

Appendix D

Cost Analysis – Basis for Calculations

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In this appendix, we describe and list the cost components for yard trucks and non yard truck equipment. Reporting costs for compliance with the record keeping and reporting requirements are covered separately from the equipment costs and are listed in Section C.

A. Yard Truck Cost Estimates

There are two cost components associated with yard trucks:

- I. *Incremental Costs Associated with Cleaner Engines:* For yard trucks, this is the cost associated for purchasing yard trucks with on-road certified engines instead of off-road certified engines. We assumed an incremental cost differential of \$1,500 per yard truck. The total number of new yard trucks estimated in a calendar year includes growth in the fleet, replacement for natural turnover (attrition) and replacement for early retirement. It is assumed that this cost component will end in 2011 after which new Tier IV off-road engines become a compliance option with no additional costs.
- II. *Early Retirement:* For yard trucks, this is the cost associated with accelerated turnover (early retirement) of a yard truck prior to replacing with a new yard truck equipped with a cleaner engine. The cost estimates for early equipment retirement are based on the remaining residual value of the old equipment using straight line depreciation.

The cost estimates for yard trucks are shown in Table 1. This table includes the total population of yard trucks, the number and costs for yard trucks subjected to early retirement and the number and costs for yard trucks purchased with a cleaner on-road engine.

Table 1. Yard Trucks: Number of Engines that Need to Comply and Estimated Statewide Costs for Proposed Regulation.

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Port Yard Trucks		1989	2051	2115	2182	2250	2320	2393	2442	2493	2544	2596	2650	2704	2760	2817	2875	2934	
Incremental Costs for on-road engine replacement																			
# of New Purchases (Note 1)		0	0	0	319	480	396	177	194	373	422	345	214	136	215	329	361	363	
Total Incremental Cost for on-road engine		\$0	\$0	\$0	\$478,474	\$719,653	\$594,226	\$266,207	\$290,891	Tier 4 engines = no cost difference in 2012									
Early Retirement-Depreciation																			
age	Amount Depreciated	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
0	\$ 54,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	\$ 49,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	\$ 45,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	\$ 40,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	\$ 36,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	\$ 31,500	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	\$ 27,000	0	0	0	7	86	0	0	0	0	0	0	0	0	0	0	0	0	
7	\$ 22,500	0	0	0	12	50	83	4	6	72	55	0	0	0	0	0	0	0	
8	\$ 18,000	0	0	0	5	107	53	22	70	104	121	80	0	0	0	0	0	0	
9	\$ 13,500	0	0	0	14	20	92	10	4	74	110	123	75	0	0	0	0	0	
10	\$ 9,000	0	0	0	12	29	11	9	1	0	7	10	8	0	0	0	0	0	
11	\$ 4,500	0	0	0	9	9	7	0	0	0	0	0	0	0	0	0	0	0	
12	\$ -	0	0	0	12	11	4	0	0	0	0	0	0	0	0	0	0	0	
Total # Early Retirements		0	0	0	81	312	250	45	82	250	294	214	83	0	0	0	0	0	
Early retirement costs		\$1,216,199 \$5,948,725 \$4,193,767 \$698,472 \$1,471,422 \$4,493,298 \$4,976,988 \$3,201,918 \$1,083,030 \$0 \$0 \$0 \$0 \$0 \$0																	
Port Yard Truck Cost Total		\$1,694,673 \$6,668,378 \$4,787,993 \$964,678 \$1,762,313 \$4,493,298 \$4,976,988 \$3,201,918 \$1,083,030 \$0 \$0 \$0 \$0 \$0 \$0																	
Rail Yard Trucks		288	306	326	346	368	392	417	448	481	517	556	597	642	690	741	797	856	
Incremental Costs for on-road engine replacement																			
# of New Purchases (Note 1)		0	0	0	54	62	58	61	97	110	96	88	95	110	117	131	149	162	
Incremental Cost for on-road engine		\$81,034 \$93,564 \$86,711 \$91,290 \$145,252 Tier 4 engines = no cost difference in 2012																	
Early Retirement-Depreciation																			
age	Amount Depreciated	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
0	\$54,000	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1	\$47,250	0	0	0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	
2	\$40,500	0	0	0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	
3	\$33,750	0	0	0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	
4	\$27,000	0	0	0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	
5	\$20,250	0	0	0	1.4	0.0	0.0	0.00	0.00	0.00	0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	
6	\$13,500	0	0	0	0.8	10.7	0.0	0.00	0.00	0.00	0.00	0	0.0	0.0	0.0	0.0	0.0	0.0	
7	\$6,750	0	0	0	0.4	4.2	7.0	0.82	1.34	4.63	5.70	0	0.0	0.0	0.0	0.0	0.0	0.0	
8	\$0	0	0	0	0.2	1.8	2.1	0.87	6.37	10.40	3.72	4	0.0	0.0	0.0	0.0	0.0	0.0	
Total # Early Retirements		3	17	9	2	8	15	9	4	0	0	0	0	0	0	0	0	0	
Early retirement costs		\$43,042 \$173,038 \$47,486 \$5,535 \$9,033 \$31,232 \$38,446 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0																	
Rail Yard Truck Cost Total		\$124,077 \$266,602 \$134,197 \$96,825 \$154,285 \$31,232 \$38,446 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0																	
Early retirement costs		\$1,259,241 \$6,121,763 \$4,241,253 \$704,006 \$1,480,455 \$4,524,531 \$5,015,435 \$3,201,918 \$1,083,030 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0																	
Incremental Cost for on-road engine		\$559,509 \$813,217 \$680,936 \$357,497 \$436,143 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0																	
Combined		\$1,818,750 \$6,934,980 \$4,922,189 \$1,061,503 \$1,916,598 \$4,524,531 \$5,015,435 \$3,201,918 \$1,083,030 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0																	

Note: # of new purchases includes new yard trucks added to the fleet due to growth and new yard trucks added due to replacement of yard trucks at the end of their life (not required by the regulation) and replacement for early retirement.

