Port of
LONG BEACH
THE PORT OF CHOICE

AIR EMISSIONS INVENTORY - 2019

September 2020

Prepared by:
STARCREST CONSULTING GROUP, LLC

Port of Long Beach
2019 Air Emissions Inventory

Prepared for:

Port of
LONG BEACH
THE PORT OF CHOICE

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Long Beach, CA

STARCREST CONSULTING GROUP, LLC
ENVIRONMENTAL MANAGEMENT
AIR QUALITY • CLIMATE • SUSTAINABILITY

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Please note that there may be minor inconsistencies, due to rounding, associated with emission estimates, percent contribution, and other calculated numbers between the various sections, tables, and figures of this report. A detailed Methodology Report is available on the Port's website[1]. This 2019 Air Emission Inventory correlates with Version 1 of the Methodology Report. There were no updates to methodology.

EXECUTIVE SUMMARY

2019 Port of Long Beach Air Emissions Inventory Results

The Port of Long Beach 2019 Air Emissions Inventory results and a comparison to the Port's baseline 2005 air emissions inventory are presented in Table ES.1. Greenhouse gas emissions (CO_2e) are shown in metric tons (MT) per year; all other pollutants are shown in tons per year.

Table ES.1: 2005-2019 Air Emissions Comparison by Source Category

	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
2005								
Ocean-going vessels	720	577	605	6,726	6,952	537	236	394,186
Harbor craft	45	41	45	1,107	5	294	70	44,746
Cargo handling equipment	47	44	47	1,289	11	398	65	103,710
Locomotives	43	40	43	1,273	76	179	66	60,579
Heavy-duty vehicles	205	196	205	5,273	37	1,523	318	391,610
Total	**1,060**	**898**	**945**	**15,667**	**7,081**	**2,931**	**755**	**994,832**
2019								
Ocean-going vessels	83	78	62	3,983	209	336	151	291,774
Harbor craft	22	20	22	637	1	458	69	51,698
Cargo handling equipment	4	4	3	274	1	697	29	109,052
Locomotives	21	20	21	592	1	135	33	47,239
Heavy-duty vehicles	7	7	7	1,127	3	172	28	307,104
Total	**138**	**129**	**115**	**6,613**	**214**	**1,799**	**309**	**806,866**
Change between 2005 and 2019 (percent)								
Ocean-going vessels	-88%	-86%	-90%	-41%	-97%	-37%	-36%	-26%
Harbor craft	-52%	-52%	-52%	-42%	-87%	56%	-1%	16%
Cargo handling equipment	-91%	-91%	-94%	-79%	-89%	75%	-55%	5%
Locomotives	-50%	-51%	-50%	-53%	-99%	-24%	-51%	-22%
Heavy-duty vehicles	-96%	-96%	-97%	-79%	-92%	-89%	-91%	-22%
Total	**-87%**	**-86%**	**-88%**	**-58%**	**-97%**	**-39%**	**-59%**	**-19%**

[1] *www.polb.com/environment/air/#emissions-inventory*

Table ES.1 presents the 2019 and 2005 emissions comparison by source category. Reductions were seen in all pollutants when comparing 2019 to 2005, except for CO and CO_2e emissions for harbor craft and CHE. The reductions occurred even with a 14% increase in TEU throughput in 2019 as compared to 2005. Several factors contributed to lower emissions in 2019 compared to 2005. Major highlights by source category include:

- For OGV, the primary reasons for emission reductions are fuel switching, shore power, and Green Flag Program. The International Maritime Organization (IMO) North American Emission Control Areas (ECA) which augmented the CARB OGV Fuel Regulation by extending the compliance zone from 24 nautical miles (nm) to 200 nm from the shore, continued to be in effect. In 2019, all engines for OGV continued to use fuel with 0.1% sulfur or lower and the At-Berth Regulation (i.e., shore power) was also in effect.
- For harbor craft, the emissions in 2019 are lower than 2005 emissions due to the repowers that have occurred in the last few years as required by the CARB Harbor Craft Regulation or funding incentives, removal of older vessels due to attrition, and more efficient operations. The increase in CO is related to an increase in Tier 2 and 3 engines that have higher CO emission rates compared to pre-Tier 2 and increase in activity. There are no CO_2 standards for engines or control measures for harbor craft, therefore, the CO_2e emissions increased along with increased activity.
- For CHE, implementation of CAAP measures and CARB's Cargo Handling Equipment Regulation, along with funding incentives, resulted in replacement of older equipment with cleaner units, retrofits, and repowers, combined with efficiency in operations, led to lower emissions. The increase in CO_2e reflects lack of lower emission standards or emission control measures and increased activity.
- For locomotives, the decreases in fleet-wide emissions from line haul locomotives are due to meeting the terms of the memorandum of understanding (MOU) with CARB, and the replacement of older switching locomotives with new low-emission and ultra-low emission switchers.
- For HDV, the 2012 implementation of the final phase of the Port's Clean Truck Program (CTP) resulted in significant turnover of older trucks to newer and cleaner trucks as compared to 2005.

Table ES.2 summarizes and compares vessel arrivals and containerized cargo throughput in twenty-foot equivalent units (TEU) at POLB in 2005 and 2019. Relative to 2005 levels, containerized cargo throughput is up 14%, while overall containership arrivals to POLB are down 22%. Indicative of the larger vessels calling at POLB, the average number of TEU per vessel call is up 57%.

Table ES.2: 2005-2019 Container Throughput and Vessel Call Comparison

Year	Container Throughput (TEU)	All Arrivals	Containership Arrivals	Average TEU per Call
2005	6,709,818	2,690	1,332	5,037
2019	7,632,032	2,104	967	7,892
Change	**14%**	**-22%**	**-27%**	**57%**

Emissions Metrics

To track operational efficiency improvements and the effectiveness of the emissions reduction strategies and measures, emissions are also estimated in total emissions per unit of cargo handled through the Port. Table ES.3 compares the tons of emissions per 10,000 TEU in 2005 and 2019.

Table ES.3: 2005-2019 Emissions Efficiency Metric Comparison, tons per 10,000 TEU

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2005	1.58	1.34	1.41	23.35	10.55	4.37	1.13	1,483
2019	0.18	0.17	0.15	8.66	0.28	2.36	0.41	1,057
Change (%)	**-89%**	**-87%**	**-89%**	**-63%**	**-97%**	**-46%**	**-64%**	**-29%**

Progress Towards CAAP Goals

Tables ES.4 and ES.5 summarize the air emissions reductions of DPM, NO_x, and SO_x associated with good movement sources and compared to the established CAAP San Pedro Bay (SPB) Emissions Reduction Standards for 2014 and 2023 from the baseline year 2005.

As a result of the implementation of CAAP measures and regulations, 2019 emission reduction levels of DPM, NO_x, and SO_x surpassed the respective 2014 SPB Emission Reduction Standards. Despite a 14% increase in TEU throughput, the emission reductions achieved in 2019 also surpassed the 2023 DPM and SO_x SPB Emission Reduction Standards and is remarkably close to meeting the 2023 NO_x SPB Emission Reduction Standard.

Table ES.4: 2019 Emissions Reductions Compared to San Pedro Bay CAAP

Pollutant	2019 Actual Reductions	2014 Emission Reduction Standard	2023 Emission Reduction Standard
DPM	88%	72%	77%
NO_x	58%	22%	59%
SO_x	97%	93%	93%

Table ES.5: 2005-2019 Emissions Reductions Compared to San Pedro Bay CAAP by Source Category

Category	2005		2019
DPM (tons)			
Ocean-going vessels	605		62
Harbor craft	45		22
Cargo handling equipment	47		3
Locomotives	43		21
Heavy-duty vehicles	205		7
Total	**945**		**115**
Cumulative DPM Emissions Reduction Achieved in 2019			**88%**
CAAP San Pedro Bay DPM Emissions Reduction Standards		**2014**	**72%**
		2023	**77%**
NO_x (tons)			
Ocean-going vessels	6,726		3,983
Harbor craft	1,107		637
Cargo handling equipment	1,289		274
Locomotives	1,273		592
Heavy-duty vehicles	5,273		1,127
Total	**15,667**		**6,612**
Cumulative NO_x Emissions Reduction Achieved in 2019			**58%**
CAAP San Pedro Bay NO_x Emissions Reduction Standards		**2014**	**22%**
		2023	**59%**
SO_x (tons)			
Ocean-going vessels	6,952		209
Harbor craft	5		1
Cargo handling equipment	11		1
Locomotives	76		1
Heavy-duty vehicles	37		3
Total	**7,081**		**214**
Cumulative SO_x Emissions Reduction Achieved in 2019			**97%**
CAAP San Pedro Bay SO_x Emissions Reduction Standards		**2014**	**93%**
		2023	**93%**

SECTION 1 INTRODUCTION

The Port of Long Beach (Port or POLB) annual activity-based emissions inventories serve as the primary tool to track the Port's efforts to reduce air emissions from goods movement-related sources through implementation of measures identified in the San Pedro Bay Ports Clean Air Action Plan (CAAP) and regulations promulgated at the state and federal levels. To quantify the annual air emissions, the Port relies on operational information provided by Port tenants and operators. Development of the annual air emissions estimates is coordinated with a technical working group (TWG) comprised of representatives from the Port, the Port of Los Angeles, and the air regulatory agencies: U.S. Environmental Protection Agency, Region 9 (EPA), California Air Resources Board (CARB), and the South Coast Air Quality Management District (South Coast AQMD). Through collaboration with the TWG, the ports seek the consensus of the air regulatory agencies regarding the methodologies and information used to develop the emissions estimates.

Emissions from the following goods movement-related emission source categories are evaluated:

- Ocean-going vessels (OGV)
- Harbor craft
- Cargo handling equipment (CHE)
- Rail locomotives
- Heavy-duty vehicles (HDV)

Exhaust emissions of the following pollutants, including greenhouse gases, are quantified in the inventory:

- Particulate matter (PM) (10-micron, 2.5-micron)
- Diesel particulate matter (DPM)
- Oxides of nitrogen (NO_x)
- Oxides of sulfur (SO_x)
- Hydrocarbons (HC)
- Carbon monoxide (CO)
- Carbon dioxide equivalent (CO_2e)

Greenhouse gas emissions are presented in units of metric tons (MT) of carbon dioxide equivalents, which weight each gas by its global warming potential (GWP) value relative to CO_2. To normalize these values into a single greenhouse gas value, CO_2e, the GHG emission estimates are multiplied by the following values and summed.[2]

