	17.64	16.53
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.36	461.58	55.43	51.94
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.59	250.50	35.82	33.57
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Subtotal	30.93	76.23	825.87	573.44	69.98	65.57
Project Year 2015						
Ships - Fairway Transit (1)	3.33	23.88	179.99	10.84	3.89	3.65
Ships - Precautionary Area Transit (1)	1.05	7.11	48.80	7.05	1.11	1.04
Ships - Harbor Transit (1)	1.56	6.59	40.15	5.23	1.01	0.95
Ships - Docking (1)	0.50	1.78	11.12	1.37	0.29	0.28
Ships - Hoteling Aux. Sources	2.77	15.67	94.18	126.37	4.76	4.46
Tugboats - Cargo Vessel Assist (1)	0.46	2.40	12.90	0.01	0.55	0.52
Subtotal	9.67	57.44	387.13	150.87	11.62	10.89
Project Year 2025						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.45	2.40	10.71	0.01	0.47	0.44
Subtotal	9.61	62.91	372.33	167.71	11.89	11.14
Project Year 2038						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.44	2.40	9.62	0.01	0.42	0.40
Subtotal	9.61	62.91	371.24	167.71	11.85	11.10

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt5-27. Daily Vessel Emissions - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Emission Source	Pounds Per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.3	1,141.1	162.4	152.1
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.1	17.2	16.1
Ships - Docking (1)	6.3	6.2	47.0	20.9	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,144.4	1,126.6	96.6	90.6
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,591	2,529	304	285
Project Year 2007						
Ships - Fairway Transit (1)	79.8	184.9	2,353.9	1,372.6	196.3	183.9
Ships - Precautionary Area Transit (1)	14.6	31.2	312.3	193.6	27.2	25.5
Ships - Harbor Transit (1)	22.6	28.6	215.7	109.0	21.9	20.5
Ships - Docking (1)	7.9	7.7	59.9	26.5	6.5	6.1
Ships - Hoteling Aux. Sources	42.1	152.6	1,504.9	1,440.4	128.4	120.3
Tugboats - Cargo Vessel Assist (1)	2.4	12.6	78.6	0.0	3.2	3.0
Subtotal	169	418	4,525	3,142	383	359
Project Year 2015						
Ships - Fairway Transit (1)	18.2	130.8	986.3	59.4	21.3	20.0
Ships - Precautionary Area Transit (1)	5.8	39.0	267.4	38.6	6.1	5.7
Ships - Harbor Transit (1)	8.5	36.1	220.0	28.6	5.5	5.2
Ships - Docking (1)	2.7	9.8	60.9	7.5	1.6	1.5
Ships - Hoteling Aux. Sources	15.2	85.9	516.0	692.5	26.1	24.4
Tugboats - Cargo Vessel Assist (1)	2.5	13.2	70.7	0.0	3.0	2.8
Subtotal	53	315	2,121	827	64	60
Project Year 2025						
Ships - Fairway Transit (1)	23.2	161.1	1,136.3	66.8	25.0	23.4
Ships - Precautionary Area Transit (1)	7.3	47.5	313.5	40.9	7.1	6.7
Ships - Harbor Transit (1)	10.8	45.1	278.7	31.4	6.9	6.5
Ships - Docking (1)	3.5	12.2	77.2	8.2	2.0	1.9
Ships - Hoteling Aux. Sources	5.4	65.7	175.7	771.5	21.6	20.2
Tugboats - Cargo Vessel Assist (1)	2.5	13.2	58.7	0.0	2.6	2.4
Subtotal	53	345	2,040	919	65	61
Project Year 2038						
Ships - Fairway Transit (1)	23.2	161.1	1,136.3	66.8	25.0	23.4
Ships - Precautionary Area Transit (1)	7.3	47.5	313.5	40.9	7.1	6.7
Ships - Harbor Transit (1)	10.8	45.1	278.7	31.4	6.9	6.5
Ships - Docking (1)	3.5	12.2	77.2	8.2	2.0	1.9
Ships - Hoteling Aux. Sources	5.4	65.7	175.7	771.5	21.6	20.2
Tugboats - Cargo Vessel Assist (1)	2.4	13.2	52.7	0.0	2.3	2.2
Subtotal	53	345	2,034	919	65	61

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt5-28. On-Road Truck Trip Vehicle Miles Travelled - Berths 136-147 Terminal Project - Alternative 5.

Year	B136-149 Throughput (TEUs)	B136-149 ICTF Thruput (TEUs) (1)	TEUs to Offsite Railyard (2)	TEUs to Local Deilveries	Truck Trips to Offsite Railyard (2)	Local Truck Trips (3)	Truck Miles to Offsite Railyard (4)	Local Truck Trip Miles (5)	Composite VMT/ Truck Trip
Baseline - Year 2003	891,976	-	445,988	445,988	598,795	598,795	9.6	55.0	32.3
Year 2007	1,091,200	-	545,600	545,600	756,532	756,532	9.6	55.0	32.3
Year 2015	1,355,200	513,621	-	841,579	-	1,158,155	9.6	55.0	55.0
Year 2025	1,697,000	700,810	123,881	872,309	149,251	1,050,954	9.6	55.0	49.4
Year 2038	1,697,000	700,810	123,881	872,309	149,251	1,050,954	9.6	55.0	49.4

(1) Annual throughput estimates from Rail Master Plan.

(2) Based on 50/50/26.8/6.7/7.3% of Berths 136-147 annual cargo throughput for years 2003/2007/2010/2015/2030.

(3) Based on 50/50/61.4/62.1/63.4% of Berths 136-147 annual cargo throughput for years 2003/2007/2010/2015/2030.

(4) Assumes an even split to Carson ICTF (4.5 miles) and LA railyards (18 miles) = 11.3 miles/trip

(5) Average of local/external-SCAB trip lengths (20/90) that originate from/are destined to the POLA.

Table D1.2.Alt5-29. ADT Estimates - Berths 136-147 Terminal Project - Alternative 5.

Alternative/Project Year	Truck Trips		
	Annual	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,513,063	4,145	5,675
2015	1,158,155	3,173	4,344
2025	1,200,205	3,288	4,502
2038	1,200,205	3,288	4,502

(1) = annual trips/ 266.6 days.

Table D1.2.Alt5-30. On-Road Truck Mitigated Emission Factors - Berths 136-147 Terminal Project Alternatives Scenarios

Project Year/Mode - Diesel Trucks	Emission Factors (Grams/Mile)						References
	ROG	CO	NOx	SOx	DPM	PM10	
Baseline - Year 2003							
On-road Truck - Idle	17.55	41.05	96.52	0.58	2.85	2.85	(1)
On-road Truck - 10 mph	10.50	23.83	38.13	0.26	3.89	3.89	(1)
On-road Truck - 25 mph	2.25	12.68	23.38	0.17	1.57	1.57	(1)
On-road Truck - 55 mph	1.41	5.38	23.09	0.14	1.16	1.16	(1)
On-road Trucks - Composite Off-Terminal	2.74	10.87	24.74	0.17	1.64	1.64	(2)
Project Year 2007							
On-road Truck - Idle	10.55	34.44	117.47	0.07	1.28	1.28	(1)
On-road Truck - 10 mph	7.97	16.13	31.20	0.03	2.29	2.29	(1)
On-road Truck - 25 mph	1.51	7.27	18.67	0.02	0.70	0.70	(1)
On-road Truck - 55 mph	0.95	3.10	19.12	0.02	0.52	0.52	(1)
On-road Trucks - Composite Off-Terminal	1.93	6.48	20.10	0.02	0.79	0.79	(2)
Project Year 2015							
On-road Truck - Idle	7.19	30.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.15	2.50	4.13	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.94	2.31	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.01	1.62	0.02	0.10	0.10	(1)
On-road Trucks - Composite Off-Terminal	0.33	1.12	2.28	0.02	0.07	0.07	(3)
Project Year 2025							
On-road Truck - Idle	7.19	30.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.14	2.49	4.11	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.94	2.30	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.01	1.61	0.02	0.10	0.10	(1)
On-road Trucks - Composite Off-Terminal	0.32	1.12	2.27	0.02	0.07	0.07	(3)
Project Year 2038							
On-road Truck - Idle	7.19	31.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.13	2.47	4.07	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.93	2.27	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.00	1.60	0.02	0.09	0.09	(1)
On-road Trucks - Composite Off-Terminal	0.34	1.10	2.32	0.02	0.06	0.06	(4)
LNG-Powered Trucks - AllYears							
On-road Truck - Idle							

Notes: (1) From EMFAC2007 (ARB 2006). Units in grams/mile for each project year, at 60 degrees and 50% relative humidity, except idle factors in units of grams/hour. PM10 non-idle factors include combustive and tire and break wear emissions. Based on age distribution of year 2001 POLA truck fleet, as used in the PEI. Mitigation assumes that by 2012 all trucks will be model year 2007 or newer

(2) Based on 10% at 10 miles per hour (mph), 50% at 25 mph, and 40% at 55 mph. Although not included in this composite emission factor, 30 minutes of idling mode included in emission estimates for each truck trip.

(3) Same as (2), except based on 10% at 10 miles per hour (mph), 60% at 25 mph, and 30% at 55 mph.

(4) Same as (2), except based on 10% at 10 miles per hour (mph), 70% at 25 mph, and 20% at 55 mph.

Table D1.2.Alt5-31. Daily Mitigated Truck Emissions for the Berths 136-147 Terminal Project - Alternative 5

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	24.1	78.7	268.4	0.2	2.9	2.7
Year 2007 - Driving	74.4	150.5	291.2	0.3	21.4	19.7
Subtotal - Year 2007	98.5	229.2	559.6	0.4	24.3	22.4
Year 2015 - Idling	12.6	52.7	223.7	0.1	0.2	0.1
Year 2015 - Driving	6.5	14.1	23.3	0.2	0.4	0.4
Subtotal - Year 2015	19.0	66.8	247.0	0.3	0.6	0.5
Year 2025 - Idling	13.0	54.6	231.8	0.1	0.2	0.2
Year 2025 - Driving	6.7	14.5	24.0	0.2	0.4	0.4
Subtotal - Year 2025	19.7	69.1	255.8	0.3	0.6	0.5
Year 2038 - Idling	13.0	56.4	231.8	0.1	0.2	0.2
Year 2038 - Driving	6.6	14.4	23.8	0.2	0.4	0.4
Subtotal - Year 2038	19.7	70.8	255.6	0.3	0.6	0.5
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	28.9	94.4	322.1	0.2	3.5	3.2
Year 2007 - Driving	571.0	1,915.3	5,937.0	5.7	233.4	214.7
Subtotal - Year 2007	599.9	2,009.8	6,259.1	5.9	236.9	217.9
Year 2015 - Idling	15.1	63.2	268.4	0.1	0.2	0.2
Year 2015 - Driving	125.1	430.9	878.8	7.6	26.6	24.4
Subtotal - Year 2015	140.2	494.2	1,147.2	7.8	26.7	24.6
Year 2025 - Idling	15.6	65.5	278.2	0.1	0.2	0.2
Year 2025 - Driving	115.9	399.4	813.5	7.1	24.7	22.7
Subtotal - Year 2025	131.5	464.9	1,091.6	7.2	24.9	22.9
Year 2038 - Idling	15.6	67.7	278.2	0.1	0.2	0.2
Year 2038 - Driving	120.1	394.0	829.5	7.2	22.9	21.1
Subtotal - Year 2038	135.7	461.7	1,107.7	7.4	23.1	21.3
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	698.4	2,239.0	6,818.8	6.3	261.2	240.3
Year 2015	159.2	560.9	1,394.2	8.0	27.3	25.1
Year 2025	151.2	534.1	1,347.5	7.5	25.5	23.4
Year 2038	155.4	532.6	1,363.3	7.7	23.7	21.8

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.Alt5-32. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Alternative 5

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	ADT	Idling Hrs/ Day	Miles/ Day
On-Terminal					
Year 2003 - Baseline	0.56	1.02	3,281	1,837	3,351
Year 2007	0.25	1.02	4,145	1,036	4,233
Year 2015	0.25	0.81	3,173	793	2,556
Year 2025	0.25	0.81	3,288	822	2,649
Year 2038	0.25	0.81	3,288	822	2,649
Off-Terminal					
Year 2003 - Baseline	0.30	32.3	3,281	984	106,028
Year 2007	0.30	32.3	4,145	1,244	133,958
Year 2015	0.30	55.0	3,173	952	174,517
Year 2025	0.30	49.4	3,288	986	162,301
Year 2038	0.30	49.4	3,288	986	162,301

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2.Alt5-33. Road Dust Emissions for the Berths 136-147 Project - Alternative 5.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.13	10.16
Year 2007	75.97	12.84
Year 2015	45.87	7.75
Year 2025	47.54	8.03
Year 2038	47.54	8.03
Off-Terminal		
Year 2003 - Baseline	83.85	14.17
Year 2007	105.94	17.90
Year 2015	138.02	23.33
Year 2025	128.36	21.69
Year 2038	128.36	21.69
Combined On/Off-Terminal		
Year 2003 - Baseline	143.98	24.33
Year 2007	181.91	30.74
Year 2015	183.89	31.08
Year 2025	175.90	29.73
Year 2038	175.90	29.73

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.Alt5-34. Brake and Tire Wear Emissions for the Berth Terminal Project - Alternative 5.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.37	0.16
Year 2007	0.47	0.20
Year 2015	0.28	0.12
Year 2025	0.29	0.13
Year 2038	0.29	0.13
Off-Terminal		
Year 2003 - Baseline	11.69	5.01
Year 2007	14.77	6.33
Year 2015	19.24	8.25
Year 2025	17.89	7.67
Year 2038	17.89	7.67
Combined On/Off-Terminal		
Year 2003 - Baseline	12.06	5.17
Year 2007	15.23	6.53
Year 2015	19.52	8.37
Year 2025	18.18	7.80
Year 2038	18.18	7.80

Table D1.2.Alt5-35. Total Non-Combustive Truck Generated PM for the Berths 136-147 Terminal Project - Alternative 5.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.50	10.32
Year 2007	76.43	13.04
Year 2015	46.15	7.87
Year 2025	47.83	8.16
Year 2038	47.83	8.16
Off-Terminal		
Year 2003 - Baseline	95.54	19.19
Year 2007	120.71	24.24
Year 2015	157.26	31.58
Year 2025	146.25	29.37
Year 2038	146.25	29.37
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	197	37
Year 2015	203	39
Year 2025	194	38
Year 2038	194	38

Table D1.2.Alt5-36. Train Trip Generation Rates - Berths 136-147
Terminal Project - Alternative 5

Project Scenario/Rail Yard	Mitigated Annual Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	731
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	894
Year 2015	
To/from Berths 136-147 ICTF	841
To/from Carson/LA Rail Yards	-
Year 2025	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	203
Year 2038	
To/from Berths 136-147 ICTF	1,148
To/from Carson/LA Rail Yards	203

Table D1.2.Alt5-37. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 5 Year 2007.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.92	8.42	20.29	0.01	0.94	0.87
Top Picks	0.90	2.52	11.15	0.01	0.46	0.42
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.68	1.61	9.54	0.87	0.36	0.33
Yard Locomotive - Switching	0.50	0.89	6.80	0.04	0.17	0.16
Subtotal	13.22	35.06	176.32	12.64	6.84	6.29
Carson or LA Railyards/Inbound						
Hostler	0.72	3.16	7.61	0.00	0.35	0.33
Top Picks	0.34	0.95	4.18	0.00	0.17	0.16
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.34	0.80	4.77	0.43	0.18	0.17
Subtotal	10.62	26.53	145.10	12.15	5.60	5.16
Total Tons Per Year	23.85	61.59	321.42	24.79	12.44	11.45

Table D1.2.Alt5-38. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 5 Year 2015.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.68	8.41	0.68	0.01	0.03	0.03
Top Picks	0.45	3.86	0.45	0.01	0.02	0.02
Line Haul Locomotive - Road Haul	8.09	22.03	112.91	0.08	2.97	2.74
Line Haul Locomotive - Notch 1	0.28	0.76	3.87	0.00	0.10	0.09
Yard Locomotive - Switching	0.24	0.97	0.33	0.00	0.01	0.01
Subtotal	9.73	36.02	118.24	0.10	3.14	2.89
Berths 136-147/Inbound						
Hostler	0.26	3.15	0.26	0.00	0.01	0.01
Top Picks	0.17	1.45	0.17	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	8.09	22.03	112.91	0.08	2.97	2.74
Line Haul Locomotive - Notch 1	0.28	0.76	3.87	0.00	0.10	0.09
Subtotal	8.79	27.39	117.20	0.09	3.10	2.85
Carson or LA Railyards/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Total Tons Per Year	18.52	63.41	235.44	0.19	6.24	5.74

Table D1.2.Alt5-39. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 5 Year 2025.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	11.43	49.15	141.07	0.14	3.59	3.30
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Subtotal	10.14	37.37	139.67	0.12	3.53	3.24
Carson or LA Railyards/Outbound						
Hostler	0.16	2.03	0.16	0.00	0.01	0.01
Top Picks	0.11	0.93	0.11	0.00	0.01	0.00
Line Haul Locomotive - Road Haul	1.51	4.91	21.96	0.02	0.55	0.51
Line Haul Locomotive - Notch 1	0.11	0.36	1.63	0.00	0.04	0.04
Yard Locomotive - Switching	0.06	0.25	0.08	0.00	0.00	0.00
Subtotal	1.96	8.48	23.95	0.02	0.61	0.56
Carson or LA Railyards/Inbound						
Hostler	0.06	0.76	0.06	0.00	0.00	0.00
Top Picks	0.04	0.35	0.04	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.51	4.91	21.96	0.02	0.55	0.51
Line Haul Locomotive - Notch 1	0.06	0.18	0.82	0.00	0.02	0.02
Subtotal	1.67	6.20	22.88	0.02	0.58	0.53
Total Tons Per Year	25.19	101.19	327.57	0.31	8.30	7.64

Table D1.2.Alt5-40. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 5 Year 2038.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	9.97	49.15	123.70	0.14	2.99	2.75
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Subtotal	8.68	37.37	122.29	0.12	2.93	2.69
Carson or LA Railyards/Outbound						
Hostler	0.16	2.03	0.16	0.00	0.01	0.01
Top Picks	0.11	0.93	0.11	0.00	0.01	0.00
Line Haul Locomotive - Road Haul	1.28	4.91	19.22	0.02	0.46	0.42
Line Haul Locomotive - Notch 1	0.09	0.36	1.43	0.00	0.03	0.03
Yard Locomotive - Switching	0.06	0.25	0.08	0.00	0.00	0.00
Subtotal	1.71	8.48	21.00	0.02	0.51	0.47
Carson or LA Railyards/Inbound						
Hostler	0.06	0.76	0.06	0.00	0.00	0.00
Top Picks	0.04	0.35	0.04	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.28	4.91	19.22	0.02	0.46	0.42
Line Haul Locomotive - Notch 1	0.05	0.18	0.71	0.00	0.02	0.02
Subtotal	1.43	6.20	20.03	0.02	0.48	0.44
Total Tons Per Year	21.78	101.19	287.03	0.31	6.90	6.35

Table D1.2.Alt5-41. Summary of Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Subtotal	23.85	61.59	321.42	24.79	12.44	11.45
Project Year 2015						
ICTF Equipment	1.55	16.86	1.55	0.02	0.08	0.07
Trains	16.97	46.54	233.89	0.17	6.16	5.67
Subtotal	18.52	63.41	235.44	0.19	6.24	5.74
Project Year 2025						
ICTF Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Trains	22.71	74.11	325.08	0.27	8.18	7.52
Subtotal	25.19	101.19	327.57	0.31	8.30	7.64
Project Year 2038						
ICTF Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Trains	19.29	74.11	284.54	0.27	6.78	6.24
Subtotal	21.78	101.19	287.03	0.31	6.90	6.35

Table D1.2.Alt5-42. Mitigated Annual Train Emissions from the Relocated Pier A Rail Yard - Berths 136-147 Terminal Project - Alternative 5.

Project Year/Emission Source	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Line Haul Locomotive	0.05	0.10	0.85	0.06	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.37	3.54	0.02	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.60	5.66	0.04	0.14	0.13
Subtotal	0.73	1.07	10.06	0.11	0.26	0.24
Project Year 2007						
Line Haul Locomotive	0.05	0.12	0.70	0.06	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.46	3.53	0.02	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.74	5.64	0.03	0.15	0.13
Subtotal	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2015						
Line Haul Locomotive	0.04	0.12	0.60	0.00	0.02	0.01
Yard Locomotive - Low UsageTrip	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.41	1.58	1.09	0.00	0.03	0.03
Project Year 2025						
Line Haul Locomotive	0.04	0.12	0.53	0.00	0.01	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.40	1.58	1.02	0.00	0.03	0.03
Project Year 2038						
Line Haul Locomotive	0.03	0.12	0.46	0.00	0.01	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.40	1.58	0.95	0.00	0.02	0.02

Note: (1) Yard locomotive NOx/PM emissions reduced 90% from Tier 2 standard levels.

Table D1.2.Alt5-43. Terminal Equipment Annual Mitigated Emissions - Berths 136-147 Terminal Project Alternative 5.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons) (1)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	12,837,231	11.23	49.38	118.97	0.06	5.53	5.09
Terminal Equipment - 176-250 Hp	15,391,012	9.67	27.15	120.01	0.07	4.91	4.52
Terminal Equipment - 250-500 Hp	2,957,161	1.31	4.56	20.15	0.01	0.71	0.66
Subtotal	31,185,404	22.21	81.10	259.13	0.15	11.15	10.26
Project Year 2015							
Terminal Equipment - 121-175 Hp	15,942,275	5.27	55.48	5.27	0.08	0.26	0.24
Terminal Equipment - 176-250 Hp	19,113,760	5.31	25.70	6.32	0.09	0.32	0.29
Terminal Equipment - 250-500 Hp	3,672,433	0.81	4.47	1.21	0.02	0.06	0.06
Subtotal	38,728,468	11.39	85.66	12.81	0.19	0.64	0.59
Project Year 2025							
Terminal Equipment - 121-175 Hp	19,968,013	2.14	67.59	6.60	0.10	0.33	0.30
Terminal Equipment - 176-250 Hp	23,940,360	2.53	29.69	7.92	0.12	0.40	0.36
Terminal Equipment - 250-500 Hp	4,599,795	0.40	5.07	1.52	0.02	0.08	0.07
Subtotal	48,508,168	5.07	102.34	16.04	0.24	0.80	0.74
Project Year 2038 (2)							
Terminal Equipment - 121-175 Hp	19,968,013	2.14	67.59	6.60	0.10	0.33	0.30
Terminal Equipment - 176-250 Hp	23,940,360	2.53	29.69	7.92	0.12	0.40	0.36
Terminal Equipment - 250-500 Hp	4,599,795	0.40	5.07	1.52	0.02	0.08	0.07
Subtotal	48,508,168	5.07	102.34	16.04	0.24	0.80	0.74

Note: (1) Mitigations begin in year 2010 and are complete by 2015.

(2) In years 2025 & 2038, Hp-Hrs increased an additional 23% to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

Table D1.2.Alt5-44. Mitigated Annual Operational Emissions - Berths 136-147 Terminal Project Alternative 5.

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.59	250.50	35.82	33.57
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Terminal Equipment	22.21	81.10	259.13	0.15	11.15	10.26
On-road Trucks	127.46	408.62	1,244.42	1.16	83.65	50.66
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Railyard Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Commuting	1.90	25.50	3.33	0.02	2.78	2.56
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	207.07	654.34	2,664.04	599.68	180.27	140.74
Project Year 2015						
Ships - Fairway Transit (1)	3.33	23.88	179.99	10.84	3.89	3.65
Ships - Precautionary Area Transit (1)	1.05	7.11	48.80	7.05	1.11	1.04
Ships - Harbor Transit (1)	1.56	6.59	40.15	5.23	1.01	0.95
Ships - Docking (1)	0.50	1.78	11.12	1.37	0.29	0.28
Ships - Hoteling Aux. Sources	2.77	15.67	94.18	126.37	4.76	4.46
Tugboats - Cargo Vessel Assist (1)	0.46	2.40	12.90	0.01	0.55	0.52
Terminal Equipment	11.39	85.66	12.81	0.19	0.64	0.59
On-road Trucks	29.06	102.37	254.44	1.47	42.10	11.78
Trains	16.97	46.54	233.89	0.17	6.16	5.67
Railyard Equipment	1.55	16.86	1.55	0.02	0.08	0.07
Commuting	2.16	29.46	3.80	0.02	4.10	3.77
Pier A Railyard	0.41	1.58	5.53	0.00	0.03	0.03
Project Year 2015 Total	71.20	339.90	899.15	152.74	64.73	32.80
Project Year 2025						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.45	2.40	10.71	0.01	0.47	0.44
Terminal Equipment	5.07	102.34	16.04	0.24	0.80	0.74
On-road Trucks	27.60	97.47	245.91	1.37	40.07	11.12
Trains	22.71	74.11	325.08	0.27	8.18	7.52
Railyard Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Commuting	1.48	19.87	2.50	0.03	4.46	4.10
Pier A Railyard	0.40	1.58	1.02	0.00	0.03	0.03
Project Year 2025 Total	69.35	385.36	965.37	169.66	65.55	34.77
Project Year 2038						
Ships - Fairway Transit (1)	4.24	29.40	207.37	12.20	4.56	4.28
Ships - Precautionary Area Transit (1)	1.34	8.66	57.22	7.46	1.30	1.22
Ships - Harbor Transit (1)	1.97	8.23	50.87	5.74	1.26	1.18
Ships - Docking (1)	0.63	2.22	14.09	1.50	0.37	0.34
Ships - Hoteling Aux. Sources	0.99	11.99	32.07	140.81	3.94	3.69
Tugboats - Cargo Vessel Assist (1)	0.44	2.40	9.62	0.01	0.42	0.40
Terminal Equipment	5.07	102.34	16.04	0.24	0.80	0.74
On-road Trucks	28.36	97.19	248.80	1.40	39.75	10.83
Trains	19.29	74.11	284.54	0.27	6.78	6.24
Railyard Equipment	2.49	27.08	2.49	0.04	0.12	0.11
Commuting	0.76	9.15	0.87	0.03	5.51	5.07
Pier A Railyard	0.40	1.58	0.95	0.00	0.02	0.02
Project Year 2038 Total	65.96	374.36	924.93	169.69	64.84	34.11

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt5-45. Mitigated Average Daily Operational Emissions - Berths 136-147 Terminal Project
Alternative 5 - 365 days/year all sources.

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	80	185	2,354	1,373	196	184
Ships - Precautionary Area Transit (1)	15	31	312	194	27	26
Ships - Harbor Transit (1)	23	29	216	109	22	20
Ships - Docking (1)	8	8	60	26	6	6
Ships - Hoteling Aux. Sources	42	153	1,505	1,440	128	120
Tugboats - Cargo Vessel Assist (1)	2	13	79	0	3	3
Terminal Equipment	122	444	1,420	1	61	56
On-road Trucks	698	2,239	6,819	6	458	278
Trains	109	255	1,524	136	58	53
Railyard Equipment	21	82	237	0	11	10
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,135	3,585	14,597	3,286	988	771
Net Change from Existing Conditions	(50)	(491)	1,126	562	(34)	(60)
Net Change from NFAB Year 2007	36	110	461	89	30	23
Project Year 2015						
Ships - Fairway Transit (1)	18	131	986	59	21	20
Ships - Precautionary Area Transit (1)	6	39	267	39	6	6
Ships - Harbor Transit (1)	9	36	220	29	6	5
Ships - Docking (1)	3	10	61	8	2	2
Ships - Hoteling Aux. Sources	15	86	516	692	26	24
Tugboats - Cargo Vessel Assist (1)	3	13	71	0	3	3
Terminal Equipment	62	469	70	1	4	3
On-road Trucks	159	561	1,394	8	231	65
Trains	93	255	1,282	1	34	31
Railyard Equipment	8	92	8	0	0	0
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	0	0
Project Year 2015 Total	390	1,862	4,927	837	355	180
Net Change from Existing Conditions	(795)	(2,214)	(8,545)	(1,887)	(667)	(651)
Net Change from NFAB Year 2015	(38)	(169)	(472)	(69)	(34)	(15)
Project Year 2025						
Ships - Fairway Transit (1)	23	161	1,136	67	25	23
Ships - Precautionary Area Transit (1)	7	47	314	41	7	7
Ships - Harbor Transit (1)	11	45	279	31	7	6
Ships - Docking (1)	3	12	77	8	2	2
Ships - Hoteling Aux. Sources	5	66	176	772	22	20
Tugboats - Cargo Vessel Assist (1)	2	13	59	0	3	2
Terminal Equipment	28	561	88	1	4	4
On-road Trucks	151	534	1,347	8	220	61
Trains	124	406	1,781	1	45	41
Railyard Equipment	14	148	14	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	6	0	0	0
Project Year 202 Total	380	2,112	5,290	930	359	191
Net Change from Existing Conditions	(805)	(1,965)	(8,182)	(1,794)	(663)	(641)
Net Change from NFAB Year 2025	-	-	-	-	-	-
Project Year 2038 Total						
Ships - Fairway Transit (1)	23	161	1,136	67	25	23
Ships - Precautionary Area Transit (1)	7	47	314	41	7	7
Ships - Harbor Transit (1)	11	45	279	31	7	6
Ships - Docking (1)	3	12	77	8	2	2
Ships - Hoteling Aux. Sources	5	66	176	772	22	20
Tugboats - Cargo Vessel Assist (1)	2	13	53	0	2	2
Terminal Equipment	39	787	123	2	6	6
On-road Trucks	155	533	1,363	8	218	59
Trains	106	406	1,559	1	37	34
Railyard Equipment	14	148	14	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	5	0	0	0
Project Year 2038 Total	373	2,278	5,104	930	357	189
Net Change from Existing Conditions	(812)	(1,799)	(8,368)	(1,793)	(665)	(643)
Net Change from NFAB Year 2038	-	-	-	-	-	-
SCAQMD Daily Significance Thresholds	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2.PPMit-1. Proposed Phase-In Mitigations Implementation Schedule - Berths 136-147 Terminal Projec

	Year/Compliance Rate Fraction of All Ship Visits				
Mitigation Measure	2007	2015	2025	2020	2038
VSRP	0.50	0.95	0.95	0.95	0.95
Non-VSRP	0.50	0.05	0.05	0.05	0.05
AMP		0.80	1.00	1.00	1.00
Non-AMP	1.00	0.20	-	-	-
Auxiliary Engines - 2.7% S RO	0.66	-	-	-	-
Auxiliary Engines - 0.78% S MGO	0.34	-			
Auxiliary Engines - 0.2% S MGO		1.00	1.00	1.00	1.00
OGV Main Engines - 2.7% S RO	1.00	-	-	-	-
OGV Main Engines - 0.5% S MGO					
OGV Main Engines - 0.2% S MGO		1.00	1.00	1.00	1.00
Slide Valves	-	0.95	0.95	0.95	0.95
Non-Slide Valves	1.00	0.05	0.05	0.05	0.05
Annex VI Compliant Vessels		0.35	0.75	0.90	0.90
Non-Annex VI Vessels	1.00	0.65	0.25	0.10	0.10

Table D1.2.PPMit-2. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - Vessels that Comply with Proposed VSRP.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.95	2.14	26.14	14.95	2.18	2.05
Containership < 3,000 TEU	1.21	2.82	36.51	21.18	3.03	2.83
Subtotal	2.16	4.96	62.65	36.13	5.21	4.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.09	2.29	26.22	14.69	2.23	2.09
Containerships 3,000 - 5,000 TEU	2.24	5.03	61.50	35.17	5.14	4.82
Containerships < 3,000 TEU	2.53	5.91	76.47	44.36	6.34	5.94
Subtotal	5.86	13.24	164.19	94.21	13.70	12.84
Project Year 2015						
Containerships 8,000 - 9,000 TEU	3.77	5.90	39.25	1.39	1.47	1.38
Containerships 5,000 - 6,000 TEU	4.42	8.00	63.57	2.52	2.23	2.09
Containerships 3,000 - 5,000 TEU	2.35	4.90	47.88	2.06	1.59	1.49
Containerships < 3,000 TEU	1.92	4.47	52.06	2.35	1.68	1.57
Subtotal	12.45	23.27	202.76	8.32	6.97	6.53
Project Year 2025						
Containerships 8,000 - 9,000 TEU	7.09	11.09	73.82	2.62	2.77	2.60
Containerships 5,000 - 6,000 TEU	6.81	12.34	98.00	3.88	3.44	3.22
Containerships 3,000 - 5,000 TEU	2.32	4.83	47.17	2.03	1.56	1.47
Containerships < 3,000 TEU	1.08	2.51	29.22	1.32	0.94	0.88
Subtotal	17.29	30.77	248.21	9.85	8.71	8.16
Project Year 2038						
Containerships 8,000 - 9,000 TEU	7.09	11.09	73.82	2.62	2.77	2.60
Containerships 5,000 - 6,000 TEU	6.81	12.34	98.00	3.88	3.44	3.22
Containerships 3,000 - 5,000 TEU	2.32	4.83	47.17	2.03	1.56	1.47
Containerships < 3,000 TEU	1.08	2.51	29.22	1.32	0.94	0.88
Subtotal	17.29	30.77	248.21	9.85	8.71	8.16

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2.PPMit-3. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - Non-Compliant Vessels with the Proposed VSRP.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	4.06	9.47	122.40	71.01	10.14	9.50
Containership < 3,000 TEU	5.28	12.33	159.36	92.45	13.21	12.37
Subtotal	9.34	21.79	281.76	163.45	23.35	21.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.39	3.25	41.95	24.34	3.48	3.26
Containerships 3,000 - 5,000 TEU	3.18	7.43	96.00	55.69	7.96	7.45
Containerships < 3,000 TEU	3.69	8.61	111.26	64.55	9.22	8.64
Subtotal	8.26	19.28	249.22	144.57	20.65	19.35
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.26	0.60	6.98	0.31	0.22	0.21
Containerships 5,000 - 6,000 TEU	0.39	0.90	10.46	0.47	0.34	0.32
Containerships 3,000 - 5,000 TEU	0.27	0.62	7.24	0.33	0.23	0.22
Containerships < 3,000 TEU	0.23	0.54	6.33	0.29	0.20	0.19
Subtotal	1.14	2.66	31.00	1.40	1.00	0.94
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.48	1.13	13.13	0.59	0.42	0.40
Containerships 5,000 - 6,000 TEU	0.59	1.39	16.12	0.73	0.52	0.49
Containerships 3,000 - 5,000 TEU	0.26	0.61	7.13	0.32	0.23	0.22
Containerships < 3,000 TEU	0.13	0.31	3.55	0.16	0.11	0.11
Subtotal	1.47	3.43	39.93	1.80	1.29	1.21
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.48	1.13	13.13	0.59	0.42	0.40
Containerships 5,000 - 6,000 TEU	0.59	1.39	16.12	0.73	0.52	0.49
Containerships 3,000 - 5,000 TEU	0.26	0.61	7.13	0.32	0.23	0.22
Containerships < 3,000 TEU	0.13	0.31	3.55	0.16	0.11	0.11
Subtotal	1.47	3.43	39.93	1.80	1.29	1.21

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2.PPMit-4. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.48	0.80	6.29	2.99	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.99	1.80	15.90	8.09	1.43	1.34
Containerships < 3,000 TEU	0.82	1.81	21.52	12.24	1.82	1.70
Subtotal	2.30	4.41	43.71	23.32	3.84	3.60
Project Year 2015						
Containerships 8,000 - 9,000 TEU	1.27	1.75	10.33	0.32	0.41	0.39
Containerships 5,000 - 6,000 TEU	1.34	2.21	15.68	0.58	0.57	0.54
Containerships 3,000 - 5,000 TEU	0.83	1.51	11.99	0.47	0.42	0.39
Containerships < 3,000 TEU	0.52	1.15	12.24	0.54	0.40	0.38
Subtotal	3.96	6.61	50.24	1.92	1.81	1.69
Project Year 2025						
Containerships 8,000 - 9,000 TEU	2.38	3.29	19.43	0.60	0.77	0.72
Containerships 5,000 - 6,000 TEU	2.07	3.41	24.18	0.89	0.88	0.83
Containerships 3,000 - 5,000 TEU	0.82	1.49	11.81	0.47	0.41	0.39
Containerships < 3,000 TEU	0.29	0.64	6.87	0.30	0.23	0.21
Subtotal	5.56	8.83	62.29	2.27	2.29	2.15
Project Year 2038						
Containerships 8,000 - 9,000 TEU	2.38	3.29	19.43	0.60	0.77	0.72
Containerships 5,000 - 6,000 TEU	2.07	3.41	24.18	0.89	0.88	0.83
Containerships 3,000 - 5,000 TEU	0.82	1.49	11.81	0.47	0.41	0.39
Containerships < 3,000 TEU	0.29	0.64	6.87	0.30	0.23	0.21
Subtotal	5.56	8.83	62.29	2.27	2.29	2.15

(2) Without slide valves

Table D1.2.PPMit-5. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.68	0.68	3.85	0.92	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.44	1.42	8.11	1.94	0.96	0.90
Containerships < 3,000 TEU	1.46	1.45	8.23	1.97	0.97	0.91
Subtotal	3.59	3.55	20.19	4.83	2.39	2.24
Project Year 2015						
Containerships 8,000 - 9,000 TEU	1.39	1.37	7.04	0.13	0.32	0.30
Containerships 5,000 - 6,000 TEU	1.90	1.87	9.60	0.18	0.44	0.41
Containerships 3,000 - 5,000 TEU	1.21	1.19	6.11	0.11	0.28	0.26
Containerships < 3,000 TEU	0.92	0.91	4.68	0.09	0.22	0.20
Subtotal	5.42	5.35	27.44	0.51	1.26	1.18
Project Year 2025						
Containerships 8,000 - 9,000 TEU	2.61	2.58	13.23	0.25	0.61	0.57
Containerships 5,000 - 6,000 TEU	2.92	2.89	14.81	0.28	0.68	0.64
Containerships 3,000 - 5,000 TEU	1.19	1.17	6.02	0.11	0.28	0.26
Containerships < 3,000 TEU	0.52	0.51	2.63	0.05	0.12	0.11
Subtotal	7.24	7.16	36.69	0.68	1.69	1.58
Project Year 2038						
Containerships 8,000 - 9,000 TEU	2.61	2.58	13.23	0.25	0.61	0.57
Containerships 5,000 - 6,000 TEU	2.92	2.89	14.81	0.28	0.68	0.64
Containerships 3,000 - 5,000 TEU	1.19	1.17	6.02	0.11	0.28	0.26
Containerships < 3,000 TEU	0.52	0.51	2.63	0.05	0.12	0.11
Subtotal	7.24	7.16	36.69	0.68	1.69	1.58

Table D1.2.PPMit-6. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.25	0.18	1.09	0.14	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.52	0.38	2.29	0.29	0.30	0.28
Containerships < 3,000 TEU	0.53	0.39	2.32	0.29	0.30	0.28
Subtotal	1.29	0.95	5.70	0.71	0.74	0.70
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.50	0.37	1.99	0.02	0.10	0.09
Containerships 5,000 - 6,000 TEU	0.68	0.50	2.71	0.03	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.43	0.32	1.73	0.02	0.09	0.08
Containerships < 3,000 TEU	0.33	0.25	1.32	0.01	0.07	0.06
Subtotal	1.95	1.44	7.75	0.08	0.39	0.37
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.94	0.69	3.74	0.04	0.19	0.18
Containerships 5,000 - 6,000 TEU	1.05	0.78	4.18	0.04	0.21	0.20
Containerships 3,000 - 5,000 TEU	0.43	0.32	1.70	0.02	0.09	0.08
Containerships < 3,000 TEU	0.19	0.14	0.74	0.01	0.04	0.04
Subtotal	2.61	1.92	10.36	0.10	0.53	0.49
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.94	0.69	3.74	0.04	0.19	0.18
Containerships 5,000 - 6,000 TEU	1.05	0.78	4.18	0.04	0.21	0.20
Containerships 3,000 - 5,000 TEU	0.43	0.32	1.70	0.02	0.09	0.08
Containerships < 3,000 TEU	0.19	0.14	0.74	0.01	0.04	0.04
Subtotal	2.61	1.92	10.36	0.10	0.53	0.49

(2) Without slide valves

Table D1.2.PPMit-7. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - Vessels that Comply with VSRP.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.04	0.12	1.57	1.31	0.16	0.15
Containership < 3,000 TEU	0.05	0.14	1.89	1.58	0.19	0.18
Subtotal	0.09	0.26	3.46	2.90	0.35	0.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.05	0.13	1.79	1.49	0.18	0.17
Containerships 3,000 - 5,000 TEU	0.10	0.28	3.69	3.09	0.38	0.35
Containerships < 3,000 TEU	0.11	0.30	3.97	3.32	0.40	0.38
Subtotal	0.26	0.71	9.44	7.90	0.96	0.90
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.21	0.56	7.14	0.43	0.14	0.13
Containerships 5,000 - 6,000 TEU	0.32	0.89	11.26	0.68	0.23	0.21
Containerships 3,000 - 5,000 TEU	0.20	0.54	6.86	0.42	0.14	0.13
Containerships < 3,000 TEU	0.15	0.42	5.32	0.32	0.11	0.10
Subtotal	0.88	2.42	30.58	1.86	0.61	0.58
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.39	1.06	13.42	0.82	0.27	0.25
Containerships 5,000 - 6,000 TEU	0.50	1.37	17.36	1.06	0.35	0.33
Containerships 3,000 - 5,000 TEU	0.19	0.53	6.76	0.41	0.14	0.13
Containerships < 3,000 TEU	0.09	0.24	2.99	0.18	0.06	0.06
Subtotal	1.17	3.21	40.53	2.46	0.81	0.76
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.39	1.06	13.42	0.82	0.27	0.25
Containerships 5,000 - 6,000 TEU	0.50	1.37	17.36	1.06	0.35	0.33
Containerships 3,000 - 5,000 TEU	0.19	0.53	6.76	0.41	0.14	0.13
Containerships < 3,000 TEU	0.09	0.24	2.99	0.18	0.06	0.06
Subtotal	1.17	3.21	40.53	2.46	0.81	0.76

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2.PPMit-8. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - Non-Compliant Vessels within VSRP.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.09	0.25	3.35	2.80	0.34	0.32
Containership < 3,000 TEU	0.12	0.33	4.42	3.69	0.45	0.42
Subtotal	0.21	0.58	7.76	6.50	0.79	0.74
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.09	1.20	1.00	0.12	0.11
Containerships 3,000 - 5,000 TEU	0.07	0.20	2.63	2.20	0.27	0.25
Containerships < 3,000 TEU	0.08	0.23	3.08	2.58	0.31	0.29
Subtotal	0.19	0.52	6.91	5.78	0.70	0.66
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.18	0.01	0.00	0.00
Containerships 5,000 - 6,000 TEU	0.01	0.02	0.31	0.02	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.21	0.01	0.00	0.00
Containerships < 3,000 TEU	0.01	0.01	0.18	0.01	0.00	0.00
Subtotal	0.03	0.07	0.89	0.05	0.02	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.01	0.03	0.34	0.02	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.01	0.04	0.48	0.03	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.20	0.01	0.00	0.00
Containerships < 3,000 TEU	0.00	0.01	0.10	0.01	0.00	0.00
Subtotal	0.03	0.09	1.13	0.07	0.02	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.01	0.03	0.34	0.02	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.01	0.04	0.48	0.03	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.20	0.01	0.00	0.00
Containerships < 3,000 TEU	0.00	0.01	0.10	0.01	0.00	0.00
Subtotal	0.03	0.09	1.13	0.07	0.02	0.02

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.PPMit-9. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.07	0.19	2.43	1.56	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.14	0.37	4.89	3.13	0.40	0.38
Containerships < 3,000 TEU	0.14	0.38	5.03	3.22	0.41	0.39
Subtotal	0.34	0.94	12.35	7.91	1.01	0.95
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.12	0.33	4.11	0.25	0.08	0.08
Containerships 5,000 - 6,000 TEU	0.19	0.51	6.48	0.39	0.13	0.12
Containerships 3,000 - 5,000 TEU	0.11	0.31	3.95	0.24	0.08	0.07
Containerships < 3,000 TEU	0.09	0.24	3.06	0.19	0.06	0.06
Subtotal	0.51	1.39	17.60	1.07	0.35	0.33
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.20	0.54	6.82	0.41	0.14	0.13
Containerships 5,000 - 6,000 TEU	0.28	0.77	9.69	0.59	0.19	0.18
Containerships 3,000 - 5,000 TEU	0.12	0.32	4.10	0.25	0.08	0.08
Containerships < 3,000 TEU	0.06	0.16	2.07	0.13	0.04	0.04
Subtotal	0.65	1.79	22.67	1.38	0.46	0.43
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.20	0.54	6.82	0.41	0.14	0.13
Containerships 5,000 - 6,000 TEU	0.28	0.77	9.69	0.59	0.19	0.18
Containerships 3,000 - 5,000 TEU	0.12	0.32	4.10	0.25	0.08	0.08
Containerships < 3,000 TEU	0.06	0.16	2.07	0.13	0.04	0.04
Subtotal	0.65	1.79	22.67	1.38	0.46	0.43

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PPMit-10. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	0.29	3.86	2.47	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.20	0.56	7.35	4.70	0.60	0.56
Containerships < 3,000 TEU	0.20	0.55	7.23	4.63	0.59	0.55
Subtotal	0.51	1.40	18.43	11.80	1.51	1.41
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.19	0.52	6.52	0.40	0.13	0.12
Containerships 5,000 - 6,000 TEU	0.30	0.81	10.29	0.63	0.21	0.19
Containerships 3,000 - 5,000 TEU	0.17	0.47	5.93	0.36	0.12	0.11
Containerships < 3,000 TEU	0.13	0.35	4.40	0.27	0.09	0.08
Subtotal	0.78	2.15	27.13	1.65	0.54	0.51
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.35	0.97	12.26	0.74	0.25	0.23
Containerships 5,000 - 6,000 TEU	0.46	1.25	15.86	0.96	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.17	0.46	5.84	0.35	0.12	0.11
Containerships < 3,000 TEU	0.07	0.20	2.47	0.15	0.05	0.05
Subtotal	1.05	2.88	36.42	2.21	0.73	0.68
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.35	0.97	12.26	0.74	0.25	0.23
Containerships 5,000 - 6,000 TEU	0.46	1.25	15.86	0.96	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.17	0.46	5.84	0.35	0.12	0.11
Containerships < 3,000 TEU	0.07	0.20	2.47	0.15	0.05	0.05
Subtotal	1.05	2.88	36.42	2.21	0.73	0.68

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PPMit-11. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.05	0.67	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.06	0.15	2.01	1.29	0.16	0.15
Containerships < 3,000 TEU	0.05	0.15	1.98	1.26	0.16	0.15
Subtotal	0.14	0.38	5.04	3.23	0.41	0.39
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.05	0.14	1.78	0.11	0.04	0.03
Containerships 5,000 - 6,000 TEU	0.08	0.22	2.81	0.17	0.06	0.05
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.62	0.10	0.03	0.03
Containerships < 3,000 TEU	0.03	0.10	1.20	0.07	0.02	0.02
Subtotal	0.21	0.59	7.42	0.45	0.15	0.14
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.10	0.27	3.35	0.20	0.07	0.06
Containerships 5,000 - 6,000 TEU	0.12	0.34	4.33	0.26	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.60	0.10	0.03	0.03
Containerships < 3,000 TEU	0.02	0.05	0.68	0.04	0.01	0.01
Subtotal	0.29	0.79	9.96	0.61	0.20	0.19
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.10	0.27	3.35	0.20	0.07	0.06
Containerships 5,000 - 6,000 TEU	0.12	0.34	4.33	0.26	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.05	0.13	1.60	0.10	0.03	0.03
Containerships < 3,000 TEU	0.02	0.05	0.68	0.04	0.01	0.01
Subtotal	0.29	0.79	9.96	0.61	0.20	0.19

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PPMit-12. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.57	4.32	56.62	36.26	4.63	4.34
Containerships 3,000 - 5,000 TEU	3.20	8.81	115.54	73.98	9.46	8.86
Containerships < 3,000 TEU	2.20	6.04	79.27	50.75	6.49	6.08
Subtotal	6.97	19.17	251.43	160.99	20.58	19.28
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.63	1.73	21.89	1.33	0.44	0.41
Containerships 5,000 - 6,000 TEU	0.87	2.39	30.21	1.84	0.61	0.57
Containerships 3,000 - 5,000 TEU	0.54	1.48	18.64	1.13	0.37	0.35
Containerships < 3,000 TEU	0.28	0.76	9.66	0.59	0.19	0.18
Subtotal	2.31	6.36	80.41	4.89	1.61	1.51
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.PPMit-13. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - VSRP-Compliant.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PPMit-14. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - VSRP-Non-Compliant.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PPMit-15. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.41	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.29	1.26	0.04	0.03
Containerships < 3,000 TEU	0.02	0.21	0.56	2.44	0.07	0.06
Subtotal	0.03	0.35	0.93	4.10	0.11	0.11
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.06	0.15	0.66	0.02	0.02
Containerships 5,000 - 6,000 TEU	0.01	0.10	0.26	1.13	0.03	0.03
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.24	1.05	0.03	0.03
Containerships < 3,000 TEU	0.01	0.13	0.35	1.54	0.04	0.04
Subtotal	0.03	0.37	1.00	4.39	0.12	0.12
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.01	0.11	0.28	1.24	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.15	0.40	1.75	0.05	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.24	1.04	0.03	0.03
Containerships < 3,000 TEU	0.01	0.07	0.20	0.86	0.02	0.02
Subtotal	0.03	0.42	1.11	4.89	0.14	0.13
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.01	0.11	0.28	1.24	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.15	0.40	1.75	0.05	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.24	1.04	0.03	0.03
Containerships < 3,000 TEU	0.01	0.07	0.20	0.86	0.02	0.02
Subtotal	0.03	0.42	1.11	4.89	0.14	0.13

Table D1.2.PPMit-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.07	0.32	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.09	0.23	1.00	0.03	0.03
Containerships < 3,000 TEU	0.01	0.16	0.44	1.93	0.05	0.05
Subtotal	0.02	0.28	0.74	3.26	0.09	0.09
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.04	0.12	0.52	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.01	0.08	0.20	0.90	0.03	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.07	0.19	0.84	0.02	0.02
Containerships < 3,000 TEU	0.01	0.10	0.28	1.22	0.03	0.03
Subtotal	0.02	0.30	0.79	3.48	0.10	0.09
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.01	0.08	0.22	0.99	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.32	1.38	0.04	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.07	0.19	0.82	0.02	0.02
Containerships < 3,000 TEU	0.00	0.06	0.16	0.69	0.02	0.02
Subtotal	0.03	0.33	0.88	3.88	0.11	0.10
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.01	0.08	0.22	0.99	0.03	0.03
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.32	1.38	0.04	0.04
Containerships 3,000 - 5,000 TEU	0.01	0.07	0.19	0.82	0.02	0.02
Containerships < 3,000 TEU	0.00	0.06	0.16	0.69	0.02	0.02
Subtotal	0.03	0.33	0.88	3.88	0.11	0.10

Table D1.2.PPMit-17. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships < 3,000 TEU	0.00	0.05	0.12	0.53	0.01	0.01
Subtotal	0.01	0.08	0.20	0.89	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.03	0.14	0.00	0.00
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.06	0.25	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.03	0.08	0.33	0.01	0.01
Subtotal	0.01	0.08	0.22	0.95	0.03	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.38	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Subtotal	0.01	0.09	0.24	1.06	0.03	0.03
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.38	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.04	0.19	0.01	0.00
Subtotal	0.01	0.09	0.24	1.06	0.03	0.03

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PPMit-18. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Project .