B. Cost Estimates for Non Yard Truck Equipment-Cranes, Excavators, Forklifts, Container Handling Equipment, Sweeper/Scrubbers and Tractors/Loaders/Backhoes

There are four cost components associated with these cargo handling equipment categories. Based on the proposed regulation, the applicability of each cost component may be different for specific categories. For compliance with the regulation, the applicable cost components have been estimated for each equipment category.

- I. *VDECS for in-use equipment (Non-Yard Truck In-use Pre 2007 Model Year Phase-in Compliance Cost):* This is capital investment and recurring costs for purchase and installation of VDECS on in-use pre-2007 MY engines, as required by the regulation. This cost component includes the capital cost for purchase and installation of VDECS, any additional fuel costs and the recurring yearly maintenance/replacement costs. Table 2 lists the percentage of equipment requiring retrofitting, the type of retrofit, average cost to purchase and install the retrofit device per piece of equipment, the cost of emulsified fuel, if required, and maintenance/replacement costs for DPF retrofitted equipment. The following calculation was used to determine the cost to retrofit in-use equipment:

$$\text{Cost} = [(\# \text{ of equipment to retrofit}) \times (\% \text{ affected}) \times (\text{average retrofit cost})] + [(\# \text{ of engines requiring yearly maintenance/replacement}) \times (\% \text{ affected}) \times (\text{average maintenance/replacement per year})] + [(\# \text{ of engines requiring fuel costs}) \times (\text{average fuel cost per year})]$$

For cranes, it was assumed that 91 percent of pre-2007 cranes would require retrofit with an average cost of \$17,520 per crane with a yearly maintenance/replacement cost of \$3,020. The number of cranes affected is broken down into the number requiring retrofitting and the number requiring yearly maintenance/replacement (see Table 5). The number of equipment requiring DPF maintenance/replacement in a given calendar year is the sum of all equipment retrofitted between 2007 and the given calendar year.

For forklifts, it was assumed that 100 percent of pre-2007 forklifts would require retrofit with an average of \$6,000 per forklift with a yearly maintenance and replacement cost of \$1,100. The number of forklifts affected is broken down into the number requiring retrofitting and the number requiring yearly maintenance/replacement (see Table 7). The number of equipment requiring DPF maintenance/replacement in a given calendar year is the sum of all equipment retrofitted between 2007 and the given calendar year.

For container handling equipment, it was assumed that all pre-2003 equipment would be retrofitted with a DOC. The 2003 through 2006 model year container handling equipment is expected to use a Level 2 DOC/emulsified fuel system

adding an additional fuel cost for emulsified diesel. Table 3 lists the number of container handling equipment that will use DOCs with emulsified fuel. Table 7 lists the statewide costs for container handling equipment.

For excavators, sweeper/scrubbers and tractor/loader/backhoe categories, it was assumed that 100 percent of pre-2007 equipment would require retrofit with a DOC, with an average of \$2,269 per piece of equipment (see Tables 6, 9 and 10).

Table 2. Cost Assumptions for VDECS Purchase, installation, Maintenance and Replacement.

Equipment Type	% affected	Control device	Average Cost	Emulsified Fuel for Level 2 DOC	DPF Maintenance and replacement
Crane	91%	Passive DPF	\$17,520		\$3,020
Excavator	100.0%	DOC	\$2,269		
Forklift	100.0%	Active DPF	\$6,000		\$1,100
Container Handling Equip	100.0%	DOC or DOC w/ Emulsified Diesel	\$2,269	\$1,925	
Sweeper/Scrubber	100.0%	DOC	\$2,269		
Tractor/Loader/Backhoe	100.0%	DOC	\$2,269		

- II. *Incremental Costs Associated with new engines with added VDECS:* This is capital investment costs for purchase and installation of VDECS on new 2007 and later MY engines. This cost component includes the capital cost for purchase and installation of VDECS as listed as the average cost in Table 2. The total number of new equipment estimated in a calendar year includes growth in the fleet, replacement for natural turnover (attrition) and replacement for early retirement. It is assumed that this cost component will end in 2012 when new Tier IV off-road engines with no additional aftertreatment costs become a compliance option.
- III. *Early Retirement:* This includes the number of pieces requiring early retirement and the cost associated with accelerated turnover (early retirement) of an engine to a cleaner engine. The cost of early equipment retirement is the lost residual value of the old equipment based on straight line depreciation.
- IV. *Early new engine replacement Costs (Repower):* This cost component is associated with cranes only. It includes the cost of repowering with a new cleaner engine instead of replacing the piece of equipment. ARB staff assumed that engine repower was available for pre 1996 cranes if the crane was less than 21 years old in the phase-in calendar year. Cranes older than

21 years would require replacement and newer engines would be retrofitted with a DPF.

C. Reporting costs for compliance with the record keeping and reporting requirements

Reporting costs include expenditures for recordkeeping and reporting. Reporting costs for compliance with the record keeping and reporting requirements in the proposed regulation was assumed to be \$10,000 for initial implementation of a record keeping system, in 2007, and \$500 per terminal or business per year in subsequent years (2008-2020). Reporting costs are listed in Table 11.

Table 3. Number of Non Yard Truck Equipment that Need to Comply with the Proposed Regulation.