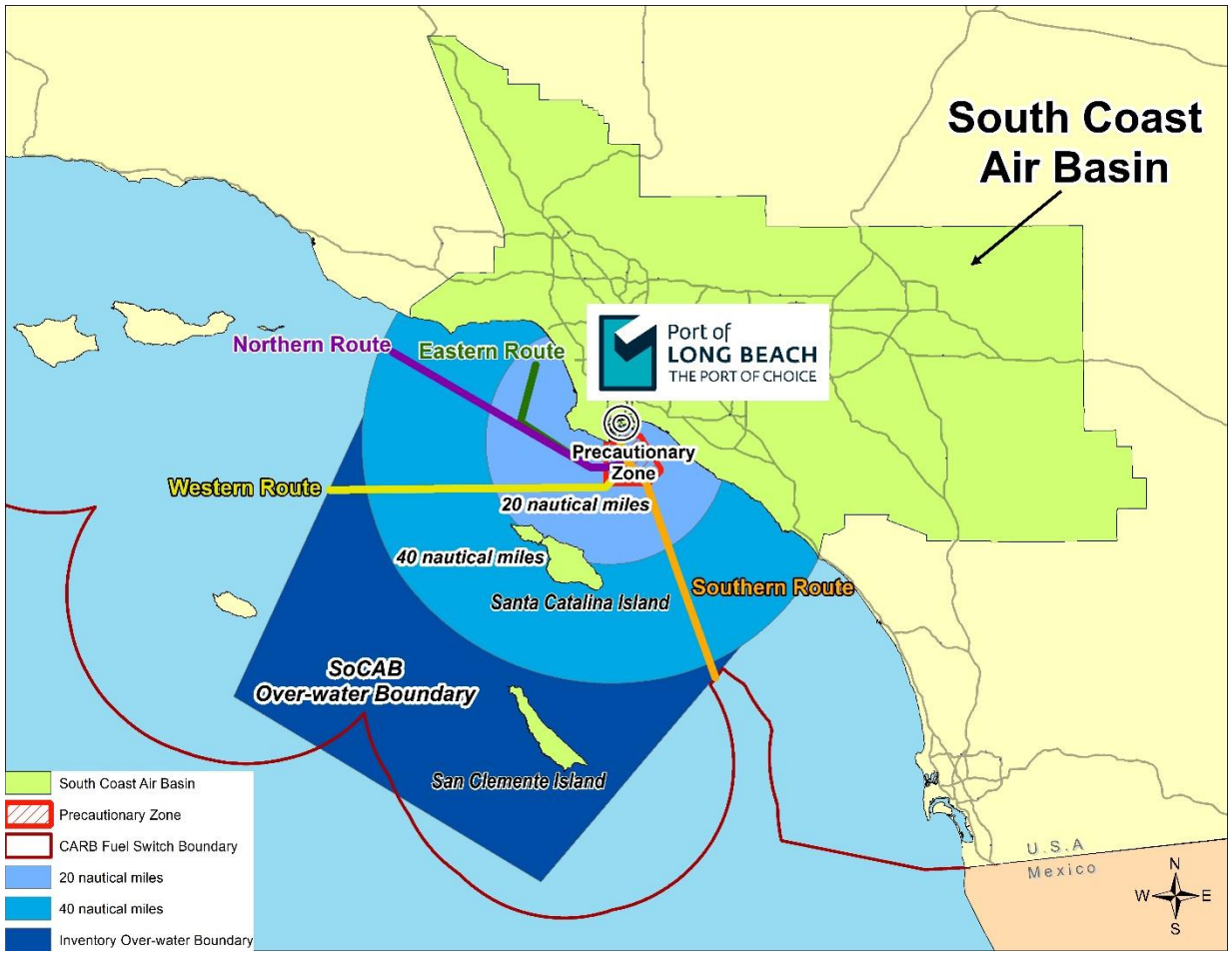
- CO_2 – 1
- CH_4 – 25
- N_2O - 298

[2] U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018*, July 2019.

Geographical Domain

Figure 1.1 shows the Port of Long Beach emissions inventory domain. For OGV and harbor craft, the geographical domain lies within the harbor and up to the South Coast Air Basin (SoCAB) over-water boundary, comprised of an over-water area bounded in the north by the southern Ventura County line at the coast and in the south with the southern Orange county line at the coast. For rail locomotives and on-road trucks, emissions are estimated from the Port to the cargo's first point of rest within the SoCAB or up to the basin boundary, whichever comes first.

Figure 1.1: Port of Long Beach Emissions Inventory Domain



Emissions are estimated for activities within Port terminals and facilities. Figure 1.2 shows the various terminals color coded by terminal type. As an example, container terminals are orange in Figure 1.2.

Figure 1.2: Port of Long Beach Terminals

SECTION 2 OCEAN-GOING VESSELS

Source Description

Vessels are grouped by the type of cargo they transport:

- Auto carrier
- Containership
- General cargo
- Ocean-going tugboat (ATB/ITB)
- Miscellaneous vessel
- Bulk carrier
- Cruise vessel
- Reefer vessel
- Roll-on roll-off vessel (RoRo)
- Tanker

Emissions are estimated from vessel main engines (propulsion), auxiliary engines, and auxiliary boilers (boilers). Based on their emissions contribution, the three predominant vessel types calling at the Port in order are: tankers, containerships, and cruise ships.

Emissions Estimation Methodology

The methodology to estimate 2019 emissions from OGVs is described in Section 2 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[3]. The following improvements were made in estimating 2019 OGV emissions:

- Added Vessel Boarding Program (VBP) data related to vessel operations collected over the past year since the last published inventory.

Geographical Domain

The geographical domain or overwater boundary for OGVs includes the berths and waterways in the Port proper as shown in Figure 1.2 and all vessel movements within the forty nautical mile (nm) arc from Point Fermin and the SoCAB as shown in Figure 1.1. The northern boundary is the Ventura County line and the southern boundary is the Orange County line. It should be noted that although the overwater boundary extends further off the coast to incorporate the South Coast air quality modeling domain, most of the vessel movements occur within the 40 nm arc.

[3] San Pedro Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/#emissions-inventory*

Data and Information Acquisition

The primary sources of data and operational information for OGV were obtained from:

- Marine Exchange of Southern California
- Vessel Speed Reduction Program
- Jacobsen Pilot Service
- IHS Markit Maritime Data
- Port Vessel Boarding Program (VBP)
- Port tanker loading information
- Terminal shore power activity data, including usage of alternative at-berth emission control technology (AMECS)

During the 2019 EI process, uncertainty regarding the vessel maximum speed values that are provided by IHS Markit Maritime Data were identified. The Ports and environmental agencies that are part of the Emissions Inventory Technical Working Group are aware of the issue and are working to understand the issue and decide on a path forward. The goal is consistency in the methodology used to estimate OGV emissions. Because the evaluation is on-going, as of this report date, no change has been made to the use of the IHS speed data for the 2019 OGV emissions estimation.

Emission Estimates

Summaries of the 2019 OGV emissions estimates are presented in Tables 2.1 through 2.3. Due to rounding, values may not add up to totals provided.

Table 2.1: 2019 Ocean-going Vessel Emissions by Vessel Type, tons and metric tons

Vessel Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Auto Carrier	2.9	2.8	2.8	163.6	5.5	15.1	6.9	7,618
Bulk	4.1	3.9	3.6	222.4	9.2	19.3	6.4	12,791
Containership	28.1	26.4	22.4	1,693.6	67.1	129.8	71.7	93,927
Cruise	9.8	9.2	9.1	476.6	19.0	40.3	16.1	26,420
General Cargo	1.0	0.9	0.9	46.6	2.0	4.4	1.8	2,784
Ocean Tugboat (ATB/ITB)	0.2	0.2	0.2	8.9	0.3	0.8	0.3	455
Miscellaneous	4.4	4.2	4.1	227.0	8.8	18.2	6.7	12,159
RoRo	0.7	0.6	0.0	9.9	3.1	1.0	0.5	4,294
Tanker	32.0	30.1	18.8	1,133.9	93.9	107.5	40.2	131,236
Total	**83.3**	**78.4**	**61.8**	**3,982.6**	**208.8**	**336.5**	**150.5**	**291,774**

The emissions for the CARB-certified capture and control system to treat emissions from auxiliary engines are included in the auxiliary engine emissions in Tables 2.2 and 2.3.

Table 2.2: 2019 Ocean-going Vessel Emissions by Emissions Source, tons and metric tons

Engine Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Auxiliary Engine	39.7	37.4	39.7	1,837.5	71.4	173.6	62.8	99,092
Auxiliary Boiler	21.4	20.2	0.0	310.8	96.1	31.5	15.7	134,849
Main Engine	22.1	20.8	22.1	1,834.3	41.3	131.4	72.0	57,832
Total	**83.3**	**78.4**	**61.8**	**3,982.6**	**208.8**	**336.5**	**150.5**	**291,774**

Table 2.3: 2019 Ocean-going Vessel Emissions by Mode, tons and metric tons

Mode	Engine Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Transit	Auxiliary Engine	9.2	8.6	9.2	443.3	16.4	39.6	14.4	22,703
Transit	Auxiliary Boiler	0.5	0.5	0.0	7.8	2.4	0.8	0.4	3,380
Transit	Main Engine	19.6	18.4	19.6	1,656.8	37.9	114.4	57.7	53,086
Total Transit		**29.3**	**27.6**	**28.7**	**2,107.9**	**56.7**	**154.8**	**72.5**	**79,169**
Maneuvering	Auxiliary Engine	2.7	2.6	2.7	129.3	4.9	11.8	4.3	6,779
Maneuvering	Auxiliary Boiler	0.2	0.2	0.0	3.4	1.0	0.3	0.2	1,455
Maneuvering	Main Engine	2.6	2.4	2.6	177.5	3.4	17.0	14.3	4,746
Total Maneuvering		**5.5**	**5.2**	**5.3**	**310.2**	**9.3**	**29.2**	**18.8**	**12,980**
Hotelling at-berth	Auxiliary Engine	17.4	16.4	17.4	818.3	31.6	77.4	27.8	43,984
Hotelling at-berth	Auxiliary Boiler	16.7	15.7	0.0	242.4	75.0	24.6	12.3	105,162
Hotelling at-berth	Main Engine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total Hotelling at-berth		**34.1**	**32.1**	**17.4**	**1,060.7**	**106.6**	**102.0**	**40.1**	**149,146**
Hotelling at-anchorage	Auxiliary Engine	10.4	9.8	10.4	446.5	18.5	44.7	16.3	25,626
Hotelling at-anchorage	Auxiliary Boiler	3.9	3.7	0.0	57.3	17.7	5.8	2.9	24,853
Hotelling at-anchorage	Main Engine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total Hotelling at-anchorage		**14.3**	**13.5**	**10.4**	**503.8**	**36.2**	**50.5**	**19.2**	**50,479**
Total		**83.3**	**78.4**	**61.8**	**3,982.6**	**208.8**	**336.5**	**150.5**	**291,774**

Operational Profiles

Table 2.4 presents the numbers of arrivals, departures, and shifts associated with vessels at the Port in 2019. An arrival is a vessel that arrives from the sea.

Table 2.4: 2019 Total OGV Activities

Vessel Type	Arrival	Departure	Shift	Total
Auto Carrier	178	181	34	393
Bulk	186	192	231	609
Bulk - Heavy Load	2	2	1	5
Bulk - Self Discharging	26	26	0	52
Container - 1000	99	98	13	210
Container - 2000	41	41	9	91
Container - 3000	57	56	23	136
Container - 4000	198	199	37	434
Container - 5000	1	1	0	2
Container - 6000	136	138	2	276
Container - 7000	1	1	0	2
Container - 8000	175	175	10	360
Container - 9000	52	52	8	112
Container - 10000	48	46	1	95
Container - 11000	94	91	8	193
Container - 12000	12	12	0	24
Container - 13000	48	48	10	106
Container - 14000	5	5	1	11
Container - 19000	0	1	1	2
Cruise	254	255	2	511
General Cargo	52	58	36	146
Ocean Tugboat (ATB/ITB)	17	13	35	65
Miscellaneous	3	4	5	12
RoRo	1	1	2	4
Tanker - Chemical	110	105	179	394
Tanker - Handysize	6	8	8	22
Tanker - Panamax	63	51	104	218
Tanker - Aframax	101	100	171	372
Tanker - Suezmax	73	71	114	258
Tanker - VLCC	15	16	44	75
Tanker - ULCC	50	48	153	251
Total	**2,104**	**2,095**	**1,242**	**5,441**

Actual VBP data, if available, is used to estimate emissions. If actual VBP data is not available, defaults are used. Table 2.5 presents the auxiliary engine load defaults by vessel type and by mode used to estimate emissions in 2019. Auxiliary engines are used to provide electricity to equipment on board the vessel.

Table 2.5: 2019 Average Auxiliary Load Defaults by Mode, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Auto Carrier	1,079	2,391	1,284	622
Bulk	313	822	210	253
Bulk - Heavy Load	462	1,223	272	253
Bulk - Self Discharging	305	807	179	305
Container - 1000	957	2,245	720	1,000
Container - 2000	985	2,188	1,039	1,012
Container - 3000	787	2,522	652	682
Container - 4000	1,348	2,327	1,048	1,091
Container - 5000	1,333	4,487	1,107	967
Container - 6000	1,518	2,771	930	1,565
Container - 7000	1,220	2,721	845	1,000
Container - 8000	1,849	3,262	1,289	1,210
Container - 9000	1,476	2,236	1,001	1,044
Container - 10000	1,360	1,925	998	1,096
Container - 11000	1,514	2,535	1,300	1,583
Container - 12000	2,059	2,988	1,725	1,725
Container - 13000	2,018	3,604	1,317	1,015
Container - 14000	1,924	2,820	1,600	1,133
Container - 19000	1,933	2,100	1,400	1,600
General Cargo	421	1,060	572	180
Ocean Tugboat (ATB/ITB)	76	202	99	76
Miscellaneous	793	2,100	467	200
RoRo	132	396	229	132
Tanker - Chemical	611	833	967	402
Tanker - Handysize	559	768	605	560
Tanker - Panamax	596	801	679	379
Tanker - Aframax	576	719	724	474
Tanker - Suezmax	860	1,288	2,509	773
Tanker - VLCC	1,080	1,486	1,171	1,080
Tanker - ULCC	1,035	1,404	1,204	1,020

Auxiliary engine loads are typically higher during maneuvering than at berth or during transit. Diesel electric crude oil tankers have significant auxiliary equipment/load differences than typical motor vessels. Specific auxiliary engine loads, collected from VBP, are used for diesel electric tankers.