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	1.33	3.55	15.57	0.44	0.41
Containerships 3,000 - 5,000 TEU	0.28	3.40	9.09	39.92	1.12	1.05
Containerships < 3,000 TEU	0.33	3.95	10.57	46.40	1.30	1.22
Subtotal	0.72	8.68	23.21	101.89	2.85	2.67
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.21	2.50	6.68	29.34	0.82	0.77
Containerships 5,000 - 6,000 TEU	0.30	3.67	9.82	43.11	1.21	1.13
Containerships 3,000 - 5,000 TEU	0.24	2.85	7.61	33.43	0.94	0.88
Containerships < 3,000 TEU	0.21	2.50	6.68	29.34	0.82	0.77
Subtotal	0.95	11.52	30.80	135.22	3.79	3.55
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.39	4.70	12.57	55.18	1.54	1.45
Containerships 5,000 - 6,000 TEU	0.47	5.66	15.14	66.46	1.86	1.74
Containerships 3,000 - 5,000 TEU	0.23	2.81	7.50	32.93	0.92	0.86
Containerships < 3,000 TEU	0.12	1.40	3.75	16.47	0.46	0.43
Subtotal	1.20	14.57	38.96	171.04	4.79	4.49
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.39	4.70	12.57	55.18	1.54	1.45
Containerships 5,000 - 6,000 TEU	0.47	5.66	15.14	66.46	1.86	1.74
Containerships 3,000 - 5,000 TEU	0.23	2.81	7.50	32.93	0.92	0.86
Containerships < 3,000 TEU	0.12	1.40	3.75	16.47	0.46	0.43
Subtotal	1.20	14.57	38.96	171.04	4.79	4.49

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PPMit-19. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.41	2.11	13.23	0.01	0.54	0.51
Project Year 2015						
Subtotal	0.43	2.25	12.08	0.01	0.52	0.48
Project Year 2025						
Subtotal	0.47	2.51	11.17	0.01	0.49	0.46
Project Year 2038						
Subtotal	0.47	2.51	10.02	0.01	0.44	0.41

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.PPMit-20. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Project .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.03	0.19	1.11	0.00	0.05	0.05
Project Year 2015						
Subtotal (1)	0.03	0.21	1.10	0.00	0.05	0.05
Project Year 2025						
Subtotal (1)	0.04	0.23	1.03	0.00	0.04	0.04
Project Year 2038						
Subtotal (1)	0.04	0.23	0.93	0.00	0.04	0.04

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.PPMit-21. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - Vessels that Comply with VSRP + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.73	5.90	28.06	1.39	0.63	0.59
Containerships 5,000 - 6,000 TEU	0.85	8.00	45.45	2.52	0.96	0.90
Containerships 3,000 - 5,000 TEU	0.45	4.90	34.24	2.06	0.68	0.64
Containerships < 3,000 TEU	0.37	4.47	37.23	2.35	0.72	0.68
Subtotal	2.40	23.27	144.98	8.32	3.00	2.81
Project Year 2025						
Containerships 8,000 - 9,000 TEU	1.36	11.09	52.78	2.62	1.19	1.12
Containerships 5,000 - 6,000 TEU	1.31	12.34	70.07	3.88	1.48	1.38
Containerships 3,000 - 5,000 TEU	0.45	4.83	33.73	2.03	0.67	0.63
Containerships < 3,000 TEU	0.21	2.51	20.89	1.32	0.40	0.38
Subtotal	3.33	30.77	177.47	9.85	3.75	3.51
Project Year 2038						
Containerships 8,000 - 9,000 TEU	1.36	11.09	52.78	2.62	1.19	1.12
Containerships 5,000 - 6,000 TEU	1.31	12.34	70.07	3.88	1.48	1.38
Containerships 3,000 - 5,000 TEU	0.45	4.83	33.73	2.03	0.67	0.63
Containerships < 3,000 TEU	0.21	2.51	20.89	1.32	0.40	0.38
Subtotal	3.33	30.77	177.47	9.85	3.75	3.51

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.PPMit-22. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Project - Non-Compliant Vessels within VSRP + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.18	0.60	4.99	0.31	0.17	0.16
Containerships 5,000 - 6,000 TEU	0.28	0.90	7.48	0.47	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.19	0.62	5.17	0.33	0.18	0.17
Containerships < 3,000 TEU	0.17	0.54	4.53	0.29	0.16	0.15
Subtotal	0.82	2.66	22.17	1.40	0.76	0.71
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.35	1.13	9.39	0.59	0.32	0.30
Containerships 5,000 - 6,000 TEU	0.42	1.39	11.53	0.73	0.40	0.37
Containerships 3,000 - 5,000 TEU	0.19	0.61	5.10	0.32	0.18	0.16
Containerships < 3,000 TEU	0.09	0.31	2.54	0.16	0.09	0.08
Subtotal	1.05	3.43	28.55	1.80	0.98	0.92
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.35	1.13	9.39	0.59	0.32	0.30
Containerships 5,000 - 6,000 TEU	0.42	1.39	11.53	0.73	0.40	0.37
Containerships 3,000 - 5,000 TEU	0.19	0.61	5.10	0.32	0.18	0.16
Containerships < 3,000 TEU	0.09	0.31	2.54	0.16	0.09	0.08
Subtotal	1.05	3.43	28.55	1.80	0.98	0.92

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.PPMit-23. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Project + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.24	1.75	7.39	0.32	0.18	0.17
Containerships 5,000 - 6,000 TEU	0.26	2.21	11.21	0.58	0.25	0.23
Containerships 3,000 - 5,000 TEU	0.16	1.51	8.57	0.47	0.18	0.17
Containerships < 3,000 TEU	0.10	1.15	8.75	0.54	0.17	0.16
Subtotal	0.76	6.61	35.92	1.92	0.78	0.73
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.46	3.29	13.89	0.60	0.33	0.31
Containerships 5,000 - 6,000 TEU	0.40	3.41	17.29	0.89	0.38	0.36
Containerships 3,000 - 5,000 TEU	0.16	1.49	8.44	0.47	0.18	0.17
Containerships < 3,000 TEU	0.06	0.64	4.91	0.30	0.10	0.09
Subtotal	1.07	8.83	44.54	2.27	0.99	0.92
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.46	3.29	13.89	0.60	0.33	0.31
Containerships 5,000 - 6,000 TEU	0.40	3.41	17.29	0.89	0.38	0.36
Containerships 3,000 - 5,000 TEU	0.16	1.49	8.44	0.47	0.18	0.17
Containerships < 3,000 TEU	0.06	0.64	4.91	0.30	0.10	0.09
Subtotal	1.07	8.83	44.54	2.27	0.99	0.92

Table D1.2.PPMit-24. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Project + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.27	1.37	5.03	0.13	0.14	0.13
Containerships 5,000 - 6,000 TEU	0.37	1.87	6.87	0.18	0.19	0.18
Containerships 3,000 - 5,000 TEU	0.23	1.19	4.37	0.11	0.12	0.11
Containerships < 3,000 TEU	0.18	0.91	3.35	0.09	0.09	0.09
Subtotal	1.04	5.35	19.62	0.51	0.54	0.51
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.50	2.58	9.46	0.25	0.26	0.25
Containerships 5,000 - 6,000 TEU	0.56	2.89	10.59	0.28	0.29	0.27
Containerships 3,000 - 5,000 TEU	0.23	1.17	4.31	0.11	0.12	0.11
Containerships < 3,000 TEU	0.10	0.51	1.88	0.05	0.05	0.05
Subtotal	1.39	7.16	26.23	0.68	0.73	0.68
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.50	2.58	9.46	0.25	0.26	0.25
Containerships 5,000 - 6,000 TEU	0.56	2.89	10.59	0.28	0.29	0.27
Containerships 3,000 - 5,000 TEU	0.23	1.17	4.31	0.11	0.12	0.11
Containerships < 3,000 TEU	0.10	0.51	1.88	0.05	0.05	0.05
Subtotal	1.39	7.16	26.23	0.68	0.73	0.68

Table D1.2.PPMit-25. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Project + Slide Valves.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.10	0.37	1.42	0.02	0.04	0.04
Containerships 5,000 - 6,000 TEU	0.13	0.50	1.94	0.03	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.08	0.32	1.23	0.02	0.04	0.04
Containerships < 3,000 TEU	0.06	0.25	0.95	0.01	0.03	0.03
Subtotal	0.38	1.44	5.54	0.08	0.17	0.16
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.18	0.69	2.67	0.04	0.08	0.08
Containerships 5,000 - 6,000 TEU	0.20	0.78	2.99	0.04	0.09	0.09
Containerships 3,000 - 5,000 TEU	0.08	0.32	1.22	0.02	0.04	0.03
Containerships < 3,000 TEU	0.04	0.14	0.53	0.01	0.02	0.02
Subtotal	0.50	1.92	7.41	0.10	0.23	0.21
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.18	0.69	2.67	0.04	0.08	0.08
Containerships 5,000 - 6,000 TEU	0.20	0.78	2.99	0.04	0.09	0.09
Containerships 3,000 - 5,000 TEU	0.08	0.32	1.22	0.02	0.04	0.03
Containerships < 3,000 TEU	0.04	0.14	0.53	0.01	0.02	0.02
Subtotal	0.50	1.92	7.41	0.10	0.23	0.21

Table D1.2.PPMit-26. Annual Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Project .

Project Scenario/Emission Source	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.88	15.72	3.14	2.94
Ships - Docking (1)	1.16	1.13	8.59	3.81	0.93	0.87
Ships - Hoteling Aux. Sources	5.86	21.86	208.85	205.61	17.64	16.53
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.42	462.30	55.51	52.01
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.77	252.47	36.03	33.76
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Subtotal	30.93	76.23	826.04	575.41	70.19	65.76
Project Year 2015						
Ships - Fairway Transit (1)	4.12	28.43	198.61	11.63	4.39	4.11
Ships - Precautionary Area Transit (1)	1.30	8.38	54.53	7.37	1.25	1.17
Ships - Harbor Transit (1)	1.85	7.80	47.54	5.64	1.19	1.11
Ships - Docking (1)	0.60	2.11	13.17	1.48	0.34	0.32
Ships - Hoteling Aux. Sources	3.27	17.88	111.21	140.10	5.40	5.06
Tugboats - Cargo Vessel Assist (1)	0.47	2.46	13.18	0.01	0.57	0.53
Subtotal	11.59	67.05	438.23	166.23	13.14	12.31
Project Year 2025						
Ships - Fairway Transit (1)	5.58	37.49	247.69	14.18	5.56	5.21
Ships - Precautionary Area Transit (1)	1.76	11.04	68.32	8.54	1.58	1.48
Ships - Harbor Transit (1)	2.47	10.37	63.54	6.78	1.57	1.47
Ships - Docking (1)	0.80	2.80	17.60	1.77	0.46	0.43
Ships - Hoteling Aux. Sources	1.20	14.57	38.96	171.04	4.79	4.49
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	12.20	0.01	0.53	0.50
Subtotal	12.32	79.02	448.31	202.31	14.48	13.57
Project Year 2038						
Ships - Fairway Transit (1)	5.58	37.49	247.69	14.18	5.56	5.21
Ships - Precautionary Area Transit (1)	1.76	11.04	68.32	8.54	1.58	1.48
Ships - Harbor Transit (1)	2.47	10.37	63.54	6.78	1.57	1.47
Ships - Docking (1)	0.80	2.80	17.60	1.77	0.46	0.43
Ships - Hoteling Aux. Sources	1.20	14.57	38.96	171.04	4.79	4.49
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	10.95	0.01	0.48	0.45
Subtotal	12.31	79.02	447.07	202.31	14.43	13.52

Note: (1) Includes auxiliary power emissions.

Table D1.2.PPMit-27. Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Project .

Project Scenario/Emission Source	Pounds Per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.1	17.2	16.1
Ships - Docking (1)	6.3	6.2	47.0	20.9	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,144.4	1,126.6	96.6	90.6
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,591	2,533	304	285
Project Year 2007						
Ships - Fairway Transit (1)	79.8	184.9	2,354.9	1,383.4	197.4	185.0
Ships - Precautionary Area Transit (1)	14.6	31.2	312.3	193.6	27.2	25.5
Ships - Harbor Transit (1)	22.6	28.6	215.7	109.0	21.9	20.5
Ships - Docking (1)	7.9	7.7	59.9	26.5	6.5	6.1
Ships - Hoteling Aux. Sources	42.1	152.6	1,504.9	1,440.4	128.4	120.3
Tugboats - Cargo Vessel Assist (1)	2.4	12.6	78.6	0.0	3.2	3.0
Subtotal	169	418	4,526	3,153	385	360
Project Year 2015						
Ships - Fairway Transit (1)	22.6	155.8	1,088.3	63.7	24.1	22.5
Ships - Precautionary Area Transit (1)	7.1	45.9	298.8	40.4	6.9	6.4
Ships - Harbor Transit (1)	10.1	42.7	260.5	30.9	6.5	6.1
Ships - Docking (1)	3.3	11.5	72.2	8.1	1.9	1.8
Ships - Hoteling Aux. Sources	17.9	98.0	609.4	767.7	29.6	27.7
Tugboats - Cargo Vessel Assist (1)	2.6	13.5	72.2	0.0	3.1	2.9
Subtotal	64	367	2,401	911	72	67
Project Year 2025						
Ships - Fairway Transit (1)	30.6	205.4	1,357.2	77.7	30.5	28.6
Ships - Precautionary Area Transit (1)	9.6	60.5	374.4	46.8	8.6	8.1
Ships - Harbor Transit (1)	13.5	56.8	348.2	37.1	8.6	8.0
Ships - Docking (1)	4.4	15.3	96.5	9.7	2.5	2.3
Ships - Hoteling Aux. Sources	6.6	79.8	213.5	937.2	26.2	24.6
Tugboats - Cargo Vessel Assist (1)	2.8	15.0	66.9	0.0	2.9	2.7
Subtotal	67	433	2,457	1,109	79	74
Project Year 2038						
Ships - Fairway Transit (1)	30.6	205.4	1,357.2	77.7	30.5	28.6
Ships - Precautionary Area Transit (1)	9.6	60.5	374.4	46.8	8.6	8.1
Ships - Harbor Transit (1)	13.5	56.8	348.2	37.1	8.6	8.0
Ships - Docking (1)	4.4	15.3	96.5	9.7	2.5	2.3
Ships - Hoteling Aux. Sources	6.6	79.8	213.5	937.2	26.2	24.6
Tugboats - Cargo Vessel Assist (1)	2.8	15.0	60.0	0.0	2.6	2.5
Subtotal	67	433	2,450	1,109	79	74

Note: (1) Includes auxiliary power emissions.

Table D1.2.PPMit-28. On-Road Truck Mitigated Emission Factors - Berths 136-147 Terminal Project Alternatives Scenario

Project Year/Mode - Diesel Trucks	Emission Factors (Grams/Mile)						References
	ROG	CO	NOx	SOx	DPM	PM10	
Baseline - Year 2003							
On-road Truck - Idle	17.55	41.05	96.52	0.58	2.85	2.85	(1)
On-road Truck - 10 mph	10.50	23.83	38.13	0.26	3.89	3.89	(1)
On-road Truck - 25 mph	2.25	12.68	23.38	0.17	1.57	1.57	(1)
On-road Truck - 55 mph	1.41	5.38	23.09	0.14	1.16	1.16	(1)
On-road Trucks - Composite Off-Terminal	2.74	10.87	24.74	0.17	1.64	1.64	(2)
Project Year 2007							
On-road Truck - Idle	10.55	34.44	117.47	0.07	1.28	1.28	(1)
On-road Truck - 10 mph	7.97	16.13	31.20	0.03	2.29	2.29	(1)
On-road Truck - 25 mph	1.51	7.27	18.67	0.02	0.70	0.70	(1)
On-road Truck - 55 mph	0.95	3.10	19.12	0.02	0.52	0.52	(1)
On-road Trucks - Composite Off-Terminal	1.93	6.48	20.10	0.02	0.79	0.79	(2)
Project Year 2015							
On-road Truck - Idle	7.19	30.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.15	2.50	4.13	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.94	2.31	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.01	1.62	0.02	0.10	0.10	(1)
On-road Trucks - Composite Off-Terminal	0.33	1.12	2.28	0.02	0.07	0.07	(3)
Project Year 2025							
On-road Truck - Idle	7.19	30.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.14	2.49	4.11	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.94	2.30	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.01	1.61	0.02	0.10	0.10	(1)
On-road Trucks - Composite Off-Terminal	0.32	1.12	2.27	0.02	0.07	0.07	(3)
Project Year 2040							
On-road Truck - Idle	7.19	31.13	127.88	0.07	0.09	0.09	(1)
On-road Truck - 10 mph	1.13	2.47	4.07	0.03	0.07	0.07	(1)
On-road Truck - 25 mph	0.28	0.93	2.27	0.02	0.06	0.06	(1)
On-road Truck - 55 mph	0.14	1.00	1.60	0.02	0.09	0.09	(1)
On-road Trucks - Composite Off-Terminal	0.34	1.10	2.32	0.02	0.06	0.06	(4)
LNG-Powered Trucks - AllYears							
On-road Truck - Idle							

Notes: (1) From EMFAC2007 (ARB 2006). Units in grams/mile for each project year, at 60 degrees and 50% relative humidity, except idle factors in units of grams/hour. Based on age distribution of year 2005 POLA truck fleet, as used in the 2005 PEI. Mitigation assumes the presence of trucks with 2007 EPA on-road standards by the following schedule: (1) 15% in 2007, (2) 30% in 2008, (3) 50% in 2009, (4) 70% in 2010, (5) 90% in 2011, and (6) 100% in 2012.

(2) Based on 10% at 10 miles per hour (mph), 50% at 25 mph, and 40% at 55 mph. Although not included in this composite emission factor, 30 minutes of idling mode included in emission estimates for each truck trip.

(3) Same as (2), except based on 10% at 10 miles per hour (mph), 60% at 25 mph, and 30% at 55 mph.

(4) Same as (2), except based on 10% at 10 miles per hour (mph), 70% at 25 mph, and 20% at 55 mph.

Table D1.2.PPMit-29. Daily Mitigated Truck Emissions for the Berths 136-147 Terminal Project - Mitigated Project

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	24.1	78.7	268.4	0.2	2.9	2.7
Year 2007 - Driving	74.4	150.5	291.2	0.3	21.4	19.7
Subtotal - Year 2007	98.5	229.2	559.6	0.4	24.3	22.4
Year 2010 - Idling	17.5	73.1	310.4	0.2	0.2	0.2
Year 2010 - Driving	9.0	19.5	32.3	0.2	0.5	0.5
Subtotal - Year 2010	26.4	92.6	342.7	0.4	0.8	0.7
Year 2015 - Idling	20.4	85.6	363.2	0.2	0.3	0.2
Year 2015 - Driving	10.4	22.8	37.6	0.3	0.6	0.6
Subtotal - Year 2015	30.9	108.3	400.8	0.5	0.9	0.8
Year 2030 - Idling	20.4	88.4	363.2	0.2	0.3	0.2
Year 2030 - Driving	10.4	22.6	37.2	0.3	0.6	0.6
Subtotal - Year 2030	30.8	111.0	400.4	0.5	0.9	0.8
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	28.9	94.4	322.1	0.2	3.5	3.2
Year 2007 - Driving	571.0	1,915.3	5,937.0	5.7	233.4	214.7
Subtotal - Year 2007	599.9	2,009.8	6,259.1	5.9	236.9	217.9
Year 2010 - Idling	21.0	87.7	372.5	0.2	0.3	0.2
Year 2010 - Driving	160.5	552.7	1,127.2	9.8	34.1	31.3
Subtotal - Year 2010	181.4	640.5	1,499.6	10.0	34.3	31.6
Year 2015 - Idling	24.5	102.7	435.8	0.2	0.3	0.3
Year 2015 - Driving	185.1	637.9	1,299.2	11.3	39.4	36.3
Subtotal - Year 2015	209.6	740.5	1,735.0	11.5	39.8	36.6
Year 2030 - Idling	24.5	106.1	435.8	0.2	0.3	0.3
Year 2030 - Driving	191.8	629.3	1,324.8	11.5	36.6	33.7
Subtotal - Year 2030	216.3	735.4	1,760.6	11.8	37.0	34.0
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	698.4	2,239.0	6,818.8	6.3	261.2	240.3
Year 2010	207.8	733.1	1,842.3	10.4	35.1	32.3
Year 2015	240.5	848.8	2,135.8	12.0	40.7	37.4
Year 2030	247.1	846.3	2,161.0	12.2	37.8	34.8

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.PPMit-30. Road Dust Emissions for the Berths 136-147 Terminal Project - Mitigated Project.

	Daily Emissions (Pounds)	
Activity	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.13	10.16
Year 2007	75.97	12.84
Year 2015	63.65	10.76
Year 2025	74.48	12.59
Year 2038	74.48	12.59
Off-Terminal		
Year 2003 - Baseline	83.85	14.17
Year 2007	105.94	17.90
Year 2015	177.03	29.92
Year 2025	205.00	34.64
Year 2038	205.00	34.64
Combined On/Off-Terminal		
Year 2003 - Baseline	143.98	24.33
Year 2007	181.91	30.74
Year 2015	240.68	40.68
Year 2025	279.47	47.23
Year 2038	279.47	47.23

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.PPMit-31. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Mitigated Project.

	Daily Emissions (Pounds)	
Activity	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.37	0.16
Year 2007	0.47	0.20
Year 2015	0.39	0.17
Year 2025	0.46	0.20
Year 2038	0.46	0.20
Off-Terminal		
Year 2003 - Baseline	11.69	5.01
Year 2007	14.77	6.33
Year 2015	24.67	10.59
Year 2025	28.57	12.26
Year 2038	28.57	12.26
Combined On/Off-Terminal		
Year 2003 - Baseline	12.06	5.17
Year 2007	15.23	6.53
Year 2015	25.06	10.75
Year 2025	29.03	12.45
Year 2038	29.03	12.45

Table D1.2.PPMit-32. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Mitigated Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	60.50	10.32
Year 2007	76.43	13.04
Year 2015	64.04	10.93
Year 2025	74.94	12.78
Year 2038	74.94	12.78
Off-Terminal		
Year 2003 - Baseline	95.54	19.19
Year 2007	120.71	24.24
Year 2015	201.70	40.50
Year 2025	233.57	46.90
Year 2038	233.57	46.90
Combined On/Off-Terminal		
Year 2003 - Baseline	156	30
Year 2007	197	37
Year 2015	266	51
Year 2025	309	60
Year 2038	309	60

Table D1.2.PPMit-33. Mitigated Emission Factors for Rail/ICTF Equipment - Berths 136-147 Terminal Project Alternat

Project Scenario/ Equipment - Horsepower	Emission Factors (Gm/Hp-Hr)						References
	ROG	CO	NOx	SOx	PM	PM10	
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	0.83	3.39	9.15	0.10	0.52	0.52	(1)
Terminal Equipment - 176-250 Hp	0.44	1.32	6.79	0.10	0.24	0.24	(1)
Line Haul Locomotive - Year 2003	0.61	1.28	10.66	0.69	0.32	0.32	(2)
Switch Yard Locomotive - Year 2003	1.28	1.83	17.40	0.11	0.44	0.44	(2)
Year 2007							
Terminal Equipment - 121-175 Hp - Unmitigated	0.79	3.49	8.41	0.004	0.39	0.39	(1)
Terminal Equipment - 176-250 Hp - Unmitigated	0.57	1.60	7.07	0.004	0.29	0.29	(1)
Line Haul Locomotive - Year 2007	0.55	1.28	7.61	0.69	0.29	0.29	(2)
Switch Yard Locomotive - Tier 2 Stds.	0.60	2.40	8.10	0.005	0.23	0.23	(3)
Switch Yard Locomotive - Year 2007	1.11	1.97	15.08	0.08	0.39	0.39	(4)
Year 2015							
100-175 Hp - Tier 4 Standard	0.30	3.70	0.30	0.00	0.02	0.02	(7)
176-500 Hp - Tier 4 Standard	0.30	2.60	0.30	0.00	0.02	0.02	(7)
Line Haul Locomotive - Year 2015	0.47	1.28	6.56	0.005	0.17	0.17	(6)
Switch Yard Locomotive - Year 2015	0.60	2.40	0.81	0.005	0.02	0.02	(8)
Year 2025							
100-175 Hp - Tier 4 Standard	0.30	3.70	0.30	0.00	0.02	0.02	(7)
176-500 Hp - Tier 4 Standard	0.30	2.60	0.30	0.00	0.02	0.02	(7)
Line Haul Locomotive - Year 2025	0.39	1.28	5.73	0.005	0.14	0.14	(6)
Switch Yard Locomotive - Year 2025	0.60	2.40	0.81	0.005	0.02	0.02	(8)
Year 2038							
100-175 Hp - Tier 4 Standard	0.30	3.70	0.30	0.00	0.02	0.02	(7)
176-500 Hp - Tier 4 Standard	0.30	2.60	0.30	0.00	0.02	0.02	(7)
Line Haul Locomotive - Year 2038	0.33	1.28	5.01	0.005	0.12	0.12	(6)
Switch Yard Locomotive - Year 2038	0.60	2.40	0.81	0.005	0.02	0.02	(8)

Notes: (1) Estimated with the use of the ARB OFFROAD Model with consideration of fleet turnover with adopted future EPA off-road emission standards. See Table D2-??.

(2) Represents national average emission factors for line haul/switch yard locomotives for a given year (EPA 1998). ROG = THC Year 2003 data for switch engines = 1999 values, as current PHL fleet is pre-1973 vintage (pre-Tier 0). Year 2003 line haul/switch loco diesel fuel assumed to be 0.22/0.035% sulfur (S) (PEI pages 223 and 229), although PM emission factor locos not subsequently reduced, due to the antiquated age of the PHL engines.

(3) Locomotive Emissions Final Rulemaking (EPA 1997), except PM reduced by 4% to simulate use of ULSD.

(4) Assumes fleet has an Mitigated Annual average of 75% Pre-Tier 0 and 25% Tier 2 standards + use of ULSD .

(5) Assumes 100% conversion of existing fleet to Tier 2 standard engines + use of ULSD.

(6) Represents average EPA emission factors for line haul locomotives for a given year + the use of 500 ppm S diesel by 2008 ar by 2012, as stated in the EPA non-road diesel fuel rule. These fuels would produce 25/28% reductions in PM emissions from assumed S fuel content of 0.2%.

(7) See Table D1.2.PPMit-33

(8) NOx/PM values reduced by 90% from switch engine Tier 2 standards (8.10/0.24).

Table D1.2.PPMit-34. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Project Year 2007.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.92	8.42	20.29	0.01	0.94	0.87
Top Picks	0.90	2.52	11.15	0.01	0.46	0.42
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.68	1.61	9.54	0.87	0.36	0.33
Yard Locomotive - Switching	0.50	0.89	6.80	0.04	0.17	0.16
Subtotal	13.22	35.06	176.32	12.64	6.84	6.29
Carson or LA Railyards/Inbound						
Hostler	0.72	3.16	7.61	0.00	0.35	0.33
Top Picks	0.34	0.95	4.18	0.00	0.17	0.16
Line Haul Locomotive - Road Haul	9.22	21.62	128.54	11.71	4.90	4.51
Line Haul Locomotive - Notch 1	0.34	0.80	4.77	0.43	0.18	0.17
Subtotal	10.62	26.53	145.10	12.15	5.60	5.16
Total Tons Per Year	23.85	61.59	321.42	24.79	12.44	11.45

Table D1.2.PPMit-35. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Project Year 2015.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.73	9.05	0.73	0.01	0.04	0.03
Top Picks	0.48	4.15	0.48	0.01	0.02	0.02
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Yard Locomotive - Switching	0.26	1.04	0.35	0.00	0.01	0.01
Subtotal	10.47	38.76	127.23	0.11	3.38	3.11
Berths 136-147/Inbound						
Hostler	0.28	3.39	0.28	0.00	0.01	0.01
Top Picks	0.18	1.56	0.18	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Subtotal	9.46	29.47	126.12	0.10	3.33	3.07
Carson or LA Railyards/Outbound						
Hostler	0.15	1.79	0.15	0.00	0.01	0.01
Top Picks	0.09	0.82	0.09	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.59	4.34	22.26	0.02	0.59	0.54
Line Haul Locomotive - Notch 1	0.12	0.32	1.65	0.00	0.04	0.04
Yard Locomotive - Switching	0.05	0.22	0.07	0.00	0.00	0.00
Subtotal	2.01	7.50	24.22	0.02	0.64	0.59
Carson or LA Railyards/Inbound						
Hostler	0.05	0.67	0.05	0.00	0.00	0.00
Top Picks	0.04	0.31	0.04	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.59	4.34	22.26	0.02	0.59	0.54
Line Haul Locomotive - Notch 1	0.06	0.16	0.83	0.00	0.02	0.02
Subtotal	1.74	5.49	23.17	0.02	0.61	0.56
Total Tons Per Year	23.68	81.22	300.75	0.25	7.97	7.33

Table D1.2.PPMit-36. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Project Year 2025.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	11.43	49.15	141.07	0.14	3.59	3.30
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Subtotal	10.14	37.37	139.67	0.12	3.53	3.24
Carson or LA Railyards/Outbound						
Hostler	0.23	2.85	0.23	0.00	0.01	0.01
Top Picks	0.15	1.31	0.15	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	2.13	6.91	30.92	0.03	0.78	0.72
Line Haul Locomotive - Notch 1	0.16	0.51	2.30	0.00	0.06	0.05
Yard Locomotive - Switching	0.09	0.35	0.12	0.00	0.00	0.00
Subtotal	2.75	11.93	33.71	0.03	0.86	0.79
Carson or LA Railyards/Inbound						
Hostler	0.09	1.07	0.09	0.00	0.00	0.00
Top Picks	0.06	0.49	0.06	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	2.13	6.91	30.92	0.03	0.78	0.72
Line Haul Locomotive - Notch 1	0.08	0.26	1.15	0.00	0.03	0.03
Subtotal	2.35	8.73	32.21	0.03	0.81	0.75
Total Tons Per Year	26.67	107.18	346.66	0.33	8.79	8.08

Table D1.2.PPMit-37. Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Project Year 2038.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	9.97	49.15	123.70	0.14	2.99	2.75
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Subtotal	8.68	37.37	122.29	0.12	2.93	2.69
Carson or LA Railyards/Outbound						
Hostler	0.23	2.85	0.23	0.00	0.01	0.01
Top Picks	0.15	1.31	0.15	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	1.80	6.91	27.05	0.03	0.64	0.59
Line Haul Locomotive - Notch 1	0.13	0.51	2.01	0.00	0.05	0.04
Yard Locomotive - Switching	0.09	0.35	0.12	0.00	0.00	0.00
Subtotal	2.40	11.93	29.56	0.03	0.71	0.66
Carson or LA Railyards/Inbound						
Hostler	0.09	1.07	0.09	0.00	0.00	0.00
Top Picks	0.06	0.49	0.06	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.80	6.91	27.05	0.03	0.64	0.59
Line Haul Locomotive - Notch 1	0.07	0.26	1.00	0.00	0.02	0.02
Subtotal	2.01	8.73	28.20	0.03	0.68	0.62
Total Tons Per Year	23.06	107.18	303.76	0.33	7.30	6.72

Table D1.2.PPMit-38. Summary of Mitigated Annual Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Project.

Project Scenario/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Subtotal	23.85	61.59	321.42	24.79	12.44	11.45
Project Year 2015						
ICTF Equipment	2.00	21.75	2.00	0.03	0.10	0.09
Trains	21.68	59.47	298.76	0.22	7.87	7.24
Subtotal	23.68	81.22	300.75	0.25	7.97	7.33
Project Year 2025						
ICTF Equipment	2.64	28.74	2.64	0.04	0.13	0.12
Trains	24.03	78.44	344.02	0.29	8.65	7.96
Subtotal	26.67	107.18	346.66	0.33	8.79	8.08
Project Year 2038						
ICTF Equipment	2.64	28.74	2.64	0.04	0.13	0.12
Trains	20.42	78.44	301.12	0.29	7.17	6.60
Subtotal	23.06	107.18	303.76	0.33	7.30	6.72

Table D1.2.PPMit-39. Mitigated Annual Train Emissions from the Relocated Pier A Rail Yard - Berths 136-147 Terminal Proposed Project Alternatives.

Project Year/Emission Source	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Line Haul Locomotive	0.05	0.10	0.85	0.06	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.37	3.54	0.02	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.60	5.66	0.04	0.14	0.13
Subtotal	0.73	1.07	10.06	0.11	0.26	0.24
Project Year 2007						
Line Haul Locomotive	0.05	0.12	0.70	0.06	0.03	0.02
Yard Locomotive - Low UsageTrip	0.26	0.46	3.53	0.02	0.09	0.08
Yard Locomotive - Medium UsageTrip	0.42	0.74	5.64	0.03	0.15	0.13
Subtotal	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2015						
Line Haul Locomotive	0.04	0.12	0.60	0.00	0.02	0.01
Yard Locomotive - Low UsageTrip	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.41	1.58	1.09	0.00	0.03	0.03
Project Year 2025						
Line Haul Locomotive	0.04	0.12	0.53	0.00	0.01	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.40	1.58	1.02	0.00	0.03	0.03
Project Year 2038						
Line Haul Locomotive	0.03	0.12	0.46	0.00	0.01	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01	0.00
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01	0.01
Subtotal	0.40	1.58	0.95	0.00	0.02	0.02

Note: (1) Yard locomotive NOx/PM emissions reduced 90% from Tier 2 standard levels.

Table D1.2.PPMit-40. Future Baseline Diesel-Powered Unmitigated Emission Factors for Terminal Equipment - Berths 136-147 Terminal Project Alternatives.

Project Scenario/Equipment Horsepower	Emission Factors (1)					References
	ROG	CO	NOx	SOx	PM10	
Baseline - Year 2003						
Terminal Equipment - 121-175 Hp	0.83	3.39	9.15	0.10	0.52	(1)
Terminal Equipment - 176-250 Hp	0.44	1.32	6.79	0.10	0.24	(1)
Terminal Equipment - 250-500 Hp	0.44	1.47	6.98	0.10	0.22	(1)
Project Year 2007						
Terminal Equipment - 121-175 Hp	0.79	3.49	8.41	0.004	0.39	(1)
Terminal Equipment - 176-250 Hp	0.57	1.60	7.07	0.004	0.29	(1)
Terminal Equipment - 250-500 Hp	0.40	1.40	6.18	0.004	0.22	(1)
Project Year 2015						
Terminal Equipment - 121-175 Hp	0.32	3.16	4.25	0.004	0.18	(1)
Terminal Equipment - 176-250 Hp	0.25	1.22	3.73	0.004	0.15	(1)
Terminal Equipment - 250-500 Hp	0.20	1.11	3.20	0.004	0.13	(1)
Project Year 2025						
Terminal Equipment - 121-175 Hp	0.10	3.07	0.92	0.004	0.03	(1)
Terminal Equipment - 176-250 Hp	0.10	1.12	0.58	0.004	0.03	(1)
Terminal Equipment - 250-500 Hp	0.08	1.00	0.54	0.004	0.03	(1)
Project Year 2038						
Terminal Equipment - 121-175 Hp	0.08	3.07	0.30	0.004	0.02	(1)
Terminal Equipment - 176-250 Hp	0.09	1.12	0.32	0.004	0.02	(1)
Terminal Equipment - 250-500 Hp	0.07	1.00	0.29	0.004	0.02	(1)

Notes: (1) Data calculated from OFFROAD Emissions Model factors estimated for the year 2001 terminal equipment fleet (ARB 2004) with the use of an equipment replacement rate of 15 years and taking into consideration future off-road emission standards implementation schedule and equipment deterioration factors.

Table D1.2.PPMit-41. Tiers 2-4 Emission Standards for Terminal Equipment - Berths 136-147 Terminal Project Alternatives.

Mitigation Scenario/Equipment Horsepower	Emission Factors (Gm/Hp-Hr)					References
	ROG	CO	NOx	SOx	PM10	
EPA Tier 4 Off-road Diesel Engine Standards						
100-175 Hp	0.30	3.70	0.30	0.004	0.015	(1)
176-500 Hp	0.30	2.60	0.30	0.004	0.015	(1)

Notes: (1) NOx/PM = Tier 4 off-road standards from EPA Rule. CO/NMHC = Tier 2 or 3 stds, as there are no Tier 4 stds for these.

Table D1.2.PPMit-42. Terminal Equipment Annual Mitigated Emissions - Berths 136-147 Terminal Project - Mitigated Project.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons) (1)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	12,837,231	11.23	49.38	118.97	0.06	5.53	5.09
Terminal Equipment - 176-250 Hp	15,391,012	9.67	27.15	120.01	0.07	4.91	4.52
Terminal Equipment - 250-500 Hp	2,957,161	1.31	4.56	20.15	0.01	0.71	0.66
Subtotal	31,185,404	22.21	81.10	259.13	0.15	11.15	10.26
Project Year 2015							
Terminal Equipment - 121-175 Hp	20,559,507	6.80	71.55	6.80	0.10	0.34	0.31
Terminal Equipment - 176-250 Hp	24,649,524	6.84	33.15	8.15	0.12	0.41	0.37
Terminal Equipment - 250-500 Hp	4,736,050	1.04	5.77	1.57	0.02	0.08	0.07
Subtotal	20,559,507	14.68	110.46	16.52	0.24	0.83	0.76
Project Year 2025							
Terminal Equipment - 121-175 Hp	34,539,516	3.70	116.92	11.42	0.17	0.57	0.53
Terminal Equipment - 176-250 Hp	41,410,653	4.37	51.35	13.69	0.20	0.68	0.63
Terminal Equipment - 250-500 Hp	7,956,460	0.70	8.76	2.63	0.04	0.13	0.12
Subtotal	83,906,628	8.77	177.03	27.75	0.41	1.39	1.28
Project Year 2038 (2)							
Terminal Equipment - 121-175 Hp	34,539,516	3.70	116.92	11.42	0.17	0.57	0.53
Terminal Equipment - 176-250 Hp	41,410,653	4.37	51.35	13.69	0.20	0.68	0.63
Terminal Equipment - 250-500 Hp	7,956,460	0.70	8.76	2.63	0.04	0.13	0.12
Subtotal	83,906,628	8.77	177.03	27.75	0.41	1.39	1.28

Note: (1) Mitigations begin in year 2010 and are complete by 2015.

(2) In years 2025 & 2038, Hp-Hrs increased an additional 23% to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

Table D1.2.PPMit-43. Mitigated Annual Operational Emissions - Berths 136-147 Terminal Project - Mitigated Project.

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	14.57	33.74	429.77	252.47	36.03	33.76
Ships - Precautionary Area Transit (1)	2.67	5.70	57.00	35.33	4.97	4.65
Ships - Harbor Transit (1)	4.12	5.23	39.36	19.89	3.99	3.74
Ships - Docking (1)	1.44	1.41	10.94	4.83	1.18	1.11
Ships - Hoteling Aux. Sources	7.69	27.85	274.64	262.88	23.43	21.95
Tugboats - Cargo Vessel Assist (1)	0.45	2.30	14.34	0.01	0.59	0.55
Terminal Equipment	22.21	81.10	259.13	0.15	11.15	10.26
On-road Trucks	127.46	408.62	1,244.42	1.16	83.65	50.66
Trains	19.98	46.54	278.19	24.77	10.52	9.68
Railyard Equipment	3.87	15.05	43.23	0.02	1.92	1.77
Commuting	1.90	25.50	3.33	0.02	2.78	2.56
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	207.07	654.34	2,664.22	601.64	180.47	140.93
Project Year 2015						
Ships - Fairway Transit (1)	4.12	28.43	198.61	11.63	4.39	4.11
Ships - Precautionary Area Transit (1)	1.30	8.38	54.53	7.37	1.25	1.17
Ships - Harbor Transit (1)	1.85	7.80	47.54	5.64	1.19	1.11
Ships - Docking (1)	0.60	2.11	13.17	1.48	0.34	0.32
Ships - Hoteling Aux. Sources	3.27	17.88	111.21	140.10	5.40	5.06
Tugboats - Cargo Vessel Assist (1)	0.47	2.46	13.18	0.01	0.57	0.53
Terminal Equipment	14.68	110.46	16.52	0.24	0.83	0.76
On-road Trucks	37.93	133.79	336.23	1.89	54.90	15.28
Trains	21.68	59.47	298.76	0.22	7.87	7.24
Railyard Equipment	2.00	21.75	2.00	0.03	0.10	0.09
Commuting	2.16	29.46	3.80	0.02	4.10	3.77
Pier A Railyard	0.41	1.58	5.53	0.00	0.03	0.03
Project Year 2015 Total	90.46	423.56	1,101.06	168.64	80.97	39.48
Project Year 2025						
Ships - Fairway Transit (1)	5.58	37.49	247.69	14.18	5.56	5.21
Ships - Precautionary Area Transit (1)	1.76	11.04	68.32	8.54	1.58	1.48
Ships - Harbor Transit (1)	2.47	10.37	63.54	6.78	1.57	1.47
Ships - Docking (1)	0.80	2.80	17.60	1.77	0.46	0.43
Ships - Hoteling Aux. Sources	1.20	14.57	38.96	171.04	4.79	4.49
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	12.20	0.01	0.53	0.50
Terminal Equipment	8.77	177.03	27.75	0.41	1.39	1.28
On-road Trucks	43.88	154.91	389.78	2.19	63.72	17.72
Trains	24.03	78.44	344.02	0.29	8.65	7.96
Railyard Equipment	2.64	28.74	2.64	0.04	0.13	0.12
Commuting	1.48	19.87	2.50	0.03	4.46	4.10
Pier A Railyard	0.40	1.58	1.02	0.00	0.03	0.03
Project Year 2025 Total	93.52	539.58	1,216.02	205.27	92.86	44.78
Project Year 2038						
Ships - Fairway Transit (1)	5.58	37.49	247.69	14.18	5.56	5.21
Ships - Precautionary Area Transit (1)	1.76	11.04	68.32	8.54	1.58	1.48
Ships - Harbor Transit (1)	2.47	10.37	63.54	6.78	1.57	1.47
Ships - Docking (1)	0.80	2.80	17.60	1.77	0.46	0.43
Ships - Hoteling Aux. Sources	1.20	14.57	38.96	171.04	4.79	4.49
Tugboats - Cargo Vessel Assist (1)	0.51	2.74	10.95	0.01	0.48	0.45
Terminal Equipment	8.77	177.03	27.75	0.41	1.39	1.28
On-road Trucks	45.09	154.46	394.39	2.23	63.21	17.25
Trains	20.42	78.44	301.12	0.29	7.17	6.60
Railyard Equipment	2.64	28.74	2.64	0.04	0.13	0.12
Commuting	0.76	9.15	0.87	0.03	5.51	5.07
Pier A Railyard	0.40	1.58	0.95	0.00	0.02	0.02
Project Year 2038 Total	90.38	528.40	1,174.79	205.31	91.87	43.86

Note: (1) Includes auxiliary generator emissions.

Table D1.2.PPMit-44. Mitigated Average Daily Operational Emissions - Berths 136-147 Terminal Project - Mitigated Project - 365 days/year all sources.