Port	Equipment	In-Use pre-2007 Phase in Compliance Counts								Cargo Handling equipment using DOC/Emulsified Fuel (Phase in starting 2010) Model year 2003 to 2006 Tier 2 & 3 engines						
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
Port	Crane	2.3	12.5	24.7	70.7	72.9	66.8	37.8	0.0	0.0						
	Excavator	0.0	0.3	3.0	5.4	5.0	4.6	2.5	0.0	0.0						
	Forklift	0.0	2.5	24.7	94.6	91.1	85.8	57.9	0.0	0.0						
	Material Handling Equip	0.0	4.2	52.9	102.6	93.4	85.6	52.7	0.0	0.0	57.23	55.85	54.26	52.67	0.00	
	Other General Industrial Equip	0.0	0.4	0.2	1.0	4.2	7.0	4.3	0.0	0.0						
	Sweeper/Scrubber	0.0	0.3	2.9	6.0	5.6	5.2	3.2	0.0	0.0						
	Tractor/Loader/Backhoe	0.0	0.5	14.7	19.9	16.5	13.2	6.1	0.0	0.0						
	Port Total:	2.3	20.7	123.0	300.2	288.7	268.2	164.5	0.0	0.0	57.23	55.85	54.26	52.67	0.00	
Rail	Crane	0.0	1.2	4.4	14.9	15.4	14.4	7.9	0.0	0.0						
	Forklift	0.0	1.0	2.4	4.1	4.0	3.9	1.4	0.0	0.0						
	Material Handling Equip	0.0	1.1	2.3	4.8	4.5	4.2	2.7	0.0	0.0	2.89	2.83	2.77	2.72	0.00	
	Other General Industrial Equip	0.0	0.0	0.0	0.1	0.5	0.9	0.6	0.0	0.0						
	Sweeper/Scrubber	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.0	0.0						
	Tractor/Loader/Backhoe	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.0	0.0						
	Rail Total:	0.0	3.4	9.2	24.4	24.8	23.8	13.0	0.0	0.0	2.89	2.83	2.77	2.72	0.00	
	Port & Rail Total:	2.3	24.0	132.2	324.6	313.4	292.1	177.5	0.0	0.0	2.89	2.83	2.77	2.72	0.00	
New (2007+) Purchase Counts																
Port	Equipment	2007	2008	2009	2010	2011	2012	2013	2014	2015	Tier 4 engines=no cost differential after 2011					
	Crane	27	28	29	33	14										
	Excavator	2	2	2	2	2										
	Forklift	37	34	27	27	27										
	Material Handling Equip	66	68	74	84	68										
	Other General Industrial Equip	5	6	6	6	5										
	Sweeper/Scrubber	4	4	4	4	3										
	Tractor/Loader/Backhoe	10	12	14	15	24										
	Port Total:	152	154	157	171	143										
Rail	Crane	10	10	9	9	7										
	Forklift	1	3	3	2	2										
	Material Handling Equip	4	7	6	5	5										
	Other General Industrial Equip	1	1	1	1	1										
	Sweeper/Scrubber	0	0	0	0	0										
	Tractor/Loader/Backhoe	0	0	0	0	0										
	Rail Total:	17	21	19	18	15										
	Port & Rail Total:	169	175	176	188	158										
Number of equipment subject to Early retirement																
Port	Equipment	2007	2008	2009	2010	2011										
	Crane	1.1	1.1	1.0	0.6	0.0										
	Excavator	0.0	0.3	0.1	0.0	0.0										
	Forklift	0.0	2.5	0.8	0.1	0.0										
	Material Handling Equip	0.0	4.2	1.8	0.4	0.0										
	Other General Industrial Equip	0.0	0.2	0.1	0.0	0.0										
	Sweeper/Scrubber	0.0	0.3	0.1	0.0	0.0										
	Tractor/Loader/Backhoe	0.0	0.5	0.2	0.1	0.0										
	Yard Tractor															
	Port Total:	1.1	9.0	4.1	1.4	0.0										
Rail	Crane	0.0	0.0	0.0	0.0	0.0										
	Forklift	0.0	1.0	0.6	0.2	0.0										
	Material Handling Equip	0.0	1.1	0.4	0.1	0.0										
	Other General Industrial Equip	0.0	0.0	0.0	0.0	0.0										
	Sweeper/Scrubber	0.0	0.0	0.0	0.0	0.0										
	Tractor/Loader/Backhoe	0.0	0.0	0.0	0.0	0.0										
	Yard Tractor															
	Rail Total:	0.0	2.2	1.0	0.3	0.0										
	Port & Rail Total:	1.1	11.2	5.1	1.7	0.0										
Number of equipment subject to Early engine repower																
	Equipment	2007	2008	2009	2010	2011										
	Crane	1.2	11.4	8.8	6.7	4.3										
	Excavator															
	Forklift															
	Material Handling Equip															
	Other General Industrial Equip															
	Sweeper/Scrubber															
	Tractor/Loader/Backhoe															
	Yard Tractor															
	Port Total:	1.2	11.4	8.8	6.7	4.3										
	Crane	0.0	1.2	0.6	0.2	0.0										
	Forklift															
	Material Handling Equip															
	Other General Industrial Equip															
	Sweeper/Scrubber															
	Tractor/Loader/Backhoe															
	Yard Tractor															
	Rail Total:	0.0	1.2	0.6	0.2	0.0										
	Port & Rail Total:	1.2	12.6	9.5	6.8	4.3										

Note: # of new purchases includes new equipment added to the fleet due to growth, added due to replacement of equipment at the end of their life (not required by the regulation) and replacement for early retirement.

Table 4. Estimated Statewide Costs for Non Yard Truck Equipment.