For all cruise ships (diesel electric and non-diesel electric) that visited the Port in 2019, the auxiliary engine load defaults are listed in Table 2.6.

Table 2.6: Cruise Ship Average Auxiliary Engine Load Defaults, kW

Passenger Range	Transit	Maneuvering	Berth Hotelling
<1,500	3,994	5,268	3,069
1,500 < 2,000	7,000	9,000	5,613
2,000 < 2,500	11,000	11,350	6,900
2,500 < 3,000	9,781	8,309	6,089
3,000 < 3,500	8,292	10,369	8,292
3,500 < 4,000	9,945	11,411	10,445

Table 2.7 presents the load defaults for the auxiliary boilers for diesel electric cruise ships and tankers. In 2019, all of the cruise vessels that visited the Port were diesel electric.

Table 2.7: 2019 Auxiliary Boiler Load Defaults by Mode for Diesel Electric Vessels, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Cruise - Diesel-Electric	0	0	1,414	0
Tanker - Diesel-Electric	0	145	220	220

Table 2.8 presents the 2019 load defaults for auxiliary boilers by vessel type and by mode. Tankers' boilers produce steam for steam-powered liquid cargo pumps when discharging, operating steam powered inert gas fans, and to heat fuel for pumping. Less steam is needed when liquid cargo is being loaded. Since loading and discharging data was available for the tankers that visited the Port, a lower boiler load of 875 kW was used for tankers known to be loading cargo while at berth, while the higher boiler load listed in the table was used as a default for the tanker calls that were discharging cargo.

Table 2.8: 2019 Auxiliary Boiler Load Defaults by Mode, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Auto Carrier	87	184	314	305
Bulk	35	94	125	125
Bulk - Heavy Load	35	94	125	125
Bulk - Self Discharging	44	103	132	132
Container - 1000	106	213	273	270
Container - 2000	141	282	361	358
Container - 3000	164	309	403	400
Container - 4000	170	333	461	457
Container - 5000	247	473	579	572
Container - 6000	194	543	643	640
Container - 7000	259	470	623	619
Container - 8000	261	456	629	628
Container - 9000	314	512	574	573
Container - 10000	341	432	588	588
Container - 11000	246	423	574	587
Container - 12000	347	597	672	672
Container - 13000	203	346	573	547
Container - 14000	269	429	697	697
Container - 19000	460	726	761	761
General Cargo	56	124	160	160
Ocean Tugboat (ATB/ITB)	0	0	0	0
Miscellaneous	33	65	96	96
RoRo	67	148	259	251
Tanker - Chemical	59	136	568	255
Tanker - Handysize	144	144	2,586	144
Tanker - Panamax	167	351	3,421	451
Tanker - Aframax	179	438	5,030	375
Tanker - Suezmax	144	191	5,843	503
Tanker - VLCC	240	720	6,000	840
Tanker - ULCC	239	675	6,380	788

Vessel hotelling times at-berth, regardless of shore power usage, and at-anchorage during 2019 are shown in Tables 2.9 and 2.10. The miscellaneous vessels and RoRos have high hotelling time due to vessels that are home based in the Port, including ready reserve vessels that use shore power.

Table 2.9: 2019 At-Berth Hotelling Times, hours

Vessel Type	Min Hours	Max Hours	Avg Hours
Auto Carrier	1.4	38.6	12.8
Bulk - General	9.8	191.6	63.7
Bulk - Heavy Load	120.5	151.5	136.0
Bulk - Self Discharging	14.0	150.5	40.0
Container - 1000	6.8	62.8	25.7
Container - 2000	6.9	140.2	50.0
Container - 3000	6.6	70.0	35.3
Container - 4000	0.8	99.6	27.5
Container - 5000	108.1	108.1	108.1
Container - 6000	47.6	123.3	77.8
Container - 7000	85.2	85.2	85.2
Container - 8000	11.0	133.3	69.5
Container - 9000	6.9	119.8	43.6
Container - 10000	61.3	146.8	98.5
Container - 11000	58.9	158.1	93.6
Container - 12000	96.2	159.0	121.3
Container - 13000	33.6	158.8	114.5
Container - 14000	53.4	142.4	100.1
Container - 19000	46.3	46.3	46.3
Cruise	7.3	49.4	12.0
General Cargo	5.0	119.5	33.1
Ocean Tugboat (ATB/ITB)	11.0	70.6	36.3
Miscellaneous	29.3	8,760.0	2,952.2
RoRo	2,368.5	8,759.8	5,815.7
Tanker - Chemical	9.2	181.4	42.5
Tanker - Handysize	19.1	96.3	41.2
Tanker - Panamax	11.0	104.9	41.4
Tanker - Aframax	12.7	121.2	38.7
Tanker - Suezmax	12.5	51.0	25.0
Tanker - VLCC	20.1	49.4	31.5
Tanker - ULCC	13.6	55.8	28.3

Table 2.10: 2019 At-Anchorage Hotelling Times, hours

Vessel Type	Min Hours	Max Hours	Avg Hours	Anchorage Activity Count
Auto Carrier	1.6	39.6	18.5	16
Bulk - General	1.9	330.5	70.0	194
Bulk - Heavy Load	46.0	46.0	46.0	1
Bulk - Self Discharging	0.0	0.0	0.0	0
Container - 1000	2.5	83.7	28.9	13
Container - 2000	2.1	23.3	12.7	2
Container - 3000	12.7	236.2	99.2	18
Container - 4000	7.7	273.4	74.5	32
Container - 5000	0.0	0.0	0.0	0
Container - 6000	22.9	35.3	29.1	2
Container - 7000	0.0	0.0	0.0	0
Container - 8000	0.7	20.0	9.0	9
Container - 9000	7.8	103.8	38.3	7
Container - 10000	23.8	23.8	23.8	1
Container - 11000	0.8	40.8	17.6	8
Container - 12000	0.0	0.0	0.0	0
Container - 13000	1.2	95.6	31.8	9
Container - 14000	0.0	0.0	0.0	0
Container - 19000	0.0	0.0	0.0	0
Cruise	9.7	9.7	9.7	1
General Cargo	1.3	531.3	71.0	25
Ocean Tugboat (ATB/ITB)	2.7	225.5	57.8	19
Miscellaneous	2.7	107.6	55.1	2
RoRo	0.0	0.0	0.0	0
Tanker - Chemical	1.0	558.8	35.5	123
Tanker - Handysize	4.6	40.0	21.7	6
Tanker - Panamax	1.0	1,197.1	91.1	102
Tanker - Aframax	2.7	585.3	76.5	150
Tanker - Suezmax	3.1	606.2	65.9	103
Tanker - VLCC	7.4	250.7	70.9	34
Tanker - ULCC	1.2	453.6	83.3	116
Total				**993**

For this EI, a frequent caller is a vessel that made six or more calls in one calendar year. Table 2.11 shows that 12% of vessels that called the Port in 2019 are frequent callers (i.e. six or more calls/year).

Table 2.11: 2019 Percentage of Frequent Callers

Vessel Type	Frequent Vessels	Total Vessels	Percent Frequent Vessels
Auto Carrier	0	109	0%
Bulk - General	0	165	0%
Bulk - Heavy Load	0	2	0%
Bulk - Self Discharging	2	5	40%
Container - 1000	7	10	70%
Container - 2000	4	6	67%
Container - 3000	4	7	57%
Container - 4000	16	42	38%
Container - 5000	0	1	0%
Container - 6000	11	33	33%
Container - 7000	0	1	0%
Container - 8000	15	39	38%
Container - 9000	2	18	11%
Container - 10000	5	12	42%
Container - 11000	9	18	50%
Container - 12000	0	4	0%
Container - 13000	0	24	0%
Container - 14000	0	3	0%
Container - 19000	0	1	0%
Cruise	4	5	80%
General Cargo	0	40	0%
Ocean Tugboat (ATB/ITB)	1	5	20%
Miscellaneous	0	1	0%
RoRo	0	1	0%
Tanker - Chemical	4	61	7%
Tanker - Handysize	0	2	0%
Tanker - Panamax	0	35	0%
Tanker - Aframax	4	29	14%
Tanker - Suezmax	3	34	9%
Tanker - VLCC	0	13	0%
Tanker - ULCC	0	35	0%
Total	**91**	**761**	
Average			**12%**

Table 2.12 presents the percent of engine tier by vessel type for arrivals/shift at the Port in 2019. In 2019, one containership and five tanker vessels that visited the Port, met IMO's Tier III NO_x emission standards. NO_x emissions for Tier III vessels are 75% cleaner than Tier II vessels.

Table 2.12: 2019 Percent of OGV Activity by Main Engine Tier and Vessel Type

Vessel Type	IMO Tier 0	IMO Tier I	IMO Tier II	IMO Tier III	No Tier	Calls Count
Auto Carrier	15%	79%	6%	0%	0%	183
Bulk - General	0.0%	54%	46%	0%	0%	186
Bulk - Heavy Load	50%	50%	0%	0%	0%	2
Bulk - Self Discharging	15%	35%	50%	0%	0%	26
Container - 1000	26%	70%	3%	0%	1%	99
Container - 2000	24%	76%	0%	0%	0%	41
Container - 3000	14%	2%	84%	0%	0%	57
Container - 4000	16%	83%	1%	0%	0%	198
Container - 5000	100%	0%	0%	0%	0%	1
Container - 6000	0%	99%	1%	0%	0%	136
Container - 7000	0%	100%	0%	0%	0%	1
Container - 8000	0%	47%	53%	0%	0%	175
Container - 9000	0%	21%	79%	0%	0%	52
Container - 10000	0%	69%	31%	0%	0%	48
Container - 11000	0%	45%	55%	0%	0%	94
Container - 12000	0%	50%	50%	0%	0%	12
Container - 13000	0%	37%	63%	0%	0%	48
Container - 14000	0%	0%	60%	40%	0%	6
Container - 19000	0%	0%	100%	0%	0%	1
Cruise	81%	18%	1%	0%	0%	255
General Cargo	2%	63%	35%	0%	0%	54
Ocean Tugboat (ATB/ITB)	0%	88%	12%	0%	0%	20
Miscellaneous	100%	0%	0%	0%	0%	3
RoRo	0%	0%	0%	0%	100%	1
Tanker - Chemical	0%	49%	51%	0%	0%	134
Tanker - Handysize	86%	14%	0%	0%	0%	7
Tanker - Panamax	0%	78%	22%	0%	0%	65
Tanker - Aframax	0%	55%	45%	0%	0%	101
Tanker - Suezmax	3%	81%	15%	1%	0%	73
Tanker - VLCC	0%	47%	53%	0%	0%	15
Tanker - ULCC	0%	26%	64%	10%	0%	50
Total	**15%**	**56%**	**28%**	**0.4%**	**0.1%**	**2,144**

SECTION 3 HARBOR CRAFT

Source Description

Emissions from the following types of diesel-fueled harbor craft were quantified:

- Assist tugboats
- Crew, supply and work boats
- Ferry vessels
- Excursion vessels
- Government vessels
- Harbor tugboats
- Ocean tugboats

Emissions Estimation Methodology

The methodology to estimate emissions from harbor craft is similar to that used in CARB's emissions inventory for commercial harbor craft emissions operating in California.[4] The methodology to estimate 2019 emissions from harbor craft is described in Section 3 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[5].

Geographical Domain

Emissions are estimated for harbor craft operating within the South Coast Air Basin over-water boundary.

Data and Information Acquisition

Harbor craft owners and operators were contacted to obtain key physical and operational parameters, including:

- Type of harbor craft
- Engine count
- Engine horsepower (or kilowatts) for main and auxiliary engines
- Engine model year
- Operating hours in calendar year 2019

[4] *www.polb.com/environment/air/emissions.asp*
[5] San Pedro Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/#emissions-inventory*

Emission Estimates

Table 3.1 summarizes the estimated harbor craft vessel emissions by vessel type and engine type.