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	80	185	2,355	1,383	197	185
Ships - Precautionary Area Transit (1)	15	31	312	194	27	26
Ships - Harbor Transit (1)	23	29	216	109	22	20
Ships - Docking (1)	8	8	60	26	6	6
Ships - Hoteling Aux. Sources	42	153	1,505	1,440	128	120
Tugboats - Cargo Vessel Assist (1)	2	13	79	0	3	3
Terminal Equipment	122	444	1,420	1	61	56
On-road Trucks	698	2,239	6,819	6	458	278
Trains	109	255	1,524	136	58	53
Railyard Equipment	21	82	237	0	11	10
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,135	3,585	14,598	3,297	989	772
Net Change from Existing Conditions	(50)	(491)	1,127	573	(33)	(59)
Net Change from NFAB Year 2007	36	110	462	100	31	24
Project Year 2015						
Ships - Fairway Transit (1)	23	156	1,088	64	24	23
Ships - Precautionary Area Transit (1)	7	46	299	40	7	6
Ships - Harbor Transit (1)	10	43	260	31	6	6
Ships - Docking (1)	3	12	72	8	2	2
Ships - Hoteling Aux. Sources	18	98	609	768	30	28
Tugboats - Cargo Vessel Assist (1)	3	13	72	0	3	3
Terminal Equipment	80	605	90	1	5	4
On-road Trucks	208	733	1,842	10	301	84
Trains	119	326	1,637	1	43	40
Railyard Equipment	11	119	11	0	1	1
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	0	0
Project Year 2015 Total	496	2,321	6,033	924	444	216
Net Change from Existing Conditions	(689)	(1,756)	(7,438)	(1,800)	(578)	(615)
Net Change from NFAB Year 2015	68	290	634	18	55	21
Project Year 2025						
Ships - Fairway Transit (1)	31	205	1,357	78	30	29
Ships - Precautionary Area Transit (1)	10	60	374	47	9	8
Ships - Harbor Transit (1)	14	57	348	37	9	8
Ships - Docking (1)	4	15	96	10	2	2
Ships - Hoteling Aux. Sources	7	80	213	937	26	25
Tugboats - Cargo Vessel Assist (1)	3	15	67	0	3	3
Terminal Equipment	48	970	152	2	8	7
On-road Trucks	240	849	2,136	12	349	97
Trains	132	430	1,885	2	47	44
Railyard Equipment	14	157	14	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	6	0	0	0
Project Year 202 Total	512	2,957	6,663	1,125	509	245
Net Change from Existing Conditions	(672)	(1,120)	(6,809)	(1,599)	(513)	(586)
Net Change from NFAB Year 2025	132	845	1,373	195	150	55
Project Year 2038 Total						
Ships - Fairway Transit (1)	31	205	1,357	78	30	29
Ships - Precautionary Area Transit (1)	10	60	374	47	9	8
Ships - Harbor Transit (1)	14	57	348	37	9	8
Ships - Docking (1)	4	15	96	10	2	2
Ships - Hoteling Aux. Sources	7	80	213	937	26	25
Tugboats - Cargo Vessel Assist (1)	3	15	60	0	3	2
Terminal Equipment	67	1,362	213	3	11	10
On-road Trucks	247	846	2,161	12	346	94
Trains	112	430	1,650	2	39	36
Railyard Equipment	14	157	14	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	5	0	0	0
Project Year 2038 Total	515	3,287	6,499	1,126	506	243
Net Change from Existing Conditions	(670)	(790)	(6,973)	(1,598)	(515)	(588)
Net Change from NFAB Year 2038	142	1,009	1,395	196	149	55
SCAQMD Daily Significance Thresholds	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt3Mit-1. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alternative 3 - Vessels that Comply with Proposed VSRP

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.95	2.14	26.14	14.95	2.18	2.05
Containership < 3,000 TEU	1.21	2.82	36.51	21.18	3.03	2.83
Subtotal	2.16	4.96	62.65	36.13	5.21	4.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.09	2.29	26.22	14.69	2.23	2.09
Containerships 3,000 - 5,000 TEU	2.21	4.97	60.73	34.73	5.08	4.76
Containerships < 3,000 TEU	2.47	5.76	74.49	43.21	6.17	5.78
Subtotal	5.77	13.02	161.45	92.63	13.48	12.63
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.60	8.34	66.22	2.62	2.32	2.18
Containerships 3,000 - 5,000 TEU	3.19	6.65	65.04	2.79	2.16	2.02
Containerships < 3,000 TEU	2.72	6.35	73.84	3.33	2.38	2.23
Subtotal	10.51	21.34	205.10	8.75	6.86	6.43
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	10.06	18.23	144.80	5.73	5.08	4.76
Containerships 3,000 - 5,000 TEU	3.65	7.60	74.33	3.19	2.46	2.31
Containerships < 3,000 TEU	1.21	2.83	32.94	1.49	1.06	0.99
Subtotal	14.92	28.67	252.07	10.41	8.60	8.06
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	10.06	18.23	144.80	5.73	5.08	4.76
Containerships 3,000 - 5,000 TEU	3.65	7.60	74.33	3.19	2.46	2.31
Containerships < 3,000 TEU	1.21	2.83	32.94	1.49	1.06	0.99
Subtotal	14.92	28.67	252.07	10.41	8.60	8.06

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2.Alt3Mit-2. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alternative 3 - Non-Compliant Vessels with the Proposed VSRP.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	4.06	9.47	122.40	71.01	10.14	9.50
Containership < 3,000 TEU	5.28	12.33	159.36	92.45	13.21	12.37
Subtotal	9.34	21.79	281.76	163.45	23.35	21.88
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.39	3.25	41.95	24.34	3.48	3.26
Containerships 3,000 - 5,000 TEU	3.14	7.33	94.80	54.99	7.86	7.36
Containerships < 3,000 TEU	3.59	8.38	108.39	62.88	8.98	8.42
Subtotal	8.13	18.96	245.15	142.21	20.32	19.04
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.40	0.94	10.89	0.49	0.35	0.33
Containerships 3,000 - 5,000 TEU	0.36	0.84	9.83	0.44	0.32	0.30
Containerships < 3,000 TEU	0.33	0.77	8.98	0.41	0.29	0.27
Subtotal	1.09	2.55	29.70	1.34	0.96	0.90
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.88	2.05	23.82	1.07	0.77	0.72
Containerships 3,000 - 5,000 TEU	0.41	0.97	11.23	0.51	0.36	0.34
Containerships < 3,000 TEU	0.15	0.34	4.01	0.18	0.13	0.12
Subtotal	1.44	3.36	39.05	1.76	1.26	1.18
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.88	2.05	23.82	1.07	0.77	0.72
Containerships 3,000 - 5,000 TEU	0.41	0.97	11.23	0.51	0.36	0.34
Containerships < 3,000 TEU	0.15	0.34	4.01	0.18	0.13	0.12
Subtotal	1.44	3.36	39.05	1.76	1.26	1.18

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2.Alt3Mit-3. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alternative 3

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.85	1.53	13.52	6.88	1.22	1.14
Containership < 3,000 TEU	0.78	1.73	20.54	11.68	1.74	1.63
Subtotal	1.63	3.26	34.06	18.56	2.95	2.77
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.48	0.80	6.29	2.99	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.98	1.78	15.70	7.99	1.42	1.33
Containerships < 3,000 TEU	0.80	1.76	20.96	11.92	1.77	1.66
Subtotal	2.26	4.34	42.96	22.90	3.78	3.54
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.40	2.30	16.34	0.60	0.60	0.56
Containerships 3,000 - 5,000 TEU	1.13	2.05	16.28	0.64	0.57	0.53
Containerships < 3,000 TEU	0.73	1.62	17.37	0.77	0.57	0.53
Subtotal	3.26	5.98	49.98	2.02	1.74	1.63
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.05	5.03	35.73	1.32	1.30	1.22
Containerships 3,000 - 5,000 TEU	1.29	2.34	18.60	0.74	0.65	0.61
Containerships < 3,000 TEU	0.33	0.72	7.75	0.34	0.25	0.24
Subtotal	4.67	8.10	62.08	2.40	2.21	2.07
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	3.05	5.03	35.73	1.32	1.30	1.22
Containerships 3,000 - 5,000 TEU	1.29	2.34	18.60	0.74	0.65	0.61
Containerships < 3,000 TEU	0.33	0.72	7.75	0.34	0.25	0.24
Subtotal	4.67	8.10	62.08	2.40	2.21	2.07

(2) Without slide valves

Table D1.2.Alt3Mit-4. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alternative 3 .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	1.23	1.21	6.89	1.65	0.82	0.76
Containership < 3,000 TEU	1.40	1.38	7.86	1.88	0.93	0.87
Subtotal	2.62	2.59	14.75	3.53	1.75	1.64
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.68	0.68	3.85	0.92	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.42	1.41	8.01	1.92	0.95	0.89
Containerships < 3,000 TEU	1.42	1.41	8.02	1.92	0.95	0.89
Subtotal	3.53	3.49	19.88	4.76	2.35	2.21
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.98	1.95	10.00	0.19	0.46	0.43
Containerships 3,000 - 5,000 TEU	1.64	1.62	8.30	0.15	0.38	0.36
Containerships < 3,000 TEU	1.31	1.30	6.64	0.12	0.31	0.29
Subtotal	4.93	4.87	24.95	0.46	1.15	1.08
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.32	4.27	21.87	0.41	1.01	0.94
Containerships 3,000 - 5,000 TEU	1.87	1.85	9.49	0.18	0.44	0.41
Containerships < 3,000 TEU	0.58	0.58	2.96	0.06	0.14	0.13
Subtotal	6.78	6.70	34.33	0.64	1.58	1.48
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	4.32	4.27	21.87	0.41	1.01	0.94
Containerships 3,000 - 5,000 TEU	1.87	1.85	9.49	0.18	0.44	0.41
Containerships < 3,000 TEU	0.58	0.58	2.96	0.06	0.14	0.13
Subtotal	6.78	6.70	34.33	0.64	1.58	1.48

(2) Without slide valves

Table D1.2.Alt3Mit-5. Annual Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Alternative 3 .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.44	0.33	1.95	0.24	0.25	0.24
Containership < 3,000 TEU	0.50	0.37	2.22	0.28	0.29	0.27
Subtotal	0.94	0.70	4.16	0.52	0.54	0.51
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.25	0.18	1.09	0.14	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.51	0.38	2.26	0.28	0.30	0.28
Containerships < 3,000 TEU	0.51	0.38	2.26	0.28	0.30	0.28
Subtotal	1.27	0.94	5.61	0.70	0.73	0.69
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.71	0.52	2.82	0.03	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.59	0.44	2.34	0.02	0.12	0.11
Containerships < 3,000 TEU	0.47	0.35	1.88	0.02	0.10	0.09
Subtotal	1.77	1.31	7.04	0.07	0.36	0.33
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.55	1.15	6.18	0.06	0.31	0.29
Containerships 3,000 - 5,000 TEU	0.67	0.50	2.68	0.03	0.14	0.13
Containerships < 3,000 TEU	0.21	0.16	0.84	0.01	0.04	0.04
Subtotal	2.44	1.80	9.69	0.09	0.49	0.46
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.55	1.15	6.18	0.06	0.31	0.29
Containerships 3,000 - 5,000 TEU	0.67	0.50	2.68	0.03	0.14	0.13
Containerships < 3,000 TEU	0.21	0.16	0.84	0.01	0.04	0.04
Subtotal	2.44	1.80	9.69	0.09	0.49	0.46

(2) Without slide valves

Table D1.2.Alt3Mit-6. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Mitigated Alternative 3 - Vessels that Comply with VSRP.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.04	0.12	1.57	1.31	0.16	0.15
Containership < 3,000 TEU	0.05	0.14	1.89	1.58	0.19	0.18
Subtotal	0.09	0.26	3.46	2.90	0.35	0.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.05	0.13	1.79	1.49	0.18	0.17
Containerships 3,000 - 5,000 TEU	0.10	0.27	3.65	3.05	0.37	0.35
Containerships < 3,000 TEU	0.11	0.29	3.86	3.23	0.39	0.37
Subtotal	0.25	0.70	9.30	7.78	0.95	0.89
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.34	0.93	11.73	0.71	0.24	0.22
Containerships 3,000 - 5,000 TEU	0.27	0.74	9.32	0.57	0.19	0.18
Containerships < 3,000 TEU	0.22	0.60	7.55	0.46	0.15	0.14
Subtotal	0.82	2.26	28.60	1.74	0.57	0.54
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.74	2.03	25.65	1.56	0.51	0.48
Containerships 3,000 - 5,000 TEU	0.31	0.84	10.65	0.65	0.21	0.20
Containerships < 3,000 TEU	0.10	0.27	3.37	0.20	0.07	0.06
Subtotal	1.14	3.14	39.67	2.41	0.80	0.75
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.74	2.03	25.65	1.56	0.51	0.48
Containerships 3,000 - 5,000 TEU	0.31	0.84	10.65	0.65	0.21	0.20
Containerships < 3,000 TEU	0.10	0.27	3.37	0.20	0.07	0.06
Subtotal	1.14	3.14	39.67	2.41	0.80	0.75

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2.Alt3Mit-7. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Mitigated Alternative 3 - Non-Compliant Vessels within VSRP.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.09	0.25	3.35	2.80	0.34	0.32
Containership < 3,000 TEU	0.12	0.33	4.42	3.69	0.45	0.42
Subtotal	0.21	0.58	7.76	6.50	0.79	0.74
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.09	1.20	1.00	0.12	0.11
Containerships 3,000 - 5,000 TEU	0.07	0.19	2.59	2.17	0.26	0.25
Containerships < 3,000 TEU	0.08	0.22	3.00	2.51	0.31	0.29
Subtotal	0.18	0.51	6.80	5.69	0.69	0.65
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.33	0.02	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.28	0.02	0.01	0.01
Containerships < 3,000 TEU	0.01	0.02	0.26	0.02	0.01	0.00
Subtotal	0.03	0.07	0.87	0.05	0.02	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.72	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.03	0.32	0.02	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.12	0.01	0.00	0.00
Subtotal	0.03	0.09	1.15	0.07	0.02	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.72	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.03	0.32	0.02	0.01	0.01
Containerships < 3,000 TEU	0.00	0.01	0.12	0.01	0.00	0.00
Subtotal	0.03	0.09	1.15	0.07	0.02	0.02

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt3Mit-8. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alternative 3 .

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.12	0.32	4.16	2.66	0.34	0.32
Containership < 3,000 TEU	0.13	0.37	4.80	3.07	0.39	0.37
Subtotal	0.25	0.68	8.96	5.74	0.73	0.69
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.07	0.19	2.43	1.56	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.13	0.37	4.83	3.09	0.40	0.37
Containerships < 3,000 TEU	0.14	0.37	4.90	3.14	0.40	0.38
Subtotal	0.34	0.93	12.16	7.79	1.00	0.93
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.19	0.53	6.75	0.41	0.14	0.13
Containerships 3,000 - 5,000 TEU	0.15	0.42	5.36	0.33	0.11	0.10
Containerships < 3,000 TEU	0.13	0.34	4.34	0.26	0.09	0.08
Subtotal	0.47	1.30	16.46	1.00	0.33	0.31
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.41	1.13	14.31	0.87	0.29	0.27
Containerships 3,000 - 5,000 TEU	0.19	0.51	6.46	0.39	0.13	0.12
Containerships < 3,000 TEU	0.07	0.18	2.33	0.14	0.05	0.04
Subtotal	0.66	1.83	23.10	1.40	0.46	0.43
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.41	1.13	14.31	0.87	0.29	0.27
Containerships 3,000 - 5,000 TEU	0.19	0.51	6.46	0.39	0.13	0.12
Containerships < 3,000 TEU	0.07	0.18	2.33	0.14	0.05	0.04
Subtotal	0.66	1.83	23.10	1.40	0.46	0.43

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt3Mit-9. Annual Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alternative 3 .

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.17	0.48	6.24	4.00	0.51	0.48
Containership < 3,000 TEU	0.19	0.53	6.90	4.42	0.56	0.53
Subtotal	0.36	1.00	13.14	8.42	1.08	1.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	0.29	3.86	2.47	0.32	0.30
Containerships 3,000 - 5,000 TEU	0.20	0.55	7.25	4.64	0.59	0.56
Containerships < 3,000 TEU	0.20	0.54	7.04	4.51	0.58	0.54
Subtotal	0.50	1.38	18.15	11.62	1.49	1.39
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.31	0.85	10.71	0.65	0.22	0.20
Containerships 3,000 - 5,000 TEU	0.23	0.64	8.05	0.49	0.16	0.15
Containerships < 3,000 TEU	0.18	0.49	6.24	0.38	0.13	0.12
Subtotal	0.72	1.98	25.01	1.52	0.50	0.47
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.67	1.85	23.43	1.42	0.47	0.44
Containerships 3,000 - 5,000 TEU	0.26	0.73	9.20	0.56	0.18	0.17
Containerships < 3,000 TEU	0.08	0.22	2.79	0.17	0.06	0.05
Subtotal	1.02	2.80	35.41	2.15	0.71	0.67
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.67	1.85	23.43	1.42	0.47	0.44
Containerships 3,000 - 5,000 TEU	0.26	0.73	9.20	0.56	0.18	0.17
Containerships < 3,000 TEU	0.08	0.22	2.79	0.17	0.06	0.05
Subtotal	1.02	2.80	35.41	2.15	0.71	0.67

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt3Mit-10. Annual Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alternative 3

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.05	0.13	1.71	1.09	0.14	0.13
Containership < 3,000 TEU	0.05	0.14	1.89	1.21	0.15	0.14
Subtotal	0.10	0.27	3.59	2.30	0.29	0.28
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.03	0.08	1.05	0.67	0.09	0.08
Containerships 3,000 - 5,000 TEU	0.05	0.15	1.98	1.27	0.16	0.15
Containerships < 3,000 TEU	0.05	0.15	1.92	1.23	0.16	0.15
Subtotal	0.14	0.38	4.96	3.18	0.41	0.38
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.08	0.23	2.93	0.18	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.06	0.17	2.20	0.13	0.04	0.04
Containerships < 3,000 TEU	0.05	0.14	1.71	0.10	0.03	0.03
Subtotal	0.20	0.54	6.84	0.42	0.14	0.13
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.18	0.51	6.40	0.39	0.13	0.12
Containerships 3,000 - 5,000 TEU	0.07	0.20	2.51	0.15	0.05	0.05
Containerships < 3,000 TEU	0.02	0.06	0.76	0.05	0.02	0.01
Subtotal	0.28	0.77	9.68	0.59	0.19	0.18
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.18	0.51	6.40	0.39	0.13	0.12
Containerships 3,000 - 5,000 TEU	0.07	0.20	2.51	0.15	0.05	0.05
Containerships < 3,000 TEU	0.02	0.06	0.76	0.05	0.02	0.01
Subtotal	0.28	0.77	9.68	0.59	0.19	0.18

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt3Mit-11. Annual Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Alternative 3

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	2.72	7.49	98.21	62.88	8.04	7.53
Containership < 3,000 TEU	2.10	5.77	75.69	48.46	6.19	5.80
Subtotal	4.82	13.26	173.89	111.34	14.23	13.33
Project Year 2007						
Containerships 5,000 - 6,000 TEU	1.57	4.32	56.62	36.26	4.63	4.34
Containerships 3,000 - 5,000 TEU	3.16	8.70	114.09	73.05	9.34	8.75
Containerships < 3,000 TEU	2.14	5.89	77.22	49.44	6.32	5.92
Subtotal	6.87	18.90	247.94	158.75	20.29	19.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.91	2.49	31.47	1.91	0.63	0.59
Containerships 3,000 - 5,000 TEU	0.73	2.00	25.32	1.54	0.51	0.48
Containerships < 3,000 TEU	0.39	1.08	13.70	0.83	0.27	0.26
Subtotal	2.03	5.58	70.49	4.28	1.41	1.33
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.Alt3Mit-12. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alternative 3 - VSRP-Compliant.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3Mit-13. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alternative 3 - VSRP-Non-Compliant.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3Mit-14. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alternative 3

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.09	0.24	1.07	0.03	0.03
Containership < 3,000 TEU	0.02	0.20	0.53	2.33	0.07	0.06
Subtotal	0.02	0.29	0.77	3.40	0.10	0.09
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.09	0.41	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.28	1.24	0.03	0.03
Containerships < 3,000 TEU	0.02	0.20	0.54	2.37	0.07	0.06
Subtotal	0.03	0.34	0.92	4.03	0.11	0.11
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.10	0.27	1.18	0.03	0.03
Containerships 3,000 - 5,000 TEU	0.01	0.12	0.33	1.43	0.04	0.04
Containerships < 3,000 TEU	0.02	0.19	0.50	2.19	0.06	0.06
Subtotal	0.03	0.41	1.09	4.80	0.13	0.13
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.22	0.59	2.58	0.07	0.07
Containerships 3,000 - 5,000 TEU	0.01	0.14	0.37	1.64	0.05	0.04
Containerships < 3,000 TEU	0.01	0.08	0.22	0.97	0.03	0.03
Subtotal	0.04	0.44	1.18	5.19	0.15	0.14
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.22	0.59	2.58	0.07	0.07
Containerships 3,000 - 5,000 TEU	0.01	0.14	0.37	1.64	0.05	0.04
Containerships < 3,000 TEU	0.01	0.08	0.22	0.97	0.03	0.03
Subtotal	0.04	0.44	1.18	5.19	0.15	0.14

Table D1.2.Alt3Mit-15. Annual Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alternative 3

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.07	0.19	0.85	0.02	0.02
Containership < 3,000 TEU	0.01	0.16	0.42	1.85	0.05	0.05
Subtotal	0.02	0.23	0.61	2.69	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.07	0.32	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.01	0.08	0.22	0.99	0.03	0.03
Containerships < 3,000 TEU	0.01	0.16	0.43	1.88	0.05	0.05
Subtotal	0.02	0.27	0.73	3.19	0.09	0.08
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.08	0.21	0.94	0.03	0.02
Containerships 3,000 - 5,000 TEU	0.01	0.10	0.26	1.14	0.03	0.03
Containerships < 3,000 TEU	0.01	0.15	0.39	1.73	0.05	0.05
Subtotal	0.03	0.32	0.87	3.80	0.11	0.10
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.17	0.47	2.05	0.06	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.30	1.30	0.04	0.03
Containerships < 3,000 TEU	0.01	0.07	0.18	0.77	0.02	0.02
Subtotal	0.03	0.35	0.94	4.12	0.12	0.11
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.17	0.47	2.05	0.06	0.05
Containerships 3,000 - 5,000 TEU	0.01	0.11	0.30	1.30	0.04	0.03
Containerships < 3,000 TEU	0.01	0.07	0.18	0.77	0.02	0.02
Subtotal	0.03	0.35	0.94	4.12	0.12	0.11

Table D1.2.Alt3Mit-16. Annual Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alternative 3

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.23	0.01	0.01
Containership < 3,000 TEU	0.00	0.04	0.11	0.50	0.01	0.01
Subtotal	0.01	0.06	0.17	0.74	0.02	0.02
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.02	0.09	0.00	0.00
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.06	0.27	0.01	0.01
Containerships < 3,000 TEU	0.00	0.04	0.12	0.51	0.01	0.01
Subtotal	0.01	0.07	0.20	0.87	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.06	0.26	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.07	0.31	0.01	0.01
Containerships < 3,000 TEU	0.00	0.04	0.11	0.47	0.01	0.01
Subtotal	0.01	0.09	0.24	1.04	0.03	0.03
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.08	0.35	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.21	0.01	0.01
Subtotal	0.01	0.10	0.26	1.13	0.03	0.03
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.05	0.13	0.56	0.02	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.03	0.08	0.35	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.21	0.01	0.01
Subtotal	0.01	0.10	0.26	1.13	0.03	0.03

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3Mit-17. Annual Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Alternative 3 .

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.24	2.89	7.73	33.93	0.95	0.89
Containership < 3,000 TEU	0.31	3.77	10.09	44.31	1.24	1.16
Subtotal	0.55	6.66	17.82	78.24	2.19	2.05
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.11	1.33	3.55	15.57	0.44	0.41
Containerships 3,000 - 5,000 TEU	0.28	3.36	8.98	39.42	1.10	1.03
Containerships < 3,000 TEU	0.32	3.85	10.30	45.21	1.27	1.19
Subtotal	0.71	8.53	22.82	100.19	2.80	2.63
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.32	3.83	10.23	44.91	1.26	1.18
Containerships 3,000 - 5,000 TEU	0.32	3.87	10.34	45.41	1.27	1.19
Containerships < 3,000 TEU	0.29	3.54	9.48	41.61	1.16	1.09
Subtotal	0.93	11.24	30.05	131.93	3.69	3.46
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	8.36	22.37	98.20	2.75	2.58
Containerships 3,000 - 5,000 TEU	0.37	4.42	11.82	51.89	1.45	1.36
Containerships < 3,000 TEU	0.13	1.58	4.23	18.56	0.52	0.49
Subtotal	1.19	14.37	38.41	168.65	4.72	4.42
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.69	8.36	22.37	98.20	2.75	2.58
Containerships 3,000 - 5,000 TEU	0.37	4.42	11.82	51.89	1.45	1.36
Containerships < 3,000 TEU	0.13	1.58	4.23	18.56	0.52	0.49
Subtotal	1.19	14.37	38.41	168.65	4.72	4.42

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3Mit-18. Annual Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Alternative 3

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.08	0.43	2.85	0.18	0.11	0.10
Containership < 3,000 TEU	0.13	0.64	4.25	0.27	0.17	0.16
Subtotal	0.21	1.06	7.10	0.46	0.28	0.26
Project Year 2007						
Subtotal	0.41	2.06	12.98	0.01	0.53	0.50
Project Year 2015						
Subtotal	0.47	2.46	13.21	0.01	0.57	0.53
Project Year 2025						
Subtotal	0.50	2.66	11.85	0.01	0.52	0.48
Project Year 2038						
Subtotal	0.50	2.66	10.63	0.01	0.47	0.44

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt3Mit-19. Annual Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Alternative 3

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.01	0.04	0.23	0.02	0.01	0.01
Containership < 3,000 TEU	0.01	0.06	0.35	0.03	0.02	0.02
Subtotal	0.02	0.10	0.58	0.05	0.03	0.03
Project Year 2007						
Subtotal (1)	0.03	0.19	1.09	0.00	0.05	0.05
Project Year 2015						
Subtotal (1)	0.04	0.22	1.20	0.00	0.05	0.05
Project Year 2025						
Subtotal (1)	0.04	0.24	1.09	0.00	0.05	0.04
Project Year 2038						
Subtotal (1)	0.04	0.24	0.99	0.00	0.04	0.04

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt3Mit-20. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147
Terminal Project Mitigated Alternative 3 - Vessels that Comply with VSRP + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.89	8.34	47.35	2.62	1.00	0.94
Containerships 3,000 - 5,000 TEU	0.61	6.65	46.50	2.79	0.93	0.87
Containerships < 3,000 TEU	0.52	6.35	52.80	3.33	1.02	0.96
Subtotal	2.02	21.34	146.65	8.75	2.95	2.76
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.94	18.23	103.53	5.73	2.18	2.05
Containerships 3,000 - 5,000 TEU	0.70	7.60	53.14	3.19	1.06	0.99
Containerships < 3,000 TEU	0.23	2.83	23.55	1.49	0.46	0.43
Subtotal	2.87	28.67	180.23	10.41	3.70	3.47
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	1.94	18.23	103.53	5.73	2.18	2.05
Containerships 3,000 - 5,000 TEU	0.70	7.60	53.14	3.19	1.06	0.99
Containerships < 3,000 TEU	0.23	2.83	23.55	1.49	0.46	0.43
Subtotal	2.87	28.67	180.23	10.41	3.70	3.47

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.
(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt3Mit-21. Annual Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147
Terminal Project Mitigated Alternative 3 - Non-Compliant Vessels within VSRP + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.29	0.94	7.79	0.49	0.27	0.25
Containerships 3,000 - 5,000 TEU	0.26	0.84	7.03	0.44	0.24	0.23
Containerships < 3,000 TEU	0.24	0.77	6.42	0.41	0.22	0.21
Subtotal	0.78	2.55	21.24	1.34	0.73	0.68
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.63	2.05	17.03	1.07	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.30	0.97	8.03	0.51	0.28	0.26
Containerships < 3,000 TEU	0.11	0.34	2.86	0.18	0.10	0.09
Subtotal	1.03	3.36	27.92	1.76	0.96	0.90
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.63	2.05	17.03	1.07	0.59	0.55
Containerships 3,000 - 5,000 TEU	0.30	0.97	8.03	0.51	0.28	0.26
Containerships < 3,000 TEU	0.11	0.34	2.86	0.18	0.10	0.09
Subtotal	1.03	3.36	27.92	1.76	0.96	0.90

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.
(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt3Mit-22. Annual Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alternative 3 + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.27	2.30	11.68	0.60	0.26	0.24
Containerships 3,000 - 5,000 TEU	0.22	2.05	11.64	0.64	0.25	0.23
Containerships < 3,000 TEU	0.14	1.62	12.42	0.77	0.25	0.23
Subtotal	0.63	5.98	35.74	2.02	0.75	0.70
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.59	5.03	25.54	1.32	0.56	0.52
Containerships 3,000 - 5,000 TEU	0.25	2.34	13.30	0.74	0.28	0.26
Containerships < 3,000 TEU	0.06	0.72	5.54	0.34	0.11	0.10
Subtotal	0.90	8.10	44.38	2.40	0.95	0.89
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.59	5.03	25.54	1.32	0.56	0.52
Containerships 3,000 - 5,000 TEU	0.25	2.34	13.30	0.74	0.28	0.26
Containerships < 3,000 TEU	0.06	0.72	5.54	0.34	0.11	0.10
Subtotal	0.90	8.10	44.38	2.40	0.95	0.89

Table D1.2.Alt3Mit-23. Annual Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alternative 3 + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.38	1.95	7.15	0.19	0.20	0.19
Containerships 3,000 - 5,000 TEU	0.32	1.62	5.94	0.15	0.16	0.15
Containerships < 3,000 TEU	0.25	1.30	4.75	0.12	0.13	0.12
Subtotal	0.95	4.87	17.84	0.46	0.49	0.46
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.83	4.27	15.64	0.41	0.43	0.41
Containerships 3,000 - 5,000 TEU	0.36	1.85	6.78	0.18	0.19	0.18
Containerships < 3,000 TEU	0.11	0.58	2.12	0.06	0.06	0.05
Subtotal	1.30	6.70	24.54	0.64	0.68	0.64
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.83	4.27	15.64	0.41	0.43	0.41
Containerships 3,000 - 5,000 TEU	0.36	1.85	6.78	0.18	0.19	0.18
Containerships < 3,000 TEU	0.11	0.58	2.12	0.06	0.06	0.05
Subtotal	1.30	6.70	24.54	0.64	0.68	0.64

Table D1.2.Alt3Mit-24. Annual Cargo Vessel Emissions for Docking Activities -
Berths 136-147 Terminal Project - Mitigated Alternative 3 + Slide Valves

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.14	0.52	2.02	0.03	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.11	0.44	1.68	0.02	0.05	0.05
Containerships < 3,000 TEU	0.09	0.35	1.34	0.02	0.04	0.04
Subtotal	0.34	1.31	5.04	0.07	0.15	0.14
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.30	1.15	4.42	0.06	0.13	0.13
Containerships 3,000 - 5,000 TEU	0.13	0.50	1.92	0.03	0.06	0.05
Containerships < 3,000 TEU	0.04	0.16	0.60	0.01	0.02	0.02
Subtotal	0.47	1.80	6.93	0.09	0.21	0.20
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.30	1.15	4.42	0.06	0.13	0.13
Containerships 3,000 - 5,000 TEU	0.13	0.50	1.92	0.03	0.06	0.05
Containerships < 3,000 TEU	0.04	0.16	0.60	0.01	0.02	0.02
Subtotal	0.47	1.80	6.93	0.09	0.21	0.20

Table D1.2.Alt3Mit-25. Annual Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3

Project Scenario/Emission Source	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.88	15.72	3.14	2.94
Ships - Docking (1)	1.16	1.13	8.59	3.81	0.93	0.87
Ships - Hoteling Aux. Sources	5.86	21.86	208.85	205.61	17.64	16.53
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Subtotal	24.26	60.16	655.42	462.30	55.51	52.01
Project Year 2007						
Ships - Fairway Transit (1)	14.33	33.19	422.69	248.31	35.44	33.20
Ships - Precautionary Area Transit (1)	2.63	5.61	56.03	34.72	4.88	4.58
Ships - Harbor Transit (1)	4.06	5.15	38.76	19.57	3.93	3.68
Ships - Docking (1)	1.41	1.39	10.77	4.75	1.16	1.09
Ships - Hoteling Aux. Sources	7.58	27.44	270.76	258.94	23.10	21.64
Tugboats - Cargo Vessel Assist (1)	0.44	2.25	14.07	0.01	0.58	0.54
Subtotal	30.45	75.03	813.08	566.30	69.09	64.73
Project Year 2015						
Ships - Fairway Transit (1)	3.65	26.22	197.35	11.88	4.27	4.00
Ships - Precautionary Area Transit (1)	1.14	7.69	53.29	7.81	1.21	1.14
Ships - Harbor Transit (1)	1.69	7.17	43.71	5.79	1.10	1.03
Ships - Docking (1)	0.55	1.94	12.11	1.52	0.32	0.30
Ships - Hoteling Aux. Sources	2.96	16.82	100.54	136.21	5.11	4.79
Tugboats - Cargo Vessel Assist (1)	0.51	2.69	14.41	0.01	0.62	0.58
Subtotal	10.50	62.52	421.41	163.22	12.63	11.84
Project Year 2025						
Ships - Fairway Transit (1)	5.08	35.25	248.97	14.65	5.48	5.13
Ships - Precautionary Area Transit (1)	1.60	10.37	68.67	8.99	1.56	1.46
Ships - Harbor Transit (1)	2.35	9.85	60.89	6.91	1.51	1.41
Ships - Docking (1)	0.76	2.66	16.86	1.81	0.44	0.41
Ships - Hoteling Aux. Sources	1.19	14.37	38.41	168.65	4.72	4.42
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	12.95	0.01	0.56	0.53
Subtotal	11.51	75.41	446.76	201.02	14.26	13.37
Project Year 2038						
Ships - Fairway Transit (1)	5.08	35.25	248.97	14.65	5.48	5.13
Ships - Precautionary Area Transit (1)	1.60	10.37	68.67	8.99	1.56	1.46
Ships - Harbor Transit (1)	2.35	9.85	60.89	6.91	1.51	1.41
Ships - Docking (1)	0.76	2.66	16.86	1.81	0.44	0.41
Ships - Hoteling Aux. Sources	1.19	14.37	38.41	168.65	4.72	4.42
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	11.62	0.01	0.51	0.48
Subtotal	11.51	75.41	445.44	201.02	14.21	13.32

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt3Mit-26. Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3

Project Scenario/Emission Source	Pounds Per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	64.7	151.2	1,948.7	1,145.0	162.8	152.5
Ships - Precautionary Area Transit (1)	10.4	23.2	240.0	151.8	20.7	19.4
Ships - Harbor Transit (1)	18.1	22.9	169.2	86.1	17.2	16.1
Ships - Docking (1)	6.3	6.2	47.0	20.9	5.1	4.8
Ships - Hoteling Aux. Sources	32.1	119.8	1,144.4	1,126.6	96.6	90.6
Tugboats - Cargo Vessel Assist (1)	1.2	6.4	42.1	2.8	1.7	1.6
Subtotal	133	330	3,591	2,533	304	285
Project Year 2007						
Ships - Fairway Transit (1)	78.5	181.9	2,316.1	1,360.6	194.2	181.9
Ships - Precautionary Area Transit (1)	14.4	30.7	307.0	190.2	26.8	25.1
Ships - Harbor Transit (1)	22.2	28.2	212.4	107.3	21.5	20.2
Ships - Docking (1)	7.7	7.6	59.0	26.0	6.4	6.0
Ships - Hoteling Aux. Sources	41.5	150.3	1,483.6	1,418.9	126.6	118.6
Tugboats - Cargo Vessel Assist (1)	2.4	12.3	77.1	0.0	3.2	3.0
Subtotal	167	411	4,455	3,103	379	355
Project Year 2015						
Ships - Fairway Transit (1)	20.0	143.7	1,081.4	65.1	23.4	21.9
Ships - Precautionary Area Transit (1)	6.2	42.1	292.0	42.8	6.6	6.2
Ships - Harbor Transit (1)	9.3	39.3	239.5	31.7	6.0	5.7
Ships - Docking (1)	3.0	10.6	66.3	8.4	1.8	1.6
Ships - Hoteling Aux. Sources	16.2	92.1	550.9	746.4	28.0	26.2
Tugboats - Cargo Vessel Assist (1)	2.8	14.7	79.0	0.0	3.4	3.2
Subtotal	58	343	2,309	894	69	65
Project Year 2025						
Ships - Fairway Transit (1)	27.8	193.2	1,364.2	80.3	30.0	28.1
Ships - Precautionary Area Transit (1)	8.8	56.8	376.3	49.3	8.5	8.0
Ships - Harbor Transit (1)	12.9	54.0	333.7	37.9	8.3	7.7
Ships - Docking (1)	4.1	14.6	92.4	9.9	2.4	2.2
Ships - Hoteling Aux. Sources	6.5	78.7	210.5	924.1	25.9	24.2
Tugboats - Cargo Vessel Assist (1)	3.0	15.9	70.9	0.1	3.1	2.9
Subtotal	63	413	2,448	1,101	78	73
Project Year 2038						
Ships - Fairway Transit (1)	27.8	193.2	1,364.2	80.3	30.0	28.1
Ships - Precautionary Area Transit (1)	8.8	56.8	376.3	49.3	8.5	8.0
Ships - Harbor Transit (1)	12.9	54.0	333.7	37.9	8.3	7.7
Ships - Docking (1)	4.1	14.6	92.4	9.9	2.4	2.2
Ships - Hoteling Aux. Sources	6.5	78.7	210.5	924.1	25.9	24.2
Tugboats - Cargo Vessel Assist (1)	2.9	15.9	63.7	0.1	2.8	2.6
Subtotal	63	413	2,441	1,101	78	73

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt3Mit-27. Daily Mitigated Truck Emissions for the Berths 136-147 Terminal Project - Mitigated Alternative 3

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	71.1	166.3	391.1	2.3	11.5	10.6
Year 2003 - Driving	77.5	176.1	281.7	1.9	28.7	26.4
Subtotal - Year 2003	148.7	342.4	672.7	4.3	40.3	37.0
Year 2007 - Idling	23.7	77.4	264.1	0.2	2.9	2.6
Year 2007 - Driving	73.2	148.1	286.5	0.3	21.1	19.4
Subtotal - Year 2007	96.9	225.5	550.6	0.4	23.9	22.0
Year 2015 - Idling	14.0	58.7	249.4	0.1	0.2	0.2
Year 2015 - Driving	7.2	15.7	26.0	0.2	0.4	0.4
Subtotal - Year 2015	21.2	74.4	275.4	0.3	0.6	0.6
Year 2025 - Idling	15.8	66.3	281.3	0.1	0.2	0.2
Year 2025 - Driving	8.1	17.6	29.1	0.2	0.5	0.4
Subtotal - Year 2025	23.9	83.9	310.4	0.4	0.7	0.6
Year 2038 - Idling	15.8	68.5	281.3	0.1	0.2	0.2
Year 2038 - Driving	8.0	17.5	28.8	0.2	0.5	0.4
Subtotal - Year 2038	23.9	86.0	310.1	0.4	0.7	0.6
Off-Terminal						
Year 2003 - Idling	38.1	89.1	209.5	1.3	6.2	5.7
Year 2003 - Driving	640.1	2,542.2	5,783.5	38.8	382.8	352.2
Subtotal - Year 2003	678.2	2,631.3	5,993.0	40.0	389.0	357.8
Year 2007 - Idling	28.5	92.9	316.9	0.2	3.4	3.2
Year 2007 - Driving	561.8	1,884.4	5,841.3	5.6	229.6	211.3
Subtotal - Year 2007	590.3	1,977.3	6,158.2	5.8	233.1	214.4
Year 2015 - Idling	16.8	70.5	299.3	0.2	0.2	0.2
Year 2015 - Driving	138.0	475.2	969.1	8.4	29.3	26.9
Subtotal - Year 2015	154.8	545.7	1,268.4	8.6	29.5	27.1
Year 2025 - Idling	19.0	79.5	337.5	0.2	0.2	0.2
Year 2025 - Driving	142.3	490.4	998.8	8.7	30.3	27.9
Subtotal - Year 2025	161.3	569.9	1,336.4	8.9	30.6	28.1
Year 2038 - Idling	19.0	82.2	337.5	0.2	0.2	0.2
Year 2038 - Driving	147.4	483.8	1,018.5	8.9	28.2	25.9
Subtotal - Year 2038	166.4	566.0	1,356.1	9.1	28.4	26.1
Year 2003	826.9	2,973.6	6,665.8	44.3	429.2	394.9
Year 2007	687.1	2,202.9	6,708.8	6.2	257.0	236.4
Year 2015	176.0	620.1	1,543.7	8.9	30.1	27.7
Year 2025	185.2	653.8	1,646.8	9.2	31.3	28.8
Year 2038	190.3	651.9	1,666.2	9.4	29.1	26.8

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.Alt3Mit-28. Annual Mitigated Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3 Year 2007.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	1.88	8.29	19.97	0.01	0.93	0.85
Top Picks	0.88	2.48	10.97	0.01	0.45	0.41
Line Haul Locomotive - Road Haul	9.08	21.27	126.46	11.52	4.82	4.43
Line Haul Locomotive - Notch 1	0.67	1.58	9.39	0.86	0.36	0.33
Yard Locomotive - Switching	0.49	0.88	6.69	0.04	0.17	0.16
Subtotal	13.01	34.49	173.48	12.43	6.73	6.19
Carson or LA Railyards/Inbound						
Hostler	0.71	3.11	7.49	0.00	0.35	0.32
Top Picks	0.33	0.93	4.11	0.00	0.17	0.15
Line Haul Locomotive - Road Haul	9.08	21.27	126.46	11.52	4.82	4.43
Line Haul Locomotive - Notch 1	0.34	0.79	4.70	0.43	0.18	0.16
Subtotal	10.45	26.10	142.76	11.96	5.51	5.07
Total Tons Per Year	23.46	60.59	316.24	24.39	12.24	11.26

Table D1.2.Alt3Mit-29. Annual Mitigated Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3 Year 2015.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.73	9.05	0.73	0.01	0.04	0.03
Top Picks	0.48	4.15	0.48	0.01	0.02	0.02
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Yard Locomotive - Switching	0.26	1.04	0.35	0.00	0.01	0.01
Subtotal	10.47	38.76	127.23	0.11	3.38	3.11
Berths 136-147/Inbound						
Hostler	0.28	3.39	0.28	0.00	0.01	0.01
Top Picks	0.18	1.56	0.18	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	8.70	23.71	121.50	0.09	3.20	2.94
Line Haul Locomotive - Notch 1	0.30	0.81	4.17	0.00	0.11	0.10
Subtotal	9.46	29.47	126.12	0.10	3.33	3.07
Carson or LA Railyards/Outbound						
Hostler	0.02	0.20	0.02	0.00	0.00	0.00
Top Picks	0.01	0.09	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.18	0.49	2.51	0.00	0.07	0.06
Line Haul Locomotive - Notch 1	0.01	0.04	0.19	0.00	0.00	0.00
Yard Locomotive - Switching	0.01	0.02	0.01	0.00	0.00	0.00
Subtotal	0.23	0.85	2.74	0.00	0.07	0.07
Carson or LA Railyards/Inbound						
Hostler	0.01	0.08	0.01	0.00	0.00	0.00
Top Picks	0.00	0.03	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.18	0.49	2.51	0.00	0.07	0.06
Line Haul Locomotive - Notch 1	0.01	0.02	0.09	0.00	0.00	0.00
Subtotal	0.20	0.62	2.62	0.00	0.07	0.06
Total Tons Per Year	20.36	69.70	258.71	0.21	6.86	6.31

Table D1.2.Alt3Mit-30. Annual Mitigated Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3 Year 2025.

ICTF/Train Direction/Source Activity	Tons per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	11.43	49.15	141.07	0.14	3.59	3.30
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	9.25	30.06	134.48	0.11	3.38	3.11
Line Haul Locomotive - Notch 1	0.32	1.03	4.61	0.00	0.12	0.11
Subtotal	10.14	37.37	139.67	0.12	3.53	3.24
Carson or LA Railyards/Outbound						
Hostler	0.20	2.43	0.20	0.00	0.01	0.01
Top Picks	0.13	1.12	0.13	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	1.81	5.89	26.33	0.02	0.66	0.61
Line Haul Locomotive - Notch 1	0.13	0.44	1.96	0.00	0.05	0.05
Yard Locomotive - Switching	0.07	0.29	0.10	0.00	0.00	0.00
Subtotal	2.34	10.17	28.72	0.03	0.73	0.67
Carson or LA Railyards/Inbound						
Hostler	0.07	0.91	0.07	0.00	0.00	0.00
Top Picks	0.05	0.42	0.05	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.81	5.89	26.33	0.02	0.66	0.61
Line Haul Locomotive - Notch 1	0.07	0.22	0.98	0.00	0.02	0.02
Subtotal	2.00	7.44	27.43	0.02	0.69	0.64
Total Tons Per Year	25.92	104.12	336.89	0.32	8.54	7.86

Table D1.2.Alt3Mit-31. Annual Mitigated Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3 Year 2038.

	Tons per Year					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.93	11.47	0.93	0.01	0.05	0.04
Top Picks	0.61	5.26	0.61	0.01	0.03	0.03
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Yard Locomotive - Switching	0.33	1.32	0.45	0.00	0.01	0.01
Subtotal	9.97	49.15	123.70	0.14	2.99	2.75
Berths 136-147/Inbound						
Hostler	0.35	4.30	0.35	0.01	0.02	0.02
Top Picks	0.23	1.97	0.23	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	7.83	30.06	117.68	0.11	2.80	2.58
Line Haul Locomotive - Notch 1	0.27	1.03	4.04	0.00	0.10	0.09
Subtotal	8.68	37.37	122.29	0.12	2.93	2.69
Carson or LA Railyards/Outbound						
Hostler	0.20	2.43	0.20	0.00	0.01	0.01
Top Picks	0.13	1.12	0.13	0.00	0.01	0.01
Line Haul Locomotive - Road Haul	1.53	5.89	23.05	0.02	0.55	0.50
Line Haul Locomotive - Notch 1	0.11	0.44	1.71	0.00	0.04	0.04
Yard Locomotive - Switching	0.07	0.29	0.10	0.00	0.00	0.00
Subtotal	2.05	10.17	25.18	0.03	0.61	0.56
Carson or LA Railyards/Inbound						
Hostler	0.07	0.91	0.07	0.00	0.00	0.00
Top Picks	0.05	0.42	0.05	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	1.53	5.89	23.05	0.02	0.55	0.50
Line Haul Locomotive - Notch 1	0.06	0.22	0.86	0.00	0.02	0.02
Subtotal	1.71	7.44	24.02	0.02	0.58	0.53
Total Tons Per Year	22.40	104.12	295.20	0.32	7.10	6.53

Table D1.2.Alt3Mit-32. Summary of Annual Mitigated Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3.

	Tons per Year					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Subtotal	21.28	49.52	354.02	20.72	11.34	10.43
Project Year 2007						
ICTF Equipment	3.81	14.81	42.54	0.02	1.89	1.74
Trains	19.65	45.79	273.70	24.37	10.35	9.52
Subtotal	23.46	60.59	316.24	24.39	12.24	11.26
Project Year 2015						
ICTF Equipment	1.70	18.55	1.70	0.03	0.09	0.08
Trains	18.65	51.14	257.01	0.19	6.77	6.23
Subtotal	20.36	69.70	258.71	0.21	6.86	6.31
Project Year 2025						
ICTF Equipment	2.56	27.89	2.56	0.04	0.13	0.12
Trains	23.35	76.23	334.33	0.28	8.41	7.74
Subtotal	25.92	104.12	336.89	0.32	8.54	7.86
Project Year 2038						
ICTF Equipment	2.56	27.89	2.56	0.04	0.13	0.12
Trains	19.84	76.23	292.64	0.28	6.97	6.41
Subtotal	22.40	104.12	295.20	0.32	7.10	6.53

Table D1.2.Alt3Mit-33. Terminal Equipment Annual Mitigated Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3.

Project Scenario/Equipment Horsepower	Annual Hp-Hrs	Annual Emissions (Tons) (1)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Baseline - Year 2003							
Terminal Equipment - 121-175 Hp	10,493,875	9.61	39.16	105.82	1.19	6.03	5.55
Terminal Equipment - 176-250 Hp	12,581,479	6.11	18.34	94.22	1.42	3.37	3.10
Terminal Equipment - 250-500 Hp	2,417,350	1.18	3.92	18.61	0.27	0.58	0.53
Subtotal	25,492,704	16.89	61.43	218.65	2.89	9.98	9.18
Project Year 2007							
Terminal Equipment - 121-175 Hp	12,633,098	11.05	48.60	117.08	0.06	5.44	5.01
Terminal Equipment - 176-250 Hp	15,146,270	9.52	26.72	118.10	0.07	4.83	4.44
Terminal Equipment - 250-500 Hp	2,910,137	1.29	4.49	19.83	0.01	0.70	0.64
Subtotal	30,689,504	21.86	79.81	255.01	0.15	10.98	10.10
Project Year 2015							
Terminal Equipment - 121-175 Hp	17,542,048	5.80	61.05	5.80	0.09	0.29	0.27
Terminal Equipment - 176-250 Hp	21,031,785	5.84	28.28	6.95	0.10	0.35	0.32
Terminal Equipment - 250-500 Hp	4,040,954	0.89	4.92	1.34	0.02	0.07	0.06
Subtotal	42,614,787	12.53	94.25	14.09	0.21	0.70	0.65
Project Year 2025							
Terminal Equipment - 121-175 Hp	26,137,689	2.80	88.48	8.64	0.13	0.43	0.40
Terminal Equipment - 176-250 Hp	31,337,404	3.31	38.86	10.36	0.15	0.52	0.48
Terminal Equipment - 250-500 Hp	6,021,030	0.53	6.63	1.99	0.03	0.10	0.09
Subtotal	63,496,123	6.63	133.97	21.00	0.31	1.05	0.97
Project Year 2038 (2)							
Terminal Equipment - 121-175 Hp	26,137,689	2.80	88.48	8.64	0.13	0.43	0.40
Terminal Equipment - 176-250 Hp	31,337,404	3.31	38.86	10.36	0.15	0.52	0.48
Terminal Equipment - 250-500 Hp	6,021,030	0.53	6.63	1.99	0.03	0.10	0.09
Subtotal	63,496,123	6.63	133.97	21.00	0.31	1.05	0.97

Note: (1) Full mitigations occur in year 2008.

(2) In year 2038, Hp-Hrs increased an additional 19% to simulate the effects of additional equipment usage needed to handle future cargo levels within a constrained terminal space (>8,000 TEUs/acre).

Table D1.2.Alt3Mit-34. Mitigated Annual Operational Emissions - Berths 136-147 Terminal Project - Mitigated Alterna

	Tons Per Year					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	11.81	27.59	355.63	208.97	29.71	27.83
Ships - Precautionary Area Transit (1)	1.90	4.23	43.80	27.70	3.78	3.54
Ships - Harbor Transit (1)	3.31	4.19	30.89	15.85	3.15	2.96
Ships - Docking (1)	1.16	1.13	8.59	3.84	0.94	0.88
Ships - Hoteling Aux. Sources	5.86	21.86	209.10	208.38	17.93	16.80
Tugboats - Cargo Vessel Assist (1)	0.23	1.16	7.68	0.50	0.31	0.29
Terminal Equipment	16.89	61.43	218.65	2.89	9.98	9.18
On-road Trucks	150.91	542.69	1,216.50	8.09	106.81	77.45
Trains	18.24	37.99	317.17	20.26	9.49	8.73
Railyard Equipment	3.03	11.53	36.85	0.46	1.84	1.70
Commuting	2.18	29.15	3.68	0.02	2.27	2.09
Pier A Railyard	0.73	1.07	10.06	0.11	0.26	0.24
Year 2003 Total	216.25	744.01	2,458.59	497.06	186.46	151.68
Project Year 2007						
Ships - Fairway Transit (1)	14.33	33.19	422.69	248.31	35.44	33.20
Ships - Precautionary Area Transit (1)	2.63	5.61	56.03	34.72	4.88	4.58
Ships - Harbor Transit (1)	4.06	5.15	38.76	19.57	3.93	3.68
Ships - Docking (1)	1.41	1.39	10.77	4.75	1.16	1.09
Ships - Hoteling Aux. Sources	7.58	27.44	270.76	258.94	23.10	21.64
Tugboats - Cargo Vessel Assist (1)	0.44	2.25	14.07	0.01	0.58	0.54
Terminal Equipment	21.86	79.81	255.01	0.15	10.98	10.10
On-road Trucks	125.40	402.03	1,224.35	1.14	82.30	49.85
Trains	19.65	45.79	273.70	24.37	10.35	9.52
Railyard Equipment	3.81	14.81	42.54	0.02	1.89	1.74
Commuting	1.90	25.50	3.33	0.02	2.78	2.56
Pier A Railyard	0.73	1.32	9.87	0.11	0.26	0.24
Project Year 2007 Total	203.80	644.27	2,621.88	592.12	177.65	138.74
Project Year 2015						
Ships - Fairway Transit (1)	3.65	26.22	197.35	11.88	4.27	4.00
Ships - Precautionary Area Transit (1)	1.14	7.69	53.29	7.81	1.21	1.14
Ships - Harbor Transit (1)	1.69	7.17	43.71	5.79	1.10	1.03
Ships - Docking (1)	0.55	1.94	12.11	1.52	0.32	0.30
Ships - Hoteling Aux. Sources	2.96	16.82	100.54	136.21	5.11	4.79
Tugboats - Cargo Vessel Assist (1)	0.51	2.69	14.41	0.01	0.62	0.58
Terminal Equipment	12.53	94.25	14.09	0.21	0.70	0.65
On-road Trucks	32.12	113.18	281.73	1.62	46.54	13.01
Trains	18.65	51.14	257.01	0.19	6.77	6.23
Railyard Equipment	1.70	18.55	1.70	0.03	0.09	0.08
Commuting	2.16	29.46	3.80	0.02	4.10	3.77
Pier A Railyard	0.41	1.58	5.53	0.00	0.16	0.14
Project Year 2015 Total	78.07	370.68	985.28	165.28	70.98	35.72
Project Year 2025						
Ships - Fairway Transit (1)	5.08	35.25	248.97	14.65	5.48	5.13
Ships - Precautionary Area Transit (1)	1.60	10.37	68.67	8.99	1.56	1.46
Ships - Harbor Transit (1)	2.35	9.85	60.89	6.91	1.51	1.41
Ships - Docking (1)	0.76	2.66	16.86	1.81	0.44	0.41
Ships - Hoteling Aux. Sources	1.19	14.37	38.41	168.65	4.72	4.42
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	12.95	0.01	0.56	0.53
Terminal Equipment	6.63	133.97	21.00	0.31	1.05	0.97
On-road Trucks	33.80	119.32	300.54	1.69	49.07	13.64
Trains	23.35	76.23	334.33	0.28	8.41	7.74
Railyard Equipment	2.56	27.89	2.56	0.04	0.13	0.12
Commuting	1.48	19.87	2.50	0.03	4.46	4.10
Pier A Railyard	0.40	1.58	5.45	0.00	0.03	0.03
Project Year 2025 Total	79.74	454.25	1,113.14	203.36	77.41	39.95
Project Year 2038						
Ships - Fairway Transit (1)	5.08	35.25	248.97	14.65	5.48	5.13
Ships - Precautionary Area Transit (1)	1.60	10.37	68.67	8.99	1.56	1.46
Ships - Harbor Transit (1)	2.35	9.85	60.89	6.91	1.51	1.41
Ships - Docking (1)	0.76	2.66	16.86	1.81	0.44	0.41
Ships - Hoteling Aux. Sources	1.19	14.37	38.41	168.65	4.72	4.42
Tugboats - Cargo Vessel Assist (1)	0.54	2.91	11.62	0.01	0.51	0.48
Terminal Equipment	6.63	133.97	21.00	0.31	1.05	0.97
On-road Trucks	34.72	118.98	304.08	1.72	48.67	13.27
Trains	19.84	76.23	292.64	0.28	6.97	6.41
Railyard Equipment	2.56	27.89	2.56	0.04	0.13	0.12
Commuting	0.65	7.79	0.74	0.03	4.70	4.32
Pier A Railyard	0.40	1.58	5.39	0.00	0.02	0.02
Project Year 2038 Total	76.31	441.83	1,071.84	203.39	75.75	38.43

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt3Mit-35. Mitigated Average Daily Operational Emissions - Berths 136-147 Terminal Project - Mitigated Alternative 3.