		In-Use pre-2007 Phase in Compliance Costs													
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Port	Equipment														
	Crane	\$ 44,021	\$ 240,145	\$ 503,564	\$ 1,433,699	\$ 1,669,441	\$ 1,756,177	\$ 1,396,157	\$ 792,553	\$ 792,553	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69
	Excavator	\$ -	\$ 690	\$ 6,727	\$ 12,228	\$ 11,300	\$ 10,420	\$ 5,773	\$ -	\$ 1,086,971					
	Forklift	\$ -	\$ 17,124	\$ 171,578	\$ 671,068	\$ 727,523	\$ 769,044	\$ 650,304	\$ 303,132	\$ 303,132	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97
	Material Handling Equip	\$ -	\$ 9,503	\$ 120,075	\$ 343,049	\$ 429,689	\$ 516,350	\$ 543,034	\$ 423,533	\$ 2,134,138	\$ 423,532.59	\$ 423,532.59	\$ 423,532.59	\$ 423,532.59	\$ 423,532.59
	Other General Industrial Equip	\$ -	\$ 897	\$ 394	\$ 2,254	\$ 3,953	\$ 15,823	\$ 9,762	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Sweeper/Scrubber	\$ -	\$ 665	\$ 6,487	\$ 13,692	\$ 12,732	\$ 11,868	\$ 7,336	\$ -	\$ 210,910					
	Tractor/Loader/Backhoe	\$ -	\$ 1,160	\$ 33,265	\$ 45,119	\$ 37,364	\$ 29,989	\$ 13,854	\$ -	\$ 650,386					
	Port Total:	\$ 44,021	\$ 270,175	\$ 842,090	\$ 2,521,111	\$ 2,897,613	\$ 3,109,671	\$ 2,626,239	\$ 1,519,217	\$ 5,178,088	\$ 1,519,217.25	\$ 1,519,217.25	\$ 1,519,217.25	\$ 1,519,217.25	\$ 1,519,217.25
Rail															
	Crane	\$ -	\$ 21,931	\$ 85,511	\$ 294,949	\$ 344,195	\$ 368,748	\$ 287,177	\$ 160,313	\$ 160,313	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55
	Forklift	\$ -	\$ 7,175	\$ 17,330	\$ 31,299	\$ 33,913	\$ 36,247	\$ 22,686	\$ 14,318	\$ 14,318	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11
	Material Handling Equip	\$ -	\$ 2,568	\$ 5,128	\$ 10,832	\$ 10,133	\$ 9,630	\$ 6,170	\$ -	\$ 1,950,325					
	Other General Industrial Equip	\$ -	\$ 38	\$ 15	\$ 217	\$ 1,069	\$ 1,964	\$ 1,394	\$ -	\$ -					
	Sweeper/Scrubber	\$ -	\$ 10	\$ 204	\$ 567	\$ 532	\$ 496	\$ 348	\$ -	\$ 9,171					
	Tractor/Loader/Backhoe	\$ -	\$ 10	\$ 204	\$ 567	\$ 532	\$ 496	\$ 348	\$ -	\$ 13,247					
	Rail Total:	\$ -	\$ 31,731	\$ 108,393	\$ 338,432	\$ 390,374	\$ 417,600	\$ 318,125	\$ 174,631	\$ 2,147,374	\$ 174,630.67	\$ 174,630.67	\$ 174,630.67	\$ 174,630.67	\$ 174,630.67
	Port & Rail Total:	\$ 44,021	\$ 301,907	\$ 950,483	\$ 2,859,543	\$ 3,287,987	\$ 3,527,271	\$ 2,944,364	\$ 1,693,848	\$ 7,325,462	\$ 1,693,847.91	\$ 1,693,847.91	\$ 1,693,847.91	\$ 1,693,847.91	\$ 1,693,847.91
		New (2007+) Purchase Costs difference					Tier 4 engines = no cost difference								
Port	Equipment	2007	2008	2009	2010	2011	2012	2013	2014	2015					
	Crane	\$ 430,677	\$ 442,659	\$ 470,618	\$ 519,933	\$ 226,784									
	Excavator	\$ 4,791	\$ 4,634	\$ 4,276	\$ 4,322	\$ 4,606									
	Forklift	\$ 224,202	\$ 205,259	\$ 164,021	\$ 164,461	\$ 162,932									
	Material Handling Equip	\$ 150,604	\$ 154,361	\$ 168,720	\$ 189,672	\$ 153,228									
	Other General Industrial Equip	\$ 12,304	\$ 12,894	\$ 12,752	\$ 13,481	\$ 10,545									
	Sweeper/Scrubber	\$ 9,228	\$ 9,671	\$ 9,564	\$ 10,110	\$ 7,909									
	Tractor/Loader/Backhoe	\$ 22,624	\$ 27,745	\$ 31,901	\$ 34,075	\$ 53,487									
	Port Total:	\$ 854,428	\$ 857,422	\$ 861,852	\$ 936,054	\$ 619,491									
Rail															
	Crane	\$ 165,493	\$ 158,589	\$ 143,984	\$ 149,849	\$ 106,421									
	Forklift	\$ 8,327	\$ 18,094	\$ 20,204	\$ 14,797	\$ 13,588									
	Material Handling Equip	\$ 10,090	\$ 15,868	\$ 13,290	\$ 10,821	\$ 11,297									
	Other General Industrial Equip	\$ 1,196	\$ 1,261	\$ 1,348	\$ 1,460	\$ 1,858									
	Sweeper/Scrubber	\$ 299	\$ 303	\$ 335	\$ 364	\$ 470									
	Tractor/Loader/Backhoe	\$ 299	\$ 303	\$ 335	\$ 364	\$ 470									
	Rail Total:	\$ 185,703	\$ 194,418	\$ 179,495	\$ 177,654	\$ 134,103									
	Port & Rail Total:	\$ 1,040,132	\$ 1,051,840	\$ 1,041,347	\$ 1,113,709	\$ 753,594									
		Early retirement residual Costs difference													
Port	Equipment	2007	2008	2009	2010	2011									
	Crane	\$ 133,971	\$ 127,976	\$ 116,262	\$ 84,724	\$ -									
	Excavator	\$ -	\$ 10,698	\$ 2,382	\$ 260	\$ -									
	Forklift	\$ -	\$ -	\$ -	\$ -	\$ -									
	Material Handling Equip	\$ -	\$ 161,001	\$ 33,165	\$ 4,045	\$ -									
	Other General Industrial Equip	\$ -	\$ -	\$ -	\$ -	\$ -									
	Sweeper/Scrubber	\$ -	\$ 1,547	\$ 345	\$ 38	\$ -									
	Tractor/Loader/Backhoe	\$ -	\$ 6,229	\$ 1,535	\$ 315	\$ -									
	Port Total:	\$ 133,971	\$ 307,450	\$ 153,689	\$ 89,382	\$ -									
Rail															
	Crane	\$ -	\$ -	\$ -	\$ -	\$ -									
	Forklift	\$ -	\$ -	\$ -	\$ -	\$ -									
	Material Handling Equip	\$ -	\$ 70,864	\$ 23,888	\$ 4,502	\$ -									
	Other General Industrial Equip	\$ -	\$ -	\$ -	\$ -	\$ -									
	Sweeper/Scrubber	\$ -	\$ 25	\$ 6	\$ 1	\$ -									
	Tractor/Loader/Backhoe	\$ -	\$ 37	\$ 9	\$ 1	\$ -									
	Rail Total:	\$ -	\$ 70,926	\$ 23,903	\$ 4,504	\$ -									
	Port & Rail Total:	\$ 133,971	\$ 378,376	\$ 177,591	\$ 93,886	\$ -									
		Early new engine replacement Costs													
Port	Equipment	2007	2008	2009	2010	2011									
	Crane	\$ 48,780	\$ 456,633	\$ 353,901	\$ 266,132	\$ 172,933									
	Excavator	\$ -	\$ -	\$ -	\$ -	\$ -									
	Forklift	\$ -	\$ -	\$ -	\$ -	\$ -									
	Material Handling Equip	\$ -	\$ -	\$ -	\$ -	\$ -									
	Other General Industrial Equip	\$ -	\$ -	\$ -	\$ -	\$ -									
	Sweeper/Scrubber	\$ -	\$ -	\$ -	\$ -	\$ -									
	Tractor/Loader/Backhoe	\$ -	\$ -	\$ -	\$ -	\$ -									
	Port Total:	\$ 48,780	\$ 456,633	\$ 353,901	\$ 266,132	\$ 172,933									
Rail															
	Crane	\$ -	\$ 46,808	\$ 25,591	\$ 7,731	\$ -									
	Forklift	\$ -	\$ -	\$ -	\$ -	\$ -									
	Material Handling Equip	\$ -	\$ -	\$ -	\$ -	\$ -									
	Other General Industrial Equip	\$ -	\$ -	\$ -	\$ -	\$ -									
	Sweeper/Scrubber	\$ -	\$ -	\$ -	\$ -	\$ -									
	Tractor/Loader/Backhoe	\$ -	\$ -	\$ -	\$ -	\$ -									
	Rail Total:	\$ -	\$ 46,808	\$ 25,591	\$ 7,731	\$ -									
	Port & Rail Total:	\$ 48,780	\$ 503,441	\$ 379,492	\$ 273,863	\$ 172,933									