Table 3.1: 2019 Harbor Craft Emissions by Vessel and Engine Type, tons and metric tons

Harbor Craft	Engine Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Assist tugboat	Auxiliary	0.5	0.4	0.5	15.2	0.0	13.3	2.2	1,495
	Propulsion	5.0	4.6	5.0	138.2	0.1	102.3	14.5	10,892
Assist tugboat Total		**5.5**	**5.1**	**5.5**	**153.5**	**0.1**	**115.5**	**16.8**	**12,386**
Crew Boat	Auxiliary	0.1	0.1	0.1	2.1	0.0	1.7	0.5	169
	Propulsion	1.7	1.5	1.7	53.1	0.1	38.5	5.9	4,619
Crew boat Total		**1.8**	**1.6**	**1.8**	**55.2**	**0.1**	**40.3**	**6.3**	**4,788**
Excursion	Auxiliary	0.1	0.1	0.1	2.5	0.0	1.7	0.5	171
	Propulsion	0.5	0.5	0.5	17.0	0.0	12.4	1.8	1,338
Excursion Total		**0.6**	**0.6**	**0.6**	**19.5**	**0.0**	**14.1**	**2.3**	**1,509**
Ferry	Auxiliary	0.1	0.1	0.1	3.3	0.0	2.6	0.8	282
	Propulsion	4.0	3.7	4.0	122.4	0.1	95.5	13.4	10,388
Ferry Total		**4.2**	**3.8**	**4.2**	**125.8**	**0.1**	**98.1**	**14.2**	**10,670**
Government	Auxiliary	0.2	0.1	0.2	6.4	0.0	5.4	0.9	614
	Propulsion	1.1	1.0	1.1	44.7	0.0	39.7	5.5	4,356
Government Total		**1.3**	**1.2**	**1.3**	**51.0**	**0.1**	**45.1**	**6.5**	**4,970**
Ocean tugboat Total	Auxiliary	0.2	0.2	0.2	5.4	0.0	4.8	0.8	539
	Propulsion	6.3	5.8	6.3	176.7	0.1	102.9	16.5	12,822
Ocean tugboat Total		**6.5**	**6.0**	**6.5**	**182.1**	**0.2**	**107.6**	**17.3**	**13,361**
Harbor tugboat	Auxiliary	0.2	0.2	0.2	5.2	0.0	4.0	0.8	433
	Propulsion	1.5	1.4	1.5	41.0	0.0	30.3	4.3	3,205
Harbor tugboat Total		**1.7**	**1.6**	**1.7**	**46.2**	**0.0**	**34.3**	**5.2**	**3,638**
Work boat	Auxiliary	0.0	0.0	0.0	0.3	0.0	0.2	0.1	23
	Propulsion	0.1	0.1	0.1	3.6	0.0	3.1	0.4	351
Work boat Total		**0.1**	**0.1**	**0.1**	**3.9**	**0.0**	**3.3**	**0.5**	**375**
Harbor Craft Total		**21.7**	**20.0**	**21.7**	**637.2**	**0.6**	**458.3**	**69.0**	**51,698**

Operational Profiles

Table 3.2 lists the harbor craft engine count by USEPA marine engine emissions standards tier level and engine type in 2019.

Table 3.2: 2019 Harbor Craft Engine Tier Count

Engine Tier	Auxiliary Engine Count	Propulsion Engine Count	Total Engine Count
Unknown	2	0	2
Tier 0	3	4	7
Tier 1	2	12	14
Tier 2	39	120	159
Tier 3	85	30	115
Total	**131**	**166**	**297**

Table 3.3 summarizes the energy consumption (kWh) per engine tier for 2019 harbor craft that operated at the port. The kWh for engines with unknown tier are distributed in the various tiers based on the default model year and/or kilowatts used to estimate emissions of unknowns.

Table 3.3: Harbor Craft Energy Consumption by Engine Tier, kWh and %

Engine Tier	2019 kWh	2019 % of Total
Tier 0	101,183	0.1%
Tier 1	6,186,173	7.9%
Tier 2	52,582,476	67.2%
Tier 3	19,329,496	24.7%
Total	**78,199,327**	**100%**

Tables 3.4 and 3.5 summarize the characteristics of main and auxiliary engines, respectively, by vessel type operating at the Port in 2019. Averages of the model year, horsepower, or operating hours are used as default values when specific data is not available. Defaults were only used for 0.3% of model year values, 0.3% of horsepower values, and 0.7% of operating hours.

A number of companies operate harbor craft in the harbors of both the Ports of Long Beach and Los Angeles. The activity hours for the vessels that are common to both ports reflect work performed during 2019 within the Port of Long Beach harbor only. For harbor vessels that share the work at both Ports in San Pedro Bay, the total hours are divided equally between the two ports.

Table 3.4: 2019 Propulsion Engine Characteristics by Harbor Craft Type

			Propulsion Engines								
Harbor	Vessel	Engine	Model year			Horsepower			Annual Operating Hours		
Craft Type	Count	Count	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tugboat	13	27	1980	2014	2007	600	2,572	2,004	326	2,173	1,340
Crew boat	16	41	2003	2016	2009	290	1,450	618	119	1,902	790
Excursion	8	14	1980	2012	2006	165	500	378	450	2,500	1,293
Ferry	12	26	2008	2015	2010	180	2,680	1,851	588	1,890	1,065
Government	4	8	2009	2016	2012	803	2,012	1,532	929	1,908	1,445
Ocean tugboat	6	12	2004	2012	2008	1,800	3,385	2,168	250	2,151	1,358
Harbor tugboat	15	29	2004	2018	2009	300	1,500	904	61	3,000	661
Work boat	5	9	2008	2015	2011	210	671	477	34	747	365
Total	**79**	**166**									

Table 3.5: 2019 Auxiliary Engine Characteristics by Harbor Craft Type

			Auxiliary Engines								
Harbor	Vessel	Engine	Model year			Horsepower			Annual Operating Hours		
Craft Type	Count	Count	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tugboat	13	28	1980	2017	2010	107	296	184	133	2,664	1,478
Crew boat	16	20	2002	2018	2009	13	107	59	417	2,084	886
Excursion	8	8	1980	2012	2005	43	90	60	800	2,925	1,746
Ferry	12	18	2008	2017	2011	18	120	67	801	2,031	1,089
Government	4	12	2009	2017	2013	15	2012	864	101	3,240	933
Ocean tugboat	6	13	2004	2016	2009	60	339	139	250	2,256	1,169
Harbor tugboat	15	24	2004	2018	2010	15	300	83	10	3,553	656
Work boat	5	8	1979	2015	2004	40	101	70	285	588	421
Total	**79**	**131**									

SECTION 4 CARGO HANDLING EQUIPMENT

Source Description

Cargo handling equipment (CHE) typically operate at Port terminals or railyards to move cargo such as containers, general cargo, and bulk cargo to and from marine vessels, railcars, and on-road trucks. The majority of CHE are composed of off-road equipment not designed to operate on public roadways. This inventory includes CHE powered by engines fueled by diesel, gasoline, propane or electricity.

Emissions Estimation Methodology

The emissions calculation methodology used to estimate CHE emissions is consistent with CARB's latest methodology for estimating emissions from CHE.[6] For the newer diesel on-road engines within a certain horsepower range, the NO_x emission rates were updated based on discussions with CARB. The methodology to estimate 2019 emissions from CHE is described in Section 4 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[7].

Geographical Domain

Emissions are estimated for CHE operating within Port terminals and facilities.

Data and Information Acquisition

The maintenance and/or CHE operating staff of each terminal were contacted to obtain equipment count and activity information on the CHE specific to their terminal or facility operations for the 2019 calendar year.

[6] CARB, Appendix B: Emission Estimation Methodology for Cargo Handling Equipment Operating at Ports and Intermodal Rail Yards in California at *www.arb.ca.gov/regact/2011/cargo11/cargoappb.pdf*, viewed 22 July 2017

[7] San Pedro Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/#emissions-inventory*

Emission Estimates

A summary of CHE emissions by terminal type is presented in Table 4.1.

Table 4.1: 2019 CHE Emissions by Terminal Type, tons and metric tons

Terminal Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Auto	0.0	0.0	0.0	0.0	0.0	0.3	0.0	16
Break-Bulk	0.2	0.1	0.2	7.1	0.0	9.7	0.8	2,575
Container	3.8	3.4	2.6	259.0	1.2	633.9	26.2	104,193
Cruise	0.1	0.1	0.0	1.4	0.0	34.2	0.4	560
Dry Bulk	0.1	0.1	0.1	4.8	0.0	7.7	1.4	516
Liquid	0.0	0.0	0.0	0.5	0.0	1.1	0.1	44
Other	0.0	0.0	0.0	0.7	0.0	10.2	0.2	1,149
Total	**4.2**	**3.7**	**2.9**	**273.5**	**1.3**	**697.1**	**29.2**	**109,052**

Table 4.2 presents the CHE emissions by equipment and engine type. Emissions from boom lifts are included in the miscellaneous propane category. Emissions from rail car movers are included under the miscellaneous diesel category.

Table 4.2: 2019 CHE Emissions by Equipment Type, tons and metric tons

Port Equipment	Engine Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Bulldozer	Diesel	0.0	0.0	0.0	0.9	0.0	0.2	0.1	95
Cone vehicle	Diesel	0.0	0.0	0.0	0.8	0.0	1.3	0.1	121
Crane	Diesel	0.0	0.0	0.0	0.0	0.0	0.1	0.0	14
Excavator	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Forklift	Diesel	0.1	0.1	0.1	6.5	0.0	10.6	0.7	1,786
Forklift	Gasoline	0.0	0.0	0.0	0.4	0.0	5.7	0.1	181
Forklift	Propane	0.1	0.1	0.0	5.4	0.0	36.7	1.7	832
Loader	Diesel	0.1	0.1	0.1	1.8	0.0	3.9	0.5	1,654
Man lift	Diesel	0.0	0.0	0.0	0.3	0.0	0.6	0.0	85
Man lift	Gasoline	0.0	0.0	0.0	0.0	0.0	0.2	0.0	52
Material handler	Diesel	0.0	0.0	0.0	1.7	0.0	0.4	0.1	201
Miscellaneous	Diesel	0.0	0.0	0.0	0.1	0.0	0.1	0.0	12
Rail pusher	Diesel	0.0	0.0	0.0	0.3	0.0	0.4	0.0	102
Hybrid RTG	Diesel	0.0	0.0	0.0	0.3	0.0	1.2	0.1	622
RTG crane	Diesel	0.5	0.5	0.5	70.2	0.1	15.9	4.0	7,268
Side handler	Diesel	0.0	0.0	0.0	2.7	0.0	0.6	0.1	272
Skid steer loader	Diesel	0.0	0.0	0.0	0.2	0.0	0.2	0.0	28
Sweeper	Diesel	0.0	0.0	0.0	0.9	0.0	0.7	0.1	315
Sweeper	Propane	0.0	0.0	0.0	0.1	0.0	0.2	0.0	14
Top handler	Diesel	1.0	0.9	1.0	122.8	0.4	81.0	13.2	37,982
Tractor	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Tractor	Propane	0.0	0.0	0.0	0.5	0.0	17.2	0.3	181
Truck	Diesel	0.1	0.1	0.1	2.8	0.0	1.5	0.3	721
Yard tractor	Diesel	0.8	0.7	0.8	48.0	0.6	119.3	7.2	43,507
Yard tractor	Gasoline	1.2	1.0	0.0	6.7	0.1	399.2	0.6	13,046
Yard tractor	Propane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
Total		**4.2**	**3.7**	**2.9**	**273.5**	**1.3**	**697.1**	**29.2**	**109,052**

Operational Profiles

Table 4.3 is a summary of all the CHE engines by fuel type, including electric equipment. In 2019, there were a total of 1,479 CHE of which 15% are electric, 8% are powered by propane engines, 11% are powered by gasoline engines, and 67% are powered by diesel engines. Further details of the 219 pieces of electric equipment are listed in Table 4.4.