	Pounds Per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	65	151	1,949	1,145	163	153
Ships - Precautionary Area Transit (1)	10	23	240	152	21	19
Ships - Harbor Transit (1)	18	23	169	87	17	16
Ships - Docking (1)	6	6	47	21	5	5
Ships - Hoteling Aux. Sources	32	120	1,146	1,142	98	92
Tugboats - Cargo Vessel Assist (1)	1	6	42	3	2	2
Terminal Equipment	93	337	1,198	16	55	50
On-road Trucks	827	2,974	6,666	44	585	424
Trains	100	208	1,738	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,185	4,077	13,472	2,724	1,022	831
Project Year 2007						
Ships - Fairway Transit (1)	79	182	2,316	1,361	194	182
Ships - Precautionary Area Transit (1)	14	31	307	190	27	25
Ships - Harbor Transit (1)	22	28	212	107	22	20
Ships - Docking (1)	8	8	59	26	6	6
Ships - Hoteling Aux. Sources	42	150	1,484	1,419	127	119
Tugboats - Cargo Vessel Assist (1)	2	12	77	0	3	3
Terminal Equipment	120	437	1,397	1	60	55
On-road Trucks	687	2,203	6,709	6	451	273
Trains	108	251	1,500	134	57	52
Railyard Equipment	21	81	233	0	10	10
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,117	3,530	14,366	3,244	973	760
Net Change from Existing Conditions	(68)	(547)	895	521	(48)	(71)
Net Change from NFAB Year 2007	18	55	230	48	15	12
Project Year 2015						
Ships - Fairway Transit (1)	20	144	1,081	65	23	22
Ships - Precautionary Area Transit (1)	6	42	292	43	7	6
Ships - Harbor Transit (1)	9	39	240	32	6	6
Ships - Docking (1)	3	11	66	8	2	2
Ships - Hoteling Aux. Sources	16	92	551	746	28	26
Tugboats - Cargo Vessel Assist (1)	3	15	79	0	3	3
Terminal Equipment	69	516	77	1	4	4
On-road Trucks	176	620	1,544	9	255	71
Trains	102	280	1,408	1	37	34
Railyard Equipment	9	102	9	0	0	0
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	428	2,031	5,399	906	389	196
Net Change from Existing Conditions	(757)	(2,046)	(8,073)	(1,818)	(633)	(635)
Net Change from NFAB Year 2015	-	-	-	-	1	1
Project Year 2025						
Ships - Fairway Transit (1)	28	193	1,364	80	30	28
Ships - Precautionary Area Transit (1)	9	57	376	49	9	8
Ships - Harbor Transit (1)	13	54	334	38	8	8
Ships - Docking (1)	4	15	92	10	2	2
Ships - Hoteling Aux. Sources	7	79	210	924	26	24
Tugboats - Cargo Vessel Assist (1)	3	16	71	0	3	3
Terminal Equipment	36	734	115	2	6	5
On-road Trucks	185	654	1,647	9	269	75
Trains	128	418	1,832	2	46	42
Railyard Equipment	14	153	14	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	30	0	0	0
Project Year 2025 Total	437	2,489	6,099	1,114	424	219
Net Change from Existing Conditions	(748)	(1,588)	(7,372)	(1,609)	(598)	(612)
Net Change from NFAB Year 2025	57	378	810	185	65	28
Project Year 2038						
Ships - Fairway Transit (1)	28	193	1,364	80	30	28
Ships - Precautionary Area Transit (1)	9	57	376	49	9	8
Ships - Harbor Transit (1)	13	54	334	38	8	8
Ships - Docking (1)	4	15	92	10	2	2
Ships - Hoteling Aux. Sources	7	79	210	924	26	24
Tugboats - Cargo Vessel Assist (1)	3	16	64	0	3	3
Terminal Equipment	51	1,031	162	2	8	7
On-road Trucks	190	652	1,666	9	267	73
Trains	109	418	1,604	2	38	35
Railyard Equipment	14	153	14	0	1	1
Commuting	4	43	4	0	26	24
Pier A Railyard	2	9	30	0	0	0
Project Year 2038 Total	433	2,717	5,920	1,115	417	213
Net Change from Existing Conditions	(752)	(1,359)	(7,552)	(1,608)	(604)	(618)
Net Change from NFAB Year 2038	60	440	816	185	60	24
SCAQMD Daily Significance Thresholds	55	550	55	150	150	

Note: (1) Includes auxiliary generator emissions.

Table D1.2.1. Terminal Equipment Future Year ROG Emission Factor Estimates for the Berths 136-147
Terminal Project Scenarios - 121-175 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	ROG EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	ROG EF + Det. EF	
1969	1.68	2002	-	0.812			
1971	1.40	2003	-	0.786	0.045	0.831	3.533=2003
1979	1.27	2004	-	0.750	0.084	0.835	3.533=2004
1984	1.19	2005	-	0.710	0.119	0.828	7.07=2004
1987	1.12	2006	-	0.669	0.147	0.816	3.533=2006
1996	0.86	2007	1	0.623	0.170	0.794	7.07=2006
2002	0.86	2008	2	0.578	0.164	0.742	10.6=2006
2003	0.42	2009	3	0.532	0.151	0.683	14.13=2006
2004	0.28	2010	4	0.486	0.138	0.624	17.67=2006
2006	0.20	2011	5	0.441	0.124	0.565	21.2=2006
2011	0.13	2012	6	0.394	0.110	0.505	24.73=2006
2014	0.11	2013	7	0.348	0.097	0.444	28.27=2006
2040	0.06	2014	8	0.301	0.083	0.384	31.8=2006
		2015	9	0.251	0.069	0.320	35.33=2006
		2016	10	0.201	0.054	0.256	38.87=2006
		2017	11	0.152	0.040	0.191	42.4=2006
		2018	12	0.128	0.033	0.161	45.93=2006
		2019	13	0.113	0.029	0.143	49.47=2006
		2020	14	0.104	0.027	0.131	3.533=2020
		2021	15	0.095	0.024	0.119	7.07=2020
		2022	16	0.091	0.023	0.113	10.6=2020
		2023	17	0.086	0.022	0.108	14.13=2020
		2024	18	0.082	0.020	0.103	17.67=2020
		2025	19	0.078	0.019	0.097	21.2=2020
		2026	20	0.074	0.018	0.092	24.73=2020
		2027	21	0.070	0.017	0.087	28.27=2020
		2028	22	0.067	0.016	0.083	31.8=2020
		2029	23	0.064	0.015	0.079	35.33=2020
		2030	24	0.064	0.015	0.079	38.87=2020
		2076	70	0.064	0.015	0.079	
		70-Yr Ave.		0.119	0.031	0.150	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 53 and an annual replacement rate of 3.53 new vehicles/year.

(3) See Table H2- for derivation of fleet average ROG deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.2. Terminal Equipment Future Year ROG Emission Factor Estimates for the Berths 136-147
Terminal Project Scenarios - 176-250 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	ROG EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	ROG EF + Det. EF	
1969	1.68	2002	-	0.363			
1971	1.40	2003	-	0.355	0.085	0.440	3=2003
1979	1.27	2004	-	0.343	0.160	0.503	3=2004
1984	1.19	2005	-	0.329	0.224	0.553	6=2004
1987	1.12	2006	-	0.314	0.277	0.591	3=2006
1995	0.86	2007	1	0.299	0.271	0.570	6=2006
2002	0.41	2008	2	0.283	0.251	0.534	9=2006
2003	0.24	2009	3	0.267	0.229	0.496	12=2006
2004	0.18	2010	4	0.252	0.207	0.459	15=2006
2006	0.15	2011	5	0.233	0.185	0.419	18=2006
2010	0.13	2012	6	0.215	0.163	0.378	21=2006
2013	0.09	2013	7	0.197	0.141	0.338	24=2006
2040	0.06	2014	8	0.177	0.118	0.295	27=2006
		2015	9	0.157	0.095	0.252	30=2006
		2016	10	0.137	0.072	0.209	33=2006
		2017	11	0.117	0.048	0.165	36=2006
		2018	12	0.105	0.043	0.148	39=2006
		2019	13	0.097	0.040	0.137	42=2006
		2020	14	0.091	0.037	0.129	3=2012
		2021	15	0.086	0.035	0.120	6=2012
		2022	16	0.081	0.033	0.114	9=2012
		2023	17	0.077	0.031	0.108	12=2012
		2024	18	0.073	0.029	0.102	15=2012
		2071	65	0.064	0.025	0.088	
		2072	66	0.064	0.025	0.088	
		2073	67	0.064	0.025	0.088	
		2074	68	0.064	0.025	0.088	
		2075	69	0.064	0.025	0.088	
		2076	70	0.064	0.025	0.088	
		70-Yr Ave.		0.089	0.048	0.137	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 45 and an annual replacement rate of 3 new vehicles/year.

(3) See Table H2- for derivation of fleet average ROG deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.3. Terminal Equipment Future Year ROG Emission Factor Estimates for the Berths 136-147
Terminal Project Scenarios - 251-500 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	ROG EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	ROG EF + Det. EF	
1969	1.60	2002	-	0.447			
1971	1.33	2003	-	0.427	0.015	0.443	1=2002
1979	1.21	2004	-	0.408	0.029	0.437	1=2004
1984	1.14	2005	-	0.386	0.040	0.427	1=2005
1987	1.07	2006	-	0.365	0.050	0.415	2=2005
1995	0.86	2007	1	0.344	0.057	0.401	3=2005
2000	0.41	2008	2	0.322	0.063	0.385	4=2005
2001	0.24	2009	3	0.301	0.066	0.367	5=2005
2002	0.18	2010	4	0.280	0.067	0.347	6=2005
2004	0.15	2011	5	0.256	0.067	0.323	7=2005
2005	0.13	2012	6	0.232	0.064	0.296	8=2005
2010	0.13	2013	7	0.208	0.059	0.267	9=2005
2013	0.09	2014	8	0.183	0.052	0.235	10=2005
2040	0.06	2015	9	0.157	0.043	0.200	11=2005
		2016	10	0.131	0.032	0.163	12=2005
		2017	11	0.106	0.019	0.124	13=2005
		2018	12	0.100	0.018	0.117	14=2005
		2019	13	0.094	0.016	0.110	15=2005
		2020	14	0.090	0.016	0.105	
		2021	15	0.086	0.015	0.100	
		2068	62	0.064	0.010	0.073	
		2069	63	0.064	0.010	0.073	
		2070	64	0.064	0.010	0.073	
		2071	65	0.064	0.010	0.073	
		2072	66	0.064	0.010	0.073	
		2073	67	0.064	0.010	0.073	
		2074	68	0.064	0.010	0.073	
		2075	69	0.064	0.010	0.073	
		2076	70	0.064	0.010	0.073	
		70-Yr Ave.		0.092	0.017	0.109	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 15 and an annual replacement rate of 1 new vehicles/year.

(3) See Table H2- for derivation of fleet average ROG deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.4. Terminal Equipment Future Year CO Emission Factor Estimates for the Berths 136-147 Terminal Project Scenarios - 121-175 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	CO EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	CO EF + Det. EF	
1969	4.40	2002	-	3.346			
1971	4.40	2003	-	3.303	0.083	3.386	3.533=2003
1979	4.40	2004	-	3.260	0.160	3.420	3.533=2004
1984	4.30	2005	-	3.217	0.232	3.449	7.07=2004
1987	4.20	2006	-	3.174	0.298	3.472	3.533=2006
1996	2.70	2007	1	3.131	0.359	3.490	7.07=2006
2002	2.70	2008	2	3.088	0.371	3.458	10.6=2006
2003	2.70	2009	3	3.045	0.371	3.415	14.13=2006
2004	2.70	2010	4	3.001	0.371	3.372	17.67=2006
2006	2.70	2011	5	2.958	0.371	3.329	21.2=2006
2011	2.70	2012	6	2.915	0.371	3.286	24.73=2006
2014	2.70	2013	7	2.872	0.371	3.243	28.27=2006
2040	2.70	2014	8	2.829	0.371	3.200	31.8=2006
		2015	9	2.786	0.371	3.157	35.33=2006
		2016	10	2.743	0.371	3.114	38.87=2006
		2017	11	2.700	0.371	3.071	42.4=2006
		2018	12	2.700	0.371	3.071	45.93=2006
		2019	13	2.700	0.371	3.071	49.47=2006
		2020	14	2.700	0.371	3.071	3.533=2020
		2021	15	2.700	0.371	3.071	7.07=2020
		2022	16	2.700	0.371	3.071	10.6=2020
		2023	17	2.700	0.371	3.071	14.13=2020
		2024	18	2.700	0.371	3.071	17.67=2020
		2025	19	2.700	0.371	3.071	21.2=2020
		2026	20	2.700	0.371	3.071	24.73=2020
		2027	21	2.700	0.371	3.071	28.27=2020
		2028	22	2.700	0.371	3.071	31.8=2020
		2029	23	2.700	0.371	3.071	35.33=2020
		2030	24	2.700	0.371	3.071	38.87=2020
		2076	70	2.700	0.371	3.071	
		70-Yr Ave.		2.734	0.371	3.105	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 53 and an annual replacement rate of 3.53 new vehicles/year.

(3) See Table H2- for derivation of fleet average CO deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.5. Terminal Equipment Future Year CO Emission Factor Estimates for the Berths 136-147
Terminal Project Scenarios - 176-250 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	CO EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	CO EF + Det. EF	
1969	4.40	2002	-	1.188			
1971	4.40	2003	-	1.170	0.152	1.323	3=2003
1979	4.40	2004	-	1.152	0.287	1.440	3=2004
1984	4.30	2005	-	1.134	0.405	1.539	6=2004
1987	4.20	2006	-	1.117	0.504	1.621	3=2006
1995	2.70	2007	1	1.099	0.502	1.600	6=2006
2002	0.92	2008	2	1.081	0.473	1.554	9=2006
2003	0.92	2009	3	1.063	0.443	1.506	12=2006
2004	0.92	2010	4	1.045	0.413	1.458	15=2006
2006	0.92	2011	5	1.027	0.383	1.410	18=2006
2010	0.92	2012	6	1.009	0.353	1.363	21=2006
2013	0.92	2013	7	0.991	0.324	1.315	24=2006
2040	0.92	2014	8	0.974	0.294	1.267	27=2006
		2015	9	0.956	0.264	1.220	30=2006
		2016	10	0.938	0.235	1.172	33=2006
		2017	11	0.920	0.205	1.125	36=2006
		2018	12	0.920	0.205	1.125	39=2006
		2019	13	0.920	0.205	1.125	42=2006
		2020	14	0.920	0.205	1.125	3=2012
		2021	15	0.920	0.205	1.125	6=2012
		2022	16	0.920	0.205	1.125	9=2012
		2023	17	0.920	0.205	1.125	12=2012
		2024	18	0.920	0.205	1.125	15=2012
		2071	65	0.920	0.205	1.125	
		2072	66	0.920	0.205	1.125	
		2073	67	0.920	0.205	1.125	
		2074	68	0.920	0.205	1.125	
		2075	69	0.920	0.205	1.125	
		2076	70	0.920	0.205	1.125	
		70-Yr Ave.		0.934	0.228	1.162	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 45 and an annual replacement rate of 3 new vehicles/year.

(3) See Table H2- for derivation of fleet average CO deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.6. Terminal Equipment Future Year CO Emission Factor Estimates for the Berths 136-147
Terminal Project Scenarios - 251-500 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	CO EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	CO EF + Det. EF	
1969	4.20	2002	-	1.480			
1971	4.20	2003	-	1.443	0.028	1.471	1=2002
1979	4.20	2004	-	1.405	0.052	1.458	1=2004
1984	4.20	2005	-	1.368	0.074	1.442	1=2005
1987	4.10	2006	-	1.331	0.092	1.423	2=2005
1995	2.70	2007	1	1.293	0.107	1.400	3=2005
2000	0.92	2008	2	1.256	0.119	1.375	4=2005
2001	0.92	2009	3	1.219	0.127	1.346	5=2005
2002	0.92	2010	4	1.181	0.132	1.314	6=2005
2004	0.92	2011	5	1.144	0.135	1.279	7=2005
2005	0.92	2012	6	1.107	0.133	1.240	8=2005
2010	0.92	2013	7	1.069	0.129	1.198	9=2005
2013	0.92	2014	8	1.032	0.121	1.153	10=2005
2040	0.92	2015	9	0.995	0.111	1.105	11=2005
		2016	10	0.957	0.097	1.054	12=2005
		2017	11	0.920	0.079	0.999	13=2005
		2018	12	0.920	0.079	0.999	14=2005
		2019	13	0.920	0.079	0.999	15=2005
		2020	14	0.920	0.079	0.999	
		2021	15	0.920	0.079	0.999	
		2068	62	0.920	0.079	0.999	
		2069	63	0.920	0.079	0.999	
		2070	64	0.920	0.079	0.999	
		2071	65	0.920	0.079	0.999	
		2072	66	0.920	0.079	0.999	
		2073	67	0.920	0.079	0.999	
		2074	68	0.920	0.079	0.999	
		2075	69	0.920	0.079	0.999	
		2076	70	0.920	0.079	0.999	
		70-Yr Ave.		0.949	0.085	1.035	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 15 and an annual replacement rate of 1 new vehicles/year.

(3) See Table H2- for derivation of fleet average CO deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.7. Terminal Equipment Future Year NOx Emission Factor Estimates for the Berths 136-147 Terminal Project Scenarios - 121-175 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	NOx EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	NOx EF + Det. EF	
1969	14.00	2002	-	9.196			
1971	13.00	2003	-	8.934	0.214	9.148	3.533=2003
1979	12.00	2004	-	8.635	0.408	9.043	3.533=2004
1984	11.00	2005	-	8.318	0.580	8.898	7.07=2004
1987	11.00	2006	-	8.001	0.731	8.732	3.533=2006
1996	8.17	2007	1	7.551	0.856	8.408	7.07=2006
2002	6.90	2008	2	7.102	0.846	7.948	10.6=2006
2003	5.26	2009	3	6.652	0.801	7.453	14.13=2006
2004	4.72	2010	4	6.202	0.752	6.954	17.67=2006
2006	4.44	2011	5	5.752	0.699	6.452	21.2=2006
2011	2.45	2012	6	5.291	0.646	5.936	24.73=2006
2014	2.27	2013	7	4.829	0.592	5.421	28.27=2006
2040	0.27	2014	8	4.367	0.537	4.905	31.8=2006
		2015	9	3.772	0.479	4.251	35.33=2006
		2016	10	3.177	0.417	3.594	38.87=2006
		2017	11	2.582	0.351	2.933	42.4=2006
		2018	12	2.249	0.309	2.558	45.93=2006
		2019	13	1.953	0.268	2.221	49.47=2006
		2020	14	1.675	0.229	1.904	3.533=2020
		2021	15	1.397	0.190	1.587	7.07=2020
		2022	16	1.251	0.170	1.421	10.6=2020
		2023	17	1.106	0.149	1.255	14.13=2020
		2024	18	0.961	0.129	1.090	17.67=2020
		2025	19	0.815	0.109	0.924	21.2=2020
		2026	20	0.670	0.088	0.758	24.73=2020
		2027	21	0.537	0.070	0.606	28.27=2020
		2028	22	0.403	0.051	0.454	31.8=2020
		2029	23	0.270	0.032	0.302	35.33=2020
		2030	24	0.270	0.032	0.302	38.87=2020
		2076	70	0.270	0.032	0.302	
		70-Yr Ave.		1.189	0.147	1.336	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 53 and an annual replacement rate of 3.53 new vehicles/year.

(3) See Table H2- for derivation of fleet average NOx deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.8. Terminal Equipment Future Year NOx Emission Factor Estimates for the Berths 136-147
Terminal Project Scenarios - 176-250 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	NOx EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	NOx EF + Det. EF	
1969	14.00	2002	-	6.499			
1971	13.00	2003	-	6.399	0.395	6.794	3=2003
1979	12.00	2004	-	6.271	0.751	7.022	3=2004
1984	11.00	2005	-	6.130	1.067	7.197	6=2004
1987	11.00	2006	-	5.989	1.344	7.333	3=2006
1995	8.17	2007	1	5.719	1.355	7.074	6=2006
2002	6.25	2008	2	5.449	1.293	6.741	9=2006
2003	5.00	2009	3	5.179	1.220	6.399	12=2006
2004	4.58	2010	4	4.909	1.138	6.047	15=2006
2006	4.38	2011	5	4.566	1.055	5.621	18=2006
2010	2.45	2012	6	4.224	0.967	5.191	21=2006
2013	1.36	2013	7	3.881	0.877	4.758	24=2006
2040	0.27	2014	8	3.466	0.778	4.244	27=2006
		2015	9	3.051	0.676	3.726	30=2006
		2016	10	2.635	0.570	3.205	33=2006
		2017	11	2.220	0.460	2.680	36=2006
		2018	12	1.905	0.394	2.298	39=2006
		2019	13	1.617	0.333	1.951	42=2006
		2020	14	1.343	0.276	1.619	3=2012
		2021	15	1.069	0.218	1.288	6=2012
		2022	16	0.924	0.188	1.112	9=2012
		2023	17	0.779	0.157	0.936	12=2012
		2024	18	0.633	0.127	0.760	15=2012
		2071	65	0.270	0.051	0.321	
		2072	66	0.270	0.051	0.321	
		2073	67	0.270	0.051	0.321	
		2074	68	0.270	0.051	0.321	
		2075	69	0.270	0.051	0.321	
		2076	70	0.270	0.051	0.321	
		70-Yr Ave.		0.972	0.211	1.184	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 45 and an annual replacement rate of 3 new vehicles/year.

(3) See Table H2- for derivation of fleet average NOx deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.9. Terminal Equipment Future Year NOx Emission Factor Estimates for the Berths 136-147 Terminal Project Scenarios - 251-500 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	NOx EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	NOx EF + Det. EF	
1969	14.00	2002	-	7.100			
1971	13.00	2003	-	6.913	0.072	6.984	1=2002
1979	12.00	2004	-	6.725	0.136	6.861	1=2004
1984	11.00	2005	-	6.519	0.193	6.712	1=2005
1987	11.00	2006	-	6.209	0.242	6.450	2=2005
1995	8.17	2007	1	5.899	0.282	6.180	3=2005
2000	6.25	2008	2	5.589	0.313	5.902	4=2005
2001	4.95	2009	3	5.279	0.337	5.615	5=2005
2002	4.51	2010	4	4.969	0.352	5.320	6=2005
2004	4.29	2011	5	4.586	0.358	4.944	7=2005
2005	4.00	2012	6	4.203	0.355	4.558	8=2005
2010	2.45	2013	7	3.821	0.343	4.163	9=2005
2013	1.36	2014	8	3.365	0.321	3.686	10=2005
2040	0.27	2015	9	2.910	0.289	3.199	11=2005
		2016	10	2.455	0.248	2.703	12=2005
		2017	11	1.999	0.197	2.196	13=2005
		2018	12	1.731	0.174	1.905	14=2005
		2019	13	1.463	0.148	1.611	15=2005
		2020	14	1.215	0.123	1.338	
		2021	15	1.069	0.110	1.180	
		2068	62	0.270	0.020	0.290	
		2069	63	0.270	0.020	0.290	
		2070	64	0.270	0.020	0.290	
		2071	65	0.270	0.020	0.290	
		2072	66	0.270	0.020	0.290	
		2073	67	0.270	0.020	0.290	
		2074	68	0.270	0.020	0.290	
		2075	69	0.270	0.020	0.290	
		2076	70	0.270	0.020	0.290	
		70-Yr Ave.		0.962	0.075	1.038	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 15 and an annual replacement rate of 1 new vehicles/year.

(3) See Table H2- for derivation of fleet average NOx deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.10. Terminal Equipment Future Year PM Emission Factor Estimates for the Berths 136-147 Terminal Project Scenarios - 121-175 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	PM EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	PM EF + Det. EF	
1969	0.77	2002	-	0.508			
1971	0.66	2003	-	0.490	0.031	0.521	3.533=2003
1979	0.55	2004	-	0.469	0.059	0.528	3.533=2004
1984	0.55	2005	-	0.446	0.084	0.530	7.07=2004
1987	0.55	2006	-	0.423	0.105	0.528	3.533=2006
1996	0.38	2007	1	0.398	0.123	0.521	7.07=2006
2002	0.38	2008	2	0.373	0.121	0.495	10.6=2006
2003	0.24	2009	3	0.349	0.115	0.464	14.13=2006
2004	0.19	2010	4	0.324	0.108	0.432	17.67=2006
2006	0.16	2011	5	0.300	0.101	0.401	21.2=2006
2011	0.14	2012	6	0.267	0.093	0.360	24.73=2006
2012	0.015	2013	7	0.234	0.085	0.319	28.27=2006
		2014	8	0.201	0.075	0.277	31.8=2006
		2015	9	0.168	0.066	0.234	35.33=2006
		2016	10	0.136	0.055	0.190	38.87=2006
		2017	11	0.103	0.044	0.147	42.4=2006
		2018	12	0.088	0.038	0.125	45.93=2006
		2019	13	0.076	0.033	0.109	49.47=2006
		2020	14	0.066	0.028	0.095	3.533=2020
		2021	15	0.057	0.024	0.081	7.07=2020
		2022	16	0.048	0.020	0.069	10.6=2020
		2023	17	0.040	0.017	0.057	14.13=2020
		2024	18	0.032	0.013	0.045	17.67=2020
		2025	19	0.023	0.009	0.033	21.2=2020
		2026	20	0.015	0.006	0.021	24.73=2020
		2027	21	0.015	0.006	0.021	28.27=2020
		2028	22	0.015	0.006	0.021	31.8=2020
		2029	23	0.015	0.006	0.021	35.33=2020
		2030	24	0.015	0.006	0.021	38.87=2020
		2076	70	0.015	0.006	0.021	
		70-Yr Ave.		0.058	0.021	0.079	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 53 and an annual replacement rate of 3.53 new vehicles/year.

(3) See Table H2- for derivation of fleet average PM deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.11. Terminal Equipment Future Year PM Emission Factor Estimates for the Berths 136-147
Terminal Project Scenarios - 176-250 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	PM EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	PM EF + Det. EF	
1969	0.77	2002	-	0.190			
1971	0.66	2003	-	0.185	0.057	0.243	3=2003
1979	0.55	2004	-	0.180	0.108	0.288	3=2004
1984	0.55	2005	-	0.175	0.152	0.326	6=2004
1987	0.55	2006	-	0.169	0.188	0.358	3=2006
1995	0.38	2007	1	0.164	0.187	0.351	6=2006
2002	0.15	2008	2	0.159	0.175	0.334	9=2006
2003	0.12	2009	3	0.153	0.163	0.316	12=2006
2004	0.11	2010	4	0.148	0.151	0.299	15=2006
2006	0.11	2011	5	0.143	0.138	0.281	18=2006
2010	0.11	2012	6	0.131	0.125	0.256	21=2006
2012	0.015	2013	7	0.119	0.111	0.231	24=2006
		2014	8	0.108	0.096	0.204	27=2006
		2015	9	0.096	0.080	0.176	30=2006
		2016	10	0.084	0.064	0.148	33=2006
		2017	11	0.073	0.048	0.120	36=2006
		2018	12	0.066	0.043	0.109	39=2006
		2019	13	0.059	0.039	0.098	42=2006
		2020	14	0.053	0.034	0.087	3=2012
		2021	15	0.047	0.030	0.077	6=2012
		2022	16	0.040	0.026	0.066	9=2012
		2023	17	0.034	0.022	0.056	12=2012
		2024	18	0.028	0.017	0.045	15=2012
		2071	65	0.015	0.009	0.024	
		2072	66	0.015	0.009	0.024	
		2073	67	0.015	0.009	0.024	
		2074	68	0.015	0.009	0.024	
		2075	69	0.015	0.009	0.024	
		2076	70	0.015	0.009	0.024	
		70-Yr Ave.		0.036	0.029	0.064	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 45 and an annual replacement rate of 3 new vehicles/year.

(3) See Table H2- for derivation of fleet average PM deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.12. Terminal Equipment Future Year PM Emission Factor Estimates for the Berths 136-147 Terminal Project Scenarios - 251-500 Hp Category.

Year	OFFROAD Emission Factor (Gm/Hp-Hr) (1)	Project Fleet Estimates					Old Vehicle Replacement Rate (4)
		Calendar Year	Project Year	PM EF (Gm/Hp-Hr)(2)	Annual Det. EF (Gm/Hp-Hr) (3)	PM EF + Det. EF	
1969	0.74	2002	-	0.213			
1971	0.63	2003	-	0.206	0.010	0.217	1=2002
1979	0.53	2004	-	0.199	0.020	0.219	1=2004
1984	0.53	2005	-	0.192	0.028	0.220	1=2005
1987	0.53	2006	-	0.186	0.034	0.220	2=2005
1995	0.38	2007	1	0.179	0.040	0.218	3=2005
2000	0.15	2008	2	0.172	0.044	0.216	4=2005
2001	0.12	2009	3	0.165	0.047	0.212	5=2005
2002	0.11	2010	4	0.158	0.049	0.207	6=2005
2004	0.11	2011	5	0.151	0.049	0.200	7=2005
2005	0.11	2012	6	0.138	0.048	0.186	8=2005
2010	0.11	2013	7	0.125	0.046	0.170	9=2005
2012	0.015	2014	8	0.112	0.042	0.153	10=2005
		2015	9	0.098	0.036	0.135	11=2005
		2016	10	0.085	0.030	0.115	12=2005
		2017	11	0.072	0.022	0.094	13=2005
		2018	12	0.066	0.020	0.086	14=2005
		2019	13	0.059	0.019	0.078	15=2005
		2020	14	0.053	0.017	0.070	
		2021	15	0.047	0.015	0.062	
		2068	62	0.015	0.003	0.018	
		2069	63	0.015	0.003	0.018	
		2070	64	0.015	0.003	0.018	
		2071	65	0.015	0.003	0.018	
		2072	66	0.015	0.003	0.018	
		2073	67	0.015	0.003	0.018	
		2074	68	0.015	0.003	0.018	
		2075	69	0.015	0.003	0.018	
		2076	70	0.015	0.003	0.018	
		70-Yr Ave.		0.037		0.047	

Note: (1) Emission year estimates from OFFROAD2007 Model (ARB 2006). Emission Factor for each year actually indicates factor for years up to and including that year.

(2) Number of vehicles in fleet = 15 and an annual replacement rate of 1 new vehicles/year.

(3) See Table H2- for derivation of fleet average PM deterioration factors.

(4) = cumulative total of new vehicles/manufacture year.

Table D1.2.13. 121-175 Horsepower Existing Terminal Equipment Replacement Functions and ROG Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD ROG Emission Standard Year/# of Vehicles									OFFROAD ROG Deterioration Factor/Vehicle Year Contribution (1)							Annual DF Sum
		1996	2003	2004	2006	2011	2014	2040	Sum		1996	2003	2004	2006	2011	2014	2040	
											0.046	0.023	0.015	0.011	0.007	0.006	0.003	
2002	1	53.0							53									
2003	2	49.5	3.5						53		0.0433	0.0015						0.0448
2004	3	45.9	3.5	3.5					53	-	0.0804	0.0030	0.0010					0.0844
2005	4	42.4	3.5	3.5	3.5				53		0.1113	0.0045	0.0020	0.0007				0.1186
2006	5	38.9	3.5	3.5	7.1				53		0.1361	0.0060	0.0030	0.0022				0.1473
2007	6	35.3	3.5	3.5	7.1	3.5			53		0.1546	0.0075	0.0040	0.0036	0.0005			0.1702
2008	7	31.8	3.5	3.5	7.1	7.1			53		0.1451	0.0078	0.0050	0.0051	0.0014			0.1644
2009	8	28.3	3.5	3.5	7.1	10.6			53		0.1290	0.0078	0.0052	0.0065	0.0027			0.1513
2010	9	24.7	3.5	3.5	7.1	14.1			53		0.1129	0.0078	0.0052	0.0074	0.0045			0.1379
2011	10	21.2	3.5	3.5	7.1	17.7			53		0.0967	0.0078	0.0052	0.0076	0.0068			0.1242
2012	11	17.7	3.5	3.5	7.1	17.7	3.5		53		0.0806	0.0078	0.0052	0.0076	0.0087	0.0004		0.1104
2013	12	14.1	3.5	3.5	7.1	17.7	7.1		53		0.0645	0.0078	0.0052	0.0076	0.0102	0.0012		0.0966
2014	13	10.6	3.5	3.5	7.1	17.7	10.6		53		0.0484	0.0078	0.0052	0.0076	0.0112	0.0025		0.0827
2015	14	7.1	3.5	3.5	7.1	17.7	10.6	3.5	53		0.0323	0.0078	0.0052	0.0076	0.0118	0.0037	0.0002	0.0686
2016	15	3.5	3.5	3.5	7.1	17.7	10.6	7.1	53		0.0161	0.0078	0.0052	0.0076	0.0119	0.0049	0.0007	0.0542
2017	16		3.5	3.5	7.1	17.7	10.6	10.6	53			0.0078	0.0052	0.0076	0.0119	0.0058	0.0014	0.0397
2018	17			3.5	7.1	17.7	10.6	14.1	53				0.0052	0.0076	0.0119	0.0063	0.0023	0.0332
2019	18				7.1	17.7	10.6	17.7	53					0.0076	0.0119	0.0064	0.0034	0.0293
2020	19				3.5	17.7	10.6	21.2	53					0.0038	0.0119	0.0064	0.0046	0.0266
2021	20					17.7	10.6	24.7	53						0.0119	0.0064	0.0058	0.0240
2022	21					14.1	10.6	28.3	53						0.0095	0.0064	0.0070	0.0229
2023	22					10.6	10.6	31.8	53						0.0071	0.0064	0.0082	0.0217
2024	23					7.1	10.6	35.3	53						0.0047	0.0064	0.0093	0.0205
2025	24					3.5	10.6	38.9	53						0.0024	0.0064	0.0105	0.0193
2026	25						10.6	42.4	53							0.0064	0.0117	0.0181
2027	26						7.1	45.9	53							0.0043	0.0129	0.0172
2028	27						3.5	49.5	53							0.0021	0.0141	0.0162
2029	28							53.0	53								0.0153	0.0153
2076	75							53.0	53								0.0153	0.0153

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 53 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.14. 176-250 Horsepower Existing Terminal Equipment Replacement Functions and ROG Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD ROG Emission Standard Year/# of Vehicles									OFFROAD ROG Deterioration Factor/Vehicle Year Contribution (1)							
		1995	2003	2004	2006	2010	2013	2040	Sum		1995	2003	2004	2006	2010	2013	2040	Annual DF Sum
											0.090	0.025	0.018	0.016	0.013	0.009	0.007	
2002	1	45							45									
2003	2	42	3						45		0.0838	0.0017						0.0855
2004	3	39	3	3					45		0.1556	0.0033	0.0012					0.1602
2005	4	36	3	3	3				45		0.2155	0.0050	0.0025	0.0011				0.2240
2006	5	33	3	3	6				45		0.2634	0.0067	0.0037	0.0032				0.2769
2007	6	30	3	3	6	3			45		0.2533	0.0071	0.0049	0.0053	0.0009			0.2715
2008	7	27	3	3	6	6			45		0.2280	0.0071	0.0052	0.0076	0.0026			0.2506
2009	8	24	3	3	6	9			45		0.2027	0.0071	0.0052	0.0089	0.0053			0.2292
2010	9	21	3	3	6	12			45		0.1773	0.0071	0.0052	0.0089	0.0088			0.2074
2011	10	18	3	3	6	12	3		45		0.1520	0.0071	0.0052	0.0089	0.0116	0.0006		0.1855
2012	11	15	3	3	6	12	6		45		0.1267	0.0071	0.0052	0.0089	0.0136	0.0018		0.1634
2013	12	12	3	3	6	12	9		45		0.1013	0.0071	0.0052	0.0089	0.0147	0.0037		0.1410
2014	13	9	3	3	6	12	9	3	45		0.0760	0.0071	0.0052	0.0089	0.0149	0.0055	0.0004	0.1181
2015	14	6	3	3	6	12	9	6	45		0.0507	0.0071	0.0052	0.0089	0.0149	0.0069	0.0013	0.0950
2016	15	3	3	3	6	12	9	9	45		0.0253	0.0071	0.0052	0.0089	0.0149	0.0077	0.0026	0.0718
2017	16		3	3	6	12	9	12	45			0.0071	0.0052	0.0089	0.0149	0.0078	0.0044	0.0484
2018	17			3	6	12	9	15	45				0.0052	0.0089	0.0149	0.0078	0.0063	0.0431
2019	18				6	12	9	18	45					0.0089	0.0149	0.0078	0.0081	0.0398
2020	19				3	12	9	21	45					0.0045	0.0149	0.0078	0.0100	0.0372
2021	20					12	9	24	45						0.0149	0.0078	0.0119	0.0346
2022	21					9	9	27	45						0.0112	0.0078	0.0137	0.0327
2023	22					6	9	30	45						0.0075	0.0078	0.0156	0.0309
2024	23					3	9	33	45						0.0037	0.0078	0.0174	0.0290
2025	24						9	36	45							0.0078	0.0193	0.0271
2026	25						6	39	45							0.0052	0.0212	0.0264
2027	26						3	42	45							0.0026	0.0230	0.0256
2028	27							45	45								0.0249	0.0249
2029	28							45	45								0.0249	0.0249
2076	75							45	45								0.0249	0.0249
2077	76							45	45								0.0249	0.0249

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 45 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.15. 251-500 Horsepower Existing Terminal Equipment Replacement Functions and ROG Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD ROG Emission Standard Year/# of Vehicles								OFFROAD ROG Deterioration Factor/Vehicle Year Contribution (1)						
		1995	2004	2005	2010	2013	2040	Sum		1995	2004	2005	2010	2013	2040	Annual DF Sum
										0.016	0.003	0.002	0.002	0.002	0.001	
2002	1	15						15								
2003	2	14	1					15		0.0153	0.0002					0.015
2004	3	13	2					15		0.0284	0.0006					0.029
2005	4	12	2	1				15		0.0393	0.0010	0.0002				0.040
2006	5	11	2	1	1			15		0.0481	0.0013	0.0003	0.0002			0.050
2007	6	10	2	1	2			15		0.0546	0.0017	0.0005	0.0005			0.057
2008	7	9	2	1	3			15		0.0590	0.0021	0.0006	0.0010			0.063
2009	8	8	2	1	4			15		0.0612	0.0025	0.0008	0.0016			0.066
2010	9	7	2	1	5			15		0.0612	0.0029	0.0010	0.0024			0.067
2011	10	6	2	1	5	1		15		0.0590	0.0033	0.0011	0.0032	0.0001		0.067
2012	11	5	2	1	5	2		15		0.0546	0.0037	0.0013	0.0040	0.0003		0.064
2013	12	4	2	1	5	3		15		0.0481	0.0040	0.0014	0.0048	0.0007		0.059
2014	13	3	2	1	5	3	1	15		0.0393	0.0044	0.0016	0.0056	0.0010	0.0001	0.052
2015	14	2	2	1	5	3	2	15		0.0284	0.0048	0.0018	0.0064	0.0013	0.0002	0.043
2016	15	1	2	1	5	3	3	15		0.0153	0.0052	0.0019	0.0072	0.0017	0.0005	0.032
2017	16		2	1	5	3	4	15			0.0056	0.0021	0.0080	0.0020	0.0008	0.019
2018	17		1	1	5	3	5	15			0.0029	0.0022	0.0088	0.0024	0.0012	0.018
2019	18			1	5	3	6	15				0.0024	0.0096	0.0027	0.0017	0.016
2020	19				5	3	7	15					0.0104	0.0030	0.0022	0.016
2021	20				4	3	8	15					0.0087	0.0034	0.0029	0.015
2022	21				3	3	9	15					0.0067	0.0037	0.0036	0.014
2023	22				2	3	10	15					0.0047	0.0040	0.0044	0.013
2024	23				1	3	11	15					0.0024	0.0044	0.0053	0.012
2025	24					3	12	15						0.0047	0.0063	0.011
2026	25					2	13	15						0.0033	0.0073	0.011
2027	26					1	14	15						0.0017	0.0084	0.010
2028	27						15	15							0.0096	0.010
2075	74						15	15							0.0096	0.010
2076	75						15	15							0.0096	0.010

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 15 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.16. OFFROAD Model Year ROG Deterioration Factor Calculations

Hp Category	OFFROAD Standard Year	OFFROAD ROG Emission Factor (Gm/Hp-Hr) (1)	Deterioration Factor (%) (2)	ROG Deterioration Factor (Gm/Hp-Hr) (3)
121 - 175				
	1996	0.86	28	0.242
	2003	0.42	28	0.117
	2004	0.28	28	0.078
	2006	0.20	28	0.057
	2011	0.13	28	0.036
	2014	0.11	28	0.032
	2040	0.06	28	0.018
176 - 250				
	1995	0.86	44	0.380
	2003	0.24	44	0.106
	2004	0.18	44	0.078
	2006	0.15	44	0.067
	2010	0.13	44	0.056
	2013	0.09	44	0.039
	2040	0.06	44	0.028
251 - 500				
	1995	0.86	44	0.380
	2004	0.15	44	0.067
	2005	0.13	44	0.056
	2010	0.13	44	0.056
	2013	0.09	44	0.039
	2040	0.06	44	0.028

Note: (1) OFFROAD2007 (ARB 2006). Assuming ROG=1.27*THC.

(2) OFFROAD Model Section 3, Table 17 (ARB 1999).

(3) Equal to year emission factor * deterioration factor (over useful life as estimated in the OFFROAD model).

(4) For 121-175 and 176-250 Hp categories project equipment reaches the OFFROAD useful life estimate in 5.2 years (6052 hr/1161 hr) and 4.2 years (6052 hr/1430 hr), after which the emission factors are assumed to level off. Equipment in the 251-500 Hp c never reach the OFFROAD estimate of useful life, so the annual factor is calculated by: OFFROAD D.F. * (8168 hr/12,625

Table D1.2.17. 121-175 Horsepower Existing Terminal Equipment Replacement Functions and CO Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD CO Emission Standard Year/# of Vehicles									OFFROAD CO Deterioration Factor/Vehicle Year Contribution (1)							
		1996	2003	2004	2006	2011	2014	2040	Sum		1996	2003	2004	2006	2011	2014	2040	Annual DF Sum
											0.083	0.083	0.083	0.083	0.083	0.083	0.083	
2002	1	53.0							53									
2003	2	49.5	3.5						53		0.0773	0.0055						0.0829
2004	3	45.9	3.5	3.5					53		0.1436	0.0110	0.0055					0.1602
2005	4	42.4	3.5	3.5	3.5				53		0.1989	0.0166	0.0110	0.0055				0.2321
2006	5	38.9	3.5	3.5	7.1				53		0.2431	0.0221	0.0166	0.0166				0.2984
2007	6	35.3	3.5	3.5	7.1	3.5			53		0.2763	0.0276	0.0221	0.0276	0.0055			0.3591
2008	7	31.8	3.5	3.5	7.1	7.1			53		0.2592	0.0288	0.0276	0.0387	0.0166			0.3709
2009	8	28.3	3.5	3.5	7.1	10.6			53		0.2304	0.0288	0.0288	0.0497	0.0331			0.3709
2010	9	24.7	3.5	3.5	7.1	14.1			53		0.2016	0.0288	0.0288	0.0564	0.0552			0.3709
2011	10	21.2	3.5	3.5	7.1	17.7			53		0.1728	0.0288	0.0288	0.0576	0.0829			0.3709
2012	11	17.7	3.5	3.5	7.1	17.7	3.5		53		0.1440	0.0288	0.0288	0.0576	0.1061	0.0055		0.3709
2013	12	14.1	3.5	3.5	7.1	17.7	7.1		53		0.1152	0.0288	0.0288	0.0576	0.1239	0.0166		0.3709
2014	13	10.6	3.5	3.5	7.1	17.7	10.6		53		0.0864	0.0288	0.0288	0.0576	0.1361	0.0331		0.3709
2015	14	7.1	3.5	3.5	7.1	17.7	10.6	3.5	53		0.0576	0.0288	0.0288	0.0576	0.1428	0.0497	0.0055	0.3709
2016	15	3.5	3.5	3.5	7.1	17.7	10.6	7.1	53		0.0288	0.0288	0.0288	0.0576	0.1440	0.0663	0.0166	0.3709
2017	16		3.5	3.5	7.1	17.7	10.6	10.6	53			0.0288	0.0288	0.0576	0.1440	0.0785	0.0331	0.3709
2018	17			3.5	7.1	17.7	10.6	14.1	53				0.0288	0.0576	0.1440	0.0852	0.0552	0.3709
2019	18				7.1	17.7	10.6	17.7	53					0.0576	0.1440	0.0864	0.0829	0.3709
2020	19				3.5	17.7	10.6	21.2	53					0.0288	0.1440	0.0864	0.1117	0.3709
2021	20					17.7	10.6	24.7	53						0.1440	0.0864	0.1405	0.3709
2022	21					14.1	10.6	28.3	53						0.1152	0.0864	0.1693	0.3709
2023	22					10.6	10.6	31.8	53						0.0864	0.0864	0.1981	0.3709
2024	23					7.1	10.6	35.3	53						0.0576	0.0864	0.2269	0.3709
2025	24					3.5	10.6	38.9	53						0.0288	0.0864	0.2557	0.3709
2026	25						10.6	42.4	53							0.0864	0.2845	0.3709
2027	26						7.1	45.9	53							0.0576	0.3133	0.3709
2028	27						3.5	49.5	53							0.0288	0.3421	0.3709
2029	28							53.0	53								0.3709	0.3709
2030	29							53.0	53								0.3709	0.3709
2076	75							53.0	53								0.3709	0.3709

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 53 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.18. 176-250 Horsepower Existing Terminal Equipment Replacement Functions and CO Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD CO Emission Standard Year/# of Vehicles								OFFROAD CO Deterioration Factor/Vehicle Year Contribution (1)							Annual DF Sum
		1995	2003	2004	2006	2010	2013	2040	Sum	1995	2003	2004	2006	2010	2013	2040	
										0.159	0.054	0.054	0.054	0.054	0.054	0.054	
2002	1	45							45								
2003	2	42	3						45	0.1489	0.0036						0.152
2004	3	39	3	3					45	0.2765	0.0072	0.0036					0.287
2005	4	36	3	3	3				45	0.3828	0.0109	0.0072	0.0036				0.405
2006	5	33	3	3	6				45	0.4678	0.0145	0.0109	0.0109				0.504
2007	6	30	3	3	6	3			45	0.4500	0.0153	0.0145	0.0181	0.0036			0.502
2008	7	27	3	3	6	6			45	0.4050	0.0153	0.0153	0.0262	0.0109			0.473
2009	8	24	3	3	6	9			45	0.3600	0.0153	0.0153	0.0307	0.0217			0.443
2010	9	21	3	3	6	12			45	0.3150	0.0153	0.0153	0.0307	0.0362			0.413
2011	10	18	3	3	6	12	3		45	0.2700	0.0153	0.0153	0.0307	0.0479	0.0036		0.383
2012	11	15	3	3	6	12	6		45	0.2250	0.0153	0.0153	0.0307	0.0560	0.0109		0.353
2013	12	12	3	3	6	12	9		45	0.1800	0.0153	0.0153	0.0307	0.0605	0.0217		0.324
2014	13	9	3	3	6	12	9	3	45	0.1350	0.0153	0.0153	0.0307	0.0613	0.0326	0.0036	0.294
2015	14	6	3	3	6	12	9	6	45	0.0900	0.0153	0.0153	0.0307	0.0613	0.0407	0.0109	0.264
2016	15	3	3	3	6	12	9	9	45	0.0450	0.0153	0.0153	0.0307	0.0613	0.0452	0.0217	0.235
2017	16		3	3	6	12	9	12	45		0.0153	0.0153	0.0307	0.0613	0.0460	0.0362	0.205
2018	17			3	6	12	9	15	45			0.0153	0.0307	0.0613	0.0460	0.0516	0.205
2019	18				6	12	9	18	45				0.0307	0.0613	0.0460	0.0669	0.205
2020	19				3	12	9	21	45				0.0153	0.0613	0.0460	0.0822	0.205
2021	20					12	9	24	45					0.0613	0.0460	0.0976	0.205
2022	21					9	9	27	45					0.0460	0.0460	0.1129	0.205
2023	22					6	9	30	45					0.0307	0.0460	0.1282	0.205
2024	23					3	9	33	45					0.0153	0.0460	0.1436	0.205
2025	24						9	36	45						0.0460	0.1589	0.205
2026	25						6	39	45						0.0307	0.1742	0.205
2027	26						3	42	45						0.0153	0.1896	0.205
2028	27							45	45							0.2049	0.205
2029	28							45	45							0.2049	0.205
2076	75							45	45							0.2049	0.205

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 45 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.19. 251-500 Horsepower Existing Terminal Equipment Replacement Functions and CO Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD CO Emission Standard Year/# of Vehicles								OFFROAD CO Deterioration Factor/Vehicle Year Contribution (1)						
										1995	2004	2005	2010	2013	2040	Annual
		2001	2004	2005	2010	2013	2040	Sum		0.029	0.010	0.010	0.010	0.010	0.010	DF Sum
2002	1	15						15								
2003	2	14	1					15		0.0272	0.0007					0.028
2004	3	13	2					15		0.0505	0.0020					0.052
2005	4	12	2	1				15		0.0699	0.0033	0.0007				0.074
2006	5	11	2	1	1			15		0.0854	0.0046	0.0013	0.0007			0.092
2007	6	10	2	1	2			15		0.0970	0.0060	0.0020	0.0020			0.107
2008	7	9	2	1	3			15		0.1048	0.0073	0.0026	0.0040			0.119
2009	8	8	2	1	4			15		0.1087	0.0086	0.0033	0.0066			0.127
2010	9	7	2	1	5			15		0.1087	0.0099	0.0040	0.0099			0.132
2011	10	6	2	1	5	1		15		0.1048	0.0112	0.0046	0.0132	0.0007		0.135
2012	11	5	2	1	5	2		15		0.0970	0.0126	0.0053	0.0165	0.0020		0.133
2013	12	4	2	1	5	3		15		0.0854	0.0139	0.0060	0.0198	0.0040		0.129
2014	13	3	2	1	5	3	1	15		0.0699	0.0152	0.0066	0.0231	0.0060	0.0007	0.121
2015	14	2	2	1	5	3	2	15		0.0505	0.0165	0.0073	0.0265	0.0079	0.0020	0.111
2016	15	1	2	1	5	3	3	15		0.0272	0.0179	0.0079	0.0298	0.0099	0.0040	0.097
2017	16		2	1	5	3	4	15			0.0192	0.0086	0.0331	0.0119	0.0066	0.079
2018	17		1	1	5	3	5	15			0.0099	0.0093	0.0364	0.0139	0.0099	0.079
2019	18			1	5	3	6	15				0.0099	0.0397	0.0159	0.0139	0.079
2020	19				5	3	7	15					0.0430	0.0179	0.0185	0.079
2021	20				4	3	8	15					0.0357	0.0198	0.0238	0.079
2022	21				3	3	9	15					0.0278	0.0218	0.0298	0.079
2023	22				2	3	10	15					0.0192	0.0238	0.0364	0.079
2024	23				1	3	11	15					0.0099	0.0258	0.0436	0.079
2025	24					3	12	15						0.0278	0.0516	0.079
2026	25					2	13	15						0.0192	0.0602	0.079
2027	26					1	14	15						0.0099	0.0694	0.079
2028	27						15	15							0.0794	0.079
2029	28						15	15							0.0794	0.079
2076	75						15	15							0.0794	0.079

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 15 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.20. OFFROAD Model Year CO Deterioration Factor Calculations

Hp Category	OFFROAD Standard Year	OFFROAD CO Emission Factor (Gm/Hp-Hr) (1)	Deterioration Factor (%) (2)	CO Deterioration Factor (Gm/Hp-Hr) (3)	Deterioration Factor/Yr (4)
121 - 175					
	1996	2.70	16	0.432	0.083
	2003	2.70	16	0.432	0.083
	2004	2.70	16	0.432	0.083
	2006	2.70	16	0.432	0.083
	2011	2.70	16	0.432	0.083
	2014	2.70	16	0.432	0.083
	2040	2.70	16	0.432	0.083
176 - 250					
	1995	2.70	25	0.675	0.159
	2003	0.92	25	0.230	0.054
	2004	0.92	25	0.230	0.054
	2006	0.92	25	0.230	0.054
	2010	0.92	25	0.230	0.054
	2013	0.92	25	0.230	0.054
	2040	0.92	25	0.230	0.054
251 - 500					
	1995	2.70	25	0.675	0.029
	2004	0.92	25	0.230	0.010
	2005	0.92	25	0.230	0.010
	2010	0.92	25	0.230	0.010
	2013	0.92	25	0.230	0.010
	2040	0.92	25	0.230	0.010

Note: (1) OFFROAD2007 (ARB 2006).