Table 5. Cranes: Number of Engines that Need to Comply and Estimated Statewide Costs for Proposed Regulation.

Cranes	Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Total Population	390	412	436	462	464	479	496	508	521	537	554	584	592	601
In-Use pre-2007 Phase in Compliance Costs (VDECS in-use equipment pre 2007)															
Port	# of IU equip retrofit	2.35	12.47	24.69	70.69	72.88	66.79	37.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Port	# of IU equip maint	2.35	14.82	39.51	110.20	183.08	249.87	287.63	287.63	287.63	287.63	287.63	287.63	287.63	287.63
Port	Cost	\$ 44,021.06	\$ 240,145.20	\$ 503,564.04	\$ 1,433,699.43	\$ 1,669,441.25	\$ 1,756,177.36	\$ 1,396,157.11	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69
Rail	# of IU equip retrofit	0.00	1.17	4.39	14.92	15.35	14.41	7.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rail	# of IU equip maint	0.00	1.17	5.56	20.48	35.84	50.24	58.18	58.18	58.18	58.18	58.18	58.18	58.18	58.18
Rail	Cost	\$ -	\$ 21,930.57	\$ 85,511.12	\$ 294,949.16	\$ 344,195.24	\$ 368,748.27	\$ 287,177.47	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55
New (2007+) Purchase Costs difference (VDECS New 2007+ Equipment)															
Port	# of new equip retrofit	26.94	27.69	29.44	32.53	14.19									
Port	Cost	\$ 430,676.73	\$ 442,658.72	\$ 470,618.16	\$ 519,933.25	\$ 226,784.23	Tier 4 engines = no cost difference								
Rail	# of new equip retrofit	10.35	9.92	9.01	9.37	6.66									
Rail	Cost	\$ 165,492.65	\$ 158,588.52	\$ 143,983.54	\$ 149,848.75	\$ 106,420.77	Tier 4 engines = no cost difference								
Early retirement residual Costs difference															
Port	# of equip	1.13	1.05	0.95	0.63										
Port	Cost	\$ 133,971.04	\$ 127,975.61	\$ 116,262.12	\$ 84,723.95										
Rail	# of equip	0	0	0	0										
Rail	Cost	\$ -	\$ -	\$ -	\$ -										
Early new engine replacement Costs															
Port	# of equip	1.22	11.42	8.85	6.65	4.32									
Port	Cost	\$ 48,780.49	\$ 456,633.40	\$ 353,901.03	\$ 266,132.14	\$ 172,932.81									
Rail	# of equip	0.00	1.17	0.64	0.19	0.00									
Rail	Cost	\$ -	\$ 46,807.99	\$ 25,591.17	\$ 7,730.82	\$ -									
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Port		\$ 657,449.32	\$ 1,267,412.94	\$ 1,444,345.34	\$ 2,304,488.76	\$ 2,069,158.29	\$ 1,756,177.36	\$ 1,396,157.11	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69
Rail		\$ 165,492.65	\$ 227,327.07	\$ 255,085.84	\$ 452,528.73	\$ 450,616.01	\$ 368,748.27	\$ 287,177.47	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55
Total		\$ 822,941.97	\$ 1,494,740.01	\$ 1,699,431.18	\$ 2,757,017.49	\$ 2,519,774.30	\$ 2,124,925.62	\$ 1,683,334.58	\$ 952,865.24	\$ 952,865.24	\$ 952,865.24	\$ 952,865.24	\$ 952,865.24	\$ 952,865.24	\$ 952,865.24