Table 4.3: 2019 CHE Engines by Fuel Type

Equipment	Electric	Propane	Gasoline	Diesel	Total
Forklift	8	102	24	98	232
RTG crane	0	0	0	54	54
Side handler	0	0	0	7	7
Top handler	0	0	0	188	188
Yard tractor	1	2	134	570	707
Sweeper	1	7	0	12	20
Other	208	5	2	55	270
Total	**218**	**116**	**160**	**984**	**1,478**
Percent of Total	**15%**	**8%**	**11%**	**67%**	

Table 4.4: 2019 Electric Equipment Count

Equipment	2019 Electric Count
Automated guided vehicle	72
Automatic stacking crane	47
Crane	6
Electric pallet jack	2
Forklift	8
Man Lift	2
Material handler	1
Ship to shore crane	72
Sweeper	1
Truck	6
Yard tractor	1
Total	**218**

Table 4.5 summarizes the characteristics of fossil fueled (i.e. diesel, gasoline, and propane) CHE data collected for the 2019 calendar year. The average values shown in the following tables are population-weighted and are used as default. For equipment without specific operational information available, default values associated with the specific equipment and engine type are used. Defaults were used for 1% of model year values, 6% of horsepower values, and 1% of operating hour values.

Table 4.5: 2019 Engine Characteristics for Fossil Fueled CHE Operating at the Port

Equipment	Engine Type	Count	Power (hp)			Model Year			Annual Operating Hours		
			Min	Max	Average	Min	Max	Average	Min	Max	Average
Bulldozer	Diesel	1	200	200	200	2004	2004	2004	1,500	1,500	1,500
Cone vehicle	Diesel	5	35	35	35	2016	2016	2016	1,197	3,469	2,363
Crane	Diesel	2	173	334	254	1985	2016	2000	20	298	159
Excavator	Diesel	2	322	371	347	2002	2005	2003	na	na	na
Forklift	Diesel	98	50	220	134	1990	2018	2010	1	5,146	754
Hybrid RTG crane	Diesel	15	250	250	250	2016	2016	2016	1111	1,700	1,449
Loader	Diesel	11	50	420	335	1985	2017	2011	250	1,912	1,386
Man Lift	Diesel	12	62	100	77	2000	2017	2010	2	1,128	304
Material handler	Diesel	2	371	717	544	2005	2008	2006	1,603	1,603	1,603
Miscellaneous	Diesel	2	13	13	13	2010	2010	2010	831	2,119	1,475
Rail pusher	Diesel	3	150	260	202	2013	2013	2013	328	879	597
RTG crane	Diesel	39	515	1,043	733	1998	2013	2005	4	4,033	2,408
Side handler	Diesel	7	205	205	205	2000	2017	2005	5	1,715	559
Skid steer loader	Diesel	2	67	67	67	2011	2015	2013	664	664	664
Sweeper	Diesel	12	75	300	188	2002	2019	2012	38	1,338	395
Top handler	Diesel	188	174	388	337	1979	2019	2011	1	3,574	1,868
Tractor	Diesel	1	59	59	59	2009	2009	2009	80	80	80
Truck	Diesel	12	177	525	317	1998	2018	2009	48	1,706	834
Yard tractor	Diesel	570	135	250	220	2007	2019	2013	4	4,338	1,738
Forklift	Gasoline	24	59	72	64	2002	2016	2012	6	1,202	507
Man Lift	Gasoline	2	82	82	82	2000	2004	2002	42	100	71
Yard tractor	Gasoline	134	335	335	335	2011	2019	2014	21	2,220	1,022
Forklift	Propane	102	45	141	84	1985	2018	2005	4	2,181	570
Sweeper	Propane	7	47	135	88	1982	2016	2005	20	200	66
Tractor	Propane	5	101	101	101	1996	1997	1996	47	1,248	969
Yard tractor	Propane	2	173	173	173	2009	2009	2009	25	98	62
Total		**1,260**									

Table 4.6 is a summary of the emission reduction technologies[8] utilized in cargo handling equipment as retrofits to existing equipment, including diesel particulate filters (DPF) and BlueCAT retrofit for large-spark ignition (LSI) engines. Hybrid equipment and on-road engine counts have been included to the table also.

Table 4.6: 2019 CHE Emission Reduction Technologies by Equipment Type

Equipment	Hybrid Equipment	On-Road Engines	ULSD Fuel	DPF Retrofit	BlueCAT Retrofit
Forklift	0	0	98	36	11
RTG crane	15	0	54	21	0
Side handler	0	0	7	6	0
Top handler	0	0	188	50	0
Yard tractor	0	344	570	0	0
Sweeper	0	0	12	0	0
Other	0	5	55	5	5
Total	**15**	**349**	**984**	**118**	**16**

Table 4.7 summarizes the distribution of diesel-powered CHE equipped with off-road diesel engines by USEPA non-road engine emission standards tier level. The table also includes on-road diesel engines. On-road engines are generally lower in emissions than the off-road engines of the same model year.

Table 4.7: 2019 Count of Diesel-Powered CHE by Type and Engine Emission Standard

Equipment Type	Unknown Tier	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4i	Tier 4f	On-road	Total Diesel
Yard tractor	0	0	0	0	0	1	225	344	570
Forklift	13	4	6	13	17	12	33	0	98
Top handler	22	1	7	27	12	61	58	0	188
Other	12	2	1	4	6	7	18	5	55
RTG crane	1	0	25	0	0	13	15	0	54
Side handler	0	0	2	2	2	0	1	0	7
Sweeper	3	0	1	2	0	0	6	0	12
Total	**51**	**7**	**42**	**48**	**37**	**94**	**356**	**349**	**984**
Percent of Total	**5%**	**1%**	**4%**	**5%**	**4%**	**10%**	**36%**	**35%**	

[8] *www.arb.ca.gov/diesel/verdev/vt/cvt.htm*

Table 4.8 summarizes the energy consumption (kWh) for all of the equipment by engine tier. For diesel equipment, the equipment with higher tier levels (newer equipment) and those with on-road engines are generally used more than older equipment, which contributes to reduced emissions due to cleaner engine standards in newer equipment. In 2019, 77% of the energy consumed was by equipment with Tier 4i, Tier 4f, and on-road engines.

Table 4.8: Equipment Energy Consumption by Engine Type and Diesel Engine Standard, kWh and %

Engine Type	Engine Tier	kWh	% of Total
Diesel	Tier 0	45,117	0.03%
Diesel	Tier 1	7,600,725	6%
Diesel	Tier 2	7,671,966	6%
Diesel	Tier 3	2,565,114	2%
Diesel	Tier 4i	21,983,491	16%
Diesel	Tier 4f	45,695,380	33%
Diesel	Onroad	37,886,508	27%
Gasoline		13,335,965	10%
Propane		1,141,597	1%
Total		**137,925,864**	**100%**

SECTION 5 RAILROAD LOCOMOTIVES

Source Description

Railroad locomotives are used to move trains transporting intermodal (containerized) freight and lesser amounts of dry bulk, liquid bulk, and carload (boxcar) freight to, from, and within the Port. Railroad locomotive activities at the Port consist of two different types of operations: the initiation or termination of long-distance cargo movements, known as line haul, and the short-distance movement of rail cars, such as the assembling and disassembling of trains in and around the Port, known as switching.

Rail operators Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) provide line haul service to and from the Port and operate switching services at their off-port locations. Pacific Harbor Line (PHL) performs most of the switching operations within the Port.

Emissions Estimation Methodology

The methodology used to estimate 2019 emissions from rail locomotives closely follows the methodology as described in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[9].

Geographical Domain

Emissions from railroad locomotives are estimated for movements of cargo by rail locomotives within Port boundaries, directly to or from port-owned properties such as terminals and on-port rail yards, or to and from the SoCAB boundary. The inventory does not include rail movements of cargo that occur solely outside the Port, such as off-port rail yard switching, and movements that neither begin nor end at a Port property, such as east-bound line hauls that initiate in central Los Angeles intermodal yards. Figure 1.1 in Section 1 of this report illustrates the geographical domain.

[9] San Pedro Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/#emissions-inventory*

Data and Information Acquisition

Information from the following general sources was used to estimate emissions associated with Port-related activities of locomotives:

- Previous emissions studies
- Port cargo statistics
- Input from railroad operators
- Published information sources
- California Air Resources Board Memorandum of Understanding (CARB MOU) line-haul fleet compliance data

The Port continues to use the most recent, locally specific data available, including MOU compliance data reflective of actual recent line haul fleet mix characteristics in the SoCAB. In addition, PHL has provided fuel consumption information for each locomotive in service in each calendar year, along with the engine tier levels of the locomotives. Table 5.1 lists the number of locomotives of each tier level that were operated in 2019, and the percentage of fuel used by locomotives in each tier. Discussion of the tiers and a list of tier-specific emission factors are included in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[10].

Table 5.1: PHL Switching Fleet Mix, 2019

Locomotive Tier Level /Power Type	Count	% of Fuel Consumed
Genset	6	7%
Tier 3	0	0%
Tier 3+	18	89%
Tier 4	1	4%
Totals	**25**	**100%**

[10] San Pedro Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/emissions.asp*

Emission Estimates

A summary of estimated emissions from locomotive operations related to the Port is presented in Table 5.2.

Table 5.2: 2019 Locomotive Emissions, tons and metric tons

Activity Component	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Port Emissions								
Switching	0.4	0.4	0.4	26.0	0.0	8.9	1.6	2984
Line Haul	5.4	5.0	5.4	144.1	0.1	31.9	8.0	11,171
On-Port Subtotal	5.8	5.4	5.8	170.1	0.2	40.8	9.6	14,154
Off-Port (Regional) Emissions								
Switching	0.1	0.1	0.1	4.8	0.0	2.1	0.1	739
Line Haul	15.6	14.4	15.6	417.3	0.4	92.4	23.1	32,345
Off-Port Subtotal	15.7	14.4	15.7	422.0	0.4	94.5	23.2	33,084
Total	**21.5**	**19.8**	**21.5**	**592.1**	**0.5**	**135.3**	**32.7**	**47,239**

Operational Profiles

The goods movement rail system in terms of the activities that are carried out by locomotive operators is the same as described in detail in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).

Table 5.3 presents the CARB MOU compliance information submitted annually by BNSF and UP on pre-Tier 0 through Tier 4 locomotive fleet composition, showing a weighted average NO_x emission factor of 5.78 g/bhp-hr.[11] The 2018 reports were used instead of 2019 because of the timing of the inventory data collection phase and of the posting of the compliance reports by CARB. The ultra-low emission locomotives (ULEL) are also included in the table but are not used in developing the line haul emission factors because the ULELs are believed to all be in switching service.

[11] Notes from railroads' MOU compliance submissions:
1. For more information on the U.S. EPA locomotive emission standards please visit. *www.epa.gov/oms/locomotives.htm.*
2. Number of locomotives is the sum of all individual locomotives that visited or operated within the SCAB at any time during 2018.

Table 5.3: CARB MOU Compliance Data, Megawatt-hours (MW-hr) and g NO_x/bhp-hr

Engine Tier	Number of Locomotives	Megawatt-hours (MWh)	%MW-hr by Tier Level	Wt'd Avg NOx (g/bhp-hr)	Tier Contribution to Fleet Average (g/bhp-hr)
BNSF					
Pre-Tier 0	297	1,797	0.7%	13.0	0.08
Tier 0	268	11,118	4.0%	7.8	0.31
Tier 1	1,455	99,606	36%	6.1	2.20
Tier 2	1,507	97,720	35%	4.9	1.74
Tier 3	1,187	53,473	19%	4.5	0.87
Tier 4	251	11,962	4.3%	1.1	0.05
ULEL	0	0	0%	-	-
Total BNSF	**4,965**	**275,676**	**100%**		**5.3**
UP					
Tier not reported	37	343	0.2%	6.3	0.01
Pre-Tier 0	57	639	0.3%	12.7	0.04
Tier 0	1,814	48,707	21.3%	8.5	1.81
Tier 1	2,433	63,855	28%	7.3	2.04
Tier 2	1,582	57,948	25%	5.3	1.34
Tier 3	953	47,062	21%	5.2	1.07
Tier 4	245	8,603	3.8%	1.1	0.04
ULEL	32	1,476	1%	2.8	0.02
Total UP	**7,153**	**228,633**	**100%**		**6.37**
		ULEL Credit Used			0.80
		UP Fleet Average			**5.57**
Both RRs, excluding ULELs and ULEL credits					
Pre-Tier 0	354	2,436	0%	12.9	0.06
Tier 0	2,082	59,825	12%	8.4	1.00
Tier 1	3,925	163,805	33%	6.6	2.14
Tier 2	3,089	155,668	31%	5.0	1.56
Tier 3	2,140	100,535	20%	4.8	0.97
Tier 4	496	20,565	4%	1.1	0.05
Total both	**12,086**	**502,833**	**100%**		**5.78**

Emission factors for particulate matter (PM_{10}), HC, and CO were calculated using the tier-specific emission rates for those pollutants published by USEPA[12] to develop weighted average emission factors using the MWh figures provided in the railroads' submissions. These results are presented in Table 5.4.