(2) OFFROAD Model Section 3, Table 17 (ARB 1999).

(3) Equal to year emission factor * deterioration factor(over useful life as estimated in the OFFROAD model).

(4) For 121-175 and 176-250 Hp categories project equipment reaches the OFFROAD useful life estimate in 5.2 years (6052 hr/1161 hr) and 4.2 years (6052 hr/1430 hr), after which the emission factors are assumed to level off. Equipment in the 251-500 Hp category never reach the OFFROAD estimate of useful life, so the annual factor is calculated by: OFFROAD D.F. * (8168 hr/12,625 hr)/15.

Table D1.2.21. 121-175 Horsepower Existing Terminal Equipment Replacement Functions and NOx Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD NOx Emission Standard Year/# of Vehicles									OFFROAD NOx Deterioration Factor/Vehicle Year NOxntribution (1)							Annual DF Sum
		1996	2003	2004	2006	2011	2014	2040	Sum		1996	2003	2004	2006	2011	2014	2040	
											0.219	0.141	0.127	0.119	0.066	0.061	0.007	
2002	1	53.0							53									
2003	2	49.5	3.5						53		0.2048	0.0094						0.2142
2004	3	45.9	3.5	3.5					53		0.3803	0.0188	0.0085					0.4076
2005	4	42.4	3.5	3.5	3.5				53		0.5266	0.0283	0.0169	0.0079				0.5797
2006	5	38.9	3.5	3.5	7.1				53		0.6437	0.0377	0.0254	0.0238				0.7305
2007	6	35.3	3.5	3.5	7.1	3.5			53		0.7314	0.0471	0.0338	0.0397	0.0044			0.8565
2008	7	31.8	3.5	3.5	7.1	7.1			53		0.6863	0.0491	0.0423	0.0556	0.0132			0.8465
2009	8	28.3	3.5	3.5	7.1	10.6			53		0.6101	0.0491	0.0441	0.0715	0.0263			0.8011
2010	9	24.7	3.5	3.5	7.1	14.1			53		0.5338	0.0491	0.0441	0.0812	0.0439			0.7520
2011	10	21.2	3.5	3.5	7.1	17.7			53		0.4576	0.0491	0.0441	0.0829	0.0658			0.6994
2012	11	17.7	3.5	3.5	7.1	17.7	3.5		53		0.3813	0.0491	0.0441	0.0829	0.0843	0.0041		0.6457
2013	12	14.1	3.5	3.5	7.1	17.7	7.1		53		0.3051	0.0491	0.0441	0.0829	0.0984	0.0122		0.5917
2014	13	10.6	3.5	3.5	7.1	17.7	10.6		53		0.2288	0.0491	0.0441	0.0829	0.1081	0.0244		0.5373
2015	14	7.1	3.5	3.5	7.1	17.7	10.6	3.5	53		0.1526	0.0491	0.0441	0.0829	0.1134	0.0366	0.0005	0.4791
2016	15	3.5	3.5	3.5	7.1	17.7	10.6	7.1	53		0.0764	0.0491	0.0441	0.0829	0.1143	0.0488	0.0015	0.4169
2017	16		3.5	3.5	7.1	17.7	10.6	10.6	53			0.0491	0.0441	0.0829	0.1143	0.0578	0.0029	0.3510
2018	17			3.5	7.1	17.7	10.6	14.1	53				0.0441	0.0829	0.1143	0.0627	0.0048	0.3088
2019	18				7.1	17.7	10.6	17.7	53					0.0829	0.1143	0.0636	0.0073	0.2680
2020	19				3.5	17.7	10.6	21.2	53					0.0414	0.1143	0.0636	0.0098	0.2291
2021	20					17.7	10.6	24.7	53						0.1143	0.0636	0.0123	0.1902
2022	21					14.1	10.6	28.3	53						0.0915	0.0636	0.0148	0.1698
2023	22					10.6	10.6	31.8	53						0.0686	0.0636	0.0173	0.1495
2024	23					7.1	10.6	35.3	53						0.0457	0.0636	0.0199	0.1291
2025	24					3.5	10.6	38.9	53						0.0229	0.0636	0.0224	0.1088
2026	25						10.6	42.4	53							0.0636	0.0249	0.0885
2027	26						7.1	45.9	53							0.0424	0.0274	0.0698
2028	27						3.5	49.5	53							0.0212	0.0299	0.0511
2029	28							53.0	53								0.0325	0.0325
2030	29							53.0	53								0.0325	0.0325
2076	75							53.0	53								0.0325	0.0325

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 53 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.22. 176-250 Horsepower Existing Terminal Equipment Replacement Functions and NOx Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year		OFFROAD NOx Emission Standard Year/# of Vehicles									OFFROAD NOx Deterioration Factor/Vehicle Year NOxntribution (1)							Annual DF Sum
		1995	2003	2004	2006	2010	2013	2040	Sum		1995	2003	2004	2006	2010	2013	2040	
											0.405	0.248	0.227	0.217	0.122	0.067	0.013	
2002	1	45							45									
2003	2	42	3						45		0.3784	0.0165						0.395
2004	3	39	3	3					45		0.7027	0.0331	0.0152					0.751
2005	4	36	3	3	3				45		0.9729	0.0496	0.0303	0.0145				1.067
2006	5	33	3	3	6				45		1.1892	0.0662	0.0455	0.0435				1.344
2007	6	30	3	3	6	3			45		1.1438	0.0700	0.0606	0.0724	0.0081			1.355
2008	7	27	3	3	6	6			45		1.0294	0.0700	0.0641	0.1048	0.0243			1.293
2009	8	24	3	3	6	9			45		0.9150	0.0700	0.0641	0.1226	0.0486			1.220
2010	9	21	3	3	6	12			45		0.8007	0.0700	0.0641	0.1226	0.0810			1.138
2011	10	18	3	3	6	12	3		45		0.6863	0.0700	0.0641	0.1226	0.1072	0.0045		1.055
2012	11	15	3	3	6	12	6		45		0.5719	0.0700	0.0641	0.1226	0.1253	0.0135		0.967
2013	12	12	3	3	6	12	9		45		0.4575	0.0700	0.0641	0.1226	0.1353	0.0270		0.877
2014	13	9	3	3	6	12	9	3	45		0.3431	0.0700	0.0641	0.1226	0.1372	0.0405	0.0009	0.778
2015	14	6	3	3	6	12	9	6	45		0.2288	0.0700	0.0641	0.1226	0.1372	0.0505	0.0027	0.676
2016	15	3	3	3	6	12	9	9	45		0.1144	0.0700	0.0641	0.1226	0.1372	0.0561	0.0054	0.570
2017	16		3	3	6	12	9	12	45			0.0700	0.0641	0.1226	0.1372	0.0571	0.0089	0.460
2018	17			3	6	12	9	15	45				0.0641	0.1226	0.1372	0.0571	0.0127	0.394
2019	18				6	12	9	18	45					0.1226	0.1372	0.0571	0.0165	0.333
2020	19				3	12	9	21	45					0.0613	0.1372	0.0571	0.0203	0.276
2021	20					12	9	24	45						0.1372	0.0571	0.0241	0.218
2022	21					9	9	27	45						0.1029	0.0571	0.0278	0.188
2023	22					6	9	30	45						0.0686	0.0571	0.0316	0.157
2024	23					3	9	33	45						0.0343	0.0571	0.0354	0.127
2025	24						9	36	45							0.0571	0.0392	0.096
2026	25						6	39	45							0.0381	0.0430	0.081
2027	26						3	42	45							0.0190	0.0467	0.066
2028	27							45	45								0.0505	0.051
2029	28							45	45								0.0505	0.051
2076	75							45	45								0.0505	0.051

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 45 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.23. 251-500 Horsepower Existing Terminal Equipment Replacement Functions and NOx Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar	Post	OFFROAD NOx Emission Standard Year/# of Vehicles								OFFROAD NOx Deterioration Factor/Vehicle Year NOxntribution (1)						
										1995	2004	2005	2010	2013	2040	Annual
Year	Year 2002	1995	2004	2005	2010	2013	2040	Sum		0.074	0.039	0.036	0.022	0.012	0.002	DF Sum
2002	1	15						15								
2003	2	14	1					15		0.0691	0.0026					0.072
2004	3	13	2					15		0.1283	0.0078					0.136
2005	4	12	2	1				15		0.1776	0.0130	0.0024				0.193
2006	5	11	2	1	1			15		0.2171	0.0181	0.0048	0.0015			0.242
2007	6	10	2	1	2			15		0.2467	0.0233	0.0072	0.0044			0.282
2008	7	9	2	1	3			15		0.2664	0.0285	0.0097	0.0089			0.313
2009	8	8	2	1	4			15		0.2763	0.0337	0.0121	0.0148			0.337
2010	9	7	2	1	5			15		0.2763	0.0389	0.0145	0.0222			0.352
2011	10	6	2	1	5	1		15		0.2664	0.0440	0.0169	0.0296	0.0008		0.358
2012	11	5	2	1	5	2		15		0.2467	0.0492	0.0193	0.0370	0.0025		0.355
2013	12	4	2	1	5	3		15		0.2171	0.0544	0.0217	0.0444	0.0049		0.343
2014	13	3	2	1	5	3	1	15		0.1776	0.0596	0.0242	0.0518	0.0074	0.0002	0.321
2015	14	2	2	1	5	3	2	15		0.1283	0.0648	0.0266	0.0592	0.0099	0.0005	0.289
2016	15	1	2	1	5	3	3	15		0.0691	0.0699	0.0290	0.0666	0.0123	0.0010	0.248
2017	16		2	1	5	3	4	15			0.0751	0.0314	0.0740	0.0148	0.0016	0.197
2018	17		1	1	5	3	5	15			0.0389	0.0338	0.0814	0.0172	0.0024	0.174
2019	18			1	5	3	6	15				0.0362	0.0888	0.0197	0.0034	0.148
2020	19				5	3	7	15					0.0962	0.0222	0.0046	0.123
2021	20				4	3	8	15					0.0799	0.0246	0.0059	0.110
2022	21				3	3	9	15					0.0621	0.0271	0.0073	0.097
2023	22				2	3	10	15					0.0429	0.0296	0.0090	0.081
2024	23				1	3	11	15					0.0222	0.0320	0.0108	0.065
2025	24					3	12	15						0.0345	0.0127	0.047
2026	25					2	13	15						0.0238	0.0148	0.039
2027	26					1	14	15						0.0123	0.0171	0.029
2028	27						15	15							0.0196	0.020
2029	28						15	15							0.0196	0.020
2076	75						15	15							0.0196	0.020

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 15 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.24. OFFROAD Model Year NOx Deterioration Factor Calculations

Hp Category	OFFROAD Standard Year	OFFROAD Nox Emission Factor (Gm/Hp-Hr) (1)	Deterioration Factor (%) (2)	NOx Deterioration Factor (Gm/Hp-Hr) (3)	Deterioration Factor/Yr (4)
121 - 175					
	1996	8.17	14	1.144	0.219
	2003	5.26	14	0.736	0.141
	2004	4.72	14	0.661	0.127
	2006	4.44	14	0.622	0.119
	2011	2.45	14	0.343	0.066
	2014	2.27	14	0.318	0.061
	2040	0.27	14	0.038	0.007
176 - 250					
	1995	8.17	21	1.716	0.405
	2003	5.00	21	1.050	0.248
	2004	4.58	21	0.962	0.227
	2006	4.38	21	0.920	0.217
	2010	2.45	21	0.515	0.122
	2013	1.36	21	0.286	0.067
	2040	0.27	21	0.057	0.013
251 - 500					
	1995	8.17	21	1.716	0.074
	2004	4.29	21	0.901	0.039
	2005	4.00	21	0.840	0.036
	2010	2.45	21	0.515	0.022
	2013	1.36	21	0.286	0.012
	2040	0.27	21	0.057	0.002

Note: (1) OFFROAD2007 (ARB 2006).

(2) OFFROAD Model Section 3, Table 17 (ARB 1999).

(3) Equal to year emission factor * deterioration factor(over useful life as estimated in the OFFROAD model).

(4) For 121-175 and 176-250 Hp categories project equipment reaches the OFFROAD useful life estimate in 5.2 years (6052 hr/1161 hr) and 4.2 years (6052 hr/1430 hr), after which the emission factors are assumed to level off. Equipment in the 251-500 Hp category never reach the OFFROAD estimate of useful life, so the annual factor is calculated by: OFFROAD D.F. * (8168 hr/12,625 hr)/15.

Table D1.2.25. 121-175 Horsepower Existing Terminal Equipment Replacement Functions and PM Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year	Post Year 2002	OFFROAD PM Emission Standard Year/# of Vehicles							OFFROAD PM Deterioration Factor/Vehicle Year PMntribution (1)						Annual DF Sum
		1996	2003	2004	2006	2011	2012	Sum	1996	2003	2004	2006	2011	2012	
									0.032	0.020	0.016	0.0135	0.0118	0.001	
2002	1	53.0						53							
2003	2	49.5	3.5					53	0.0299	0.0014					0.0313
2004	3	45.9	3.5	3.5				53	0.0556	0.0027	0.0011				0.0594
2005	4	42.4	3.5	3.5	3.5			53	0.0770	0.0041	0.0021	0.0009			0.0841
2006	5	38.9	3.5	3.5	7.1			53	0.0941	0.0054	0.0032	0.0027			0.1054
2007	6	35.3	3.5	3.5	7.1	3.5		53	0.1069	0.0068	0.0043	0.0045	0.0008		0.1232
2008	7	31.8	3.5	3.5	7.1	7.1		53	0.1003	0.0070	0.0053	0.0063	0.0024		0.1214
2009	8	28.3	3.5	3.5	7.1	10.6		53	0.0892	0.0070	0.0056	0.0081	0.0047		0.1146
2010	9	24.7	3.5	3.5	7.1	14.1		53	0.0780	0.0070	0.0056	0.0092	0.0079		0.1077
2011	10	21.2	3.5	3.5	7.1	17.7		53	0.0669	0.0070	0.0056	0.0094	0.0118		0.1007
2012	11	17.7	3.5	3.5	7.1	17.7	3.5	53	0.0557	0.0070	0.0056	0.0094	0.0151	0.0001	0.0930
2013	12	14.1	3.5	3.5	7.1	17.7	7.1	53	0.0446	0.0070	0.0056	0.0094	0.0177	0.0003	0.0845
2014	13	10.6	3.5	3.5	7.1	17.7	10.6	53	0.0335	0.0070	0.0056	0.0094	0.0194	0.0005	0.0754
2015	14	7.1	3.5	3.5	7.1	17.7	14.1	53	0.0223	0.0070	0.0056	0.0094	0.0204	0.0008	0.0655
2016	15	3.5	3.5	3.5	7.1	17.7	17.7	53	0.0112	0.0070	0.0056	0.0094	0.0205	0.0013	0.0550
2017	16		3.5	3.5	7.1	17.7	21.2	53		0.0070	0.0056	0.0094	0.0205	0.0017	0.0442
2018	17			3.5	7.1	17.7	24.7	53			0.0056	0.0094	0.0205	0.0021	0.0376
2019	18				7.1	17.7	28.3	53				0.0094	0.0205	0.0026	0.0325
2020	19				3.5	17.7	31.8	53				0.0047	0.0205	0.0030	0.0283
2021	20					17.7	35.3	53					0.0205	0.0035	0.0240
2022	21					14.1	38.9	53					0.0164	0.0039	0.0203
2023	22					10.6	42.4	53					0.0123	0.0043	0.0167
2024	23					7.1	45.9	53					0.0082	0.0048	0.0130
2025	24					3.5	49.5	53					0.0041	0.0052	0.0093
2026	25						53.0	53						0.0057	0.0057
2027	26						53.0	53						0.0057	0.0057
2028	27						53.0	53						0.0057	0.0057
2029	28						53.0	53						0.0057	0.0057
2030	29						53.0	53						0.0057	0.0057
2076	75						53.0	53						0.0057	0.0057

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 53 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.26. 176-250 Horsepower Existing Terminal Equipment Replacement Functions and PM Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year	Post Year 2002	OFFROAD PM Emission Standard Year/# of Vehicles								OFFROAD PM Deterioration Factor/Vehicle Year PMntribution (1)						
		1995	2003	2004	2006	2010	2012	Sum		1995	2003	2004	2006	2010	2012	Annual DF Sum
										0.060	0.019	0.017	0.017	0.017	0.002	
2002	1	45						45								
2003	2	42	3					45		0.0561	0.0013					0.057
2004	3	39	3	3				45		0.1043	0.0025	0.0012				0.108
2005	4	36	3	3	3			45		0.1444	0.0038	0.0023	0.0012			0.152
2006	5	33	3	3	6			45		0.1765	0.0051	0.0035	0.0035			0.188
2007	6	30	3	3	6	3		45		0.1697	0.0054	0.0046	0.0058	0.0012		0.187
2008	7	27	3	3	6	6		45		0.1528	0.0054	0.0049	0.0084	0.0035		0.175
2009	8	24	3	3	6	9		45		0.1358	0.0054	0.0049	0.0098	0.0070		0.163
2010	9	21	3	3	6	12		45		0.1188	0.0054	0.0049	0.0098	0.0116		0.151
2011	10	18	3	3	6	15		45		0.1018	0.0054	0.0049	0.0098	0.0165		0.138
2012	11	15	3	3	6	15	3	45		0.0849	0.0054	0.0049	0.0098	0.0203	0.0002	0.125
2013	12	12	3	3	6	15	6	45		0.0679	0.0054	0.0049	0.0098	0.0229	0.0005	0.111
2014	13	9	3	3	6	15	9	45		0.0509	0.0054	0.0049	0.0098	0.0243	0.0009	0.096
2015	14	6	3	3	6	15	12	45		0.0339	0.0054	0.0049	0.0098	0.0246	0.0016	0.080
2016	15	3	3	3	6	15	15	45		0.0170	0.0054	0.0049	0.0098	0.0246	0.0023	0.064
2017	16		3	3	6	15	18	45			0.0054	0.0049	0.0098	0.0246	0.0029	0.048
2018	17			3	6	15	21	45				0.0049	0.0098	0.0246	0.0036	0.043
2019	18				6	15	24	45					0.0098	0.0246	0.0043	0.039
2020	19				3	15	27	45					0.0049	0.0246	0.0049	0.034
2021	20					15	30	45						0.0246	0.0056	0.030
2022	21					12	33	45						0.0197	0.0063	0.026
2023	22					9	36	45						0.0147	0.0069	0.022
2024	23					6	39	45						0.0098	0.0076	0.017
2025	24					3	42	45							0.0083	0.008
2026	25						45	45							0.0090	0.009
2027	26						45	45							0.0090	0.009
2028	27						45	45							0.0090	0.009
2029	28						45	45							0.0090	0.009
2076	75						45	45							0.0090	0.009

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 45 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.27. 251-500 Horsepower Existing Terminal Equipment Replacement Functions and PM Deterioration Factor Calculations - Berths 136-147 Terminal Project Scenarios.

Calendar Year	Post Year 2002	OFFROAD PM Emission Standard Year/# of Vehicles							OFFROAD PM Deterioration Factor/Vehicle Year PMntribution (1)					Annual DF Sum
		1995	2004	2005	2010	2012	Sum		1995	2004	2005	2010	2012	
									0.011	0.003	0.003	0.003	0.000	
2002	1	15					15							
2003	2	14	1				15		0.0102	0.0002				0.010
2004	3	13	2				15		0.0190	0.0006				0.020
2005	4	12	2	1			15		0.0264	0.0011	0.0002			0.028
2006	5	11	2	1	1		15		0.0322	0.0015	0.0004	0.0002		0.034
2007	6	10	2	1	2		15		0.0366	0.0019	0.0006	0.0006		0.040
2008	7	9	2	1	3		15		0.0395	0.0023	0.0008	0.0013		0.044
2009	8	8	2	1	4		15		0.0410	0.0028	0.0011	0.0021		0.047
2010	9	7	2	1	5		15		0.0410	0.0032	0.0013	0.0032		0.049
2011	10	6	2	1	6		15		0.0395	0.0036	0.0015	0.0045		0.049
2012	11	5	2	1	6	1	15		0.0366	0.0040	0.0017	0.0057	0.0000	0.048
2013	12	4	2	1	6	2	15		0.0322	0.0045	0.0019	0.0070	0.0001	0.046
2014	13	3	2	1	6	3	15		0.0264	0.0049	0.0021	0.0083	0.0002	0.042
2015	14	2	2	1	6	4	15		0.0190	0.0053	0.0023	0.0095	0.0003	0.036
2016	15	1	2	1	6	5	15		0.0102	0.0057	0.0025	0.0108	0.0004	0.030
2017	16		2	1	6	6	15			0.0061	0.0028	0.0121	0.0006	0.022
2018	17		1	1	6	7	15			0.0032	0.0030	0.0134	0.0008	0.020
2019	18			1	6	8	15				0.0032	0.0146	0.0010	0.019
2020	19				6	9	15					0.0159	0.0013	0.017
2021	20				5	10	15					0.0138	0.0016	0.015
2022	21				4	11	15					0.0114	0.0019	0.013
2023	22				3	12	15					0.0089	0.0023	0.011
2024	23				2	13	15					0.0061	0.0026	0.009
2025	24				1	14	15					0.0032	0.0030	0.006
2026	25					14	14						0.0032	0.003
2027	26					14	14						0.0032	0.003
2028	27					14	14						0.0032	0.003
2029	28					14	14						0.0032	0.003
2076	75					14	14						0.0032	0.003

Note: (1) See Table D1.2. . for OFFROAD deterioration factor calculations. Vehicle year contributions = annual deterioration factor * # of vehicles in standard year/ 15 total vehicles. Units in Gm/Hp-Hr.

Table D1.2.28. OFFROAD Model Year PM Deterioration Factor Calculations

Hp Category	OFFROAD Standard Year	OFFROAD PM Emission Factor (Gm/Hp-Hr) (1)	Deterioration Factor (%) (2)	PM Deterioration Factor (Gm/Hp-Hr) (3)	Deterioration Factor/Yr (4)
121 - 175					
	1996	0.38	44	0.167	0.032
	2003	0.24	44	0.106	0.020
	2004	0.19	44	0.084	0.016
	2006	0.16	44	0.070	0.014
	2011	0.14	44	0.062	0.012
	2012	0.015	44	0.007	0.001
176 - 250					
	1995	0.38	67	0.255	0.060
	2003	0.12	67	0.080	0.019
	2004	0.11	67	0.074	0.017
	2006	0.11	67	0.074	0.017
	2010	0.11	67	0.074	0.017
	2012	0.015	67	0.010	0.002
251 - 500					
	1995	0.38	67	0.255	0.011
	2004	0.11	67	0.074	0.003
	2005	0.11	67	0.074	0.003
	2010	0.11	67	0.074	0.003
	2012	0.015	67	0.010	0.000

Note: (1) OFFROAD2007 (ARB 2006).

(2) OFFROAD Model Section 3, Table 17 (ARB 1999).

(3) Equal to year emission factor * deterioration factor(over useful life as estimated in the OFFROAD model).

(4) For 121-175 and 176-250 Hp categories project equipment reaches the OFFROAD useful life estimate in 5.2 years (6052 hr/1161 hr) and 4.2 years (6052 hr/1430 hr), after which the emission factors are assumed to level off. Equipment in the 251-500 Hp category never reach the OFFROAD estimate of useful life, so the annual factor is calculated by: OFFROAD D.F. * (8168 hr/12,625 hr)/15.

Table D1.2.29. Unmitigated Emission Factors for Terminal Equipment - Berths 136-147 Terminal Proje

Project Scenario/Equipment Horsepower	Emission Factors (Gm/Hp-Hr) (1)				
	ROG	CO	NOx	SOx	PM (2)
Baseline - Year 2003					
Terminal Equipment - 121-175 Hp	0.83	3.39	9.15	0.10	0.52
Terminal Equipment - 176-250 Hp	0.44	1.32	6.79	0.10	0.24
Terminal Equipment - 251-500 Hp	0.44	1.47	6.98	0.10	0.22
Project Year 2007					
Terminal Equipment - 121-175 Hp	0.79	3.49	8.41	0.004	0.39
Terminal Equipment - 176-250 Hp	0.57	1.60	7.07	0.004	0.29
Terminal Equipment - 251-500 Hp	0.40	1.40	6.18	0.004	0.22
Project Year 2015					
Terminal Equipment - 121-175 Hp	0.32	3.16	4.25	0.004	0.18
Terminal Equipment - 176-250 Hp	0.25	1.22	3.73	0.004	0.15
Terminal Equipment - 251-500 Hp	0.20	1.11	3.20	0.004	0.13
Project Year 2025					
Terminal Equipment - 121-175 Hp	0.10	3.07	0.92	0.004	0.03
Terminal Equipment - 176-250 Hp	0.10	1.12	0.58	0.004	0.03
Terminal Equipment - 251-500 Hp	0.08	1.00	0.54	0.004	0.03
Project Year 2038					
Terminal Equipment - 121-175 Hp	0.08	3.07	0.30	0.004	0.021
Terminal Equipment - 176-250 Hp	0.09	1.12	0.32	0.004	0.024
Terminal Equipment - 251-500 Hp	0.07	1.00	0.29	0.004	0.018

Notes: (1) Data calculated from OFFROAD Emissions Model factors derived for year 2002 terminal equipment fleet with the use of an equipment replacement rate of 15 years and consideration of future off-road emission standards implementation schedule. Beginning in year 2007, assumes use of ULSD.

(2) PM EFs for 121-175 and 176-250 Hp categories reflect use of DOCs for years 2007-2015.

Table D1.2.30. Unmitigated Emission Factors for Terminal Equipment - For Non-cancer analyses and year 2010 in HA files to minimize interpolation

Project Scenario/Equipment Horsepower	Emission Factors (1)				
	ROG	CO	NOx	SOx	PM10
Project Year 2010					
Terminal Equipment - 121-175 Hp	0.62	3.37	6.95	0.004	0.32
Terminal Equipment - 176-250 Hp	0.46	1.46	6.05	0.004	0.25
Terminal Equipment - 251-500 Hp	0.35	1.31	5.32	0.004	0.21

Table D1.2.CB-PD1. Peak Daily Wharfage Data - Berths 136-147 Terminal Project - CEQA Baselin

Project Scenario/Ship Type	Peak Daily Ship Visits	Max TEU Moves/ Peak Day (1)	Peak Daily TEU Moves	Hoteling Hours/ Day (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2010				
Containerships 8,000 - 9,000 TEU				
Containerships 5,000 - 6,000 TEU				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2015				
Containerships 8,000 - 9,000 TEU				
Containerships 5,000 - 6,000 TEU				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2038				
Containerships 8,000 - 9,000 TEU				
Containerships 5,000 - 6,000 TEU				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/d
5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would se
8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service.
Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane productio
3,927, 4,909, and 5,890 TEUs/day.

(2) There are 10 cranes present from 2007 through 2011, then 12 cranes beginning in 2012.

Table D1.2.CB-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year (1)(2)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.03	0.08	0.99	0.57	0.08	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08	0.08
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08	0.08
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08	0.08
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08	0.08
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08	0.08

Note: (1) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2.CB-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.01	0.01	0.14	0.08	0.01	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01	0.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01	0.01
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01	0.01

Table D1.2.CB-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01

Table D1.2.CB-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00

Table D1.2.CB-PD6. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - CEQA Baseline.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.05	0.04	0.01	0.00
Subtotal	0.00	0.00	0.05	0.04	0.01	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2.CB-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.03	0.02	0.00	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.03	0.01	0.00	0.00
Subtotal	0.00	0.00	0.03	0.01	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.03	0.01	0.00	0.00
Subtotal	0.00	0.00	0.03	0.01	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.03	0.01	0.00	0.00
Subtotal	0.00	0.00	0.03	0.01	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.03	0.01	0.00	0.00
Subtotal	0.00	0.00	0.03	0.01	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.CB-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.05	0.03	0.00	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.CB-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.01	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.CB-PD10. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05	0.04
Containership < 3,000 TEU	0.01	0.03	0.34	0.22	0.03	0.03
Subtotal	0.03	0.07	0.92	0.59	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.57	0.27	0.04	0.03
Containerships < 3,000 TEU	0.01	0.03	0.34	0.16	0.02	0.02
Subtotal	0.03	0.07	0.90	0.42	0.06	0.05
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.57	0.27	0.04	0.03
Containerships < 3,000 TEU	0.01	0.03	0.34	0.16	0.02	0.02
Subtotal	0.03	0.07	0.90	0.42	0.06	0.05
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.57	0.27	0.04	0.03
Containerships < 3,000 TEU	0.01	0.03	0.34	0.16	0.02	0.02
Subtotal	0.03	0.07	0.90	0.42	0.06	0.05
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.57	0.27	0.04	0.03
Containerships < 3,000 TEU	0.01	0.03	0.34	0.16	0.02	0.02
Subtotal	0.03	0.07	0.90	0.42	0.06	0.05

Table D1.2.CB-PD11. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - CEQA Baseline.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.04	0.00	0.00
Subtotal	0.00	0.00	0.01	0.04	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.04	0.00	0.00
Subtotal	0.00	0.00	0.01	0.04	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.04	0.00	0.00
Subtotal	0.00	0.00	0.01	0.04	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.01	0.04	0.00	0.00
Subtotal	0.00	0.00	0.01	0.04	0.00	0.00

Table D1.2.CB-PD12. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00

Table D1.2.CB-PD13. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00

Table D1.2.CB-PD14. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00

Table D1.2.CB-PD15. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - CEQA Baseline.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containership < 3,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01	0.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01	0.01
Project Year 2010						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01	0.01

Table D1.2.CB-PD16. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - CEQA Baseline.

Project Scenario/Vessel Type	Tons Per Year (1)					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU						
Containership < 3,000 TEU	0.00	0.01	0.07	0.00	0.00	0.00
Subtotal	0.00	0.01	0.07	0.00	0.00	0.00
Project Year 2007						
Subtotal	0.00	0.01	0.07	0.00	0.00	0.00
Project Year 2010						
Subtotal	0.00	0.01	0.06	0.00	0.00	0.00
Project Year 2015						
Subtotal	0.00	0.01	0.05	0.00	0.00	0.00
Project Year 2038						
Subtotal	0.00	0.01	0.04	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.CB-PD17. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - CEQA Baseline.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU						
Containership < 3,000 TEU						
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2007						
Subtotal (1)	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2010						
Subtotal (1)	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2015						
Subtotal (1)	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2038						
Subtotal (1)	0.00	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.CB-PD18. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - CEQA Baseline.

	Pounds Per Day					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173	162
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6	6
Subtotal	171	458	4,863	3,583	410	384
Project Year 2007						
Ships - Fairway Transit (1)	68.83	167.92	2,092.57	1,280.46	172.37	161.51
Ships - Precautionary Area Transit (1)	12.58	30.99	348.62	219.14	28.42	26.63
Ships - Harbor Transit (1)	21.63	27.88	203.63	93.20	19.14	17.94
Ships - Docking (1)	7.54	7.53	56.61	22.28	5.71	5.35
Ships - Hoteling Aux. Sources	56.55	208.08	1,989.53	1,642.15	138.03	129.33
Tugboats - Cargo Vessel Assist (1)	4.58	23.60	147.31	0.08	6.08	5.70
Subtotal	171.71	466.01	4,838.28	3,257.31	369.76	346.46
Project Year 2010						
Ships - Fairway Transit (1)	68.83	167.92	2,092.57	1,280.46	172.37	161.51
Ships - Precautionary Area Transit (1)	12.58	30.99	348.62	219.14	28.42	26.63
Ships - Harbor Transit (1)	21.63	27.88	203.63	93.20	19.14	17.94
Ships - Docking (1)	7.54	7.53	56.61	22.28	5.71	5.35
Ships - Hoteling Aux. Sources	56.55	208.08	1,989.53	1,642.15	138.03	129.33
Tugboats - Cargo Vessel Assist (1)	4.48	23.60	126.65	0.08	5.45	5.10
Subtotal	171.61	466.01	4,817.62	3,257.31	369.12	345.86
Project Year 2015						
Ships - Fairway Transit (1)	68.83	167.92	2,092.57	1,280.46	172.37	161.51
Ships - Precautionary Area Transit (1)	12.58	30.99	348.62	219.14	28.42	26.63
Ships - Harbor Transit (1)	21.63	27.88	203.63	93.20	19.14	17.94
Ships - Docking (1)	7.54	7.53	56.61	22.28	5.71	5.35
Ships - Hoteling Aux. Sources	56.55	208.08	1,989.53	1,642.15	138.03	129.33
Tugboats - Cargo Vessel Assist (1)	4.41	23.60	105.17	0.08	4.58	4.29
Subtotal	171.54	466.01	4,796.14	3,257.31	368.25	345.05
Project Year 2038						
Ships - Fairway Transit (1)	68.83	167.92	2,092.57	1,280.46	172.37	161.51
Ships - Precautionary Area Transit (1)	12.58	30.99	348.62	219.14	28.42	26.63
Ships - Harbor Transit (1)	21.63	27.88	203.63	93.20	19.14	17.94
Ships - Docking (1)	7.54	7.53	56.61	22.28	5.71	5.35
Ships - Hoteling Aux. Sources	56.55	208.08	1,989.53	1,642.15	138.03	129.33
Tugboats - Cargo Vessel Assist (1)	4.37	23.60	94.43	0.08	4.15	3.89
Subtotal	171.50	466.01	4,785.40	3,257.31	367.82	344.65

Note: (1) Includes auxiliary power emissions.

Table D1.2.CB-PD19. ADT Estimates - Berths 136-147 - CEQA Base

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,197,589	3,281	4,492
2010	1,197,589	3,281	4,492
2015	1,197,589	3,281	4,492
2030	1,197,589	3,281	4,492

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.CB-PD20. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - CEQA Baseline. Peak Day

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	Peak Day Trips	Idling Hrs/ Day	Miles/ Day	TEUs/ Peak Day
On-Terminal						
Year 2003 - Baseline	0.56	1.02	4,492	2,516	4,587	8,310
Year 2007	0.25	1.02	4,492	1,123	4,587	8,310
Year 2010	0.25	1.02	4,492	1,123	4,587	8,310
Year 2015	0.25	1.02	4,492	1,123	4,587	8,310
Year 2030	0.25	1.02	4,492	1,123	4,587	8,310
Off-Terminal						
Year 2003 - Baseline	0.30	32.3	4,492	1,348	145,162	
Year 2007	0.30	32.3	4,492	1,348	145,162	
Year 2010	0.30	32.3	4,492	1,348	145,162	
Year 2015	0.30	32.3	4,492	1,348	145,162	
Year 2030	0.30	32.3	4,492	1,348	145,162	

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2.CB-PD21. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - CEQA Baseline

Location/Project Scenario - Mode	Pounds per Peak Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97.4	227.7	535.4	3.2	15.8	14.5
Year 2003 - Driving	106.2	241.0	385.6	2.7	39.3	36.2
Subtotal - Year 2003	203.5	468.7	921.0	5.9	55.1	50.7
Year 2007 - Idling	34.6	125.8	262.5	0.2	5.5	5.1
Year 2007 - Driving	103.7	217.2	391.9	0.3	31.5	29.0
Subtotal - Year 2007	138.3	342.9	654.3	0.5	37.0	34.1
Year 2015 - Idling	22.3	108.1	296.5	0.2	2.5	2.3
Year 2015 - Driving	57.7	120.3	266.0	0.3	11.8	10.9
Subtotal - Year 2015	80.1	228.3	562.6	0.5	14.4	13.2
Year 2025 - Idling	19.2	103.0	305.2	0.2	0.6	0.5
Year 2025 - Driving	20.4	44.1	90.4	0.3	1.7	1.6
Subtotal - Year 2025	39.5	147.1	395.5	0.5	2.3	2.1
Year 2038 - Idling	19.0	102.6	305.9	0.2	0.3	0.3
Year 2038 - Driving	16.0	34.8	69.4	0.3	1.1	1.0
Subtotal - Year 2038	34.9	137.4	375.2	0.5	1.3	1.2
Off-Terminal						
Year 2003 - Idling	52.2	122.0	286.8	1.7	8.5	7.8
Year 2003 - Driving	876.4	3,480.5	7,918.2	53.1	524.1	482.1
Subtotal - Year 2003	928.6	3,602.4	8,205.0	54.8	532.5	489.9
Year 2007 - Idling	41.5	150.9	314.9	0.2	6.6	6.1
Year 2007 - Driving	812.6	2,876.9	8,011.5	6.2	366.4	337.1
Subtotal - Year 2007	854.1	3,027.8	8,326.5	6.4	373.0	343.2
Year 2015 - Idling	26.8	129.7	355.9	0.2	3.1	2.8
Year 2015 - Driving	272.7	1,662.7	4,952.7	6.3	202.1	186.0
Subtotal - Year 2015	299.5	1,792.4	5,308.5	6.5	205.2	188.8
Year 2025 - Idling	23.0	123.6	366.2	0.2	0.7	0.6
Year 2025 - Driving	117.8	622.8	1,635.8	6.5	45.5	41.8
Subtotal - Year 2025	140.8	746.4	2,002.1	6.7	46.2	42.5
Year 2038 - Idling	22.7	123.1	367.0	0.2	0.3	0.3
Year 2038 - Driving	149.8	491.7	1,250.1	6.5	31.6	29.1
Subtotal - Year 2038	172.5	614.8	1,617.1	6.7	32.0	29.4
Total Daily Truck Emissions by Project Year						
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	992	3,371	8,981	7	410	377
Year 2015	380	2,021	5,871	7	220	202
Year 2025	180	893	2,398	7	48	45
Year 2038	207	752	1,992	7	33	31

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.CB-PD22. Road Dust Emissions for the Berths 136-147 Terminal Project - CEQA Baseline.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	82.32	13.91
Year 2010	82.32	13.91
Year 2015	82.32	13.91
Year 2038	82.32	13.91
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	114.80	19.40
Year 2010	114.80	19.40
Year 2015	114.80	19.40
Year 2038	114.80	19.40
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	197.13	33.31
Year 2010	197.13	33.31
Year 2015	197.13	33.31
Year 2038	197.13	33.31

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.CB-PD23. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - CEQA Baseline.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.51	0.22
Year 2010	0.51	0.22
Year 2015	0.51	0.22
Year 2038	0.51	0.22
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	16.00	6.86
Year 2010	16.00	6.86
Year 2015	16.00	6.86
Year 2038	16.00	6.86
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	16.51	7.08
Year 2010	16.51	7.08
Year 2015	16.51	7.08
Year 2038	16.51	7.08

Table D1.2.CB-PD24. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - CEQA Baseline.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	82.83	14.13
Year 2010	82.83	14.13
Year 2015	82.83	14.13
Year 2038	82.83	14.13
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	130.81	26.27
Year 2010	130.81	26.27
Year 2015	130.81	26.27
Year 2038	130.81	26.27
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	214	40
Year 2010	214	40
Year 2015	214	40
Year 2038	214	40

Table D1.2.CB-PD25. Peak Day Train Trips - Berths 136-147
Terminal Project - CEQA Baseline

Project Scenario/Rail Yard	Peak Daily Round Trips	TEUs/ Day
Year 2003 Baseline		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2007		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2010		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	2	1,224
Year 2015		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	2	1,224
Year 2038		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	2	1,224

Table D1.2.CB-PD26. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project CEQA Baseline - Year 2003.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Carson or LA Railyards/Outbound						
Hostler	0.00	0.02	0.05	0.00	0.00	0.00
Top Picks	0.00	0.00	0.02	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.40	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.03	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00	0.00
Subtotal	0.03	0.08	0.52	0.03	0.02	0.02
Carson or LA Railyards/Inbound						
Hostler	0.00	0.01	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.40	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.03	0.06	0.45	0.03	0.01	0.01
Total Tons Per Year	0.06	0.14	0.97	0.06	0.03	0.03

Table D1.2.CB-PD27. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project CEQA Baseline - Year 2007.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.00	0.02	0.04	0.00	0.00	0.00
Top Picks	0.00	0.00	0.02	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.01	0.01
Carson or LA Railyards/Inbound						
Hostler	0.00	0.01	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01	0.01
Total Tons Per Year	0.05	0.13	0.71	0.06	0.03	0.02

Table D1.2.CB-PD28. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project CEQA Baseline - Year 2010.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.00	0.02	0.04	0.00	0.00	0.00
Top Picks	0.00	0.00	0.02	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.01	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.07	0.35	0.01	0.01	0.01
Carson or LA Railyards/Inbound						
Hostler	0.00	0.01	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.01	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.06	0.30	0.01	0.01	0.01
Total Tons Per Year	0.05	0.13	0.65	0.01	0.02	0.02

Table D1.2.CB-PD29. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project CEQA Baseline - Year 2015.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.00	0.02	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.25	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.07	0.31	0.00	0.01	0.01
Carson or LA Railyards/Inbound						
Hostler	0.00	0.01	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.25	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.06	0.27	0.00	0.01	0.01
Total Tons Per Year	0.04	0.13	0.58	0.00	0.02	0.01

Table D1.2.CB-PD30. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project CEQA Baseline - Year 2038.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.00	0.01	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.19	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.07	0.21	0.00	0.01	0.00
Carson or LA Railyards/Inbound						
Hostler	0.00	0.01	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.19	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.01	0.06	0.20	0.00	0.00	0.00
Total Tons Per Year	0.03	0.13	0.41	0.00	0.01	0.01

Table D1.2.CB-PD31. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project CEQA Baseline.

	Tons					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	0.01	0.03	0.10	0.00	0.01	0.00
Trains	0.05	0.10	0.87	0.06	0.03	0.02
Subtotal	0.06	0.14	0.97	0.06	0.03	0.03
Project Year 2007						
ICTF Equipment	0.01	0.03	0.09	0.00	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02	0.02
Subtotal	0.05	0.13	0.71	0.06	0.03	0.02
Project Year 2010						
ICTF Equipment	0.00	0.03	0.08	0.00	0.00	0.00
Trains	0.04	0.10	0.57	0.01	0.02	0.01
Subtotal	0.05	0.13	0.65	0.01	0.02	0.02
Project Year 2015						
ICTF Equipment	0.00	0.03	0.05	0.00	0.00	0.00
Trains	0.04	0.10	0.53	0.00	0.01	0.01
Subtotal	0.04	0.13	0.58	0.00	0.02	0.01
Project Year 2038						
ICTF Equipment	0.00	0.02	0.00	0.00	0.00	0.00
Trains	0.03	0.10	0.41	0.00	0.01	0.01
Subtotal	0.03	0.13	0.41	0.00	0.01	0.01

Table D1.2.CB-PD32. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project CEQA Basel

Project Scenario/Equipment Horsepower		Tons				
		ROG	CO	NOx	SOx	PM10
Project Year 2006						
Terminal Equipment - 121-175 Hp		0.15	0.63	1.70	0.02	0.10
Terminal Equipment - 176-250 Hp		0.10	0.29	1.51	0.02	0.05
Terminal Equipment - 250-500 Hp		0.02	0.06	0.30	0.00	0.01
Subtotal		0.27	0.98	3.50	0.05	0.16
Project Year 2007						
Terminal Equipment - 121-175 Hp		0.12	0.59	1.44	0.00	0.05
Terminal Equipment - 176-250 Hp		0.07	0.25	1.32	0.00	0.03
Terminal Equipment - 250-500 Hp		0.01	0.06	0.27	0.00	0.01
Subtotal		0.20	0.89	3.03	0.00	0.09
Project Year 2010						
Terminal Equipment - 121-175 Hp		0.09	0.56	1.26	0.00	0.05
Terminal Equipment - 176-250 Hp		0.06	0.24	1.23	0.00	0.03
Terminal Equipment - 250-500 Hp		0.01	0.05	0.24	0.00	0.01
Subtotal		0.16	0.85	2.73	0.00	0.08
Project Year 2015						
Terminal Equipment - 121-175 Hp		0.05	0.52	0.76	0.00	0.02
Terminal Equipment - 176-250 Hp		0.04	0.22	0.82	0.00	0.02
Terminal Equipment - 250-500 Hp		0.01	0.04	0.15	0.00	0.00
Subtotal		0.09	0.78	1.73	0.00	0.05
Project Year 2038						
Terminal Equipment - 121-175 Hp		0.02	0.51	0.06	0.00	0.00
Terminal Equipment - 176-250 Hp		0.02	0.21	0.07	0.00	0.00
Terminal Equipment - 250-500 Hp		0.00	0.04	0.01	0.00	0.00
Subtotal		0.05	0.75	0.14	0.00	0.01

Table D1.2.CB-PD33. Peak Daily Terminal Yard TEU Throughput - Berths 136-14

	Peak Daily TEUs				Peak Daily/
Project Year	Wharf	Gate	Total	Peak Daily TEUs	eak Daily TEU
2003	5,984	8,310	14,294	891,976	0.016
2007	5,984	8,310	14,294	891,976	0.016
2010	5,984	8,310	14,294	891,976	0.016
2015	5,984	8,310	14,294	891,976	0.016
2038	5,984	8,310	14,294	891,976	0.016

Table D1.2.CB-PD34. Peak Daily Operational Emissions - Berths 136-147 Terminal Project CEQA Baseline.

Project Scenario/Source Type	Pounds per Peak Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173	162
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6	6
Terminal Equipment	542	1,969	7,008	92	320	294
On-road Trucks	1,132	4,071	9,126	61	801	581
Trains	100	208	1,737	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,977	6,935	23,010	3,851	1,607	1,329

Table D1.2.NFAB-PD1. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-14
Terminal Project NEPA Baseline - Vessels that Comply with Proposed VSRP.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2.NFAB-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-14
Terminal Project NEPA Baseline - Non-Compliant Vessels with the Proposed VSRP.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2.NFAB-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01

(2) Without slide valves

Table D1.2.NFAB-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01

Table D1.2.NFAB-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00

(2) Without slide valves

Table D1.2.NFAB-PD6. Peak Daily Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.NFAB-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project NEPA Baseline - Vessels that Comply with VSRP.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2.NFAB-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairwa
Zone - Berths 136-147 Terminal Project NEPA Baseline - Non-Compliant Vessels within VSRP.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.NFAB-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.NFAB-PD10. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.NFAB-PD11. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.NFAB-PD12. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.04	0.10	1.30	0.83	0.11
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.01	0.07	0.00	0.00
Subtotal	0.01	0.02	0.21	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Table D1.2.NFAB-PD13. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.NFAB-PD14. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-

Table D1.2.NFAB-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - VSRP-Compliant.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.NFAB-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - NEPA Baseline - VSRP-Non-Compliant.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.NFAB-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00

Table D1.2.NFAB-PD18. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00

Table D1.2.NFAB-PD19. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00

(2) Does not assume use of low-sulfur fuels.

Table D1.2.NFAB-PD20. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02

(2) Does not assume use of low-sulfur fuels.

Table D1.2.NFAB-PD21. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Hoteling					
Subtotal	-	-	-	-	-

Table D1.2.NFAB-PD22. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.01	0.06	0.00	0.00
Project Year 2025					
Subtotal	0.00	0.01	0.05	0.00	0.00
Project Year 2038					
Subtotal	0.00	0.01	0.04	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.NFAB-PD23. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2025					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.NFAB-PD24. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-
Terminal Project NEPA Baseline - Vessels that Comply with VSRP + Slide Valves

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.NFAB-PD25. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-
Terminal Project NEPA Baseline - Non-Compliant Vessels within VSRP + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.NFAB-PD26. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - NEPA Baseline + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00

Table D1.2.NFAB-PD27. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - NEPA Baseline + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00

Table D1.2.NFAB-PD28. Peak Daily Cargo Vessel Emissions for Docking Activities -
Berths 136-147 Terminal Project - NEPA Baseline + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00

Table D1.2.NFAB-PD29. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - NEPA Baseline.

	Tons				
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	0.03	0.08	1.04	0.62	0.09
Ships - Precautionary Area Transit (1)	0.01	0.02	0.17	0.12	0.01
Ships - Harbor Transit (1)	0.01	0.01	0.10	0.06	0.01
Ships - Docking (1)	0.00	0.00	0.03	0.01	0.00
Ships - Hoteling Aux. Sources	0.04	0.13	1.39	1.23	0.12
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.07	0.00	0.00
Subtotal	0.10	0.26	2.81	2.03	0.24
Project Year 2015					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.01	0.07	0.34	0.61	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.06	0.00	0.00
Subtotal	0.05	0.30	1.79	0.72	0.05
Project Year 2025					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.04	0.28	1.57	0.70	0.05
Project Year 2038					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.04	0.28	1.57	0.70	0.05

Note: (1) Includes auxiliary power emissions.

Table D1.2.NFAB-PD30. Mitigated Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - NEPA Baseline

	Pounds Per Peak Day				
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6
Subtotal	192	517	5,624	4,066	473
Project Year 2015					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	20	135	684	1,222	42
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5
Subtotal	96	594	3,578	1,434	108
Project Year 2025					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5
Subtotal	84	561	3,145	1,409	99
Project Year 2038					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	84	561	3,134	1,409	99

Note: (1) Includes auxiliary power emissions.

Table D1.2.NFAB-PD31. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - NEPA Baseline.