Note: # of new equipment for retrofits includes new equipment added to the fleet due to growth, added due to replacement of at the end of their life (not required by the regulation) and replacement for early retirement.

Table 6. Excavators: Number of Engines that Need to Comply and Estimated Statewide Costs for Proposed Regulation.

Excavator		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Equipment														
	Total Population	29	29	29	29	30	30	30	31	31	31	32	32	32	32
In-Use pre-2007 Phase in Compliance Costs (VDECS in-use equipment pre 2007)															
Port	# of IU equip retrofit	0.00	0.30	2.96	5.39	4.98	4.59	2.54	0.00	12.31	0	0	0	0	0
Port	Cost	\$ -	\$ 690.10	\$ 6,727.20	\$ 12,228.41	\$ 11,300.14	\$ 10,419.77	\$ 5,772.57	\$ -	\$ 1,086,970.63	\$ -	\$ -	\$ -	\$ -	\$ -
Rail	# of IU equip retrofit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0
Rail	Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New (2007+) Purchase Costs difference (VDECs New 2007+ Equipment) Tier 4 engines = no cost difference															
Port	# of equip	2.11	2.13	1.88	1.90	2.03									
Port	Cost	\$ 4,790.61	\$ 4,833.53	\$ 4,275.79	\$ 4,322.29	\$ 4,605.65									
Rail	# of equip														
Rail	Cost														
Early retirement residual Costs difference															
Port	# of equip	0.00	0.30	0.14	0.04										
Port	Cost	\$ -	\$ 10,698.21	\$ 2,382.00	\$ 260.43										
Rail	# of equip														
Rail	Cost														
Early new engine replacement Costs															
No early new engine replacement costs															
Port		\$ 4,790.61	\$ 16,221.84	\$ 13,384.99	\$ 16,811.12	\$ 15,905.79	\$ 10,419.77	\$ 5,772.57	\$ -	\$ 1,086,970.63	\$ -	\$ -	\$ -	\$ -	\$ -
Rail		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total		\$ 4,790.61	\$ 16,221.84	\$ 13,384.99	\$ 16,811.12	\$ 15,905.79	\$ 10,419.77	\$ 5,772.57	\$ -	\$ 1,086,970.63	\$ -	\$ -	\$ -	\$ -	\$ -

Note: # of new equipment for VDECS includes new equipment added to the fleet due to growth, added due to replacement of at the end of their life (not required by the regulation) and replacement for early retirement.

Table 7. Forklifts: Number of Engines that Need to Comply and Estimated Statewide Costs for Proposed Regulation.

Forklift		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Equipment		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Population		496	507	519	530	537	545	552	559	567	575	583	591	600	607
In-Use pre-2007 Phase in Compliance Costs (VDECS in-use equipment pre 2007)															
Port	# of IU equip retrofit	0.00	2.50	24.74	94.59	91.09	85.85	57.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Port	# of IU equip maint	0.00	2.50	27.24	121.82	212.91	298.76	356.63	356.63	356.63	356.63	356.63	356.63	356.63	356.63
Port	Cost	\$ -	\$ 17,124.25	\$ 171,577.56	\$ 671,068.37	\$ 727,523.25	\$ 769,043.96	\$ 650,303.60	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97
Rail	# of IU equip retrofit	0.00	1.05	2.40	4.14	4.01	3.85	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rail	# of IU equip maint	0.00	1.05	3.45	7.59	11.60	15.45	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84
Rail	Cost	\$ -	\$ 7,175.22	\$ 17,329.79	\$ 31,298.71	\$ 33,912.54	\$ 36,246.62	\$ 22,686.17	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11
New (2007+) Purchase Costs difference (VDECS New 2007+ Equipment)															
Tier 4 engines = no cost difference after 2011															
Port	# of new equip retrofit	37.37	34.21	27.34	27.41	27.16									
Port	Cost	\$ 224,201.71	\$ 205,258.76	\$ 164,021.16	\$ 164,461.02	\$ 162,932.11									
Rail	# of new equip retrofit	1.39	3.02	3.37	2.47	2.26									
Rail	Cost	\$ 8,327.37	\$ 18,094.48	\$ 20,203.67	\$ 14,797.19	\$ 13,587.89									
Early retirement residual Costs difference															
No Early Retirement Costs															
Early new engine replacement Costs															
No New Engine Replacement Costs															
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Port		\$ 224,201.71	\$ 222,383.01	\$ 335,598.72	\$ 835,529.39	\$ 890,455.37	\$ 769,043.96	\$ 650,303.60	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97
Rail		\$ 8,327.37	\$ 25,269.70	\$ 37,533.46	\$ 46,095.91	\$ 47,500.43	\$ 36,246.62	\$ 22,686.17	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11
total		\$ 232,529.08	\$ 247,652.72	\$ 373,132.17	\$ 881,625.30	\$ 937,955.79	\$ 805,290.58	\$ 672,989.76	\$ 317,450.08	\$ 317,450.08	\$ 317,450.08	\$ 317,450.08	\$ 317,450.08	\$ 317,450.08	\$ 317,450.08

Table 9. Sweeper/Scrubbers: Number of Engines that Need to Comply and Estimated Statewide Costs for Proposed Regulation.