Table 5.4: Fleet MW-hr and PM, HC, CO Emission Factors, g/hp-hr

Engine Tier	MWh	% of MWh	EPA Tier-specific			Fleet Composite		
			PM_{10}	HC	CO	PM_{10}	HC	CO
			g/bhp-hr			g/bhp-hr		
Pre-Tier 0	2,436	0%	0.32	0.48	1.28	0.00	0.00	0.01
Tier 0	59,825	12%	0.32	0.48	1.28	0.04	0.06	0.15
Tier 1	163,805	33%	0.32	0.47	1.28	0.10	0.15	0.42
Tier 2	155,668	31%	0.18	0.26	1.28	0.06	0.08	0.40
Tier 3	100,535	20%	0.08	0.13	1.28	0.02	0.03	0.26
Tier 4	20,565	4.09%	0.015	0.04	1.28	0.00	0.00	0.05
Totals	**502,833**	**100%**				**0.22**	**0.32**	**1.28**

Emission factors for $PM_{2.5}$ and DPM were calculated as fractions of PM_{10}, with $PM_{2.5}$ calculated as 94% of PM_{10} consistent with CARB methodology and DPM equal to PM_{10} because all PM emissions from diesel engines are defined as DPM. Rounding of emission factors before and after the conversion resulted in the emission factor values shown. Table 5.5 summarizes the emission factors for line haul locomotives, presented in units of g/bhp-hr.

Table 5.5: Emission Factors for Line Haul Locomotives, g/bhp-hr

	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2	N_2O	CH_4
EF, g/bhp-hr	0.22	0.20	0.22	5.78	0.005	1.28	0.32	489	0.013	0.04

[12] EPA Office of Transportation and Air Quality, "Emission Factors for Locomotives" EPA-420-F-09-025 April 2009.

On-Port Line Haul Activity

As described in the San Pedro Bay Ports Emissions Inventory Methodology Report[13], estimates of the number of trains per year, locomotives per train, and on-port hours per train are multiplied together to calculate total locomotive hours per year. This activity information for 2019 is summarized in Table 5.6.

Table 5.6: 2019 Estimated On-Port Line Haul Locomotive Activity

Activity Measure	Inbound	Outbound	Total
Trains per Year	1,914	1,927	3,841
Locomotives per Train	3	3	N/A
Hours on Port per Trip	1	2.5	N/A
Locomotive Hours per Year	5,742	14,453	20,195

Out-of-Port Line Haul Activity

Table 5.7 lists the estimated totals of travel distance, out-of-port trains per year, out-of-port million gross tons (MMGT), out-of-port MMGT-miles, gallons of fuel used, and horsepower-hours. Fuel consumption is calculated by multiplying gross ton-miles by the average fuel consumption factor of 0.996 gallons per thousand gross ton-miles. Overall horsepower hours are calculated by multiplying the fuel used by the fuel consumption conversion factor of 20.8 hp-hr/gal.

Table 5.7: 2019 Gross Ton-Mile, Fuel Use, and Horsepower-hour Estimate

	Distance miles	Trains per year	MMGT per year	MMGT-miles per year
Alameda Corridor	21	4,062	30	630
Central LA to Air Basin Boundary	84	4,062	30	2,520
Million gross ton-miles				**3,150**
Estimated gallons of fuel (millions)				**3.14**
Estimated million horsepower-hours				**65.3**

[13] San Pedro Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/#emissions-inventory*

SECTION 6 HEAVY-DUTY VEHICLES

Source Description

Heavy-duty vehicles (HDVs), or trucks, are used to move cargo, particularly containerized cargo, to and from the marine terminals. Trucks also transfer containers between terminals and off-port railcar loading facilities. The local activity is often referred to as drayage. In the course of their daily operations, trucks are driven onto and through the terminals, where they deliver and/or pick up cargo. They are also driven on the public roads within the Port boundaries and on the public roads outside the Port.

The majority of trucks that service the Port's terminals are diesel-fueled vehicles. Alternative fuel trucks, primarily those fueled by liquefied natural gas (LNG), made approximately 4% of the terminal calls in 2019, according to an evaluation of the Port's Clean Trucks Program (CTP) activity records and the Port Drayage Truck Registry (PDTR). Vehicles using fuel other than diesel fuel do not emit diesel particulate matter, so the diesel particulate emission estimates presented in this inventory have been adjusted to take the alternative-fueled trucks into account.

Emissions Estimation Methodology

The methodology used to estimate 2019 emissions from HDVs is described in Section 6 of the San Pedro Bay Ports Emissions Inventory Methodology Report[14]. HDV emission estimates are based on estimates of vehicle miles traveled (VMT), average speeds, CARB's on-road vehicle Emission Factors model (EMFAC) and HDV model year information specific to the San Pedro Bay ports. The most recent version of the model, EMFAC2017, reflects CARB's current understanding of motor vehicle travel activities and their associated emission levels.

Geographical Domain

The two major geographical components of truck activities evaluated for this inventory are:

- **On-terminal operations**, which include waiting for terminal entry, transiting the terminal to drop off and/or pick up cargo, and departing the terminals.
- **On-road operations**, consisting of travel on public roads within the SoCAB. This also includes travel on public roads within the Port boundaries and those of the adjacent Port of Los Angeles (POLA). The activity of on-road trucks included within the geographical domain is from the Port to the cargo's first point of rest within SoCAB or up to the basin boundary, whichever comes first.

[14] San Pedro Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/#emissions-inventory*

Data and Information Acquisition

Information regarding the activity of trucks while they are on terminal, such as average times and distances traveled through the terminal, is collected during in-person and/or telephone interviews with terminal personnel. For on-road operations, the volumes (number of trucks), distances, and average speeds on roadway segments between defined intersections are estimated using trip generation and travel demand models that have been developed for these purposes. The trip generation model is used to develop truck trip numbers for container terminals, while the terminal interviews are used to obtain trip counts associated with non-container terminals.

The model year distribution of HDVs operating at the Port is developed using radio frequency identification (RFID) call information gathered at the Port and POLA container terminals and truck/engine model year data from the Port Drayage Truck Registry (PTDR). The RFID call information is only collected at container terminals, so it is assumed for the inventory that trucks calling at other Port terminals have the same general distribution of model years.

Emission Estimates

Tables 6.1 through 6.3 summarize the vehicle miles traveled and emissions associated with overall HDV activity, emissions associated with container terminal activity, and emissions associated with other Port terminals, respectively.

Table 6.1: 2019 HDV Emissions, tons and metric tons

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Terminal	5,237,843	0.3	0.3	0.3	160	0.3	95.9	8.3	35,239
On-Road	169,505,239	6.9	6.6	6.6	967	2.7	75.6	19.4	271,865
Total	**174,743,082**	**7.3**	**6.9**	**7.0**	**1,127**	**3.1**	**171.6**	**27.7**	**307,104**

Table 6.2: 2019 HDV Emissions Associated with Container Terminals, tons and metric tons

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Terminal	5,183,851	0.3	0.3	0.3	158	0.3	94.7	8.2	34,812
On-Road	161,126,653	6.6	6.3	6.3	919	2.6	71.9	18.4	258,426
Total	**166,310,505**	**6.9**	**6.6**	**6.6**	**1,077**	**2.9**	**166.6**	**26.7**	**293,238**

Table 6.3: 2019 HDV Emissions Associated with Non-Container Port Terminals, tons and metric tons

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Terminal	53,992	0	0	0	2	0	1	0	428
On-Road	8,378,586	0.3	0.3	0.3	48	0.1	3.7	1.0	13,438
Total	**8,432,577**	**0.3**	**0.3**	**0.3**	**50**	**0.1**	**4.7**	**1.0**	**13,767**

Operational Profiles

To estimate the 2019 emissions from HDVs, operational profiles were developed for on-terminal truck activity using data and information collected from terminal operators. The on-road truck activity profiles were developed using trip generation and travel demand models to estimate the number of on-road VMT.

The model year distribution of HDVs was determined using RFID information collected at Port terminals to track the number of truck calls, and truck model year information from the PDTR. The distribution of the model years of the trucks that called at the Port and at the Port of Los Angeles terminals during 2019 is presented in Figure 6.1. The call weighted average age of the trucks in 2019 was approximately 7.6 years.

Figure 6.1: 2019 Model Year Distribution of HDV Fleet

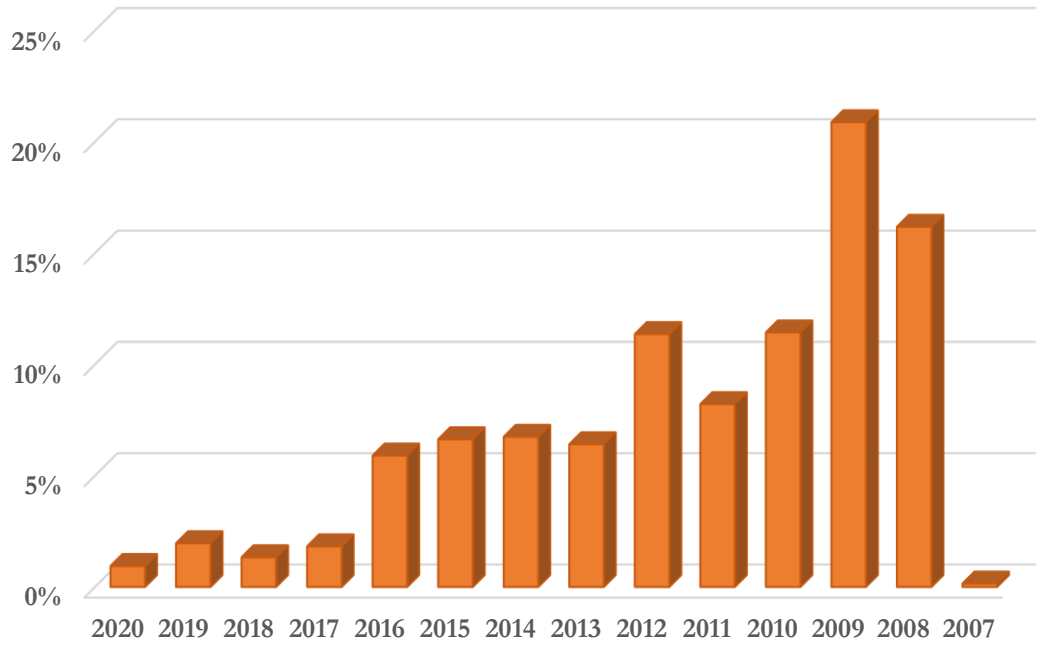


Table 6.4 shows the range and average of reported operating characteristics of on-terminal truck activities at Port container terminals, while Table 6.5 shows the same summary data for non-container terminals and facilities.

Table 6.4: 2019 Summary of Reported Container Terminal Operating Characteristics

	Speed (mph)	Distance (miles)	Gate In (hours)	Unload/Load (hours)	Gate Out (hours)
Maximum	15	3.5	0.28	0.81	0.18
Minimum	5	0.5	0.03	0.40	0.00
Average	10	1.4	0.15	0.56	0.07

Table 6.5: 2019 Summary of Reported Non-Container Facility Operating Characteristics

	Speed (mph)	Distance (miles)	Gate In (hours)	Unload/Load (hours)	Gate Out (hours)
Maximum	10	0.5	0.08	0.50	0.08
Minimum	0	0.0	0.00	0.00	0.00
Average	5	0.2	0.01	0.09	0.01

In 2019, a total 3,464,786 truck calls were associated with container terminals and 287,714 truck calls were associated with non-container facilities. The total number of truck calls associated with container terminals is estimated by the trip generation model on which truck travel VMT estimates are based, while non-container terminal truck calls were obtained from the terminal operators. The non-container terminal number includes activity at the Port's temporary empty container depot and chassis support facility that operated in 2019, totaling approximately 109,000 calls. The chassis yard is used for pickup, delivery and maintenance of chassis.