Project Scenario/Ship Type	Peak Daily Ship Visits	ax TEU Move Peak Day (1)	Peak Daily TEU Moves	Hoteling Time/ Visit (Hours) (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU	1	3,740	3,740	24.0
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU		2,992		
Subtotal	2		6,732	
Project Year 2015				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	
Project Year 2025				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	
Project Year 2038				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service. Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane production = 3,927, 4,909, and 5,890 TEUs/day.

Table D1.2.NFAB-PD32. ADT Estimates - Berths 136-147 NEPA Baseline

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,464,255	4,012	5,492
2015	1,291,247	3,538	4,843
2025	1,200,205	3,288	4,502
2038	1,200,205	3,288	4,502

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.NFAB-PD33. On-Road Truck Peak Daily Operational Data for the Berths 136-147 Terminal Project - NEPA Baseline

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	Peak Daily Trips	Idling Hrs/ Day	Miles/ Day	TEUs/ Peak Day
On-Terminal						
Year 2003 - Baseline	0.56	1.02	4,492	2,516	4,587	8,310
Year 2007	0.25	1.02	5,492	1,373	5,609	10,161
Year 2015	0.25	0.81	4,843	1,211	3,902	8,960
Year 2025	0.25	0.81	4,502	1,125	3,627	8,329
Year 2038	0.25	0.81	4,502	1,125	3,627	8,329
Off-Terminal						
Year 2003 - Baseline	0.30	32.3	4,492	1,348	145,162	
Year 2007	0.30	32.3	5,492	1,648	177,485	
Year 2015	0.30	54.4	4,843	1,453	263,487	
Year 2025	0.30	49.4	4,502	1,351	222,205	
Year 2038	0.30	49.4	4,502	1,351	222,205	

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.PP-Mit-PD34.

Table D1.2.NFAB-PD34. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - NEPA Baseline

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97	228	535	3	16	15
Year 2003 - Driving	106	241	386	3	39	36
Subtotal - Year 2003	204	469	921	6	55	51
Year 2007 - Idling	32	104	356	0	4	4
Year 2007 - Driving	99	199	386	0	28	26
Subtotal - Year 2007	130	304	741	1	32	30
Year 2015 - Idling	19	80	341	0	0	0
Year 2015 - Driving	10	21	36	0	1	1
Subtotal - Year 2015	29	102	377	0	1	1
Year 2025 - Idling	18	75	317	0	0	0
Year 2025 - Driving	9	20	33	0	1	1
Subtotal - Year 2025	27	95	350	0	1	1
Year 2038 - Idling	18	77	317	0	0	0
Year 2038 - Driving	9	20	33	0	1	1
Subtotal - Year 2038	27	97	350	0	1	1
Off-Terminal						
Year 2003 - Idling	52	122	287	2	8	8
Year 2003 - Driving	876	3,480	7,918	53	524	482
Subtotal - Year 2003	929	3,602	8,205	55	533	490
Year 2007 - Idling	38	125	427	0	5	4
Year 2007 - Driving	757	2,538	7,866	8	309	284
Subtotal - Year 2007	795	2,663	8,293	8	314	289
Year 2015 - Idling	23	97	410	0	0	0
Year 2015 - Driving	189	651	1,327	12	40	37
Subtotal - Year 2015	212	747	1,737	12	40	37
Year 2025 - Idling	21	90	381	0	0	0
Year 2025 - Driving	159	547	1,114	10	34	31
Subtotal - Year 2025	180	637	1,495	10	34	31
Year 2038 - Idling	21	93	381	0	0	0
Year 2038 - Driving	164	539	1,136	10	31	29
Subtotal - Year 2038	186	632	1,517	10	32	29
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	925	2,967	9,034	8	346	318
Year 2015	241	849	2,114	12	41	38
Year 2025	207	731	1,845	10	35	32
Year 2038	213	729	1,866	11	32	30

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.NFAB-PD35. Road Dust Emissions for the Berths 136-147 Terminal Project - NEPA Baseline

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	100.65	17.01
Year 2010	70.02	11.83
Year 2015	65.08	11.00
Year 2038	65.08	11.00
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	140.37	23.72
Year 2010	208.39	35.22
Year 2015	175.74	29.70
Year 2038	175.74	29.70
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	241.02	40.73
Year 2010	278.40	47.05
Year 2015	240.82	40.70
Year 2038	240.82	40.70

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.NFAB-PD36. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - NEPA Baseline

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.62	0.27
Year 2010	0.43	0.18
Year 2015	0.40	0.17
Year 2038	0.40	0.17
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	19.56	8.39
Year 2010	29.04	12.46
Year 2015	24.49	10.51
Year 2038	24.49	10.51
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	20.18	8.66
Year 2010	29.47	12.64
Year 2015	24.89	10.68
Year 2038	24.89	10.68

Table D1.2.NFAB-PD37. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - NEPA Baseline

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	101.27	17.28
Year 2010	70.45	12.02
Year 2015	65.48	11.17
Year 2038	65.48	11.17
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	159.93	32.12
Year 2010	237.43	47.68
Year 2015	200.23	40.21
Year 2038	200.23	40.21
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	261	49
Year 2010	308	60
Year 2015	266	51
Year 2038	266	51

Table D1.2.NFAB-PD38. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2007 - NEPA Baseline

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.05	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03

Table D1.2.NFAB-PD39. Mitigated Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2015 - NEPA Baseline

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Total Tons Per Year	0.06	0.17	0.82	0.00	0.02

Table D1.2.NFAB-PD40. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2025 - NEPA Baseline

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.09	0.25	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.07	0.24	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.12	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.11	0.00	0.00
Total Tons Per Year	0.06	0.22	0.72	0.00	0.02

Table D1.2.NFAB-PD41. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2038 - NEPA Baseline

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.09	0.22	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.07	0.21	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.10	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.10	0.00	0.00
Total Tons Per Year	0.05	0.22	0.63	0.00	0.02

Table D1.2.NFAB-PD42. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Mitigat
Emissions - Berths 136-147 Terminal Project - NEPA Baseline

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.00	0.01	0.00	0.00	0.00
Trains	0.06	0.16	0.82	0.00	0.02
Subtotal	0.06	0.17	0.82	0.00	0.02
Project Year 2025					
ICTF Equipment	0.01	0.06	0.01	0.00	0.00
Trains	0.05	0.16	0.71	0.00	0.02
Subtotal	0.06	0.22	0.72	0.00	0.02
Project Year 2038					
ICTF Equipment	0.01	0.06	0.01	0.00	0.00
Trains	0.04	0.16	0.63	0.00	0.01
Subtotal	0.05	0.22	0.63	0.00	0.02

Table D1.2.NFAB-PD43. Peak Daily Train Trips - Berths 136-147
Terminal Project - NEPA Baseline

Project Scenario/Rail Yard	Peak Daily Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	2
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	2
Year 2015	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1
Year 2025	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1
Year 2038	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1

Table D1.2.NFAB-PD44. Peak Daily Terminal Yard TEU Throughput - Berths 1

Project Year	Peak Daily TEUs			eak Daily TEU	Peak Daily/ Peak Daily TEUs
	Wharf	Gate	Total		
2003	5,984	8,310	14,294	891,976	0.016
2007	6,732	10,161	16,893	1,056,000	0.016
2015	10,799	8,960	19,759	1,491,000	0.013
2025	10,799	8,329	19,128	1,697,000	0.011
2038	10,799	8,329	19,128	1,697,000	0.011

Table D1.2.NFAB-PD45. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project - NEPA Baseline

Project Scenario/Equipment Horsepower		Peak Daily Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2003							
Terminal Equipment - 121-175 Hp		0.15	0.63	1.70	0.02	0.10	0.09
Terminal Equipment - 176-250 Hp		0.10	0.29	1.51	0.02	0.05	0.05
Terminal Equipment - 250-500 Hp		0.02	0.06	0.30	0.00	0.01	0.01
Subtotal		0.27	0.98	3.50	0.05	0.16	0.15
Project Year 2007							
Terminal Equipment - 121-175 Hp		0.17	0.76	1.84	0.00	0.09	0.08
Terminal Equipment - 176-250 Hp		0.15	0.42	1.86	0.00	0.08	0.07
Terminal Equipment - 250-500 Hp		0.02	0.07	0.31	0.00	0.01	0.01
Subtotal		0.34	1.26	4.01	0.00	0.17	0.16
Project Year 2015							
Terminal Equipment - 121-175 Hp		0.08	0.81	0.08	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.08	0.37	0.09	0.00	0.00	0.00
Terminal Equipment - 250-500 Hp		0.01	0.07	0.02	0.00	0.00	0.00
Subtotal		0.17	1.25	0.19	0.00	0.01	0.01
Project Year 2025							
Terminal Equipment - 121-175 Hp		0.02	0.76	0.07	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.03	0.33	0.09	0.00	0.00	0.00
Terminal Equipment - 250-500 Hp		0.00	0.06	0.02	0.00	0.00	0.00
Subtotal		0.06	1.15	0.18	0.00	0.01	0.01
Project Year 2038							
Terminal Equipment - 121-175 Hp		0.02	0.76	0.07	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.03	0.33	0.09	0.00	0.00	0.00
Terminal Equipment - 250-500 Hp		0.00	0.06	0.02	0.00	0.00	0.00
Subtotal		0.06	1.15	0.18	0.00	0.01	0.01

Table D1.2.NFAB-PD46. Peak Daily Operational Emissions - Berths 136-147 Terminal Project - NEPA Baseline.

	Pounds Per Peak Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2007						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236	221
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	688	2,511	8,024	5	345	318
On-road Trucks	925	2,967	9,034	8	607	368
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,927	6,417	24,193	4,191	1,498	1,195
Project Year 2015						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	20	135	684	1,222	42	39
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5	5
Terminal Equipment	332	2,498	374	5	19	17
On-road Trucks	241	849	2,114	12	349	98
Trains	119	326	1,636	1	43	40
Railyard Equipment	2	24	2	0	0	0
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	0	0
Project Year 2015 Total	804	4,461	7,754	1,453	542	277
Project Year 2025						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5	4
Terminal Equipment	114	2,307	362	5	18	17
On-road Trucks	207	731	1,845	10	301	83
Trains	100	326	1,429	1	36	33
Railyard Equipment	11	120	11	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	6	0	0	0
Project Year 2025 Total	527	4,163	6,811	1,426	479	249
Project Year 2038 Total						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	114	2,307	362	5	18	17
On-road Trucks	213	729	1,866	11	298	81
Trains	85	326	1,251	1	30	27
Railyard Equipment	11	120	11	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	5	0	0	0
Project Year 2038 Total	513	4,102	6,634	1,426	476	246

Table D1.2.PP-PD1. Peak Daily Ship Visit and Throughput Data - Berths 136-147 Terminal Project

Project Scenario/Ship Type	Peak Daily Ship Visits	Max TEU Moves/ Peak Day (1)	Peak Daily TEU Moves	Hoteling Hours/ Day (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU	1	3,740	3,740	24.0
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU		2,992		
Subtotal	2		6,732	
Project Year 2015				
Containerships 8,000 - 9,000 TEU	1	5,890	5,890	24.0
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	982	24.0
Containerships < 3,000 TEU		3,927		
Subtotal	3		11,781	
Project Year 2025				
Containerships 8,000 - 9,000 TEU	1	5,890	5,890	24.0
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	982	24.0
Containerships < 3,000 TEU		3,927		
Subtotal	3		11,781	
Project Year 2038				
Containerships 8,000 - 9,000 TEU	1	5,890	5,890	24.0
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	982	24.0
Containerships < 3,000 TEU		3,927		
Subtotal	3		11,781	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/d
5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would se
8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service.
Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane productio
3,927, 4,909, and 5,890 TEUs/day.

(2) There are 10 cranes present from 2007 through 2011, then 12 cranes beginning in 2012.

Table D1.2.PP-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)(2)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.03	0.08	0.99	0.57	0.08	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08	0.08
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.06	0.13	1.54	0.88	0.13	0.12
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.06	0.13	1.54	0.88	0.13	0.12
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.11	0.21	2.26	1.24	0.20	0.18
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.11	0.21	2.26	1.24	0.20	0.18
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.11	0.21	2.26	1.24	0.20	0.18
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.11	0.21	2.26	1.24	0.20	0.18
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.11	0.21	2.26	1.24	0.20	0.18
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.11	0.21	2.26	1.24	0.20	0.18

Note: (1) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2.PP-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.01	0.01	0.14	0.08	0.01	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01	0.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.20	0.10	0.02	0.02
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.01	0.02	0.20	0.10	0.02	0.02
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.03	0.04	0.27	0.11	0.03	0.03
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.03	0.04	0.27	0.11	0.03	0.03
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.03	0.04	0.27	0.11	0.03	0.03
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.03	0.04	0.27	0.11	0.03	0.03
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.03	0.04	0.27	0.11	0.03	0.03
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.03	0.04	0.27	0.11	0.03	0.03

Table D1.2.PP-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.02	0.02	0.10	0.02	0.01	0.01
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.02	0.02	0.10	0.02	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.03	0.03	0.19	0.04	0.02	0.02
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.03	0.03	0.19	0.04	0.02	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.03	0.03	0.19	0.04	0.02	0.02
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.03	0.03	0.19	0.04	0.02	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.03	0.03	0.19	0.04	0.02	0.02
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.03	0.03	0.19	0.04	0.02	0.02

Table D1.2.PP-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.01	0.00	0.03	0.00	0.00	0.00
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.01	0.00	0.03	0.00	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.05	0.01	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.01	0.01	0.05	0.01	0.01	0.01

Table D1.2.PP-PD6. Peak Daily Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	-	-	-	-	-	-
Docking	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.PP-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.05	0.04	0.01	0.00
Subtotal	0.00	0.00	0.05	0.04	0.01	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.08	0.01	0.01
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.09	0.08	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.15	0.12	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.15	0.12	0.01	0.01
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.15	0.12	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.15	0.12	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.15	0.12	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.15	0.12	0.01	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

(2) Assumes 25/50/75/80% VSRP compliance rates for years 2003/2007/2010/post-2014.

Table D1.2.PP-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.03	0.02	0.00	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.06	0.04	0.01	0.00
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.06	0.04	0.01	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.10	0.06	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.10	0.06	0.01	0.01
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.10	0.06	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.10	0.06	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.10	0.06	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.10	0.06	0.01	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PP-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.05	0.03	0.00	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.06	0.01	0.01
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.09	0.06	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.16	0.10	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.16	0.10	0.01	0.01
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.16	0.10	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.16	0.10	0.01	0.01
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.16	0.10	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.01	0.16	0.10	0.01	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PP-PD10. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.01	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.03	0.02	0.00	0.00
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.03	0.02	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.04	0.03	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.04	0.03	0.00	0.00
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.04	0.03	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.04	0.03	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.04	0.03	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.04	0.03	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PP-PD11. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05	0.04
Containership < 3,000 TEU	0.01	0.03	0.34	0.22	0.03	0.03
Subtotal	0.03	0.07	0.92	0.59	0.08	0.07
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05	0.04
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.04	0.10	1.30	0.83	0.11	0.10
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.02	0.06	0.77	0.49	0.06	0.06
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05	0.04
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.06	0.16	2.08	1.33	0.17	0.16
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.02	0.06	0.77	0.49	0.06	0.06
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05	0.04
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.06	0.16	2.08	1.33	0.17	0.16
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.02	0.06	0.77	0.49	0.06	0.06
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05	0.04
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.06	0.16	2.08	1.33	0.17	0.16

Table D1.2.PP-PD12. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Proposed Project.

Project Scenario/Vessel Mode	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	-	-	-	-	-	-
Docking	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.PP-PD13. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Proposed Project.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.PP-PD14. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Proposed Project.

Project Scenario/Vessel Type	Tons Per Year					
	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2015						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2025						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Project Year 2038						
Containerships 8,000 - 9,000 TEU	-	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.PP-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.02	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00	0.00

Table D1.2.PP-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.01	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00	0.00

Table D1.2.PP-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	-	-	-	-	-	-
Containership < 3,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2007						
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.00	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00

Table D1.2.PP-PD18. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containership < 3,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01	0.01
Project Year 2007						
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.03	0.09	0.40	0.01	0.01
Project Year 2015						
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.05	0.14	0.60	0.02	0.02
Project Year 2025						
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.05	0.14	0.60	0.02	0.02
Project Year 2038						
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01	0.01
Containerships < 3,000 TEU	-	-	-	-	-	-
Subtotal	0.00	0.05	0.14	0.60	0.02	0.02

Table D1.2.PP-PD19. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Transit	-	-	-	-	-	-
Docking	-	-	-	-	-	-
Hoteling	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-

Table D1.2.PP-PD20. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year (1)					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Subtotal	0.00	0.01	0.07	0.00	0.00	0.00
Project Year 2007						
Subtotal	0.00	0.01	0.07	0.00	0.00	0.00
Project Year 2015						
Subtotal	0.00	0.01	0.06	0.00	0.00	0.00
Project Year 2025						
Subtotal	0.00	0.01	0.05	0.00	0.00	0.00
Project Year 2038						
Subtotal	0.00	0.01	0.04	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.PP-PD21. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Proposed Project.

	Tons Per Year					
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Subtotal	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2007						
Subtotal (1)	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2015						
Subtotal (1)	0.00	0.00	0.01	0.00	0.00	0.00
Project Year 2025						
Subtotal (1)	0.00	0.00	0.00	0.00	0.00	0.00
Project Year 2038						
Subtotal (1)	0.00	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.PP-PD22. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Proposed Project.

	Pounds Per Day					
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	68.20	160.29	2,075.68	1,230.39	173.98	163.02
Ships - Precautionary Area Transit (1)	12.58	30.99	349.67	230.89	29.65	27.78
Ships - Harbor Transit (1)	21.63	27.88	205.13	110.08	20.90	19.59
Ships - Docking (1)	7.54	7.53	57.02	26.90	6.19	5.80
Ships - Hoteling Aux. Sources	56.55	208.08	2,019.07	1,974.70	172.70	161.82
Tugboats - Cargo Vessel Assist (1)	4.60	23.60	156.20	10.23	6.21	5.82
Subtotal	171.10	458.38	4,862.77	3,583.19	409.63	383.83
Project Year 2007						
Ships - Fairway Transit (1)	117.15	265.25	3,259.79	1,912.95	275.87	258.49
Ships - Precautionary Area Transit (1)	28.47	57.05	527.05	312.09	46.73	43.78
Ships - Harbor Transit (1)	41.30	51.73	392.08	191.07	39.74	37.23
Ships - Docking (1)	14.40	13.97	108.99	46.13	11.77	11.03
Ships - Hoteling Aux. Sources	77.90	266.79	2,789.13	2,467.77	235.72	220.87
Tugboats - Cargo Vessel Assist (1)	4.58	23.60	147.31	0.08	6.08	5.70
Subtotal	283.79	678.40	7,224.36	4,930.08	615.91	577.11
Project Year 2015						
Ships - Fairway Transit (1)	221.88	441.00	4,809.46	2,715.93	420.66	394.16
Ships - Precautionary Area Transit (1)	66.20	101.55	756.76	380.11	73.41	68.79
Ships - Harbor Transit (1)	75.26	92.06	700.04	320.30	71.14	66.66
Ships - Docking (1)	26.28	24.85	194.69	76.36	21.11	19.78
Ships - Hoteling Aux. Sources	123.57	418.66	4,426.02	3,856.81	373.42	349.89
Tugboats - Cargo Vessel Assist (1)	4.48	23.60	126.65	0.08	5.45	5.10
Subtotal	517.68	1,101.71	11,013.63	7,349.58	965.18	904.37
Project Year 2025						
Ships - Fairway Transit (1)	221.88	441.00	4,809.46	2,715.93	420.66	394.16
Ships - Precautionary Area Transit (1)	66.20	101.55	756.76	380.11	73.41	68.79
Ships - Harbor Transit (1)	75.26	92.06	700.04	320.30	71.14	66.66
Ships - Docking (1)	26.28	24.85	194.69	76.36	21.11	19.78
Ships - Hoteling Aux. Sources	123.57	418.66	4,426.02	3,856.81	373.42	349.89
Tugboats - Cargo Vessel Assist (1)	4.41	23.60	105.17	0.08	4.58	4.29
Subtotal	517.60	1,101.71	10,992.15	7,349.58	964.32	903.56
Project Year 2038						
Ships - Fairway Transit (1)	221.88	441.00	4,809.46	2,715.93	420.66	394.16
Ships - Precautionary Area Transit (1)	66.20	101.55	756.76	380.11	73.41	68.79
Ships - Harbor Transit (1)	75.26	92.06	700.04	320.30	71.14	66.66
Ships - Docking (1)	26.28	24.85	194.69	76.36	21.11	19.78
Ships - Hoteling Aux. Sources	123.57	418.66	4,426.02	3,856.81	373.42	349.89
Tugboats - Cargo Vessel Assist (1)	4.37	23.60	94.43	0.08	4.15	3.89
Subtotal	517.57	1,101.71	10,981.42	7,349.58	963.88	903.16

Note: (1) Includes auxiliary power emissions.

West Basin Container Terminal Daily Trips

Table D1.2.PP-PD23. ADT Estimates - Berths 136-147 - Proposed P

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,513,063	4,145	5,675
2015	1,607,093	4,403	6,028
2025	1,880,401	5,152	7,053
2038	1,880,401	5,152	7,053

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.PP-PD24. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Proposed Action

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	Peak Daily Trips	Idling Hrs/ Day	Miles/ Day	TEUs/ Day
On-Terminal						
Year 2003 - Baseline	0.56	1.02	4,492	2,516	4,587	8,310
Year 2007	0.25	1.02	5,675	1,419	5,796	10,499
Year 2015	0.25	0.81	6,028	1,507	4,856	11,152
Year 2025	0.25	0.81	7,053	1,763	5,682	13,049
Year 2038	0.25	0.81	7,053	1,763	5,682	13,049
Off-Terminal						
Year 2003 - Baseline	0.30	32.3	4,492	1,348	145,162	
Year 2007	0.30	32.3	5,675	1,703	183,401	
Year 2015	0.30	50.8	6,028	1,808	306,459	
Year 2025	0.30	50.3	7,053	2,116	354,872	
Year 2038	0.30	50.3	7,053	2,116	354,872	

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.PP-PD34.

Table D1.2.PP-PD25. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Proposed Action

Location/Project Scenario - Mode	Pounds per Peak Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97	228	535	3	16	15
Year 2003 - Driving	106	241	386	3	39	36
Subtotal - Year 2003	204	469	921	6	55	51
Year 2007 - Idling	44	159	332	0	7	6
Year 2007 - Driving	131	274	495	0	40	37
Subtotal - Year 2007	175	433	827	1	47	43
Year 2015 - Idling	30	145	398	0	3	3
Year 2015 - Driving	61	127	282	0	12	11
Subtotal - Year 2015	91	272	680	1	16	15
Year 2025 - Idling	30	162	479	0	1	1
Year 2025 - Driving	25	55	112	0	2	2
Subtotal - Year 2025	55	216	591	1	3	3
Year 2038 - Idling	30	161	480	0	0	0
Year 2038 - Driving	20	43	86	0	1	1
Subtotal - Year 2038	50	204	566	1	2	2
Off-Terminal						
Year 2003 - Idling	52	122	287	2	8	8
Year 2003 - Driving	876	3,480	7,918	53	524	482
Subtotal - Year 2003	929	3,602	8,205	55	533	490
Year 2007 - Idling	52	191	398	0	8	8
Year 2007 - Driving	1,027	3,635	10,122	8	463	426
Subtotal - Year 2007	1,079	3,825	10,520	8	471	434
Year 2015 - Idling	36	174	478	0	4	4
Year 2015 - Driving	576	3,510	10,456	13	427	393
Subtotal - Year 2015	612	3,684	10,933	14	431	396
Year 2025 - Idling	36	194	575	0	1	1
Year 2025 - Driving	288	1,523	3,999	16	111	102
Subtotal - Year 2025	324	1,717	4,574	16	112	103
Year 2038 - Idling	36	193	576	0	1	0
Year 2038 - Driving	366	1,202	3,056	16	77	71
Subtotal - Year 2038	402	1,395	3,632	16	78	72
Total Daily Truck Emissions by Project Year						
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	1,254	4,259	11,347	9	518	477
Year 2015	703	3,957	11,613	14	447	411
Year 2025	379	1,933	5,165	17	115	106
Year 2038	451	1,600	4,198	17	80	73

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.PP-PD26. Peak Daily Road Dust Emissions for the Berths 136-147 Terminal Project - Proposed Action.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	104.01	17.58
Year 2015	87.15	14.73
Year 2025	101.97	17.23
Year 2038	101.97	17.23
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	145.05	24.51
Year 2015	242.37	40.96
Year 2025	280.66	47.43
Year 2038	280.66	47.43
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	249.05	42.09
Year 2015	329.52	55.69
Year 2025	382.63	64.66
Year 2038	382.63	64.66

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.PP-PD27. Peak Daily Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Proposed Action.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.64	0.27
Year 2015	0.54	0.23
Year 2025	0.63	0.27
Year 2038	0.63	0.27
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	20.22	8.67
Year 2015	33.78	14.49
Year 2025	39.12	16.78
Year 2038	39.12	16.78
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	20.85	8.95
Year 2015	34.32	14.72
Year 2025	39.74	17.05
Year 2038	39.74	17.05

Table D1.2.PP-PD28. Peak Daily Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Proposed Action.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	104.65	17.85
Year 2015	87.68	14.96
Year 2025	102.59	17.50
Year 2038	102.59	17.50
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	165.26	33.19
Year 2015	276.15	55.45
Year 2025	319.78	64.21
Year 2038	319.78	64.21
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	270	51
Year 2015	364	70
Year 2025	422	82
Year 2038	422	82

Table D1.2.PP-PD29. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Proposed Project

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.01	0.04	0.07	0.00	0.00
Trains	0.06	0.16	0.83	0.00	0.02
Subtotal	0.06	0.21	0.90	0.00	0.02
Project Year 2025					
ICTF Equipment	0.00	0.06	0.02	0.00	0.00
Trains	0.07	0.22	0.97	0.00	0.02
Subtotal	0.07	0.27	0.99	0.00	0.03
Project Year 2038					
ICTF Equipment	0.00	0.06	0.01	0.00	0.00
Trains	0.06	0.22	0.85	0.00	0.02
Subtotal	0.06	0.27	0.86	0.00	0.02

Table D1.2.PP-PD30. Peak Day Train Trips - Berths 136-147
Terminal Project - Proposed Project

Project Scenario/Rail Yard	Peak Daily Round Trips	TEUs/ Day
Year 2003 Baseline		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2007		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2015		
To/from Berths 136-147 ICTF	2	1,224
To/from Carson/LA Rail Yards	1	612
Year 2025		
To/from Berths 136-147 ICTF	3	1,836
To/from Carson/LA Rail Yards	1	612
Year 2038		
To/from Berths 136-147 ICTF	3	1,836
To/from Carson/LA Rail Yards	1	612

Table D1.2.PP-PD31. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Baseline Year 2003.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Carson or LA Railyards/Outbound						
Hostler	0.00	0.02	0.05	0.00	0.00	0.00
Top Picks	0.00	0.00	0.02	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.40	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.03	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00	0.00
Subtotal	0.03	0.08	0.52	0.03	0.02	0.02
Carson or LA Railyards/Inbound						
Hostler	0.00	0.01	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.40	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.03	0.06	0.45	0.03	0.01	0.01
Total Tons Per Year	0.06	0.14	0.97	0.06	0.03	0.03

Table D1.2.PP-PD32. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2007.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Berths 136-147/Inbound						
Hostler	-	-	-	-	-	-
Top Picks	-	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-
Carson or LA Railyards/Outbound						
Hostler	0.00	0.02	0.05	0.00	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02	0.01
Carson or LA Railyards/Inbound						
Hostler	0.00	0.01	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03	0.03

Table D1.2.PP-PD33. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2015.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.00	0.02	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.08	0.32	0.00	0.01	0.01
Berths 136-147/Inbound						
Hostler	0.00	0.01	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.06	0.29	0.00	0.01	0.01
Carson or LA Railyards/Outbound						
Hostler	0.00	0.01	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.16	0.00	0.00	0.00
Carson or LA Railyards/Inbound						
Hostler	0.00	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.14	0.00	0.00	0.00
Total Tons Per Year	0.06	0.21	0.90	0.00	0.02	0.02

Table D1.2.PP-PD34. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2025.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.00	0.02	0.01	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.35	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.03	0.12	0.39	0.00	0.01	0.01
Berths 136-147/Inbound						
Hostler	0.00	0.01	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.35	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.03	0.09	0.37	0.00	0.01	0.01
Carson or LA Railyards/Outbound						
Hostler	0.00	0.01	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.12	0.00	0.00	0.00
Carson or LA Railyards/Inbound						
Hostler	0.00	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.11	0.00	0.00	0.00
Total Tons Per Year	0.07	0.27	0.99	0.00	0.03	0.02

Table D1.2.PP-PD35. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project Year 2038.

	Tons					
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Berths 136-147/Outbound						
Hostler	0.00	0.02	0.00	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.31	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.12	0.33	0.00	0.01	0.01
Berths 136-147/Inbound						
Hostler	0.00	0.01	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.31	0.00	0.01	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Subtotal	0.02	0.09	0.32	0.00	0.01	0.01
Carson or LA Railyards/Outbound						
Hostler	0.00	0.01	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.11	0.00	0.00	0.00
Carson or LA Railyards/Inbound						
Hostler	0.00	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.10	0.00	0.00	0.00
Total Tons Per Year	0.06	0.27	0.86	0.00	0.02	0.02

Table D1.2.PP-PD36. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions - Berths 136-147 Terminal Project - Proposed Project.

	Tons					
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10	PM2.5
Baseline Year 2003						
ICTF Equipment	0.01	0.03	0.10	0.00	0.01	0.00
Trains	0.05	0.10	0.87	0.06	0.03	0.02
Subtotal	0.06	0.14	0.97	0.06	0.03	0.03
Project Year 2007						
ICTF Equipment	0.01	0.03	0.10	0.00	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03	0.03
Project Year 2015						
ICTF Equipment	0.01	0.04	0.07	0.00	0.00	0.00
Trains	0.06	0.16	0.83	0.00	0.02	0.02
Subtotal	0.06	0.21	0.90	0.00	0.02	0.02
Project Year 2025						
ICTF Equipment	0.00	0.06	0.02	0.00	0.00	0.00
Trains	0.07	0.22	0.97	0.00	0.02	0.02
Subtotal	0.07	0.27	0.99	0.00	0.03	0.02
Project Year 2038						
ICTF Equipment	0.00	0.06	0.01	0.00	0.00	0.00
Trains	0.06	0.22	0.85	0.00	0.02	0.02
Subtotal	0.06	0.27	0.86	0.00	0.02	0.02

Table D1.2.PP-PD37. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project - Proposed Project.

		Tons				
Project Scenario/Equipment Horsepower		ROG	CO	NOx	SOx	PM10
Project Year 2003						
Terminal Equipment - 121-175 Hp	168,169	0.15	0.63	1.70	0.02	0.10
Terminal Equipment - 176-250 Hp	201,624	0.10	0.29	1.51	0.02	0.05
Terminal Equipment - 250-500 Hp	38,739	0.02	0.06	0.30	0.00	0.01
Subtotal	408,533	0.27	0.98	3.50	0.05	0.16
Project Year 2007						
Terminal Equipment - 121-175 Hp	202,717	0.18	0.78	1.88	0.00	0.09
Terminal Equipment - 176-250 Hp	243,045	0.15	0.43	1.90	0.00	0.08
Terminal Equipment - 250-500 Hp	46,698	0.02	0.07	0.32	0.00	0.01
Subtotal	492,459	0.35	1.28	4.09	0.00	0.18
Project Year 2015						
Terminal Equipment - 121-175 Hp	269,809	0.10	0.94	1.26	0.00	0.05
Terminal Equipment - 176-250 Hp	323,484	0.09	0.44	1.33	0.00	0.05
Terminal Equipment - 250-500 Hp	62,153	0.01	0.08	0.22	0.00	0.01
Subtotal	655,445	0.20	1.45	2.81	0.00	0.11
Project Year 2025						
Terminal Equipment - 121-175 Hp	358,979	0.04	1.22	0.37	0.00	0.01
Terminal Equipment - 176-250 Hp	430,392	0.05	0.53	0.28	0.00	0.01
Terminal Equipment - 250-500 Hp	82,694	0.01	0.09	0.05	0.00	0.00
Subtotal	872,065	0.09	1.84	0.69	0.00	0.03
Project Year 2038						
Terminal Equipment - 121-175 Hp	358,979	0.03	1.22	0.12	0.00	0.01
Terminal Equipment - 176-250 Hp	430,392	0.04	0.53	0.15	0.00	0.01
Terminal Equipment - 250-500 Hp	82,694	0.01	0.09	0.03	0.00	0.00
Subtotal	872,065	0.08	1.84	0.30	0.00	0.02

Table D1.2.PP-PD38. Peak Daily Terminal Yard TEU Throughput - Berths 136-147 Terminal Project - Proposed Project.

	Peak Daily TEUs				Peak Daily/
Project Year	Wharf	Gate	Total	Peak Daily TEUs	Peak Daily TEUs
2003	5,984	8,310	14,294	891,976	0.016
2007	6,732	10,499	17,231	1,091,200	0.016
2015	11,781	11,152	22,933	1,747,500	0.013
2025	11,781	13,049	24,830	2,389,000	0.010
2038	11,781	13,049	24,830	2,389,000	0.010

Table D1.2.PP-PD39. Peak Daily Operational Emissions - Berths 136-147 Terminal Project - Proposed Project.

	Pounds per Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173	162
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6	6
Terminal Equipment	542	1,969	7,008	92	320	294
On-road Trucks	1,132	4,071	9,126	61	801	581
Trains	100	208	1,737	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,977	6,935	23,010	3,851	1,607	1,329
Project Year 2007						
Ships - Fairway Transit (1)	117	265	3,260	1,913	276	258
Ships - Precautionary Area Transit (1)	28	57	527	312	47	44
Ships - Harbor Transit (1)	41	52	392	191	40	37
Ships - Docking (1)	14	14	109	46	12	11
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236	221
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	702	2,561	8,184	5	352	324
On-road Trucks	1,254	4,259	11,347	9	788	528
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	2,360	7,921	28,266	5,055	1,828	1,495
Net Change from Existing Conditions	383	986	5,255	1,205	222	166
Net Change from NFAB Year 2007	434	1,504	4,073	864	331	301
Project Year 2015						
Ships - Fairway Transit (1)	222	441	4,809	2,716	421	394
Ships - Precautionary Area Transit (1)	66	102	757	380	73	69
Ships - Harbor Transit (1)	75	92	700	320	71	67
Ships - Docking (1)	26	25	195	76	21	20
Ships - Hoteling Aux. Sources	124	419	4,426	3,857	373	350
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5	5
Terminal Equipment	397	2,899	5,625	6	228	209
On-road Trucks	703	3,957	11,613	14	811	481
Trains	119	326	1,658	1	44	40
Railyard Equipment	11	88	149	0	6	6
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	1,758	8,489	30,102	7,372	2,078	1,664
Net Change from Existing Conditions	(219)	1,554	7,091	3,521	472	335
Net Change from NFAB Year 2015	954	4,028	22,347	5,919	1,537	1,387
Project Year 2025						
Ships - Fairway Transit (1)	222	441	4,809	2,716	421	394
Ships - Precautionary Area Transit (1)	66	102	757	380	73	69
Ships - Harbor Transit (1)	75	92	700	320	71	67
Ships - Docking (1)	26	25	195	76	21	20
Ships - Hoteling Aux. Sources	124	419	4,426	3,857	373	350
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5	4
Terminal Equipment	182	3,680	1,383	8	53	48
On-road Trucks	379	1,933	5,165	17	538	188
Trains	134	437	1,943	2	49	45
Railyard Equipment	5	113	39	0	1	1
Commuting	4	55	6	0	30	28
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	1,224	7,327	19,558	7,377	1,636	1,215
Net Change from Existing Conditions	(753)	392	(3,453)	3,526	29	(114)
Net Change from NFAB Year 2025	698	3,164	12,747	5,951	1,157	966
Project Year 2038						
Ships - Fairway Transit (1)	222	441	4,809	2,716	421	394
Ships - Precautionary Area Transit (1)	66	102	757	380	73	69
Ships - Harbor Transit (1)	75	92	700	320	71	67
Ships - Docking (1)	26	25	195	76	21	20
Ships - Hoteling Aux. Sources	124	419	4,426	3,857	373	350
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	160	3,680	596	8	42	39
On-road Trucks	451	1,600	4,198	17	502	155
Trains	114	437	1,704	2	41	37
Railyard Equipment	4	113	15	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	1,253	6,989	17,529	7,377	1,581	1,164
Net Change from Existing Conditions	(725)	54	(5,481)	3,526	(25)	(165)
Net Change from NFAB Year 2038	739	2,887	10,895	5,951	1,106	918
SCAQMD Daily Significance Thresholds	55	550	55	150	150	55

Table D1.2.Alt1-PD1. Peak Daily Ship Visit and Throughput Data - Berths 136-147 Terminal Projec

Project Scenario/Ship Type	Peak Daily Ship Visits	Max TEU Moves/ Peak Day (1)	Peak Daily TEU Moves	Hoteling Hours/ Day (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU	1	3,740	3,740	24.0
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU		2,992		
Subtotal	2		6,732	
Project Year 2015				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	
Project Year 2025				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	
Project Year 2038				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/d
5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would se
8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service.
Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane productio
3,927, 4,909, and 5,890 TEUs/day.

(2) There are 10 cranes present from 2007 through 2011, then 12 cranes beginning in 2012.

Table D1.2.Alt1-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone
Berths 136-147 Terminal Project - Alt 1

	Tons Per Year (1)(2)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.06	0.13	1.54	0.88	0.13
Containerships < 3,000 TEU					
Subtotal	0.06	0.13	1.54	0.88	0.13
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.08	0.18	2.02	1.13	0.17
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.08	0.18	2.02	1.13	0.17
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.08	0.18	2.02	1.13	0.17
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.08	0.18	2.02	1.13	0.17

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.
(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt1-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.20	0.10	0.02
Containerships < 3,000 TEU					
Subtotal	0.01	0.02	0.20	0.10	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.24	0.12	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.24	0.12	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.24	0.12	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.24	0.12	0.02

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.02	0.02	0.10	0.02	0.01
Containerships < 3,000 TEU					
Subtotal	0.02	0.02	0.10	0.02	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.15	0.04	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.15	0.04	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.15	0.04	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.15	0.04	0.02

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities -
Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.01	0.00	0.03	0.00	0.00
Containerships < 3,000 TEU					
Subtotal	0.01	0.00	0.03	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.01	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.01	0.01

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD6. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.08	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.08	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.11	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.11	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.11	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.11	0.01

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt1-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.06	0.04	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.06	0.04	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.15	0.09	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.15	0.09	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.15	0.09	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.15	0.09	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking withir the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.03	0.02	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.03	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.03	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.03	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.03	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD10. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling
Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containership < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.03	0.07	0.92	0.59	0.08
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.04	0.10	1.30	0.83	0.11
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.05	0.13	1.64	1.05	0.13
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.05	0.13	1.64	1.05	0.13
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.05	0.13	1.64	1.05	0.13

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt1-PD11. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt1-PD12. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 1

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD13. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD14. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD15. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling
Berths 136-147 Terminal Project - Alt 1

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containership < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02

Table D1.2.Alt1-PD16. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 1

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2007					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.01	0.06	0.00	0.00
Project Year 2025					
Subtotal	0.00	0.01	0.04	0.00	0.00
Project Year 2038					
Subtotal	0.00	0.01	0.04	0.00	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD17. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 1

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2007					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2025					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt1-PD18. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Emission Source	Pounds Per Day				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6
Subtotal	171	458	4,863	3,583	410
Project Year 2007					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6
Subtotal	192	517	5,624	4,066	473
Project Year 2015					
Ships - Fairway Transit (1)	117	265	3,260	1,913	276
Ships - Precautionary Area Transit (1)	28	57	527	312	47
Ships - Harbor Transit (1)	41	52	392	191	40
Ships - Docking (1)	14	14	109	46	12
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5
Subtotal	305	764	7,976	5,766	682
Project Year 2025					
Ships - Fairway Transit (1)	175	374	4,309	2,489	371
Ships - Precautionary Area Transit (1)	43	78	678	381	62
Ships - Harbor Transit (1)	61	77	599	286	60
Ships - Docking (1)	21	21	166	69	18
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	404	926	9,409	6,529	817
Project Year 2038					
Ships - Fairway Transit (1)	175	374	4,309	2,489	371
Ships - Precautionary Area Transit (1)	43	78	678	381	62
Ships - Harbor Transit (1)	61	77	599	286	60
Ships - Docking (1)	21	21	166	69	18
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	404	926	9,409	6,529	817

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt1-PD19. ADT Estimates - Berths 136-147 Alt 1

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,513,063	4,145	5,675
2015	1,879,127	5,148	7,048
2025	1,961,395	5,374	7,357
2038	1,961,395	5,374	7,357

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.Alt1-PD20. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Alt 1

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	Peak Daily Trips	Idling Hrs/ Day	Miles/ Day	TEUs/ Day
On-Terminal						
Year 2003 - Baseline	0.56	1.02	4,492	2,516	4,587	8,310
Year 2007	0.25	1.02	5,675	1,419	5,796	10,499
Year 2015	0.25	0.81	7,048	1,762	5,678	13,040
Year 2025	0.25	0.81	7,357	1,839	5,927	13,611
Year 2030	0.25	0.81	7,357	1,839	5,927	13,611
Off-Terminal						
Year 2003 - Baseline	0.30	32.3	4,492	1,348	145,162	
Year 2007	0.30	32.3	5,675	1,703	183,401	
Year 2015	0.30	32.3	7,048	2,115	227,772	
Year 2025	0.30	32.3	7,357	2,207	237,744	
Year 2030	0.30	32.3	7,357	2,207	237,744	

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2.Alt1-PD21. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Alt 1

Location/Project Scenario - Mode	Pounds per Peak Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97.4	227.7	535.4	3.2	15.8	14.5
Year 2003 - Driving	106.2	241.0	385.6	2.7	39.3	36.2
Subtotal - Year 2003	203.5	468.7	921.0	5.9	55.1	50.7
Year 2007 - Idling	43.7	158.9	331.6	0.2	7.0	6.4
Year 2007 - Driving	131.0	274.4	495.1	0.4	39.8	36.6
Subtotal - Year 2007	174.7	433.3	826.7	0.6	46.8	43.0
Year 2015 - Idling	35.0	169.6	465.3	0.2	4.0	3.7
Year 2015 - Driving	71.5	148.9	329.3	0.4	14.6	13.4
Subtotal - Year 2015	106.5	318.5	794.6	0.6	18.6	17.1
Year 2025 - Idling	31.4	168.7	499.8	0.3	0.9	0.8
Year 2025 - Driving	26.3	57.0	116.7	0.4	2.2	2.0
Subtotal - Year 2025	57.7	225.7	616.6	0.6	3.1	2.9
Year 2038 - Idling	31.0	168.0	500.9	0.3	0.5	0.4
Year 2038 - Driving	20.6	45.0	89.6	0.4	1.4	1.3
Subtotal - Year 2038	51.7	213.0	590.6	0.6	1.8	1.7
Off-Terminal						
Year 2003 - Idling	52.2	122.0	286.8	1.7	8.5	7.8
Year 2003 - Driving	876.4	3,480.5	7,918.2	53.1	524.1	482.1
Subtotal - Year 2003	928.6	3,602.4	8,205.0	54.8	532.5	489.9
Year 2007 - Idling	52.4	190.7	397.9	0.2	8.4	7.7
Year 2007 - Driving	1,026.6	3,634.7	10,121.9	7.8	462.9	425.9
Subtotal - Year 2007	1,079.1	3,825.4	10,519.8	8.1	471.3	433.6
Year 2015 - Idling	42.0	203.5	558.4	0.3	4.8	4.4
Year 2015 - Driving	427.9	2,609.0	7,771.2	9.9	317.2	291.8
Subtotal - Year 2015	470.0	2,812.5	8,329.5	10.2	322.0	296.2
Year 2025 - Idling	37.7	202.4	599.8	0.3	1.1	1.0
Year 2025 - Driving	192.9	1,020.0	2,679.1	10.6	74.5	68.5
Subtotal - Year 2025	230.6	1,222.4	3,279.0	10.9	75.6	69.5
Year 2038 - Idling	37.3	201.6	601.1	0.3	0.5	0.5
Year 2038 - Driving	245.3	805.3	2,047.3	10.6	51.8	47.7
Subtotal - Year 2038	282.6	1,006.9	2,648.5	10.9	52.3	48.2
Total Daily Truck Emissions by Project Year						
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	1,254	4,259	11,347	9	518	477
Year 2015	576	3,131	9,124	11	341	313
Year 2025	288	1,448	3,896	12	79	72
Year 2038	334	1,220	3,239	12	54	50

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.Alt1-PD22. Road Dust Emissions for the Berths 136-147 Termir
Project - Alt 1.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	104.01	17.58
Year 2015	101.90	17.22
Year 2025	106.36	17.97
Year 2038	106.36	17.97
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	145.05	24.51
Year 2015	180.14	30.44
Year 2025	188.03	31.78
Year 2038	188.03	31.78
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	249.05	42.09
Year 2015	282.04	47.66
Year 2025	294.38	49.75
Year 2038	294.38	49.75

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.Alt1-PD23. Brake and Tire Wear Emissions for the Berths 136-1
Terminal Project - Alt 1.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.64	0.27
Year 2015	0.63	0.27
Year 2025	0.65	0.28
Year 2038	0.65	0.28
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	20.22	8.67
Year 2015	25.11	10.77
Year 2025	26.21	11.24
Year 2038	26.21	11.24
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	20.85	8.95
Year 2015	25.73	11.04
Year 2025	26.86	11.52
Year 2038	26.86	11.52

Table D1.2.Alt1-PD24. Total Non-Combustive Truck Generated PM Emissi
for the Berths 136-147 Terminal Project - Alt 1.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	104.65	17.85
Year 2015	102.52	17.49
Year 2025	107.01	18.26
Year 2038	107.01	18.26
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	165.26	33.19
Year 2015	205.25	41.21
Year 2025	214.23	43.02
Year 2038	214.23	43.02
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	270	51
Year 2015	308	59
Year 2025	321	61
Year 2038	321	61

Table D1.2.Alt1-PD25. Peak Day Train Trips - Berths 136-147 Terminal Project - Alt 1

Project Scenario/Rail Yard	Peak Daily Round Trips	TEUs/ Day
Year 2003 Baseline		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2007		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2015		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	3	1,836
Year 2025		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	3	1,836
Year 2038		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	3	1,836

Table D1.2.Alt1-PD26. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 1 Year 2007

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.05	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03

Table D1.2.Alt1-PD27. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 1 Year 2015

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.03	0.03	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.03	0.07	0.37	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.01	0.03	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.03	0.11	0.47	0.00	0.01
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.01	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.03	0.07	0.37	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.03	0.09	0.41	0.00	0.01
Total Tons Per Year	0.06	0.20	0.87	0.00	0.02

Table D1.2.Alt1-PD28. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 1 Year 2025

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.01	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.07	0.32	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.01	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.03	0.11	0.37	0.00	0.01
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.07	0.32	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.09	0.34	0.00	0.01
Total Tons Per Year	0.05	0.20	0.71	0.00	0.02

Table D1.2.Alt1-PD29. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 1 Year 2038

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.07	0.28	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.01	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.11	0.32	0.00	0.01
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.07	0.28	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.09	0.30	0.00	0.01
Total Tons Per Year	0.04	0.20	0.62	0.00	0.02

Table D1.2.Alt1-PD30. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Emissi
Berths 136-147 Terminal Project Alt 1

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.01	0.04	0.07	0.00	0.00
Trains	0.06	0.16	0.80	0.00	0.02
Subtotal	0.06	0.20	0.87	0.00	0.02
Project Year 2025					
ICTF Equipment	0.00	0.04	0.01	0.00	0.00
Trains	0.05	0.16	0.70	0.00	0.02
Subtotal	0.05	0.20	0.71	0.00	0.02
Project Year 2038					
ICTF Equipment	0.00	0.04	0.01	0.00	0.00
Trains	0.04	0.16	0.61	0.00	0.01
Subtotal	0.04	0.20	0.62	0.00	0.02

Table D1.2.Alt1-PD31. Peak Day Terminal Yard TEU Throughput - Berths 136-147 Terminal Project Alt 1.

	Peak Daily TEUs				Peak Daily/
Project Year	Wharf	Gate	Total	Peak Daily TEUs	Peak Daily TEUs
2003	5,984	8,310	14,294	891,976	0.016
2007	6,732	10,499	17,231	1,091,200	0.016
2015	10,799	13,040	23,839	1,355,200	0.018
2025	10,799	13,611	24,410	1,697,000	0.014
2038	10,799	13,611	24,410	1,697,000	0.014

Table D1.2.Alt1-PD32. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project Alt 1.

Project Scenario/Equipment Horsepower		Tons				
		ROG	CO	NOx	SOx	PM10
Project Year 2003						
Terminal Equipment - 121-175 Hp	168,169	0.15	0.63	1.70	0.02	0.10
Terminal Equipment - 176-250 Hp	201,624	0.10	0.29	1.51	0.02	0.05
Terminal Equipment - 250-500 Hp	38,739	0.02	0.06	0.30	0.00	0.01
Subtotal	408,533	0.27	0.98	3.50	0.05	0.16
Project Year 2007						
Terminal Equipment - 121-175 Hp	202,717	0.18	0.78	1.88	0.00	0.09
Terminal Equipment - 176-250 Hp	243,045	0.15	0.43	1.90	0.00	0.08
Terminal Equipment - 250-500 Hp	46,698	0.02	0.07	0.32	0.00	0.01
Subtotal	492,459	0.35	1.28	4.09	0.00	0.18
Project Year 2015						
Terminal Equipment - 121-175 Hp	280,433	0.10	0.98	1.31	0.00	0.05
Terminal Equipment - 176-250 Hp	336,221	0.09	0.45	1.38	0.00	0.05
Terminal Equipment - 250-500 Hp	64,600	0.01	0.08	0.23	0.00	0.01
Subtotal	681,255	0.21	1.51	2.92	0.00	0.12
Project Year 2025						
Terminal Equipment - 121-175 Hp	346,172	0.04	1.17	0.35	0.00	0.01
Terminal Equipment - 176-250 Hp	415,038	0.04	0.51	0.27	0.00	0.01
Terminal Equipment - 250-500 Hp	79,744	0.01	0.09	0.05	0.00	0.00
Subtotal	840,955	0.09	1.77	0.67	0.00	0.03
Project Year 2038						
Terminal Equipment - 121-175 Hp	346,172	0.03	1.17	0.12	0.00	0.01
Terminal Equipment - 176-250 Hp	415,038	0.04	0.51	0.15	0.00	0.01
Terminal Equipment - 250-500 Hp	79,744	0.01	0.09	0.03	0.00	0.00
Subtotal	840,955	0.08	1.77	0.29	0.00	0.02

Table D1.2.Alt1-PD33. Peak Daily Operational Emissions - Berths 136-147 Terminal Project Alt 1.