Sweepers and Scrubbers		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Equipment	Total Population	34	37	40	42	44	46	48	50	52	54	56	58	61	63
In-Use pre-2007 Phase in Compliance Costs (VDECS in-use equipment pre 2007)															
Port	# of IU equip retrofit	0.00	0.29	2.86	6.03	5.61	5.23	3.23	0.00	14.80	0.00	0.00	0.00	0.00	0.00
Port	Cost	\$ -	\$ 665.45	\$ 6,486.95	\$ 13,692.47	\$ 12,731.83	\$ 11,867.59	\$ 7,336.31	\$ -	\$ 210,909.63	\$ -	\$ -	\$ -	\$ -	\$ -
Rail	# of IU equip retrofit	0.00	0.00	0.09	0.25	0.23	0.22	0.15	0.00	0.66	0.00	0.00	0.00	0.00	0.00
Rail	Cost	\$ -	\$ 9.58	\$ 204.30	\$ 567.19	\$ 532.20	\$ 495.89	\$ 348.47	\$ -	\$ 9,170.95	\$ -	\$ -	\$ -	\$ -	\$ -
New (2007+) Purchase Costs difference (VDECS New 2007+ Equipment) Tier 4 engines = no cost difference															
Port	# of equip	4.07	4.26	4.22	4.46	3.49									
Port	Cost	\$ 9,227.65	\$ 9,670.69	\$ 9,564.12	\$ 10,110.45	\$ 7,908.85									
Rail	# of equip	0.13	0.13	0.15	0.16	0.21									
Rail	Cost	\$ 298.90	\$ 302.54	\$ 334.76	\$ 363.90	\$ 470.07									
Early retirement residual Costs difference															
Port	# of equip	0.00	0.29	0.13	0.04										
Port	Cost	\$ -	\$ 1,547.42	\$ 344.54	\$ 37.67										
Rail	# of equip	0.00	0.004	0.002	0.001										
Rail	Cost	0.00	25.35	6.12	0.92										
Early new engine replacement Costs															
Port	Cost	\$ 9,227.65	\$ 11,883.56	\$ 16,395.61	\$ 23,840.60	\$ 20,640.69	\$ 11,867.59	\$ 7,336.31	\$ -	\$ 210,909.63	\$ -	\$ -	\$ -	\$ -	\$ -
rail	Cost	\$ 298.90	\$ 337.47	\$ 545.18	\$ 932.01	\$ 1,002.27	\$ 495.89	\$ 348.47	\$ -	\$ 9,170.95	\$ -	\$ -	\$ -	\$ -	\$ -
total	Cost	\$ 9,526.55	\$ 12,221.03	\$ 16,940.79	\$ 24,772.60	\$ 21,642.95	\$ 12,363.48	\$ 7,684.78	\$ -	\$ 220,080.58	\$ -	\$ -	\$ -	\$ -	\$ -

Note: # of new equipment for VDECS includes new equipment added to the fleet due to growth, added due to replacement of at the end of their life (not required by the regulation) and replacement for early retirement.

Table 10. Tractor/Loader/Backhoes: Number of Engines that Need to Comply and Estimated Statewide Costs for Proposed Regulation.

Tractors, Loaders and Backhoes		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Equipment	Total Population	107	114	123	131	141	146	152	158	164	171	177	184	192	199
In-Use pre-2007 Phase in Compliance Costs (VDECs in-use equipment pre 2007)															
Port	# of equip retrofit	0.00	0.51	14.66	19.88	16.47	13.22	6.11	0.00	28.82	0.00	0.00	0.00	0.00	0.00
Port	# of equip maint														
Port	Cost	\$ -	\$ 1,159.60	\$ 33,265.33	\$ 45,118.88	\$ 37,364.30	\$ 29,988.66	\$ 13,854.44	\$ -	\$ 650,385.93	\$ -	\$ -	\$ -	\$ -	\$ -
Rail	# of equip retrofit	0.00	0.00	0.09	0.25	0.23	0.22	0.15	0.00	0.66	0.00	0.00	0.00	0.00	0.00
Rail	# of equip maint														
Rail	Cost	\$ -	\$ 9.58	\$ 204.30	\$ 567.19	\$ 532.20	\$ 495.89	\$ 348.47	\$ -	\$ 13,246.93	\$ -	\$ -	\$ -	\$ -	\$ -
New (2007+) Purchase Costs difference (VDECs New 2007+ Equipment) Tier 4 engines = no cost difference															
Port	# of equip	9.97	12.23	14.06	15.02	23.57									
Port	Cost	\$ 22,624.23	\$ 27,744.65	\$ 31,900.56	\$ 34,074.96	\$ 53,486.99									
Rail	# of equip	0.13	0.13	0.15	0.16	0.21									
Rail	Cost	\$ 298.90	\$ 302.54	\$ 334.76	\$ 363.90	\$ 470.07									
Early retirement residual Costs difference															
Port	# of equip	0.00	0.51	0.19	0.08										
Port	Cost	\$ -	\$ 6,228.55	\$ 1,534.72	\$ 315.16										
Rail	# of equip	0.000	0.004	0.002	0.001										
Rail	Cost	\$ -	\$ 36.62	\$ 8.84	\$ 1.33										
Early new engine replacement Costs															
Port	Cost	\$ 22,624.23	\$ 35,132.80	\$ 66,700.60	\$ 79,509.01	\$ 90,851.29	\$ 29,988.66	\$ 13,854.44	\$ -	\$ 650,385.93	\$ -	\$ -	\$ -	\$ -	\$ -
rail	Cost	\$ 298.90	\$ 348.74	\$ 547.90	\$ 932.41	\$ 1,002.27	\$ 495.89	\$ 348.47	\$ -	\$ 13,246.93	\$ -	\$ -	\$ -	\$ -	\$ -
total	Cost	\$ 22,923.14	\$ 35,481.54	\$ 67,248.51	\$ 80,441.42	\$ 91,853.56	\$ 30,484.55	\$ 14,202.90	\$ -	\$ 663,632.87	\$ -	\$ -	\$ -	\$ -	\$ -

Note: # of new equipment for VDECs includes new equipment added to the fleet due to growth, added due to replacement of at the end of their life (not required by the regulation) and replacement for early retirement.