Table 6.6 provides the on-terminal operating parameters, listing total estimated VMT and hours of idling on-terminal and waiting at entry gates. The idling times are likely to be over-estimated because the idling estimates are based on the entire time that trucks are on terminal (except for driving time), which does not account for times that trucks are turned off while on terminal. To date, there are no other known available data sources identified to provide a reliable estimate of the average percentage of time the trucks' engines are turned off while on terminal.

Table 6.6: 2019 Estimated On-Terminal VMT and Idling Hours by Terminal

Terminal Type	Total Miles Traveled	Total Hours Idling (all trips)
Container	2,680,276	559,029
Container	961,358	400,566
Container	710,295	956,531
Container	334,500	107,040
Container	282,791	328,038
Container	214,632	467,897
Auto	5,656	9,721
Break Bulk	3,566	2,995
Break Bulk	3,000	960
Break Bulk	1,500	0
Break Bulk	400	80
Break Bulk	20	0
Dry Bulk	13,025	686
Dry Bulk	40	440
Liquid Bulk	5,400	4,320
Liquid Bulk	3,125	375
Liquid Bulk	1,350	0
Other	11,600	9,860
Other	3,060	8,670
Other	2,250	0
Total	**5,237,843**	**2,857,207**

Table 6.7 summarizes the speed-specific composite emission factors developed from the EMFAC2017 model and the port-specific model year distribution. These composite emission factors are developed using model year specific emission factors for the T7 POLA vehicle category of EMFAC2017.

Table 6.7: 2019 Speed-Specific Composite Exhaust Emission Factor, g/hr and g/mi

Speed (mph)	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2	N_2O	CH_4	Units
0 (Idle)	0.0039	0.0037	0.0037	26.1794	0.0540	23.7915	1.0407	5,754	0.8932	0.0612	g/hr
5	0.0611	0.0584	0.0586	15.7870	0.0355	4.6439	1.0781	3,756	0.5903	0.0634	g/mi
10	0.0548	0.0525	0.0526	13.1278	0.0304	3.4880	0.8465	3,221	0.5063	0.0498	g/mi
15	0.0467	0.0446	0.0448	10.1944	0.0248	2.3113	0.5790	2,630	0.4134	0.0341	g/mi
20	0.0414	0.0396	0.0397	8.4594	0.0216	1.6426	0.4139	2,282	0.3587	0.0244	g/mi
25	0.0379	0.0363	0.0364	7.3206	0.0192	1.2157	0.3053	2,034	0.3196	0.0180	g/mi
30	0.0358	0.0343	0.0344	6.4551	0.0174	0.9064	0.2274	1,840	0.2892	0.0134	g/mi
35	0.0349	0.0334	0.0335	5.7836	0.0160	0.6744	0.1699	1,690	0.2657	0.0100	g/mi
40	0.0349	0.0334	0.0335	5.2869	0.0149	0.5023	0.1277	1,579	0.2482	0.0075	g/mi
45	0.0359	0.0344	0.0345	4.9516	0.0142	0.3771	0.0972	1,503	0.2363	0.0057	g/mi
50	0.0378	0.0362	0.0363	4.7714	0.0138	0.2893	0.0756	1,461	0.2296	0.0044	g/mi
55	0.0406	0.0389	0.0390	4.7457	0.0137	0.2318	0.0610	1,450	0.2279	0.0036	g/mi
60	0.0447	0.0427	0.0429	4.9166	0.0140	0.2177	0.0572	1,482	0.2330	0.0034	g/mi
65	0.0499	0.0478	0.0479	5.2914	0.0147	0.2354	0.0609	1,555	0.2444	0.0036	g/mi
70	0.0499	0.0478	0.0479	5.3069	0.0147	0.2445	0.0617	1,555	0.2444	0.0036	g/mi

SECTION 7 SUMMARY OF 2019 EMISSION RESULTS

The Port of Long Beach 2019 Air Emissions Inventory results are presented in this section. Table 7.1 summarizes the 2019 air emissions associated with the goods movement-related sources at the Port, by category.

Table 7.1: 2019 Emissions by Source Category, tons and metric tons

Category	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Ocean going vessels	83	78	62	3,983	209	336	151	291,774
Harbor craft	22	20	22	637	1	458	69	51,698
Cargo handling equipment	4	4	3	274	1	697	29	109,052
Locomotives	21	20	21	592	1	135	33	47,239
Heavy-duty vehicles	7	7	7	1,127	3	172	28	307,104
Total	**138**	**129**	**115**	**6,613**	**214**	**1,799**	**309**	**806,866**

Table 7.2: 2019 Emissions Percent Contributions by Source Category

Source Category	DPM		NO_x		SO_x		CO_2e	
	tons	%	tons	%	tons	%	MT	%
Ocean going vessels	62	54%	3,983	60%	209	97.5%	291,774	36%
Harbor craft	22	19%	637	10%	0.6	0.3%	51,698	6%
Cargo handling equipment	3	2%	274	4%	1.3	0.6%	109,052	14%
Rail locomotives	21	19%	592	9%	0.5	0.2%	47,239	6%
Heavy-duty vehicles	7	6%	1,127	17%	3	1.4%	307,104	38%
Total	**115**	**100%**	**6,613**	**100%**	**214**	**100.0%**	**806,866**	**100%**

To place the maritime industry-related emissions into context, the following figures compare the Port's contributions to the total emissions in the South Coast Air Basin by major emission source category. Due to rounding, the percentages may not total 100%.

Figure 7.1: 2019 PM_{10} Emissions in the South Coast Air Basin, %

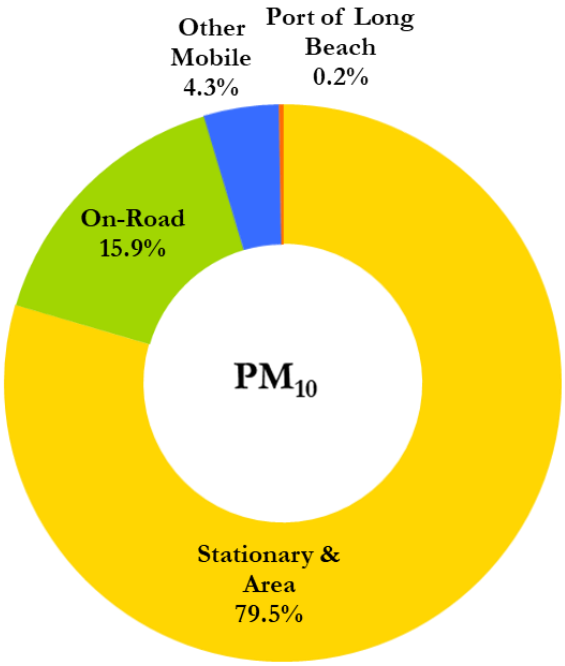


Figure 7.2: 2019 $PM_{2.5}$ Emissions in the South Coast Air Basin, %

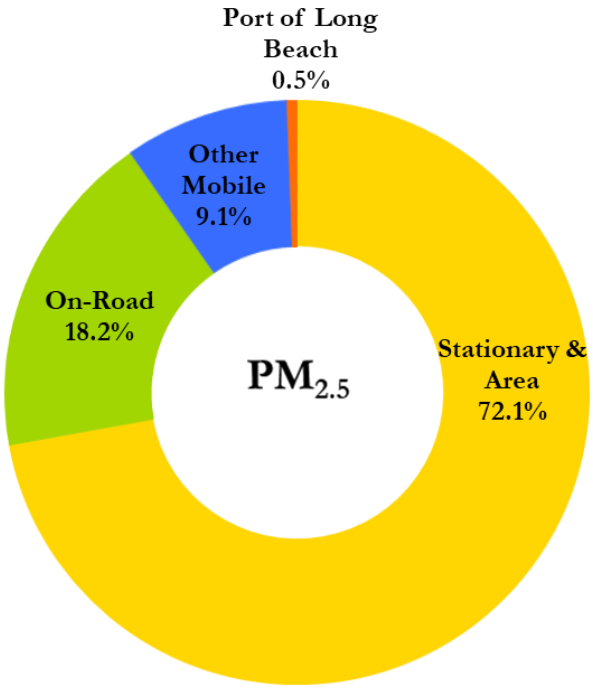


Figure 7.3: 2019 DPM Emissions in the South Coast Air Basin, %

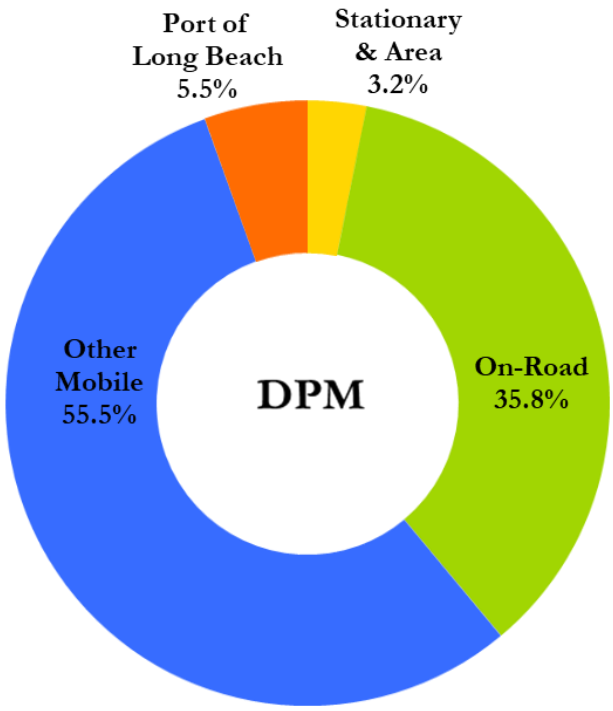


Figure 7.4: 2019 NO_x Emissions in the South Coast Air Basin, %

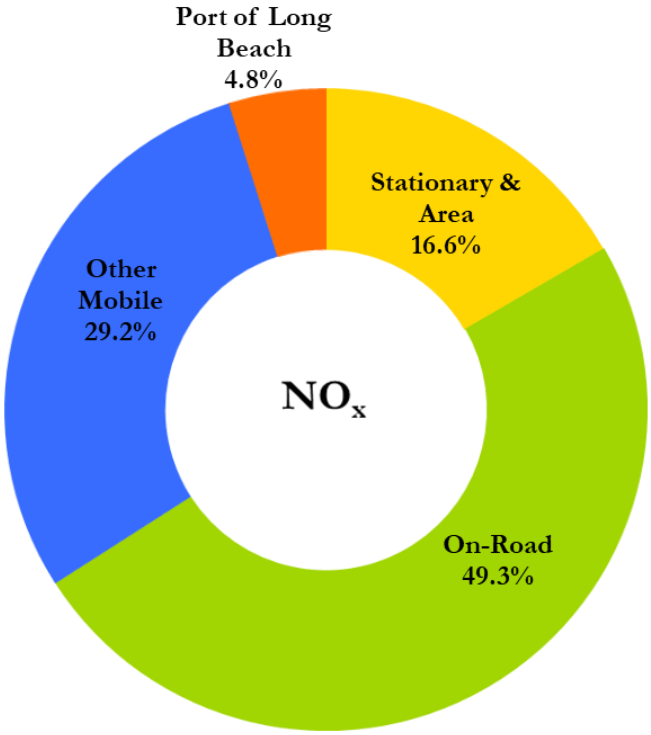
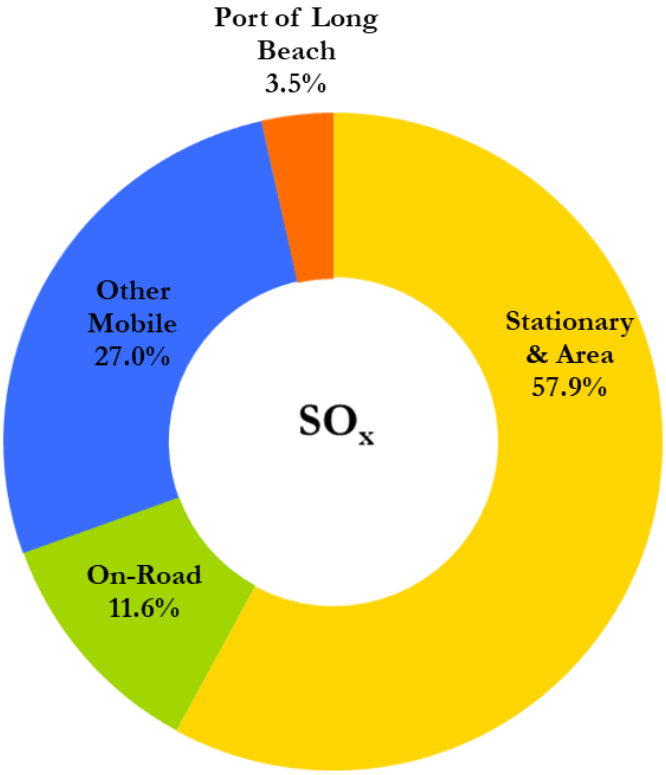


Figure 7.5: 2019 SO_x Emissions in the South Coast Air Basin, %



Tables 7.3 through 7.8 list the percent emissions contribution. The 2019 SoCAB emissions are based on the 2016 AQMP Appendix III[15], except for the SoCAB on-road emission estimates which were updated to take into consideration EMFAC2017[16]. Thus, the 2019 SoCAB total emissions shown on the bottom row of the tables do not exactly match 2016 AQMP Appendix III values. It should be noted that SoCAB on-road heavy-duty diesel PM_{10} and $PM_{2.5}$ emissions do not include brake and tire wear emissions consistent with the Port's HDV emissions.