	Pounds per Peak Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173	162
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6	6
Terminal Equipment	542	1,969	7,008	92	320	294
On-road Trucks	1,132	4,071	9,126	61	801	581
Trains	100	208	1,737	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,977	6,935	23,010	3,851	1,607	1,329
Project Year 2007						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236	221
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	702	2,561	8,184	5	352	324
On-road Trucks	1,254	4,259	11,347	9	788	528
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	137	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	2,269	7,757	26,665	4,191	1,685	1,361
Net Change from Existing Conditions	292	822	3,655	341	78	32
Net Change from NFAB Year 2007	3,733	10,590	43,041	6,616	2,816	2,443
Project Year 2015						
Ships - Fairway Transit (1)	117	265	3,260	1,913	276	258
Ships - Precautionary Area Transit (1)	28	57	527	312	47	44
Ships - Harbor Transit (1)	41	52	392	191	40	37
Ships - Docking (1)	14	14	109	46	12	11
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303	284
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5	5
Terminal Equipment	413	3,013	5,846	7	237	218
On-road Trucks	576	3,131	9,124	11	648	372
Trains	114	314	1,595	1	42	39
Railyard Equipment	11	88	149	0	6	6
Commuting	10	135	17	0	19	17
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	1,432	7,454	24,738	5,785	1,635	1,291
Net Change from Existing Conditions	(545)	519	1,728	1,934	28	(38)
Net Change from NFAB Year 2015	1,377	6,904	24,683	5,635	1,485	1,236
Project Year 2025						
Ships - Fairway Transit (1)	175	374	4,309	2,489	371	347
Ships - Precautionary Area Transit (1)	43	78	678	381	62	58
Ships - Harbor Transit (1)	61	77	599	286	60	56
Ships - Docking (1)	21	21	166	69	18	17
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303	284
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	176	3,549	1,334	8	51	47
On-road Trucks	288	1,448	3,896	12	400	134
Trains	96	314	1,396	1	35	32
Railyard Equipment	4	85	29	0	1	1
Commuting	7	92	12	0	21	19
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	976	6,422	16,104	6,550	1,325	999
Net Change from Existing Conditions	(1,001)	(513)	(6,906)	2,700	(281)	(330)
Net Change from NFAB Year 2025	976	6,422	16,104	6,550	1,325	999
Project Year 2038						
Ships - Fairway Transit (1)	175	374	4,309	2,489	371	347
Ships - Precautionary Area Transit (1)	43	78	678	381	62	58
Ships - Harbor Transit (1)	61	77	599	286	60	56
Ships - Docking (1)	21	21	166	69	18	17
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303	284
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	154	3,549	575	8	41	38
On-road Trucks	334	1,220	3,239	12	375	111
Trains	82	314	1,224	1	29	27
Railyard Equipment	3	85	11	0	1	1
Commuting	4	43	4	0	26	24
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	982	6,144	14,492	6,550	1,290	966
Net Change from Existing Conditions	(995)	(791)	(8,518)	2,700	(317)	(363)
Net Change from NFAB Year 2038	982	6,144	14,492	6,550	1,290	966
SCAQMD Daily Significance Thresholds	55	550	55	150	150	55

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt3-PD1. Peak Daily Ship Visit and Throughput Data - Berths 136-147 Terminal Projec

Project Scenario/Ship Type	Peak Daily Ship Visits	Max TEU Moves/ Peak Day (1)	Peak Daily TEU Moves	Hoteling Hours/ Day (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU	1	3,740	3,740	24.0
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU		2,992		
Subtotal	2		6,732	
Project Year 2015				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	2,945	24.0
Subtotal	3		11,781	
Project Year 2025				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	2,945	24.0
Subtotal	3		11,781	
Project Year 2038				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	2,945	24.0
Subtotal	3		11,781	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/d
5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would se
8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service.
Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane productio
3,927, 4,909, and 5,890 TEUs/day.

(2) There are 10 cranes present from 2007 through 2011, then 12 cranes beginning in 2012.

Table D1.2.Alt3-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone
Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year (1)(2)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.08	0.18	2.02	1.13	0.17
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.08	0.18	2.02	1.13	0.17
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.08	0.18	2.02	1.13	0.17
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.08	0.18	2.02	1.13	0.17
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.08	0.18	2.02	1.13	0.17
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.08	0.18	2.02	1.13	0.17

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.
(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt3-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.24	0.12	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.24	0.12	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.24	0.12	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.24	0.12	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.24	0.12	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.24	0.12	0.02

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.15	0.04	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.15	0.04	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.15	0.04	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.15	0.04	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.15	0.04	0.02
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.15	0.04	0.02

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities -
Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.01	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.01	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.01	0.01

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD6. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.11	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.11	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.11	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.11	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.11	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.11	0.01

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt3-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.15	0.09	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.15	0.09	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.15	0.09	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.15	0.09	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.15	0.09	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.15	0.09	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.03	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.03	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.03	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.03	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.03	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.03	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD10. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling
Berths 136-147 Terminal Project - Alt 3

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containership < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.03	0.07	0.92	0.59	0.08
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.04	0.10	1.30	0.83	0.11
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.05	0.13	1.64	1.05	0.13
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.05	0.13	1.64	1.05	0.13
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.05	0.13	1.64	1.05	0.13

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt3-PD11. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt3-PD12. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD13. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 3

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD14. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD15. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling
Berths 136-147 Terminal Project - Alt 3

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containership < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02

Table D1.2.Alt3-PD16. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 3

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2007					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2010					
Subtotal	0.00	0.01	0.06	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.01	0.04	0.00	0.00
Project Year 2038					
Subtotal	0.00	0.01	0.04	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all project years.

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD17. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 3

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2007					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2010					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all project years.

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt3-PD18. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Emission Source	Pounds Per Day				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6
Subtotal	171	458	4,863	3,583	410
Project Year 2007					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6
Subtotal	192	517	5,624	4,066	473
Project Year 2015					
Ships - Fairway Transit (1)	175	374	4,309	2,489	371
Ships - Precautionary Area Transit (1)	43	78	678	381	62
Ships - Harbor Transit (1)	61	77	599	286	60
Ships - Docking (1)	21	21	166	69	18
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5
Subtotal	404	926	9,441	6,529	818
Project Year 2025					
Ships - Fairway Transit (1)	175	374	4,309	2,489	371
Ships - Precautionary Area Transit (1)	43	78	678	381	62
Ships - Harbor Transit (1)	61	77	599	286	60
Ships - Docking (1)	21	21	166	69	18
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	404	926	9,409	6,529	817
Project Year 2038					
Ships - Fairway Transit (1)	175	374	4,309	2,489	371
Ships - Precautionary Area Transit (1)	43	78	678	381	62
Ships - Harbor Transit (1)	61	77	599	286	60
Ships - Docking (1)	21	21	166	69	18
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	404	926	9,409	6,529	817

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt3-PD19. ADT Estimates - Berths 136-147 Alt 3

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,488,659	4,079	5,584
2015	1,291,247	3,538	4,843
2025	1,456,293	3,990	5,462
2038	1,456,293	3,990	5,462

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.Alt3-PD20. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Alt 3

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	ADT	Idling Hrs/ Day	Miles/ Day	TEUs/ Day
On-Terminal						
Year 2003 - Baseline	0.56	1.02	4,492	2,516	4,587	8,310
Year 2007	0.25	1.02	5,584	1,396	5,702	10,330
Year 2015	0.25	0.81	4,843	1,211	3,902	8,960
Year 2025	0.25	0.81	5,462	1,366	4,401	10,106
Year 2038	0.25	0.81	5,462	1,366	4,401	10,106
Off-Terminal						
Year 2003 - Baseline	0.30	32.3	4,492	1,348	145,162	
Year 2007	0.30	32.3	5,584	1,675	180,443	
Year 2015	0.30	41.1	4,843	1,453	198,980	
Year 2025	0.30	48.3	5,462	1,639	263,894	
Year 2030	0.30	49.9	5,462	1,639	272,841	

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2.Alt3-PD21. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Alt 3

Location/Project Scenario - Mode	Pounds per Peak Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97.4	227.7	535.4	3.2	15.8	14.5
Year 2003 - Driving	106.2	241.0	385.6	2.7	39.3	36.2
Subtotal - Year 2003	203.5	468.7	921.0	5.9	55.1	50.7
Year 2007 - Idling	43.0	156.3	326.2	0.2	6.9	6.3
Year 2007 - Driving	128.9	270.0	487.1	0.4	39.2	36.0
Subtotal - Year 2007	171.9	426.3	813.4	0.6	46.0	42.3
Year 2015 - Idling	24.1	116.5	319.7	0.2	2.7	2.5
Year 2015 - Driving	49.1	102.3	226.3	0.3	10.0	9.2
Subtotal - Year 2015	73.2	218.8	546.0	0.4	12.8	11.8
Year 2025 - Idling	23.3	125.2	371.1	0.2	0.7	0.6
Year 2025 - Driving	19.5	42.3	86.7	0.3	1.6	1.5
Subtotal - Year 2025	42.9	167.5	457.8	0.5	2.3	2.1
Year 2038 - Idling	23.0	124.8	371.9	0.2	0.3	0.3
Year 2038 - Driving	15.3	33.4	66.5	0.3	1.0	0.9
Subtotal - Year 2038	38.4	158.2	438.5	0.5	1.4	1.2
Off-Terminal						
Year 2003 - Idling	52.2	122.0	286.8	1.7	8.5	7.8
Year 2003 - Driving	876.4	3,480.5	7,918.2	53.1	524.1	482.1
Subtotal - Year 2003	928.6	3,602.4	8,205.0	54.8	532.5	489.9
Year 2007 - Idling	51.6	187.6	391.5	0.2	8.2	7.6
Year 2007 - Driving	1,010.1	3,576.1	9,958.7	7.7	455.4	419.0
Subtotal - Year 2007	1,061.7	3,763.7	10,350.2	8.0	463.6	426.6
Year 2015 - Idling	28.9	139.8	383.7	0.2	3.3	3.0
Year 2015 - Driving	373.8	2,279.2	6,788.8	8.7	277.1	254.9
Subtotal - Year 2015	402.7	2,419.0	7,172.5	8.9	280.4	257.9
Year 2025 - Idling	28.0	150.3	445.4	0.2	0.8	0.7
Year 2025 - Driving	214.1	1,132.2	2,973.8	11.8	82.7	76.1
Subtotal - Year 2025	242.1	1,282.5	3,419.2	12.0	83.5	76.8
Year 2038 - Idling	27.7	149.7	446.3	0.2	0.4	0.4
Year 2038 - Driving	281.6	924.2	2,349.6	12.2	59.4	54.7
Subtotal - Year 2038	309.2	1,073.9	2,795.9	12.4	59.8	55.1
Total Daily Truck Emissions by Project Year						
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	1,234	4,190	11,164	9	510	469
Year 2015	476	2,638	7,719	9	293	270
Year 2025	285	1,450	3,877	12	86	79
Year 2038	348	1,232	3,234	13	61	56

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.Alt3-PD22. Road Dust Emissions for the Berths 136-147 Termir
Project - Alt 3.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	102.33	17.29
Year 2015	70.02	11.83
Year 2025	78.97	13.35
Year 2038	78.97	13.35
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	142.71	24.12
Year 2015	157.37	26.60
Year 2025	208.71	35.27
Year 2038	215.78	36.47
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	245.04	41.41
Year 2015	227.39	38.43
Year 2025	287.68	48.62
Year 2038	294.75	49.81

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.Alt3-PD23. Brake and Tire Wear Emissions for the Berths 136-1
Terminal Project - Alt 3.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.63	0.27
Year 2015	0.43	0.18
Year 2025	0.49	0.21
Year 2038	0.49	0.21
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	19.89	8.53
Year 2015	21.93	9.41
Year 2025	29.09	12.48
Year 2038	30.08	12.90
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	20.52	8.80
Year 2015	22.36	9.59
Year 2025	29.57	12.69
Year 2038	30.56	13.11

Table D1.2.Alt3-PD24. Total Non-Combustive Truck Generated PM Emissi
for the Berths 136-147 Terminal Project - Alt 3.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	102.96	17.56
Year 2015	70.45	12.02
Year 2025	79.45	13.55
Year 2038	79.45	13.55
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	162.60	32.65
Year 2015	179.30	36.00
Year 2025	237.80	47.75
Year 2038	245.86	49.37
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	266	50
Year 2015	250	48
Year 2025	317	61
Year 2038	325	63

Table D1.2.Alt3-PD25. Peak Day Train Trips - Berths 136-147 Terminal Project - Alt 3

Project Scenario/Rail Yard	Peak Daily Round Trips	TEUs/ Day
Year 2003 Baseline		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2007		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2015		
To/from Berths 136-147 ICTF	2	1,224
To/from Carson/LA Rail Yards	1	612
Year 2025		
To/from Berths 136-147 ICTF	2	1,224
To/from Carson/LA Rail Yards	1	612
Year 2038		
To/from Berths 136-147 ICTF	2	1,224
To/from Carson/LA Rail Yards	1	612

Table D1.2.Alt3-PD26. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 3 Year 2007

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.05	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03

Table D1.2.Alt3-PD27. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 3 Year 2015

ICTF/Train Direction/Source Activity	Tons				
	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.08	0.32	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.01	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.29	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.01	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.16	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.14	0.00	0.00
Total Tons Per Year	0.06	0.21	0.90	0.00	0.02

Table D1.2.Alt3-PD28. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 3 Year 2025

ICTF/Train Direction/Source Activity	Tons				
	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.08	0.26	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.24	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.12	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.11	0.00	0.00
Total Tons Per Year	0.05	0.21	0.74	0.00	0.02

Table D1.2.Alt3-PD29. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 3 Year 2038

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.08	0.22	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.01	0.06	0.21	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.11	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.10	0.00	0.00
Total Tons Per Year	0.04	0.21	0.64	0.00	0.02

Table D1.2.Alt3-PD30. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Emissi
Berths 136-147 Terminal Project Alt 3

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.01	0.04	0.07	0.00	0.00
Trains	0.06	0.16	0.83	0.00	0.02
Subtotal	0.06	0.21	0.90	0.00	0.02
Project Year 2025					
ICTF Equipment	0.00	0.04	0.01	0.00	0.00
Trains	0.05	0.16	0.73	0.00	0.02
Subtotal	0.05	0.21	0.74	0.00	0.02
Project Year 2038					
ICTF Equipment	0.00	0.04	0.01	0.00	0.00
Trains	0.04	0.16	0.64	0.00	0.02
Subtotal	0.04	0.21	0.64	0.00	0.02

Table D1.2.Alt3-PD31. Peak Day Terminal Yard TEU Throughput - Berths 136-147 Terminal Project Alt

	Peak Daily TEUs				Peak Daily/
Project Year	Wharf	Gate	Total	Peak Daily TEUs	eak Daily TEUs
2003	5,984	8,310	14,294	891,976	0.016
2007	6,732	10,330	17,062	1,073,600	0.016
2010	11,781	8,960	20,741	1,491,000	0.014
2015	11,781	10,106	21,887	2,035,000	0.011
2038	11,781	10,106	21,887	2,035,000	0.011

Table D1.2.Alt3-PD32. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project Alt 3.

Project Scenario/Equipment Horsepower		Tons				
		ROG	CO	NOx	SOx	PM10
Project Year 2003						
Terminal Equipment - 121-175 Hp	168,169	0.15	0.63	1.70	0.02	0.10
Terminal Equipment - 176-250 Hp	201,624	0.10	0.29	1.51	0.02	0.05
Terminal Equipment - 250-500 Hp	38,739	0.02	0.06	0.30	0.00	0.01
Subtotal	408,533	0.27	0.98	3.50	0.05	0.16
Project Year 2007						
Terminal Equipment - 121-175 Hp	200,771	0.18	0.77	1.86	0.00	0.09
Terminal Equipment - 176-250 Hp	240,712	0.15	0.42	1.88	0.00	0.08
Terminal Equipment - 250-500 Hp	46,249	0.02	0.07	0.32	0.00	0.01
Subtotal	487,732	0.35	1.27	4.05	0.00	0.17
Project Year 2010						
Terminal Equipment - 121-175 Hp	244,027	0.09	0.85	1.14	0.00	0.05
Terminal Equipment - 176-250 Hp	292,573	0.08	0.39	1.20	0.00	0.05
Terminal Equipment - 250-500 Hp	56,214	0.01	0.07	0.20	0.00	0.01
Subtotal	592,813	0.18	1.31	2.54	0.00	0.10
Project Year 2015						
Terminal Equipment - 121-175 Hp	281,113	0.03	0.95	0.29	0.00	0.01
Terminal Equipment - 176-250 Hp	337,036	0.04	0.42	0.22	0.00	0.01
Terminal Equipment - 250-500 Hp	64,757	0.01	0.07	0.04	0.00	0.00
Subtotal	682,905	0.07	1.44	0.54	0.00	0.02
Project Year 2038						
Terminal Equipment - 121-175 Hp	281,113	0.02	0.95	0.09	0.00	0.01
Terminal Equipment - 176-250 Hp	337,036	0.03	0.42	0.12	0.00	0.01
Terminal Equipment - 250-500 Hp	64,757	0.01	0.07	0.02	0.00	0.00
Subtotal	682,905	0.06	1.44	0.23	0.00	0.02

Table D1.2.Alt3-PD33. Peak Daily Operational Emissions - Berths 136-147 Terminal Project Alt 3.

	Pounds per Peak Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Year 2003 Baseline						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173	162
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6	6
Terminal Equipment	542	1,969	7,008	92	320	294
On-road Trucks	1,132	4,071	9,126	61	801	581
Trains	100	208	1,737	111	52	48
Railyard Equipment	17	63	202	3	10	9
Commuting	12	160	20	0	12	11
Pier A Railyard	4	6	55	1	1	1
Year 2003 Total	1,977	6,935	23,010	3,851	1,607	1,329
Project Year 2007						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236	221
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	695	2,537	8,105	5	349	321
On-road Trucks	1,234	4,190	11,164	9	775	519
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	137	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	2,242	7,664	26,404	4,191	1,669	1,349
Net Change from Existing Conditions	265	729	3,393	341	62	20
Net Change from NFAB Year 2007	315	1,247	2,211	0	171	154
Project Year 2015						
Ships - Fairway Transit (1)	175	374	4,309	2,489	371	347
Ships - Precautionary Area Transit (1)	43	78	678	381	62	58
Ships - Harbor Transit (1)	61	77	599	286	60	56
Ships - Docking (1)	21	21	166	69	18	17
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303	284
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5	5
Terminal Equipment	359	2,622	5,087	6	206	189
On-road Trucks	476	2,638	7,719	9	543	318
Trains	119	326	1,658	1	44	40
Railyard Equipment	11	88	149	0	6	6
Commuting	10	135	17	0	19	17
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	1,381	6,743	24,101	6,546	1,636	1,338
Net Change from Existing Conditions	(597)	(192)	1,091	2,695	30	9
Net Change from NFAB Year 2015	576	2,283	16,346	5,093	1,095	1,061
Project Year 2025						
Ships - Fairway Transit (1)	175	374	4,309	2,489	371	347
Ships - Precautionary Area Transit (1)	43	78	678	381	62	58
Ships - Harbor Transit (1)	61	77	599	286	60	56
Ships - Docking (1)	21	21	166	69	18	17
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303	284
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	143	2,882	1,083	7	41	38
On-road Trucks	285	1,450	3,877	12	403	140
Trains	100	326	1,450	1	37	34
Railyard Equipment	4	85	29	0	1	1
Commuting	7	92	12	0	21	19
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	944	5,769	15,890	6,550	1,320	998
Net Change from Existing Conditions	(1,033)	(1,166)	(7,121)	2,699	(286)	(331)
Net Change from NFAB Year 2025	417	1,606	9,079	5,124	842	749
Project Year 2038						
Ships - Fairway Transit (1)	175	374	4,309	2,489	371	347
Ships - Precautionary Area Transit (1)	43	78	678	381	62	58
Ships - Harbor Transit (1)	61	77	599	286	60	56
Ships - Docking (1)	21	21	166	69	18	17
Ships - Hoteling Aux. Sources	100	353	3,562	3,304	303	284
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	125	2,882	467	7	33	31
On-road Trucks	348	1,232	3,234	13	387	119
Trains	85	326	1,272	1	30	28
Railyard Equipment	3	85	11	0	1	1
Commuting	4	43	4	0	26	24
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	970	5,501	14,427	6,550	1,294	968
Net Change from Existing Conditions	(1,007)	(1,434)	(8,584)	2,700	(312)	(361)
Net Change from NFAB Year 2038	456	1,399	7,793	5,124	819	722
SCAQMD Daily Significance Threshold	55	550	55	150	150	55

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt4-PD1. Peak Daily Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Ship Type	Peak Daily Ship Visits	Max TEU Moves/ Peak Day (1)	Peak Daily TEU Moves	Hoteling Hours/ Day (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU		3,740		
Containerships 3,000 - 5,000 TEU		2,992		
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	1		2,992	
Project Year 2015				
Containerships 8,000 - 9,000 TEU		4,488		
Containerships 5,000 - 6,000 TEU		3,740		
Containerships 3,000 - 5,000 TEU		2,992		
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	1		2,992	
Project Year 2025				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU		4,909		
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU		3,927		
Subtotal	1		3,927	
Project Year 2038				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU		3,927		
Containerships < 3,000 TEU		3,927		
Subtotal	1		4,909	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service. Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane production = 3,927, 4,909, and 5,890 TEUs/day.

(2) There are 10 cranes present from 2007 through 2011, then 12 cranes beginning in 2012.

Table D1.2.Alt4-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone
Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year (1)(2)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.06	0.13	1.54	0.88	0.13
Containerships < 3,000 TEU					
Subtotal	0.06	0.13	1.54	0.88	0.13
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.06	0.13	1.54	0.88	0.13
Containerships < 3,000 TEU					
Subtotal	0.06	0.13	1.54	0.88	0.13

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.
(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt4-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.20	0.10	0.02
Containerships < 3,000 TEU					
Subtotal	0.01	0.02	0.20	0.10	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.20	0.10	0.02
Containerships < 3,000 TEU					
Subtotal	0.01	0.02	0.20	0.10	0.02

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.02	0.02	0.10	0.02	0.01
Containerships < 3,000 TEU					
Subtotal	0.02	0.02	0.10	0.02	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.02	0.02	0.10	0.02	0.01
Containerships < 3,000 TEU					
Subtotal	0.02	0.02	0.10	0.02	0.01

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities -
Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.01	0.00	0.03	0.00	0.00
Containerships < 3,000 TEU					
Subtotal	0.01	0.00	0.03	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.01	0.00	0.03	0.00	0.00
Containerships < 3,000 TEU					
Subtotal	0.01	0.00	0.03	0.00	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD6. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.08	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.08	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.08	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.08	0.01

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt4-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.06	0.04	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.06	0.04	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.06	0.04	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.06	0.04	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.06	0.01

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.03	0.02	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.03	0.02	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.03	0.02	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD10. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling
Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containership < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.03	0.07	0.92	0.59	0.08
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.03	0.34	0.22	0.03
Subtotal	0.01	0.03	0.34	0.22	0.03
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.01	0.03	0.34	0.16	0.02
Subtotal	0.01	0.03	0.34	0.16	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.02	0.04	0.58	0.37	0.05
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.02	0.04	0.58	0.37	0.05

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt4-PD11. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

(2) Assumes VSRP compliance for all project years.

Table D1.2.Alt4-PD12. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD13. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD14. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2007					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD15. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling
Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containership < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.02	0.05	0.20	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.02	0.05	0.20	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.02	0.05	0.20	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.02	0.05	0.20	0.01

Table D1.2.Alt4-PD16. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year (1)				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2007					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.01	0.06	0.00	0.00
Project Year 2025					
Subtotal	0.00	0.01	0.05	0.00	0.00
Project Year 2038					
Subtotal	0.00	0.01	0.04	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all project years.

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD17. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Vessel Type	Tons Per Year				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2007					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2025					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all project years.

Note: (1) Assumes 1 round trip/peak day for the smallest vessel in 2003, then one size larger for each future project year.

Table D1.2.Alt4-PD18. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Emission Source	Pounds Per Day				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	57	208	2,019	1,975	173
Tugboats - Cargo Vessel Assist (1)	5	24	156	10	6
Subtotal	171	458	4,863	3,583	410
Project Year 2007					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	22	86	773	836	67
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6
Subtotal	136	336	3,608	2,434	304
Project Year 2015					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	22	86	762	712	54
Tugboats - Cargo Vessel Assist (1)	4	24	127	2	5
Subtotal	136	336	3,576	2,312	290
Project Year 2025					
Ships - Fairway Transit (1)	117	265	3,260	1,913	276
Ships - Precautionary Area Transit (1)	28	57	527	312	47
Ships - Harbor Transit (1)	41	52	392	191	40
Ships - Docking (1)	14	14	109	46	12
Ships - Hoteling Aux. Sources	35	122	1,246	1,139	106
Tugboats - Cargo Vessel Assist (1)	4	24	105	2	5
Subtotal	241	534	5,639	3,603	484
Project Year 2038					
Ships - Fairway Transit (1)	117	265	3,260	1,913	276
Ships - Precautionary Area Transit (1)	28	57	527	312	47
Ships - Harbor Transit (1)	41	52	392	191	40
Ships - Docking (1)	14	14	109	46	12
Ships - Hoteling Aux. Sources	35	122	1,246	1,139	106
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	241	534	5,629	3,601	484

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt4-PD19. ADT Estimates - Berths 136-147 - Alt 4.

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	490,858	1,345	1,841
2010	710,790	1,947	2,666
2015	672,434	1,842	2,522
2030	672,434	1,842	2,522

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.Alt4-PD20. On-Road Truck Operational Data for the Berths 136-147 Terminal Project - Alt 4

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	Peak Daily Trips	Idling Hrs/ Day	Miles/ Day	TEUs/ Day
On-Terminal						
Year 2003 - Baseline	0.56	1.02	4,492	2,516	4,587	8,310
Year 2007	0.25	1.02	1,841	460	1,880	3,406
Year 2010	0.25	0.81	2,666	667	2,148	4,932
Year 2015	0.25	0.81	2,522	631	2,032	4,666
Year 2030	0.25	0.81	2,522	631	2,032	4,666
Off-Terminal						
Year 2003 - Baseline	0.30	32.3	4,492	1,348	145,162	
Year 2007	0.30	32.3	1,841	552	59,498	
Year 2010	0.30	32.3	2,666	800	86,156	
Year 2015	0.30	32.3	2,522	757	81,507	
Year 2030	0.30	32.3	2,522	757	81,507	

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.34.

Table D1.2.Alt4-PD21. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Alt 4

Location/Project Scenario - Mode	Pounds per Peak Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97.4	227.7	535.4	3.2	15.8	14.5
Year 2003 - Driving	106.2	241.0	385.6	2.7	39.3	36.2
Subtotal - Year 2003	203.5	468.7	921.0	5.9	55.1	50.7
Year 2007 - Idling	14.2	51.5	107.6	0.1	2.3	2.1
Year 2007 - Driving	42.5	89.0	160.6	0.1	12.9	11.9
Subtotal - Year 2007	56.7	140.6	268.2	0.2	15.2	14.0
Year 2015 - Idling	13.3	64.2	176.0	0.1	1.5	1.4
Year 2015 - Driving	27.0	56.3	124.6	0.1	5.5	5.1
Subtotal - Year 2015	40.3	120.5	300.6	0.2	7.0	6.5
Year 2025 - Idling	10.8	57.8	171.4	0.1	0.3	0.3
Year 2025 - Driving	9.0	19.5	40.0	0.1	0.8	0.7
Subtotal - Year 2025	19.8	77.4	211.4	0.2	1.1	1.0
Year 2038 - Idling	10.6	57.6	171.7	0.1	0.2	0.1
Year 2038 - Driving	7.1	15.4	30.7	0.1	0.5	0.4
Subtotal - Year 2038	17.7	73.0	202.5	0.2	0.6	0.6
Off-Terminal						
Year 2003 - Idling	52.2	122.0	286.8	1.7	8.5	7.8
Year 2003 - Driving	876.4	3,480.5	7,918.2	53.1	524.1	482.1
Subtotal - Year 2003	928.6	3,602.4	8,205.0	54.8	532.5	489.9
Year 2007 - Idling	17.0	61.9	129.1	0.1	2.7	2.5
Year 2007 - Driving	333.1	1,179.2	3,283.7	2.5	150.2	138.2
Subtotal - Year 2007	350.1	1,241.0	3,412.8	2.6	152.9	140.6
Year 2015 - Idling	15.9	77.0	211.2	0.1	1.8	1.7
Year 2015 - Driving	161.9	986.9	2,939.5	3.8	120.0	110.4
Subtotal - Year 2015	177.8	1,063.8	3,150.7	3.9	121.8	112.0
Year 2025 - Idling	12.9	69.4	205.6	0.1	0.4	0.3
Year 2025 - Driving	66.1	349.7	918.5	3.6	25.5	23.5
Subtotal - Year 2025	79.1	419.1	1,124.1	3.7	25.9	23.8
Year 2038 - Idling	12.8	69.1	206.1	0.1	0.2	0.2
Year 2038 - Driving	84.1	276.1	701.9	3.6	17.8	16.3
Subtotal - Year 2038	96.9	345.2	908.0	3.7	17.9	16.5
Total Daily Truck Emissions by Project Year						
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	407	1,382	3,681	3	168	155
Year 2015	218	1,184	3,451	4	129	119
Year 2025	99	496	1,336	4	27	25
Year 2038	115	418	1,110	4	19	17

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.Alt4-PD22. Road Dust Emissions for the Berths 136-147 Terminal Project - Alt 4

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	33.74	5.70
Year 2010	38.54	6.51
Year 2015	36.46	6.16
Year 2038	36.46	6.16
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	47.06	7.95
Year 2010	68.14	11.52
Year 2015	64.46	10.89
Year 2038	64.46	10.89
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	80.80	13.65
Year 2010	106.68	18.03
Year 2015	100.93	17.06
Year 2038	100.93	17.06

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.Alt4-PD23. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Alt 4

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.21	0.09
Year 2010	0.24	0.10
Year 2015	0.22	0.10
Year 2038	0.22	0.10
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	6.56	2.81
Year 2010	9.50	4.07
Year 2015	8.98	3.85
Year 2038	8.98	3.85
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	6.77	2.90
Year 2010	9.73	4.18
Year 2015	9.21	3.95
Year 2038	9.21	3.95

Table D1.2.Alt4-PD24. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Alt 4

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	33.95	5.79
Year 2010	38.78	6.62
Year 2015	36.69	6.26
Year 2038	36.69	6.26
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	53.61	10.77
Year 2010	77.64	15.59
Year 2015	73.45	14.75
Year 2038	73.45	14.75
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	88	17
Year 2010	116	22
Year 2015	110	21
Year 2038	110	21

Table D1.2.Alt4-PD25. Peak Day Train Trips - Berths 136-147 Terminal Project - Alt 4

Project Scenario/Rail Yard	Peak Daily Round Trips	TEUs/ Day
Year 2003 Baseline		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2007		
To/from Berths 136-147 ICTF	-	
To/from Carson/LA Rail Yards	2	1,224
Year 2010		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	2	1,224
Year 2015		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	2	1,224
Year 2038		
To/from Berths 136-147 ICTF	-	-
To/from Carson/LA Rail Yards	2	1,224

Table D1.2.Alt4-PD26. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 4 Year 2007

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.05	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03

Table D1.2.Alt4-PD27. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 4 Year 2015

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.25	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.08	0.31	0.00	0.01
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.01	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.25	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.27	0.00	0.01
Total Tons Per Year	0.04	0.13	0.58	0.00	0.02

Table D1.2.Alt4-PD28. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 4 Year 2025

ICTF/Train Direction/Source Activity	Tons				
	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.22	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.07	0.25	0.00	0.01
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.22	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.23	0.00	0.01
Total Tons Per Year	0.03	0.13	0.47	0.00	0.01

Table D1.2.Alt4-PD29. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Alt 4 Year 2038

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.19	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.01	0.00	0.00
Subtotal	0.01	0.07	0.21	0.00	0.01
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.19	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.01	0.06	0.20	0.00	0.00
Total Tons Per Year	0.03	0.13	0.41	0.00	0.01

Table D1.2.Alt4-PD30. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Emissi
Berths 136-147 Terminal Project Alt 4

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.00	0.03	0.05	0.00	0.00
Trains	0.04	0.10	0.53	0.00	0.01
Subtotal	0.04	0.13	0.58	0.00	0.02
Project Year 2025					
ICTF Equipment	0.00	0.03	0.01	0.00	0.00
Trains	0.03	0.10	0.47	0.00	0.01
Subtotal	0.03	0.13	0.47	0.00	0.01
Project Year 2038					
ICTF Equipment	0.00	0.03	0.00	0.00	0.00
Trains	0.03	0.10	0.41	0.00	0.01
Subtotal	0.03	0.13	0.41	0.00	0.01

Table D1.2.Alt4-PD31. Peak Daily Terminal Yard TEU Throughput - Berths 136-147 Terminal Project A

	Peak Daily TEUs				Peak Daily/
Project Year	Wharf	Gate	Total	Peak Daily TEUs	eak Daily TEUs
2003	5,984	8,310	14,294	891,976	0.016
2007	2,992	3,406	6,398	354,000	0.018
2015	2,992	4,932	7,924	452,400	0.018
2025	3,927	4,666	8,593	499,200	0.017
2038	4,909	4,666	9,575	565,700	0.017

Table D1.2.Alt4-PD32. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project Alt 4.

Project Scenario/Equipment Horsepower		Tons				
		ROG	CO	NOx	SOx	PM10
Project Year 2003						
Terminal Equipment - 121-175 Hp	168,169	0.15	0.63	1.70	0.02	0.10
Terminal Equipment - 176-250 Hp	201,624	0.10	0.29	1.51	0.02	0.05
Terminal Equipment - 250-500 Hp	38,739	0.02	0.06	0.30	0.00	0.01
Subtotal	408,533	0.27	0.98	3.50	0.05	0.16
Project Year 2007						
Terminal Equipment - 121-175 Hp	75,296	0.07	0.29	0.70	0.00	0.03
Terminal Equipment - 176-250 Hp	90,275	0.06	0.16	0.70	0.00	0.03
Terminal Equipment - 250-500 Hp	17,345	0.01	0.03	0.12	0.00	0.00
Subtotal	182,917	0.13	0.48	1.52	0.00	0.07
Project Year 2015						
Terminal Equipment - 121-175 Hp	102,887	0.04	0.36	0.48	0.00	0.02
Terminal Equipment - 176-250 Hp	123,355	0.03	0.17	0.51	0.00	0.02
Terminal Equipment - 250-500 Hp	23,701	0.01	0.03	0.08	0.00	0.00
Subtotal	249,942	0.08	0.55	1.07	0.00	0.04
Project Year 2025						
Terminal Equipment - 121-175 Hp	114,564	0.01	0.39	0.12	0.00	0.00
Terminal Equipment - 176-250 Hp	137,355	0.01	0.17	0.09	0.00	0.00
Terminal Equipment - 250-500 Hp	26,391	0.00	0.03	0.02	0.00	0.00
Subtotal	278,310	0.03	0.59	0.22	0.00	0.01
Project Year 2038						
Terminal Equipment - 121-175 Hp	112,650	0.01	0.38	0.04	0.00	0.00
Terminal Equipment - 176-250 Hp	135,060	0.01	0.17	0.05	0.00	0.00
Terminal Equipment - 250-500 Hp	25,950	0.00	0.03	0.01	0.00	0.00
Subtotal	273,659	0.03	0.58	0.09	0.00	0.01

Table D1.2.Alt4-PD33. Peak Daily Operational Emissions - Berths 136-147 Terminal Project Alt 4.

	Pounds per Peak Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2007						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	22	86	773	836	67	63
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	261	951	3,040	2	131	120
On-road Trucks	407	1,382	3,681	3	256	171
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	137	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	925	3,090	11,839	2,550	762	643
Net Change from 2003 CEQA Baseline	(1,053)	(3,845)	(11,171)	(1,300)	(844)	(686)
Project Year 2015						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	22	86	762	712	54	51
Tugboats - Cargo Vessel Assist (1)	4	24	127	2	5	5
Terminal Equipment	151	1,106	2,145	2	87	80
On-road Trucks	218	1,184	3,451	4	245	141
Trains	76	209	1,063	1	28	26
Railyard Equipment	7	59	99	0	4	4
Commuting	10	135	17	0	19	17
Pier A Railyard	2	9	30	0	1	1
Project Year 2015 Total	601	3,038	10,382	2,320	674	540
Net Change from 2003 CEQA Baseline	(1,376)	(3,897)	(12,628)	(1,531)	(933)	(789)
Project Year 2025						
Ships - Fairway Transit (1)	117	265	3,260	1,913	276	258
Ships - Precautionary Area Transit (1)	28	57	527	312	47	44
Ships - Harbor Transit (1)	41	52	392	191	40	37
Ships - Docking (1)	14	14	109	46	12	11
Ships - Hoteling Aux. Sources	35	122	1,246	1,139	106	99
Tugboats - Cargo Vessel Assist (1)	4	24	105	2	5	4
Terminal Equipment	58	1,174	441	3	17	15
On-road Trucks	99	496	1,336	4	137	46
Trains	64	209	930	1	23	22
Railyard Equipment	2	57	19	0	1	1
Commuting	7	92	12	0	21	19
Pier A Railyard	2	9	30	0	1	1
Project Year 2025 Total	473	2,571	8,408	3,611	684	557
Net Change from 2003 CEQA Baseline	(1,504)	(4,364)	(14,603)	(240)	(922)	(772)
Project Year 2038						
Ships - Fairway Transit (1)	117	265	3,260	1,913	276	258
Ships - Precautionary Area Transit (1)	28	57	527	312	47	44
Ships - Harbor Transit (1)	41	52	392	191	40	37
Ships - Docking (1)	14	14	109	46	12	11
Ships - Hoteling Aux. Sources	35	122	1,246	1,139	106	99
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	50	1,155	187	3	13	12
On-road Trucks	115	418	1,110	4	129	38
Trains	54	209	816	1	20	18
Railyard Equipment	2	57	8	0	1	0
Commuting	4	43	4	0	26	24
Pier A Railyard	2	9	30	0	1	1
Project Year 2038 Total	467	2,424	7,784	3,609	673	547
Net Change from 2003 CEQA Baseline	(1,510)	(4,511)	(15,227)	(242)	(934)	(782)
SCAQMD Daily Significance Thresholds	55	550	55	150	150	55

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt5-PD1. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147
Terminal Project Alternative 5 - Vessels that Comply with Proposed VSRP.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2.Alt5-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-147 Terminal Project Alternative 5 - Non-Compliant Vessels with the Proposed VSRP.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2.Alt5-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01

(2) Without slide valves

Table D1.2.Alt5-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01

Table D1.2.Alt5-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00

(2) Without slide valves

Table D1.2.Alt5-PD6. Peak Daily Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.Alt5-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Alternative 5 - Vessels that Comply with VSRP.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2.Alt5-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Alternative 5 - Non-Compliant Vessels within VSRP.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt5-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.03	0.02	0.00
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt5-PD10. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.03	0.00
Subtotal	0.00	0.00	0.05	0.03	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt5-PD11. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt5-PD12. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.04	0.10	1.30	0.83	0.11
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.01	0.07	0.00	0.00
Subtotal	0.01	0.02	0.21	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Table D1.2.Alt5-PD13. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.Alt5-PD14. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-

Table D1.2.Alt5-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 5 - VSRP-Compliant.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Alternative 5 - VSRP-Non-Compliant.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00

Table D1.2.Alt5-PD18. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00

Table D1.2.Alt5-PD19. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-PD20. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt5-PD21. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Hoteling					
Subtotal	-	-	-	-	-

Table D1.2.Alt5-PD22. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.01	0.06	0.00	0.00
Project Year 2025					
Subtotal	0.00	0.01	0.05	0.00	0.00
Project Year 2038					
Subtotal	0.00	0.01	0.04	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt5-PD23. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Alternative 5.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2025					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt5-PD24. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-14
Terminal Project Alternative 5 - Vessels that Comply with VSRP + Slide Valves

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt5-PD25. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-14
Terminal Project Alternative 5 - Non-Compliant Vessels within VSRP + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt5-PD26. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00

Table D1.2.Alt5-PD27. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00

Table D1.2.Alt5-PD28. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Alternative 5 + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00

Table D1.2.Alt5-PD29. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Emission Source	Tons				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	0.03	0.08	1.04	0.62	0.09
Ships - Precautionary Area Transit (1)	0.01	0.02	0.17	0.12	0.01
Ships - Harbor Transit (1)	0.01	0.01	0.10	0.06	0.01
Ships - Docking (1)	0.00	0.00	0.03	0.01	0.00
Ships - Hoteling Aux. Sources	0.04	0.13	1.39	1.23	0.12
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.07	0.00	0.00
Subtotal	0.10	0.26	2.81	2.03	0.24
Project Year 2015					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.01	0.07	0.34	0.61	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.06	0.00	0.00
Subtotal	0.05	0.30	1.79	0.72	0.05
Project Year 2025					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.04	0.28	1.57	0.70	0.05
Project Year 2038					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.04	0.28	1.57	0.70	0.05

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt5-PD30. Mitigated Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Alternative 5

Project Scenario/Emission Source	Pounds Per Peak Day				
	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	350	231	30
Ships - Harbor Transit (1)	22	28	205	110	21
Ships - Docking (1)	8	8	57	27	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6
Subtotal	192	517	5,624	4,066	473
Project Year 2015					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	20	135	684	1,222	42
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5
Subtotal	96	594	3,578	1,434	108
Project Year 2025					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5
Subtotal	84	561	3,145	1,409	99
Project Year 2038					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	84	561	3,134	1,409	99

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt5-PD31. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Ship Type	Peak Daily Ship Visits	ax TEU Move Peak Day (1)	Peak Daily TEU Moves	Hoteling Time/ Visit (Hours) (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU	1	3,740	3,740	24.0
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU		2,992		
Subtotal	2		6,732	
Project Year 2015				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	
Project Year 2025				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	
Project Year 2038				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	1,963	24.0
Subtotal	3		10,799	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service. Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane production = 3,927, 4,909, and 5,890 TEUs/day.

Table D1.2.Alt5-PD32. ADT Estimates - Berths 136-147 Alt 5

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,513,063	4,145	5,675
2015	1,158,155	3,173	4,344
2025	1,200,205	3,288	4,502
2038	1,200,205	3,288	4,502

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.Alt5-PD33. On-Road Truck Peak Daily Operational Data for the Berths 136-147 Terminal Project - Alternative 5

Activity/Project Scenario	Idling Time/ Trip (Hrs) (1)	Miles/ Trip (2)	Peak Daily Trips	Idling Hrs/ Day	Miles/ Day	TEUs/ Peak Day
On-Terminal						
Year 2003 - Baseline	0.56	1.02	4,492	2,516	4,587	8,310
Year 2007	0.25	1.02	5,675	1,419	5,796	10,499
Year 2015	0.25	0.81	4,344	1,086	3,500	8,037
Year 2025	0.25	0.81	4,502	1,125	3,627	8,329
Year 2038	0.25	0.81	4,502	1,125	3,627	8,329
Off-Terminal						
Year 2003 - Baseline	0.30	32.3	4,492	1,348	145,162	
Year 2007	0.30	32.3	5,675	1,703	183,401	
Year 2015	0.30	55.0	4,344	1,303	238,929	
Year 2025	0.30	49.4	4,502	1,351	222,205	
Year 2038	0.30	49.4	4,502	1,351	222,205	

Notes: (1) 2003 on-terminal durations from PEI. Post-2003 on-terminal durations from TraPac (TraPac 2006).

(2) On-terminal mileage/trip based upon current/proposed terminal gate systems. Off-terminal miles/trip from data presented in Table D1.2.PP-Mit-PD34.

Table D1.2.Alt5-PD34. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Alternative 5

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97	228	535	3	16	15
Year 2003 - Driving	106	241	386	3	39	36
Subtotal - Year 2003	204	469	921	6	55	51
Year 2007 - Idling	33	108	368	0	4	4
Year 2007 - Driving	102	206	399	0	29	27
Subtotal - Year 2007	135	314	766	1	33	31
Year 2015 - Idling	17	72	306	0	0	0
Year 2015 - Driving	9	19	32	0	1	0
Subtotal - Year 2015	26	91	338	0	1	1
Year 2025 - Idling	18	75	317	0	0	0
Year 2025 - Driving	9	20	33	0	1	1
Subtotal - Year 2025	27	95	350	0	1	1
Year 2038 - Idling	18	77	317	0	0	0
Year 2038 - Driving	9	20	33	0	1	1
Subtotal - Year 2038	27	97	350	0	1	1
Off-Terminal						
Year 2003 - Idling	52	122	287	2	8	8
Year 2003 - Driving	876	3,480	7,918	53	524	482
Subtotal - Year 2003	929	3,602	8,205	55	533	490
Year 2007 - Idling	40	129	441	0	5	4
Year 2007 - Driving	782	2,622	8,128	8	320	294
Subtotal - Year 2007	821	2,752	8,569	8	324	298
Year 2015 - Idling	21	87	368	0	0	0
Year 2015 - Driving	171	590	1,203	10	36	33
Subtotal - Year 2015	192	677	1,571	11	37	34
Year 2025 - Idling	21	90	381	0	0	0
Year 2025 - Driving	159	547	1,114	10	34	31
Subtotal - Year 2025	180	637	1,495	10	34	31
Year 2038 - Idling	21	93	381	0	0	0
Year 2038 - Driving	164	539	1,136	10	31	29
Subtotal - Year 2038	186	632	1,517	10	32	29
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	956	3,065	9,336	9	358	329
Year 2015	218	768	1,909	11	37	34
Year 2025	207	731	1,845	10	35	32
Year 2038	213	729	1,866	11	32	30

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.Alt5-PD35. Road Dust Emissions for the Berths 136-147 Terminal Project - Alternative 5

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	104.01	17.58
Year 2010	62.80	10.61
Year 2015	65.08	11.00
Year 2038	65.08	11.00
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	145.05	24.51
Year 2010	188.96	31.93
Year 2015	175.74	29.70
Year 2038	175.74	29.70
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	249.05	42.09
Year 2010	251.77	42.55
Year 2015	240.82	40.70
Year 2038	240.82	40.70

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.Alt5-PD36. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Alternative 5

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.64	0.27
Year 2010	0.39	0.17
Year 2015	0.40	0.17
Year 2038	0.40	0.17
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	20.22	8.67
Year 2010	26.34	11.30
Year 2015	24.49	10.51
Year 2038	24.49	10.51
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	20.85	8.95
Year 2010	26.72	11.46
Year 2015	24.89	10.68
Year 2038	24.89	10.68

Table D1.2.Alt5-PD37. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Alternative 5

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	104.65	17.85
Year 2010	63.19	10.78
Year 2015	65.48	11.17
Year 2038	65.48	11.17
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	165.26	33.19
Year 2010	215.30	43.23
Year 2015	200.23	40.21
Year 2038	200.23	40.21
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	270	51
Year 2010	278	54
Year 2015	266	51
Year 2038	266	51

Table D1.2.Alt5-PD38. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2007 - Alternative 5

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.05	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03

Table D1.2.Alt5-PD39. Mitigated Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2015 - Alternative 5

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Total Tons Per Year	0.06	0.17	0.82	0.00	0.02

Table D1.2.Alt5-PD40. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2025 - Alternative 5

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.09	0.25	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.07	0.24	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.12	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.11	0.00	0.00
Total Tons Per Year	0.06	0.22	0.72	0.00	0.02

Table D1.2.Alt5-PD41. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project Year 2038 - Alternative 5

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.09	0.22	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.07	0.21	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.10	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.10	0.00	0.00
Total Tons Per Year	0.05	0.22	0.63	0.00	0.02

Table D1.2.Alt5-PD42. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Mitigated Emissions - Berths 136-147 Terminal Project - Alternative 5

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.00	0.01	0.00	0.00	0.00
Trains	0.06	0.16	0.82	0.00	0.02
Subtotal	0.06	0.17	0.82	0.00	0.02
Project Year 2025					
ICTF Equipment	0.01	0.06	0.01	0.00	0.00
Trains	0.05	0.16	0.71	0.00	0.02
Subtotal	0.06	0.22	0.72	0.00	0.02
Project Year 2038					
ICTF Equipment	0.01	0.06	0.01	0.00	0.00
Trains	0.04	0.16	0.63	0.00	0.01
Subtotal	0.05	0.22	0.63	0.00	0.02

Table D1.2.Alt5-PD43. Peak Daily Train Trips - Berths 136-147
Terminal Project - Alternative 5

Project Scenario/Rail Yard	Peak Daily Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	2
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	2
Year 2015	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1
Year 2025	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1
Year 2038	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1

Table D1.2.Alt5-PD44. Peak Day Terminal Yard TEU Throughput - Berths 136-147 Terminal Project - Alt 5

	Peak Daily TEUs				Total Peak Daily/
Project Year	Wharf	Gate	Total	Annual TEUs	Annual TEUs
2003	5,984	8,310	14,294	891,976	0.016
2007	6,732	10,499	17,231	1,091,200	0.016
2015	10,799	8,037	18,836	1,355,200	0.014
2025	10,799	8,329	19,128	1,697,000	0.011
2038	10,799	8,329	19,128	1,697,000	0.011

Table D1.2.Alt5-PD45. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project - Alternative 5

Project Scenario/Equipment Horsepower		Peak Daily Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2003							
Terminal Equipment - 121-175 Hp		0.15	0.63	1.70	0.02	0.10	0.09
Terminal Equipment - 176-250 Hp		0.10	0.29	1.51	0.02	0.05	0.05
Terminal Equipment - 250-500 Hp		0.02	0.06	0.30	0.00	0.01	0.01
Subtotal		0.27	0.98	3.50	0.05	0.16	0.15
Project Year 2007							
Terminal Equipment - 121-175 Hp		0.18	0.78	1.88	0.00	0.09	0.08
Terminal Equipment - 176-250 Hp		0.15	0.43	1.90	0.00	0.08	0.07
Terminal Equipment - 250-500 Hp		0.02	0.07	0.32	0.00	0.01	0.01
Subtotal		0.35	1.28	4.09	0.00	0.18	0.16
Project Year 2015							
Terminal Equipment - 121-175 Hp		0.07	0.77	0.07	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.07	0.36	0.09	0.00	0.00	0.00
Terminal Equipment - 250-500 Hp		0.01	0.06	0.02	0.00	0.00	0.00
Subtotal		0.16	1.19	0.18	0.00	0.01	0.01
Project Year 2025							
Terminal Equipment - 121-175 Hp		0.02	0.76	0.07	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.03	0.33	0.09	0.00	0.00	0.00
Terminal Equipment - 250-500 Hp		0.00	0.06	0.02	0.00	0.00	0.00
Subtotal		0.06	1.15	0.18	0.00	0.01	0.01
Project Year 2038							
Terminal Equipment - 121-175 Hp		0.02	0.76	0.07	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.03	0.33	0.09	0.00	0.00	0.00
Terminal Equipment - 250-500 Hp		0.00	0.06	0.02	0.00	0.00	0.00
Subtotal		0.06	1.15	0.18	0.00	0.01	0.01

Table D1.2.Alt5-PD46. Peak Daily Operational Emissions - Berths 136-147 Terminal Project - Alternative 5.