Table 11. Summary of Estimated Statewide Costs for Proposed Regulation Including Reporting Costs.

Reporting Cost		\$ 1,200,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 1,980,000
Total Cost																	
Port		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		Sum
2004 Counts	Equipment																
248	Crane	\$ 657,449.32	\$ 1,267,412.94	\$ 1,444,345.34	\$ 2,304,488.76	\$ 2,069,158.29	\$ 1,756,177.36	\$ 1,396,157.11	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 792,552.69	\$ 16,443,058
28	Excavator	\$ 4,790.61	\$ 16,221.84	\$ 13,384.99	\$ 16,811.12	\$ 15,905.79	\$ 10,419.77	\$ 5,772.57	\$ -	\$ 1,086,970.63	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,170,277
441	Forklift	\$ 224,201.71	\$ 222,383.01	\$ 335,598.72	\$ 835,529.39	\$ 890,455.37	\$ 769,043.96	\$ 650,303.60	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 303,131.97	\$ 6,049,440
461	Material Handling Equip	\$ 150,603.57	\$ 324,865.44	\$ 321,960.05	\$ 536,765.34	\$ 582,917.27	\$ 516,349.97	\$ 543,033.61	\$ 423,532.59	\$ 2,134,137.55	\$ 423,532.59	\$ 423,532.59	\$ 423,532.59	\$ 423,532.59	\$ 423,532.59	\$ 423,532.59	\$ 7,651,828
27	Sweeper/Scrubber	\$ 9,227.65	\$ 11,883.56	\$ 16,395.61	\$ 23,840.60	\$ 20,640.69	\$ 11,867.59	\$ 7,336.31	\$ -	\$ 210,909.63	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 312,102
92	Tractor/Loader/Backhoe	\$ 22,624.23	\$ 35,132.80	\$ 66,700.60	\$ 79,509.01	\$ 90,851.29	\$ 29,988.66	\$ 13,854.44	\$ -	\$ 650,385.93	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 989,047
1989	Yard Tractor	\$ 1,694,672.87	\$ 6,668,378.13	\$ 4,787,992.60	\$ 964,678.31	\$ 1,762,313.26	\$ 4,500,233.82	\$ 4,976,988.45	\$ 3,201,917.85	\$ 1,083,030.27	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,640,206
3286	Port Total:	\$ 2,763,569.97	\$ 8,546,277.72	\$ 6,986,377.92	\$ 4,761,622.53	\$ 5,432,241.96	\$ 7,594,081.12	\$ 7,593,446.08	\$ 4,721,135.10	\$ 6,261,118.67	\$ 1,519,217.25	\$ 1,519,217.25	\$ 1,519,217.25	\$ 1,519,217.25	\$ 1,519,217.25	\$ 1,519,217.25	\$ 62,255,957
Rail																	
73	Crane	\$ 165,492.65	\$ 227,327.07	\$ 255,085.84	\$ 452,528.73	\$ 450,616.01	\$ 368,748.27	\$ 287,177.47	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 160,312.55	\$ 3,329,164
23	Forklift	\$ 8,327.37	\$ 25,269.70	\$ 37,533.46	\$ 46,095.91	\$ 47,500.43	\$ 36,246.62	\$ 22,686.17	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 14,318.11	\$ 323,886
26	Material Handling Equip	\$ 10,090.04	\$ 89,300.26	\$ 42,306.14	\$ 26,154.42	\$ 21,429.37	\$ 9,629.83	\$ 6,170.32	\$ -	\$ 1,950,325.46	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,155,406
1	Sweeper/Scrubber	\$ 298.90	\$ 337.47	\$ 545.18	\$ 932.01	\$ 1,002.27	\$ 495.89	\$ 348.47	\$ -	\$ 9,170.95	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,131
1	Tractor/Loader/Backhoe	\$ 298.90	\$ 348.74	\$ 547.90	\$ 932.41	\$ 1,002.27	\$ 495.89	\$ 348.47	\$ -	\$ 13,246.93	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,222
288	Yard Tractor	\$ 124,076.82	\$ 266,601.99	\$ 134,196.54	\$ 96,825.03	\$ 154,284.88	\$ 31,232.42	\$ 38,446.34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 845,664
412	Rail Total:	\$ 308,584.69	\$ 609,185.24	\$ 470,215.05	\$ 623,468.51	\$ 675,835.22	\$ 446,848.92	\$ 355,177.23	\$ 174,630.67	\$ 2,147,374.01	\$ 174,630.67	\$ 174,630.67	\$ 174,630.67	\$ 174,630.67	\$ 174,630.67	\$ 174,630.67	\$ 6,684,473
Reporting, Port & Rail Total:		\$ 4,272,154.66	\$ 9,215,462.97	\$ 7,516,592.97	\$ 5,445,091.05	\$ 6,168,077.18	\$ 8,100,930.04	\$ 8,008,623.31	\$ 4,955,765.76	\$ 8,468,492.68	\$ 1,753,847.91	\$ 1,753,847.91	\$ 1,753,847.91	\$ 1,753,847.91	\$ 1,753,847.91	\$ 1,753,847.91	\$ 70,920,430