Project Scenario/Source Type	Pounds Per Peak Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2007						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	350	231	30	28
Ships - Harbor Transit (1)	22	28	205	110	21	20
Ships - Docking (1)	8	8	57	27	6	6
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236	221
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	702	2,561	8,184	5	352	324
On-road Trucks	956	3,065	9,336	9	628	380
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,971	6,566	24,654	4,191	1,525	1,213
Net Change from CEQA Baseline Year 2007	(6)	(369)	1,644	341	(82)	(115)
Project Year 2015						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	20	135	684	1,222	42	39
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5	5
Terminal Equipment	317	2,381	356	5	18	16
On-road Trucks	218	768	1,909	11	316	88
Trains	119	326	1,636	1	43	40
Railyard Equipment	2	24	2	0	0	0
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	0	0
Project Year 2015 Total	766	4,263	7,532	1,451	508	267
Net Change from CEQA Baseline Year 2015	(1,212)	(2,672)	(15,478)	(2,399)	(1,099)	(1,062)
Project Year 2025						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5	4
Terminal Equipment	114	2,307	362	5	18	17
On-road Trucks	207	731	1,845	10	301	83
Trains	100	326	1,429	1	36	33
Railyard Equipment	11	120	11	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	6	0	0	0
Project Year 2025 Total	527	4,163	6,811	1,426	479	249
Net Change from CEQA Baseline Year 2025	(1,451)	(2,772)	(16,200)	(2,424)	(1,128)	(1,080)
Project Year 2038 Total						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	114	2,307	362	5	18	17
On-road Trucks	213	729	1,866	11	298	81
Trains	85	326	1,251	1	30	27
Railyard Equipment	11	120	11	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	5	0	0	0
Project Year 2038 Total	513	4,102	6,634	1,426	476	246
Net Change from CEQA Baseline Year 2038	(1,464)	(2,833)	(16,376)	(2,424)	(1,131)	(1,083)
SCAQMD Daily Significance Thresholds	55	550	55	150	150	55

Note: (1) Includes auxiliary generator emissions.

Table D1.2.PP-Mit-PD1. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-1
Terminal Project - Mitigated Proposed Project - Vessels that Comply with Proposed VSRP.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.06	0.13	1.54	0.88	0.13
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.06	0.13	1.54	0.88	0.13
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.09	0.15	0.98	0.03	0.04
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.09	0.15	0.98	0.03	0.04
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.09	0.15	0.98	0.03	0.04
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.09	0.15	0.98	0.03	0.04
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.09	0.15	0.98	0.03	0.04
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.09	0.15	0.98	0.03	0.04

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2.PP-Mit-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136-1
Terminal Project - Mitigated Proposed Project - Non-Compliant Vessels with the Proposed VSR

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2.PP-Mit-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.01	0.02	0.20	0.10	0.02
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.02	0.20	0.10	0.02
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.03	0.04	0.25	0.01	0.01
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.03	0.04	0.25	0.01	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.03	0.04	0.25	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.03	0.04	0.25	0.01	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.03	0.04	0.25	0.01	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.03	0.04	0.25	0.01	0.01

(2) Without slide valves

Table D1.2.PP-Mit-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.02	0.02	0.10	0.02	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.02	0.02	0.10	0.02	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.03	0.03	0.17	0.00	0.01
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.03	0.03	0.17	0.00	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.03	0.03	0.17	0.00	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.03	0.03	0.17	0.00	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.03	0.03	0.17	0.00	0.01
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.03	0.03	0.17	0.00	0.01

Table D1.2.PP-Mit-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.01	0.00	0.03	0.00	0.00
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.00	0.03	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.05	0.00	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.01	0.05	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.05	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.01	0.05	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.05	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.01	0.05	0.00	0.00

(2) Without slide valves

Table D1.2.PP-Mit-PD6. Peak Daily Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.PP-Mit-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - Vessels that Comply

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.08	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.09	0.08	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.18	0.01	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.01	0.18	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.18	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.01	0.18	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.01	0.01	0.18	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.01	0.18	0.01	0.00

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2.PP-Mit-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairw
Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - Non-Compliant Vessels withir

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.PP-Mit-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.06	0.04	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.06	0.04	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.10	0.01	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.10	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.10	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.10	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.10	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.10	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PP-Mit-PD10. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.01	0.09	0.06	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.09	0.06	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.16	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PP-Mit-PD11. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.03	0.02	0.00
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.03	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.04	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.PP-Mit-PD12. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.73	0.46	0.06
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.58	0.37	0.05
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.04	0.10	1.30	0.83	0.11
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.14	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Table D1.2.PP-Mit-PD13. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.PP-Mit-PD14. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-

Table D1.2.PP-Mit-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - VSRP-Compliant.

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PP-Mit-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Proposed Project - VSRP-Non-Compli

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PP-Mit-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.02	0.00

Table D1.2.PP-Mit-PD18. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.01	0.00

Table D1.2.PP-Mit-PD19. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.00	0.00	0.00	0.00

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PP-Mit-PD20. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.05	0.14	0.60	0.02

(2) Does not assume use of low-sulfur fuels.

Table D1.2.PP-Mit-PD21. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Hoteling					
Subtotal	-	-	-	-	-

Table D1.2.PP-Mit-PD22. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.01	0.06	0.00	0.00
Project Year 2025					
Subtotal	0.00	0.01	0.05	0.00	0.00
Project Year 2038					
Subtotal	0.00	0.01	0.04	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.PP-Mit-PD23. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2025					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.PP-Mit-PD24. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136
Terminal Project - Mitigated Proposed Project - Vessels that Comply with VSRP + Slide Va

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.02	0.15	0.70	0.03	0.02
Containerships 5,000 - 6,000 TEU					
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.02	0.15	0.70	0.03	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.02	0.15	0.70	0.03	0.02
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.02	0.15	0.70	0.03	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.02	0.15	0.70	0.03	0.02
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.02	0.15	0.70	0.03	0.02

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.PP-Mit-PD25. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136
Terminal Project - Mitigated Proposed Project - Non-Compliant Vessels within VSRP + Slide Valv

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.PP-Mit-PD26. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Proposed Project + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.01	0.04	0.18	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.04	0.18	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.01	0.04	0.18	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.04	0.18	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.01	0.04	0.18	0.01	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.04	0.18	0.01	0.00

Table D1.2.PP-Mit-PD27. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Proposed Project + Slide Valve

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.01	0.03	0.12	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.03	0.12	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.01	0.03	0.12	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.03	0.12	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.01	0.03	0.12	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.01	0.03	0.12	0.00	0.00

Table D1.2.PP-Mit-PD28. Peak Daily Cargo Vessel Emissions for Docking Activities -
Berths 136-147 Terminal Project - Mitigated Proposed Project + Slide Valves.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.01	0.03	0.00	0.00

Table D1.2.PP-Mit-PD29. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project .

	Tons				
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	0.06	0.13	1.63	0.96	0.14
Ships - Precautionary Area Transit (1)	0.01	0.03	0.26	0.16	0.02
Ships - Harbor Transit (1)	0.02	0.03	0.20	0.10	0.02
Ships - Docking (1)	0.01	0.01	0.05	0.02	0.01
Ships - Hoteling Aux. Sources	0.04	0.13	1.39	1.23	0.12
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.07	0.00	0.00
Subtotal	0.14	0.34	3.61	2.47	0.31
Project Year 2015					
Ships - Fairway Transit (1)	0.02	0.16	0.88	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.05	0.28	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.05	0.28	0.03	0.01
Ships - Docking (1)	0.00	0.01	0.08	0.01	0.00
Ships - Hoteling Aux. Sources	0.01	0.06	0.28	0.61	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.06	0.00	0.00
Subtotal	0.06	0.35	1.85	0.71	0.06
Project Year 2025					
Ships - Fairway Transit (1)	0.02	0.16	0.88	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.05	0.28	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.05	0.28	0.03	0.01
Ships - Docking (1)	0.00	0.01	0.08	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.05	0.33	1.70	0.71	0.05
Project Year 2038					
Ships - Fairway Transit (1)	0.02	0.16	0.88	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.05	0.28	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.05	0.28	0.03	0.01
Ships - Docking (1)	0.00	0.01	0.08	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.05	0.33	1.70	0.71	0.05

Note: (1) Includes auxiliary power emissions.

Table D1.2.PP-Mit-PD30. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Miatigated Proposed Pro

	Pounds Per Peak Day				
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	117	265	3,260	1,913	276
Ships - Precautionary Area Transit (1)	28	57	527	312	47
Ships - Harbor Transit (1)	41	52	392	191	40
Ships - Docking (1)	14	14	109	46	12
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6
Subtotal	284	678	7,224	4,930	616
Project Year 2015					
Ships - Fairway Transit (1)	47	324	1,764	92	39
Ships - Precautionary Area Transit (1)	17	102	554	59	13
Ships - Harbor Transit (1)	22	92	556	50	14
Ships - Docking (1)	7	25	154	13	4
Ships - Hoteling Aux. Sources	16	124	553	1,215	39
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5
Subtotal	114	690	3,707	1,428	114
Project Year 2025					
Ships - Fairway Transit (1)	47	324	1,764	92	39
Ships - Precautionary Area Transit (1)	17	102	554	59	13
Ships - Harbor Transit (1)	22	92	556	50	14
Ships - Docking (1)	7	25	154	13	4
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5
Subtotal	106	668	3,406	1,411	108
Project Year 2038					
Ships - Fairway Transit (1)	47	324	1,764	92	39
Ships - Precautionary Area Transit (1)	17	102	554	59	13
Ships - Harbor Transit (1)	22	92	556	50	14
Ships - Docking (1)	7	25	154	13	4
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	106	668	3,395	1,411	107

Note: (1) Includes auxiliary power emissions.

Table D1.2.PP-Mit-PD31. Peak Daily Mitigated Truck Emissions for the Berths 136-147 Terminal Project - Mitiga

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97	228	535	3	16	15
Year 2003 - Driving	106	241	386	3	39	36
Subtotal - Year 2003	204	469	921	6	55	51
Year 2007 - Idling	33	108	368	0	4	4
Year 2007 - Driving	102	206	399	0	29	27
Subtotal - Year 2007	135	314	766	1	33	31
Year 2015 - Idling	24	100	425	0	0	0
Year 2015 - Driving	12	27	44	0	1	1
Subtotal - Year 2015	36	127	469	1	1	1
Year 2025 - Idling	28	117	497	0	0	0
Year 2025 - Driving	14	31	52	0	1	1
Subtotal - Year 2025	42	148	549	1	1	1
Year 2038 - Idling	28	121	497	0	0	0
Year 2038 - Driving	14	31	51	0	1	1
Subtotal - Year 2038	42	152	548	1	1	1
Off-Terminal						
Year 2003 - Idling	52	122	287	2	8	8
Year 2003 - Driving	876	3,480	7,918	53	524	482
Subtotal - Year 2003	929	3,602	8,205	55	533	490
Year 2007 - Idling	40	129	441	0	5	4
Year 2007 - Driving	782	2,622	8,128	8	320	294
Subtotal - Year 2007	821	2,752	8,569	8	324	298
Year 2015 - Idling	29	120	510	0	0	0
Year 2015 - Driving	220	757	1,543	13	47	43
Subtotal - Year 2015	248	877	2,053	14	47	43
Year 2025 - Idling	34	141	597	0	0	0
Year 2025 - Driving	253	873	1,779	15	54	50
Subtotal - Year 2025	287	1,014	2,375	16	54	50
Year 2038 - Idling	34	145	597	0	0	0
Year 2038 - Driving	263	862	1,814	16	50	46
Subtotal - Year 2038	296	1,007	2,410	16	51	47
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	956	3,065	9,336	9	358	329
Year 2015	285	1,004	2,522	14	48	44
Year 2025	329	1,162	2,924	16	56	51
Year 2038	338	1,159	2,959	17	52	48

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.PP-Mit-PD32. Road Dust Emissions for the Berths 136-147 Terminal Project - Mitigated Proposed Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	104.01	17.58
Year 2015	87.15	14.73
Year 2025	101.97	17.23
Year 2038	101.97	17.23
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	145.05	24.51
Year 2015	242.37	40.96
Year 2025	280.66	47.43
Year 2038	280.66	47.43
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	249.05	42.09
Year 2015	329.52	55.69
Year 2025	382.63	64.66
Year 2038	382.63	64.66

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.PP-Mit-PD33. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Mitigated Proposed Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.64	0.27
Year 2015	0.54	0.23
Year 2025	0.63	0.27
Year 2038	0.63	0.27
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	20.22	8.67
Year 2015	33.78	14.49
Year 2025	39.12	16.78
Year 2038	39.12	16.78
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	20.85	8.95
Year 2015	34.32	14.72
Year 2025	39.74	17.05
Year 2038	39.74	17.05

Table D1.2.PP-Mit-PD34. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Mitigated Proposed Project.

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	104.65	17.85
Year 2015	87.68	14.96
Year 2025	102.59	17.50
Year 2038	102.59	17.50
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	165.26	33.19
Year 2015	276.15	55.45
Year 2025	319.78	64.21
Year 2038	319.78	64.21
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	270	51
Year 2015	364	70
Year 2025	422	82
Year 2038	422	82

Table D1.2.PP-Mit-PD35. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2007

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.05	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03

Table D1.2.PP-Mit-PD36. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2015

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Total Tons Per Year	0.06	0.17	0.82	0.00	0.02

Table D1.2.PP-Mit-PD37. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2025

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.03	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.35	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.03	0.13	0.37	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.35	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.03	0.10	0.37	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.12	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.11	0.00	0.00
Total Tons Per Year	0.07	0.30	0.96	0.00	0.02

Table D1.2.PP-Mit-PD38. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Proposed Project Year 2038

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.03	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.31	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.03	0.13	0.32	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.08	0.31	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.10	0.32	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.10	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.10	0.00	0.00
Total Tons Per Year	0.06	0.30	0.85	0.00	0.02

Table D1.2.PP-Mit-PD39. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Mitiga
Emissions - Berths 136-147 Terminal Project - Mitigated Proposed Project

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.00	0.01	0.00	0.00	0.00
Trains	0.06	0.16	0.82	0.00	0.02
Subtotal	0.06	0.17	0.82	0.00	0.02
Project Year 2025					
ICTF Equipment	0.01	0.08	0.01	0.00	0.00
Trains	0.07	0.22	0.96	0.00	0.02
Subtotal	0.07	0.30	0.96	0.00	0.02
Project Year 2038					
ICTF Equipment	0.01	0.08	0.01	0.00	0.00
Trains	0.06	0.22	0.84	0.00	0.02
Subtotal	0.06	0.30	0.85	0.00	0.02

Table D1.2.PP-Mit-PD40. Peak Daily Train Emissions from the Relocated Pier A Rail Yard - Berths 136-147 Terminal Project - Mitigated Proposed Project Alternatives

	Tons per Year				
Project Year/Emission Source	VOC	CO	NOx	SOx	PM
Year 2003 Baseline					
Line Haul Locomotive	0.05	0.10	0.85	0.06	0.03
Yard Locomotive - Low UsageTrip	0.26	0.37	3.54	0.02	0.09
Yard Locomotive - Medium UsageTrip	0.42	0.60	5.66	0.04	0.14
Subtotal	0.73	1.07	10.06	0.11	0.26
Project Year 2007					
Line Haul Locomotive	0.05	0.12	0.70	0.06	0.03
Yard Locomotive - Low UsageTrip	0.26	0.46	3.53	0.02	0.09
Yard Locomotive - Medium UsageTrip	0.42	0.74	5.64	0.03	0.15
Subtotal	0.73	1.32	9.87	0.11	0.26
Project Year 2010					
Line Haul Locomotive	0.04	0.12	0.60	0.00	0.02
Yard Locomotive - Low UsageTrip	0.14	0.56	1.90	0.00	0.05
Yard Locomotive - Medium UsageTrip	0.22	0.90	3.03	0.00	0.09
Subtotal	0.41	1.58	5.53	0.00	0.16
Project Year 2015					
Line Haul Locomotive	0.04	0.12	0.53	0.00	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01
Subtotal	0.40	1.58	1.02	0.00	0.03
Project Year 2038					
Line Haul Locomotive	0.03	0.12	0.46	0.00	0.01
Yard Locomotive - Low UsageTrip (1)	0.14	0.56	0.19	0.00	0.01
Yard Locomotive - Medium UsageTrip (1)	0.22	0.90	0.30	0.00	0.01
Subtotal	0.40	1.58	0.95	0.00	0.02

Note: (1) Yard locomotive NOx/PM emissions reduced 90% from Tier 2 standard levels.

Table D1.2.PP-Mit-PD41. Peak Daily Terminal Yard TEU Throughput - Berths 136-147 Te

	Peak Daily TEUs				Peak Daily/
Project Year	Wharf	Gate	Total	eak Daily TEU	Peak Daily TEUs
2003	5,984	8,310	14,294	891,976	0.016
2007	6,732	10,499	17,231	1,091,200	0.016
2015	11,781	11,152	22,933	1,747,500	0.013
2025	11,781	13,049	24,830	2,389,000	0.010
2038	11,781	13,049	24,830	2,389,000	0.010

Table D1.2.PP-Mit-PD42. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Mitigated Proposed Project

		Peak Daily Emissions (Tons)					
Project Scenario/Equipment Horsepower		ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2003							
Terminal Equipment - 121-175 Hp	-	-	-	-	-	-	-
Terminal Equipment - 176-250 Hp	-	-	-	-	-	-	-
Terminal Equipment - 250-500 Hp	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Project Year 2007							
Terminal Equipment - 121-175 Hp	202,717	0.18	0.78	1.88	0.00	0.09	0.08
Terminal Equipment - 176-250 Hp	243,045	0.15	0.43	1.90	0.00	0.08	0.07
Terminal Equipment - 250-500 Hp	46,698	0.02	0.07	0.32	0.00	0.01	0.01
Subtotal	492,459	0.35	1.28	4.09	0.00	0.18	0.16
Project Year 2015							
Terminal Equipment - 121-175 Hp	269,809	0.09	0.94	0.09	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp	323,484	0.09	0.44	0.11	0.00	0.01	0.00
Terminal Equipment - 250-500 Hp	62,153	0.01	0.08	0.02	0.00	0.00	0.00
Subtotal	655,445	0.19	1.45	0.22	0.00	0.01	0.01
Project Year 2025							
Terminal Equipment - 121-175 Hp	453,273	0.04	1.22	0.12	0.00	0.01	0.01
Terminal Equipment - 176-250 Hp	543,445	0.05	0.53	0.14	0.00	0.01	0.01
Terminal Equipment - 250-500 Hp	104,415	0.01	0.09	0.03	0.00	0.00	0.00
Subtotal	1,101,133	0.09	1.84	0.29	0.00	0.01	0.01
Project Year 2038							
Terminal Equipment - 121-175 Hp	453,273	0.04	1.22	0.12	0.00	0.01	0.01
Terminal Equipment - 176-250 Hp	543,445	0.05	0.53	0.14	0.00	0.01	0.01
Terminal Equipment - 250-500 Hp	104,415	0.01	0.09	0.03	0.00	0.00	0.00
Subtotal	1,101,133	0.09	1.84	0.29	0.00	0.01	0.01

Table D1.2.PP-Mit-PD43. Peak Daily Operational Emissions - Berths 136-147 Terminal Mitigated Proposed Project.

	Pounds Per Peak Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2007						
Ships - Fairway Transit (1)	117	265	3,260	1,913	276	258
Ships - Precautionary Area Transit (1)	28	57	527	312	47	44
Ships - Harbor Transit (1)	41	52	392	191	40	37
Ships - Docking (1)	14	14	109	46	12	11
Ships - Hoteling Aux. Sources	78	267	2,789	2,468	236	221
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	702	2,561	8,184	5	352	324
On-road Trucks	956	3,065	9,336	9	628	380
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	2,063	6,728	26,255	5,055	1,668	1,348
Net Change from Existing Conditions	85	(207)	3,244	1,205	61	19
Net Change from NFAB Year 2007	136	310	2,062	864	171	153
Project Year 2015						
Ships - Fairway Transit (1)	47	324	1,764	92	39	36
Ships - Precautionary Area Transit (1)	17	102	554	59	13	12
Ships - Harbor Transit (1)	22	92	556	50	14	13
Ships - Docking (1)	7	25	154	13	4	4
Ships - Hoteling Aux. Sources	16	124	553	1,215	39	37
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5	5
Terminal Equipment	385	2,899	433	6	22	20
On-road Trucks	285	1,004	2,522	14	412	115
Trains	119	326	1,636	1	43	40
Railyard Equipment	2	24	2	0	0	0
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	30	0	0	0
Project Year 2015 Total	915	5,060	8,346	1,450	616	304
Net Change from Existing Conditions	(1,062)	(1,875)	(14,665)	(2,401)	(991)	(1,025)
Net Change from NFAB Year 2015	111	600	591	(3)	74	27
Project Year 2025						
Ships - Fairway Transit (1)	47	324	1,764	92	39	36
Ships - Precautionary Area Transit (1)	17	102	554	59	13	12
Ships - Harbor Transit (1)	22	92	556	50	14	13
Ships - Docking (1)	7	25	154	13	4	4
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5	4
Terminal Equipment	182	3,680	577	8	29	27
On-road Trucks	329	1,162	2,924	16	478	133
Trains	134	437	1,914	2	48	44
Railyard Equipment	15	160	15	0	1	1
Commuting	4	55	6	0	30	28
Pier A Railyard	2	9	6	0	0	0
Project Year 2025 Total	772	6,170	8,847	1,438	694	333
Net Change from Existing Conditions	(1,205)	(765)	(14,163)	(2,413)	(913)	(995)
Net Change from NFAB Year 2025	246	2,007	2,037	12	215	84
Project Year 2038 Total						
Ships - Fairway Transit (1)	47	324	1,764	92	39	36
Ships - Precautionary Area Transit (1)	17	102	554	59	13	12
Ships - Harbor Transit (1)	22	92	556	50	14	13
Ships - Docking (1)	7	25	154	13	4	4
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	182	3,680	577	8	29	27
On-road Trucks	338	1,159	2,959	17	474	129
Trains	114	437	1,675	2	40	37
Railyard Equipment	15	160	15	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	5	0	0	0
Project Year 2038 Total	761	6,162	8,631	1,438	681	322
Net Change from Existing Conditions	(1,216)	(773)	(14,379)	(2,413)	(925)	(1,007)
Net Change from NFAB Year 2038	248	2,060	1,997	12	206	76
SCAQMD Daily Significance Thresholds	55	550	55	150	150	55

Note: (1) Includes auxiliary generator emissions.

Table D1.2.Alt3-Mit-PD1. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136
Terminal Project Mitigated Alt 3 - Vessels that Comply with Proposed VSRP.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.03	0.08	0.99	0.57	0.08
Subtotal	0.03	0.08	0.99	0.57	0.08
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.06	0.12	0.93	0.04	0.03
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.06	0.12	0.93	0.04	0.03

Note: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Without slide valves

Table D1.2.Alt3-Mit-PD2. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 136
Terminal Project Mitigated Alt 3 - Non-Compliant Vessels with the Proposed VSRP.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Without slide valves

Table D1.2.Alt3-Mit-PD3. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.14	0.08	0.01
Subtotal	0.01	0.01	0.14	0.08	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.02	0.03	0.22	0.01	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.02	0.03	0.22	0.01	0.01

(2) Without slide valves

Table D1.2.Alt3-Mit-PD4. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.01	0.01	0.05	0.01	0.01
Subtotal	0.01	0.01	0.05	0.01	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.03	0.03	0.13	0.00	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.03	0.03	0.13	0.00	0.01

Table D1.2.Alt3-Mit-PD5. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.00	0.00
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.01	0.01	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.01	0.04	0.00	0.00

(2) Without slide valves

Table D1.2.Alt3-Mit-PD6. Peak Daily Shifting Emissions for Cargo Vessels within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.Alt3-Mit-PD7. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Vessels that Comply with VSRP.

	Tons (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.04	0.01
Subtotal	0.00	0.00	0.05	0.04	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.16	0.01	0.00

Note: (1) Fuel types assumed for each project year identified in Table D3-A1.1

(2) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

Table D1.2.Alt3-Mit-PD8. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Fair Zone - Berths 136-147 Terminal Project Mitigated Alt 3 - Non-Compliant Vessels within VSRP.

	Tons (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt3-Mit-PD9. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.03	0.01	0.00
Subtotal	0.00	0.00	0.03	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.09	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.09	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt3-Mit-PD10. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.05	0.02	0.00
Subtotal	0.00	0.00	0.05	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.14	0.01	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt3-Mit-PD11. Peak Daily Auxiliary Generator Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.01	0.01	0.00
Subtotal	0.00	0.00	0.01	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.04	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.04	0.00	0.00

Note: (1) Assumes 37/63% residual/diesel fuel usage (PEI Table 2.3).

Table D1.2.Alt3-Mit-PD12. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons Per Year				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.02	0.06	0.71	0.33	0.05
Containerships 3,000 - 5,000 TEU	0.02	0.04	0.57	0.27	0.04
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.04	0.10	1.28	0.60	0.08
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.14	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	0.00	0.01	0.07	0.00	0.00
Subtotal	0.01	0.02	0.21	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Table D1.2.Alt3-Mit-PD13. Peak Daily Auxiliary Generator Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Subtotal	-	-	-	-	-

Table D1.2.Alt3-Mit-PD14. Peak Daily Auxiliary Generator Emissions for Shifted Cargo Vessels during Hoteling - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-

Table D1.2.Alt3-Mit-PD15. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alt 3 - VSRP-Compliant.

	Tons (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	-	-	-	-	-

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3-Mit-PD16. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Fairway Zone - Berths 136-147 Terminal Project - Mitigated Alt 3 - VSRP-Non-Compliant.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3-Mit-PD17. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting the Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.02	0.00
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.02	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.02	0.00

Table D1.2.Alt3-Mit-PD18. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Transiting within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.01	0.00
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.01	0.00

Table D1.2.Alt3-Mit-PD19. Peak Daily Auxiliary Boiler Emissions for Cargo Vessels Docking within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.00	0.00	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.00	0.00	0.00	0.00

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3-Mit-PD20. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Hoteling - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	0.00	0.03	0.09	0.40	0.01
Project Year 2015					
Containerships 8,000 - 9,000 TEU					
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships 3,000 - 5,000 TEU	0.00	0.02	0.05	0.20	0.01
Containerships < 3,000 TEU	0.00	0.02	0.05	0.20	0.01
Subtotal	0.00	0.05	0.14	0.60	0.02

(2) Does not assume use of low-sulfur fuels.

Table D1.2.Alt3-Mit-PD21. Peak Daily Auxiliary Boiler Emissions during Cargo Vessel Shifts - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Mode	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Transit					
Docking					
Hoteling					
Subtotal	-	-	-	-	-

Table D1.2.Alt3-Mit-PD22. Peak Daily Tugboat Emissions for Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons (1)				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal	0.00	0.01	0.07	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.01	0.06	0.00	0.00
Project Year 2025					
Subtotal	0.00	0.01	0.05	0.00	0.00
Project Year 2038					
Subtotal	0.00	0.01	0.04	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt3-Mit-PD23. Peak Daily Auxiliary Generator Emissions for Tugboats during Cargo Vessel Assists - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Containership 3,000 - 5,000 TEU					
Containership < 3,000 TEU					
Subtotal	-	-	-	-	-
Project Year 2007					
Subtotal (1)	0.00	0.00	0.01	0.00	0.00
Project Year 2015					
Subtotal	0.00	0.00	0.01	0.00	0.00
Project Year 2025					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00
Project Year 2038					
Subtotal (1)	0.00	0.00	0.00	0.00	0.00

Note: (1) Assumes 3 tug assists per ship visit for all post-baseline years.

Table D1.2.Alt3-Mit-PD24. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 13
Terminal Project Mitigated Alt 3 - Vessels that Comply with VSRP + Slide Valves

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU					
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.12	0.66	0.04	0.01
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.12	0.66	0.04	0.01

Notes: (1) Assumes 25/50/95% VSRP compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt3-Mit-PD25. Peak Daily Cargo Vessel Emissions within the POLA Fairway Zone - Berths 13
Terminal Project Mitigated Alt 3 - Non-Compliant Vessels within VSRP + Slide Valves.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2010					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	-	-	-	-	-
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU	-	-	-	-	-
Subtotal	-	-	-	-	-

Note: (1) Assumes 75/50/05% VSRP non-compliance rates for years 2003/2007/post-2007.

(2) Fuel types assumed for each project year identified in Table D3-A1.1

Table D1.2.Alt3-Mit-PD26. Peak Daily Cargo Vessel Emissions within the POLA Precautionary Area - Berths 136-147 Terminal Project - Mitigated Alt 3 + Slide Valves.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.03	0.16	0.01	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.03	0.16	0.01	0.00

Table D1.2.Alt3-Mit-PD27. Peak Daily Cargo Vessel Emissions for Transit within the POLA Breakwater - Berths 136-147 Terminal Project - Mitigated Alt 3 + Slide Valves.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.01	0.03	0.10	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.01	0.03	0.10	0.00	0.00

Table D1.2.Alt3-Mit-PD28. Peak Daily Cargo Vessel Emissions for Docking Activities - Berths 136-147 Terminal Project - Mitigated Alt 3 + Slide Valves.

	Tons				
Project Scenario/Vessel Type	ROG	CO	NOx	SOx	PM10
Project Year 2015					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2025					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00
Project Year 2038					
Containerships 8,000 - 9,000 TEU	-	-	-	-	-
Containerships 5,000 - 6,000 TEU	0.00	0.01	0.03	0.00	0.00
Containerships 3,000 - 5,000 TEU	-	-	-	-	-
Containerships < 3,000 TEU					
Subtotal	0.00	0.01	0.03	0.00	0.00

Table D1.2.Alt3-Mit-PD29. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Tons				
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	0.03	0.08	1.04	0.62	0.09
Ships - Precautionary Area Transit (1)	0.01	0.02	0.17	0.11	0.01
Ships - Harbor Transit (1)	0.01	0.01	0.10	0.05	0.01
Ships - Docking (1)	0.00	0.00	0.03	0.01	0.00
Ships - Hoteling Aux. Sources	0.04	0.13	1.37	1.00	0.09
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.07	0.00	0.00
Subtotal	0.10	0.26	2.79	1.78	0.21
Project Year 2015					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.01	0.07	0.34	0.61	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.06	0.00	0.00
Subtotal	0.05	0.30	1.79	0.72	0.05
Project Year 2025					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.04	0.28	1.57	0.70	0.05
Project Year 2038					
Ships - Fairway Transit (1)	0.02	0.13	0.83	0.05	0.02
Ships - Precautionary Area Transit (1)	0.01	0.04	0.25	0.03	0.01
Ships - Harbor Transit (1)	0.01	0.04	0.24	0.02	0.01
Ships - Docking (1)	0.00	0.01	0.07	0.01	0.00
Ships - Hoteling Aux. Sources	0.00	0.05	0.14	0.60	0.02
Tugboats - Cargo Vessel Assist (1)	0.00	0.01	0.05	0.00	0.00
Subtotal	0.04	0.28	1.57	0.70	0.05

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt3-Mit-PD30. Peak Daily Vessel Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Pounds Per Peak Day				
Project Scenario/Emission Source	ROG	CO	NOx	SOx	PM10
Year 2003 Baseline					
Ships - Fairway Transit (1)	-	-	-	-	-
Ships - Precautionary Area Transit (1)	-	-	-	-	-
Ships - Harbor Transit (1)	-	-	-	-	-
Ships - Docking (1)	-	-	-	-	-
Ships - Hoteling Aux. Sources	-	-	-	-	-
Tugboats - Cargo Vessel Assist (1)	-	-	-	-	-
Subtotal	-	-	-	-	-
Project Year 2007					
Ships - Fairway Transit (1)	68	160	2,076	1,230	174
Ships - Precautionary Area Transit (1)	13	31	349	219	28
Ships - Harbor Transit (1)	22	28	204	93	19
Ships - Docking (1)	8	8	57	22	6
Ships - Hoteling Aux. Sources	78	267	2,747	1,996	187
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6
Subtotal	192	517	5,579	3,561	420
Project Year 2015					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	20	135	684	1,222	42
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5
Subtotal	96	594	3,578	1,434	108
Project Year 2025					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5
Subtotal	84	561	3,145	1,409	99
Project Year 2038					
Ships - Fairway Transit (1)	34	260	1,658	94	35
Ships - Precautionary Area Transit (1)	12	78	493	58	11
Ships - Harbor Transit (1)	19	77	482	47	12
Ships - Docking (1)	6	21	133	12	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4
Subtotal	84	561	3,134	1,409	99

Note: (1) Includes auxiliary power emissions.

Table D1.2.Alt3-Mit-PD31. Ship Visit and Throughput Data - Berths 136-147 Terminal Project - Mitigated Alt 3.

Project Scenario/Ship Type	Peak Daily Ship Visits	ax TEU Move Peak Day (1)	Peak Daily TEU Moves	Hoteling Time/ Visit (Hours) (2)
Baseline - Year 2003				
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU	1	2,992	2,992	24.0
Subtotal	2		5,984	
Project Year 2007				
Containerships 5,000 - 6,000 TEU	1	3,740	3,740	24.0
Containerships 3,000 - 5,000 TEU	1	2,992	2,992	24.0
Containerships < 3,000 TEU		2,992		
Subtotal	2		6,732	
Project Year 2015				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	2,945	24.0
Subtotal	3		11,781	
Project Year 2025				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	2,945	24.0
Subtotal	3		11,781	
Project Year 2038				
Containerships 8,000 - 9,000 TEU		5,890		
Containerships 5,000 - 6,000 TEU	1	4,909	4,909	24.0
Containerships 3,000 - 5,000 TEU	1	3,927	3,927	24.0
Containerships < 3,000 TEU	1	3,927	2,945	24.0
Subtotal	3		11,781	

Notes: (1) Assumes that 4 cranes would service <3,000 and 3-5,000 TEU vessels @ 1600 lifts/day = 2992 TEUs/day, 5 cranes would service 5-6,000 TEU vessels @ 2000 lifts/day = 3740 TEUs/day, and 6 cranes would service 8-9,000 TEU vessels @ 2400 lifts/day = 4488 TEUs/day (TraPac 2006) during 16 hours of service. Beginning in year 2015, crane service time increases to 21 hours/day and 4-, 5-, and 6- crane production = 3,927, 4,909, and 5,890 TEUs/day.

West Basin Container Terminal Daily Trips

Table D1.2.Alt3-Mit-PD32. ADT Estimates - Berths 136-147 - Mitigated Alt 3.

Alternative/Project Year	Truck Trips		
	Peak Daily	ADT	Peak Daily (1)
2003 - Baseline	1,197,589	3,281	4,492
2007	1,488,659	4,079	5,584
2015	1,291,247	3,538	4,843
2025	1,456,293	3,990	5,462
2038	1,456,293	3,990	5,462

(1) = Peak Daily trips/ 266.6 days.

Table D1.2.Alt3-Mit-PD34. Peak Daily Truck Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Location/Project Scenario - Mode	Pounds per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
On-Terminal (1)						
Year 2003 - Idling	97	228	535	3	16	15
Year 2003 - Driving	106	241	386	3	39	36
Subtotal - Year 2003	204	469	921	6	55	51
Year 2007 - Idling	32	106	362	0	4	4
Year 2007 - Driving	100	203	392	0	29	27
Subtotal - Year 2007	133	309	754	1	33	30
Year 2015 - Idling	19	80	341	0	0	0
Year 2015 - Driving	10	21	36	0	1	1
Subtotal - Year 2015	29	102	377	0	1	1
Year 2025 - Idling	22	91	385	0	0	0
Year 2025 - Driving	11	24	40	0	1	1
Subtotal - Year 2025	33	115	425	0	1	1
Year 2038 - Idling	22	94	385	0	0	0
Year 2038 - Driving	11	24	39	0	1	1
Subtotal - Year 2038	33	118	425	0	1	1
Off-Terminal						
Year 2003 - Idling	52	122	287	2	8	8
Year 2003 - Driving	876	3,480	7,918	53	524	482
Subtotal - Year 2003	929	3,602	8,205	55	533	490
Year 2007 - Idling	39	127	434	0	5	4
Year 2007 - Driving	769	2,580	7,997	8	314	289
Subtotal - Year 2007	808	2,707	8,431	8	319	294
Year 2015 - Idling	23	97	410	0	0	0
Year 2015 - Driving	189	651	1,327	12	40	37
Subtotal - Year 2015	212	747	1,737	12	40	37
Year 2025 - Idling	26	109	462	0	0	0
Year 2025 - Driving	193	663	1,351	12	41	38
Subtotal - Year 2025	218	772	1,813	12	41	38
Year 2038 - Idling	26	112	462	0	0	0
Year 2038 - Driving	199	655	1,378	12	38	35
Subtotal - Year 2038	225	767	1,840	12	38	35
Year 2003	1,132	4,071	9,126	61	588	541
Year 2007	941	3,016	9,185	9	352	324
Year 2015	241	849	2,114	12	41	38
Year 2025	251	887	2,238	13	42	39
Year 2038	258	885	2,265	13	39	36

Notes: (1) On-terminal driving emissions calculated with 10 mph emission factors.

Table D1.2.Alt3-Mit-PD35. Road Dust Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.32	13.91
Year 2007	102.33	17.29
Year 2010	70.02	11.83
Year 2015	78.97	13.35
Year 2038	78.97	13.35
Off-Terminal		
Year 2003 - Baseline	114.80	19.40
Year 2007	142.71	24.12
Year 2010	208.39	35.22
Year 2015	213.23	36.04
Year 2038	213.23	36.04
Combined On/Off-Terminal		
Year 2003 - Baseline	197.13	33.31
Year 2007	245.04	41.41
Year 2010	278.40	47.05
Year 2015	292.20	49.38
Year 2038	292.20	49.38

Notes: (1) 47.05 % freeway travel and 52.95% surface street travel

Table D1.2.Alt3-Mit-PD36. Brake and Tire Wear Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	0.51	0.22
Year 2007	0.63	0.27
Year 2010	0.43	0.18
Year 2015	0.49	0.21
Year 2038	0.49	0.21
Off-Terminal		
Year 2003 - Baseline	16.00	6.86
Year 2007	19.89	8.53
Year 2010	29.04	12.46
Year 2015	29.72	12.75
Year 2038	29.72	12.75
Combined On/Off-Terminal		
Year 2003 - Baseline	16.51	7.08
Year 2007	20.52	8.80
Year 2010	29.47	12.64
Year 2015	30.20	12.96
Year 2038	30.20	12.96

Table D1.2.Alt3-Mit-PD37. Total Non-Combustive Truck Generated PM Emissions for the Berths 136-147 Terminal Project - Mitigated Alt 3

Activity	Daily Emissions (Pounds)	
	PM10	PM2.5
On-Terminal		
Year 2003 - Baseline	82.83	14.13
Year 2007	102.96	17.56
Year 2010	70.45	12.02
Year 2015	79.45	13.55
Year 2038	79.45	13.55
Off-Terminal		
Year 2003 - Baseline	130.81	26.27
Year 2007	162.60	32.65
Year 2010	237.43	47.68
Year 2015	242.95	48.79
Year 2038	242.95	48.79
Combined On/Off-Terminal		
Year 2003 - Baseline	214	40
Year 2007	266	50
Year 2010	308	60
Year 2015	322	62
Year 2038	322	62

Table D1.2.Alt3-Mit-PD38. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Alt 3 - Year 2007

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Yard Locomotive - Switching	-	-	-	-	-
Subtotal	-	-	-	-	-
Berths 136-147/Inbound					
Hostler	-	-	-	-	-
Top Picks	-	-	-	-	-
Line Haul Locomotive - Road Haul	-	-	-	-	-
Line Haul Locomotive - Notch 1	-	-	-	-	-
Subtotal	-	-	-	-	-
Carson or LA Railyards/Outbound					
Hostler	0.00	0.02	0.05	0.00	0.00
Top Picks	0.00	0.01	0.02	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.02	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.02	0.00	0.00
Subtotal	0.03	0.08	0.39	0.03	0.02
Carson or LA Railyards/Inbound					
Hostler	0.00	0.01	0.02	0.00	0.00
Top Picks	0.00	0.00	0.01	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.29	0.03	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.32	0.03	0.01
Total Tons Per Year	0.05	0.14	0.72	0.06	0.03

Table D1.2.Alt3-Mit-PD39. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Alt 3 -Year 2015

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.27	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.06	0.28	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.12	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.13	0.00	0.00
Total Tons Per Year	0.06	0.17	0.82	0.00	0.02

Table D1.2.Alt3-Mit-PD40. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Alt 3 - Year 2025

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.09	0.25	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.02	0.05	0.23	0.00	0.01
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.07	0.24	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.12	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.11	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.11	0.00	0.00
Total Tons Per Year	0.06	0.22	0.72	0.00	0.02

Table D1.2.Alt3-Mit-PD41. Peak Daily Train and Rail Yard Cargo Handling Equipment Emissions
Berths 136-147 Terminal Project - Mitigated Alt 3 -Year 2038

	Tons				
ICTF/Train Direction/Source Activity	ROG	CO	NOx	SOx	PM10
Berths 136-147/Outbound					
Hostler	0.00	0.02	0.00	0.00	0.00
Top Picks	0.00	0.01	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.02	0.09	0.22	0.00	0.01
Berths 136-147/Inbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.05	0.21	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Subtotal	0.02	0.07	0.21	0.00	0.01
Carson or LA Railyards/Outbound					
Hostler	0.00	0.01	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.01	0.00	0.00
Yard Locomotive - Switching	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.04	0.10	0.00	0.00
Carson or LA Railyards/Inbound					
Hostler	0.00	0.00	0.00	0.00	0.00
Top Picks	0.00	0.00	0.00	0.00	0.00
Line Haul Locomotive - Road Haul	0.01	0.02	0.09	0.00	0.00
Line Haul Locomotive - Notch 1	0.00	0.00	0.00	0.00	0.00
Subtotal	0.01	0.03	0.10	0.00	0.00
Total Tons Per Year	0.05	0.22	0.63	0.00	0.02

Table D1.2.Alt3-Mit-PD42. Summary of Peak Daily Train and Rail Yard Cargo Handling Equipment Mitig Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3

	Tons				
Project Scenario/Source Activity	ROG	CO	NOx	SOx	PM10
Baseline Year 2003					
ICTF Equipment	0.01	0.03	0.10	0.00	0.01
Trains	0.05	0.10	0.87	0.06	0.03
Subtotal	0.06	0.14	0.97	0.06	0.03
Project Year 2007					
ICTF Equipment	0.01	0.03	0.10	0.00	0.00
Trains	0.04	0.10	0.62	0.06	0.02
Subtotal	0.05	0.14	0.72	0.06	0.03
Project Year 2015					
ICTF Equipment	0.00	0.01	0.00	0.00	0.00
Trains	0.06	0.16	0.82	0.00	0.02
Subtotal	0.06	0.17	0.82	0.00	0.02
Project Year 2025					
ICTF Equipment	0.01	0.06	0.01	0.00	0.00
Trains	0.05	0.16	0.71	0.00	0.02
Subtotal	0.06	0.22	0.72	0.00	0.02
Project Year 2038					
ICTF Equipment	0.01	0.06	0.01	0.00	0.00
Trains	0.04	0.16	0.63	0.00	0.01
Subtotal	0.05	0.22	0.63	0.00	0.02

Table D1.2.PP-Mit-PD43. Peak Daily Train Trips - Berths 136-147
Terminal Project - Mitigated Alt 3

Project Scenario/Rail Yard	Peak Daily Round Trips
Year 2003 Baseline	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	2
Year 2007	
To/from Berths 136-147 ICTF	-
To/from Carson/LA Rail Yards	2
Year 2015	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1
Year 2025	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1
Year 2038	
To/from Berths 136-147 ICTF	2
To/from Carson/LA Rail Yards	1

Table D1.2.Alt3-Mit-PD43. Peak Daily Terminal Yard TEU Throughput - Berths 136-147 Terminal Pr

	Peak Daily TEUs				Peak Daily/
Project Year	Wharf	Gate	Total	eak Daily TEU	Peak Daily TEUs
2003	5,984	8,310	14,294	891,976	0.016
2007	6,732	10,330	17,062	1,056,000	0.016
2015	11,781	8,960	20,741	1,491,000	0.014
2025	11,781	10,106	21,887	1,697,000	0.013
2038	11,781	10,106	21,887	1,697,000	0.013

Table D1.2.Alt3-Mit-PD44. Terminal Equipment Peak Daily Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3

Project Scenario/Equipment Horsepower		Peak Daily Emissions (Tons)					
		ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2003							
Terminal Equipment - 121-175 Hp		0.15	0.63	1.70	0.02	0.10	0.09
Terminal Equipment - 176-250 Hp		0.10	0.29	1.51	0.02	0.05	0.05
Terminal Equipment - 250-500 Hp		0.02	0.06	0.30	0.00	0.01	0.01
Subtotal		0.27	0.98	3.50	0.05	0.16	0.15
Project Year 2007							
Terminal Equipment - 121-175 Hp		0.18	0.77	1.86	0.00	0.09	0.08
Terminal Equipment - 176-250 Hp		0.15	0.42	1.88	0.00	0.08	0.07
Terminal Equipment - 250-500 Hp		0.02	0.07	0.32	0.00	0.01	0.01
Subtotal		0.35	1.27	4.05	0.00	0.17	0.16
Project Year 2015							
Terminal Equipment - 121-175 Hp		0.08	0.85	0.08	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.08	0.39	0.10	0.00	0.00	0.00
Terminal Equipment - 250-500 Hp		0.01	0.07	0.02	0.00	0.00	0.00
Subtotal		0.17	1.31	0.20	0.00	0.01	0.01
Project Year 2025							
Terminal Equipment - 121-175 Hp		0.03	0.87	0.09	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.03	0.38	0.10	0.00	0.01	0.00
Terminal Equipment - 250-500 Hp		0.01	0.07	0.02	0.00	0.00	0.00
Subtotal		0.07	1.32	0.21	0.00	0.01	0.01
Project Year 2038							
Terminal Equipment - 121-175 Hp		0.03	0.87	0.09	0.00	0.00	0.00
Terminal Equipment - 176-250 Hp		0.03	0.38	0.10	0.00	0.01	0.00
Terminal Equipment - 250-500 Hp		0.01	0.07	0.02	0.00	0.00	0.00
Subtotal		0.07	1.32	0.21	0.00	0.01	0.01

Table D1.2.Alt3-Mit-PD45. Peak Daily Operational Emissions - Berths 136-147 Terminal Project - Mitigated Alt 3.

	Pounds Per Peak Day					
Project Scenario/Source Type	ROG	CO	NOx	SOx	PM10	PM2.5
Project Year 2007						
Ships - Fairway Transit (1)	68	160	2,076	1,230	174	163
Ships - Precautionary Area Transit (1)	13	31	349	219	28	27
Ships - Harbor Transit (1)	22	28	204	93	19	18
Ships - Docking (1)	8	8	57	22	6	5
Ships - Hoteling Aux. Sources	78	267	2,747	1,996	187	175
Tugboats - Cargo Vessel Assist (1)	5	24	147	0	6	6
Terminal Equipment	695	2,536	8,104	5	349	321
On-road Trucks	941	3,016	9,185	9	617	374
Trains	89	208	1,245	111	47	43
Railyard Equipment	17	67	193	0	9	8
Commuting	10	140	18	0	15	14
Pier A Railyard	4	7	54	1	1	1
Project Year 2007 Total	1,949	6,492	24,379	3,686	1,458	1,155
Net Change from Existing Conditions	(28)	(443)	1,369	(165)	(148)	(174)
Net Change from NFAB Year 2007	22	75	186	(505)	(39)	(40)
Project Year 2015						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	20	135	684	1,222	42	39
Tugboats - Cargo Vessel Assist (1)	4	24	127	0	5	5
Terminal Equipment	349	2,622	392	6	20	18
On-road Trucks	241	849	2,114	12	349	98
Trains	119	326	1,636	1	43	40
Railyard Equipment	2	24	2	0	0	0
Commuting	12	161	21	0	22	21
Pier A Railyard	2	9	30	0	0	0
Project Year 2015 Total	821	4,585	7,773	1,453	543	278
Net Change from Existing Conditions	(1,157)	(2,350)	(15,237)	(2,397)	(1,064)	(1,051)
Net Change from NFAB Year 2015	17	124	19	0	1	1
Project Year 2025						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	105	0	5	4
Terminal Equipment	131	2,640	414	6	21	19
On-road Trucks	251	887	2,238	13	365	101
Trains	100	326	1,429	1	36	33
Railyard Equipment	11	120	11	0	1	1
Commuting	8	109	14	0	24	22
Pier A Railyard	2	9	6	0	0	0
Project Year 2025 Total	587	4,652	7,256	1,429	546	269
Net Change from Existing Conditions	(1,390)	(2,283)	(15,754)	(2,421)	(1,061)	(1,060)
Net Change from NFAB Year 2025	61	489	446	3	67	20
Project Year 2038 Total						
Ships - Fairway Transit (1)	34	260	1,658	94	35	32
Ships - Precautionary Area Transit (1)	12	78	493	58	11	11
Ships - Harbor Transit (1)	19	77	482	47	12	11
Ships - Docking (1)	6	21	133	12	3	3
Ships - Hoteling Aux. Sources	8	102	273	1,198	34	31
Tugboats - Cargo Vessel Assist (1)	4	24	94	0	4	4
Terminal Equipment	131	2,640	414	6	21	19
On-road Trucks	258	885	2,265	13	362	99
Trains	85	326	1,251	1	30	27
Railyard Equipment	11	120	11	0	1	1
Commuting	4	50	5	0	30	28
Pier A Railyard	2	9	5	0	0	0
Project Year 2038 Total	575	4,591	7,084	1,429	542	266
Net Change from Existing Conditions	(1,402)	(2,344)	(15,926)	(2,421)	(1,065)	(1,063)
Net Change from NFAB Year 2038	62	488	450	3	66	20
SCAQMD Daily Significance Thresholds	55	550	55	150	150	55

Note: (1) Includes auxiliary generator emissions.