[15] SCAQMD, *Final 2016 AQMP Appendix III, Base & Future Year Emissions Inventories*, March 2017. Except on-road emissions based on EMFAC2014 are replaced with EMFAC2017 estimates.
[16] ARB, *www.arb.ca.gov/emfac/*

Table 7.3: 2019 PM_{10} Emissions Contribution, tons and %

Category	Subcategory	PM_{10}	Percent PM_{10} Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	4%	2%	0.01%
OGV	Bulk vessel	4	5%	3%	0.01%
OGV	Containership	28	34%	20%	0.05%
OGV	Cruise	10	12%	7%	0.02%
OGV	General cargo	1	1%	1%	0.00%
OGV	Ocean tugboat	0	0%	0%	0.00%
OGV	Miscellaneous	4	5%	3%	0.01%
OGV	RoRo	1	1%	0%	0.00%
OGV	Tanker	32	38%	23%	0.05%
OGV	**Subtotal**	**83**	**100%**	**60%**	**0.14%**
Harbor Craft	Assist tug	5	25%	4%	0.01%
Harbor Craft	Harbor tug	2	7%	1%	0.00%
Harbor Craft	Ferry	4	19%	3%	0.01%
Harbor Craft	Ocean tugboat	7	30%	5%	0.01%
Harbor Craft	Government	1	6%	1%	0.00%
Harbor Craft	Excursion	1	3%	0%	0.00%
Harbor Craft	Crewboat	2	8%	1%	0.00%
Harbor Craft	Work boat	0	0%	0%	0.00%
Harbor Craft	**Subtotal**	**22**	**100%**	**16%**	**0.04%**
CHE	RTG crane	1	13%	0%	0.00%
CHE	Forklift	0	5%	0%	0.00%
CHE	Top handler, side pick	1	25%	1%	0.00%
CHE	Other	0	8%	0%	0.00%
CHE	Yard tractor	2	48%	1%	0.00%
CHE	**Subtotal**	**4**	**100%**	**3%**	**0.01%**
Locomotives	Switching	0	2%	0%	0.00%
Locomotives	Line haul	21	99%	16%	0.04%
Locomotives	**Subtotal**	**21**	**100%**	**16%**	**0.04%**
HDV	On-Terminal	0.3	5%	0%	0.00%
HDV	On-road	6.9	95%	5%	0.01%
HDV	**Subtotal**	**7**	**100%**	**5%**	**0.01%**
Port	**Total**	**138**		**100%**	**0.2%**
SoCAB AQMP	**Total**	**58,363**			

Table 7.4: 2019 $PM_{2.5}$ Emissions Contribution, tons and %

Category	Subcategory	$PM_{2.5}$	Percent $PM_{2.5}$ Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	4%	2%	0.01%
OGV	Bulk vessel	4	5%	3%	0.02%
OGV	Containership	26	34%	20%	0.11%
OGV	Cruise	9	12%	7%	0.04%
OGV	General cargo	1	1%	1%	0.00%
OGV	Ocean tugboat	0	0%	0%	0.00%
OGV	Miscellaneous	4	5%	3%	0.02%
OGV	RoRo	1	1%	0%	0.00%
OGV	Tanker	30	38%	23%	0.13%
OGV	**Subtotal**	**78**	**100%**	**61%**	**0.33%**
Harbor Craft	Assist tug	5	25%	4%	0.02%
Harbor Craft	Harbor tug	2	8%	1%	0.01%
Harbor Craft	Ferry	4	19%	3%	0.02%
Harbor Craft	Ocean tugboat	6	30%	5%	0.03%
Harbor Craft	Government	1	6%	1%	0.01%
Harbor Craft	Excursion	1	3%	0%	0.00%
Harbor Craft	Crewboat	2	8%	1%	0.01%
Harbor Craft	Work boat	0	0%	0%	0.00%
Harbor Craft	**Subtotal**	**20**	**100%**	**15%**	**0.08%**
CHE	RTG crane	1	14%	0%	0.00%
CHE	Forklift	0	6%	0%	0.00%
CHE	Top handler, side pick	1	25%	1%	0.00%
CHE	Other	0	8%	0%	0.00%
CHE	Yard tractor	2	47%	1%	0.01%
CHE	**Subtotal**	**4**	**100%**	**3%**	**0.02%**
Locomotives	Switching	0	2%	0%	0.00%
Locomotives	Line haul	19	98%	15%	0.08%
Locomotives	**Subtotal**	**20**	**100%**	**15%**	**0.08%**
HDV	On-Terminal	0.3	5%	0%	0.00%
HDV	On-road	6.6	95%	5%	0.03%
HDV	**Subtotal**	**7**	**100%**	**5%**	**0.03%**
Port	**Total**	**129**		**100%**	**0.5%**
SoCAB AQMP	**Total**	**23,683**			

Table 7.5: 2019 DPM Emissions Contribution, tons and %

Category	Subcategory	DPM	Percent DPM Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	4%	2%	0.1%
OGV	Bulk vessel	4	6%	3%	0.2%
OGV	Containership	22	36%	20%	1.1%
OGV	Cruise	9	15%	8%	0.4%
OGV	General cargo	1	1%	1%	0.0%
OGV	Ocean tugboat	0	0%	0%	0.0%
OGV	Miscellaneous	4	7%	4%	0.2%
OGV	RoRo	0	0%	0%	0.0%
OGV	Tanker	19	30%	16%	0.9%
OGV	**Subtotal**	**62**	**100%**	**54%**	**3.0%**
Harbor Craft	Assist tug	5	25%	5%	0.3%
Harbor Craft	Harbor tug	2	8%	1%	0.1%
Harbor Craft	Ferry	4	19%	4%	0.2%
Harbor Craft	Ocean tugboat	7	30%	6%	0.3%
Harbor Craft	Government	1	6%	1%	0.1%
Harbor Craft	Excursion	1	3%	1%	0.0%
Harbor Craft	Crewboat	2	8%	2%	0.1%
Harbor Craft	Work boat	0	0%	0%	0.0%
Harbor Craft	**Subtotal**	**22**	**100%**	**19%**	**1.0%**
CHE	RTG crane	1	19%	0%	0.0%
CHE	Forklift	0	5%	0%	0.0%
CHE	Top handler, side pick	1	36%	1%	0.0%
CHE	Other	0	11%	0%	0.0%
CHE	Yard tractor	1	29%	1%	0.0%
CHE	**Subtotal**	**3**	**100%**	**2%**	**0.1%**
Locomotives	Switching	0	2%	0%	0.0%
Locomotives	Line haul	21	98%	18%	1.0%
Locomotives	**Subtotal**	**21**	**100%**	**19%**	**1.0%**
HDV	On-Terminal	0.3	5%	0%	0.0%
HDV	On-road	6.6	95%	6%	0.3%
HDV	**Subtotal**	**7**	**100%**	**6%**	**0.3%**
Port	**Total**	**115**		**100%**	**5.5%**
SoCAB AQMP	**Total**	**2,085**			

Table 7.6: 2019 NO_x Emissions Contribution, tons and %

Category	Subcategory	NO_x	Percent NO_x Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	164	4%	2%	0.1%
OGV	Bulk vessel	222	6%	3%	0.2%
OGV	Containership	1,694	43%	26%	1.2%
OGV	Cruise	477	12%	7%	0.3%
OGV	General cargo	47	1%	1%	0.0%
OGV	Ocean tugboat	9	0%	0%	0.0%
OGV	Miscellaneous	227	6%	3%	0.2%
OGV	RoRo	10	0%	0%	0.0%
OGV	Tanker	1,134	28%	17%	0.8%
OGV	**Subtotal**	**3,983**	**100%**	**60%**	**2.9%**
Harbor Craft	Assist tug	153	24%	2%	0.1%
Harbor Craft	Harbor tug	46	7%	1%	0.0%
Harbor Craft	Ferry	126	20%	2%	0.1%
Harbor Craft	Ocean tugboat	182	29%	3%	0.1%
Harbor Craft	Government	51	8%	1%	0.0%
Harbor Craft	Excursion	19	3%	0%	0.0%
Harbor Craft	Crewboat	55	9%	1%	0.0%
Harbor Craft	Work boat	4	1%	0%	0.0%
Harbor Craft	**Subtotal**	**637**	**100%**	**10%**	**0.5%**
CHE	RTG crane	71	26%	1%	0.1%
CHE	Forklift	12	4%	0%	0.0%
CHE	Top handler, side pick	126	46%	2%	0.1%
CHE	Other	11	4%	0%	0.0%
CHE	Yard tractor	55	20%	1%	0.0%
CHE	**Subtotal**	**274**	**100%**	**4%**	**0.2%**
Locomotives	Switching	31	5%	0%	0.0%
Locomotives	Line haul	561	95%	8%	0.4%
Locomotives	**Subtotal**	**592**	**100%**	**9%**	**0.4%**
HDV	On-Terminal	160	14%	2%	0.1%
HDV	On-road	967	86%	15%	0.7%
HDV	**Subtotal**	**1,127**	**100%**	**17%**	**0.8%**
Port	**Total**	**6,613**		**100%**	**4.8%**
SoCAB AQMP	**Total**	**136,564**			

Table 7.7: 2019 SO_x Emissions Contribution, tons and %

Category	Subcategory	SO_x	Percent SO_x Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	5	3%	3%	0%
OGV	Bulk vessel	9	4%	4%	0%
OGV	Containership	67	32%	31%	1%
OGV	Cruise	19	9%	9%	0%
OGV	General cargo	2	1%	1%	0%
OGV	Ocean tugboat	0	0%	0%	0%
OGV	Miscellaneous	9	4%	4%	0%
OGV	RoRo	3	1%	1%	0%
OGV	Tanker	94	45%	44%	2%
OGV	**Subtotal**	**209**	**100%**	**97.4%**	**3%**
Harbor Craft	Assist tug	0.14	24%	0%	0%
Harbor Craft	Harbor tug	0.04	7%	0%	0%
Harbor Craft	Ferry	0.12	21%	0%	0%
Harbor Craft	Ocean tugboat	0.15	26%	0%	0%
Harbor Craft	Government	0.06	10%	0%	0%
Harbor Craft	Excursion	0.02	3%	0%	0%
Harbor Craft	Crewboat	0.05	9%	0%	0%
Harbor Craft	Work boat	0.00	1%	0%	0%
Harbor Craft	**Subtotal**	**1**	**100%**	**0%**	**0%**
CHE	RTG crane	0.1	7%	0%	0%
CHE	Forklift	0.0	2%	0%	0%
CHE	Top handler, side pick	0.4	33%	0%	0%
CHE	Other	0.0	3%	0%	0%
CHE	Yard tractor	0.7	54%	0%	0%
CHE	**Subtotal**	**1**	**100%**	**1%**	**0%**
Locomotives	Switching	0.0	7%	0%	0%
Locomotives	Line haul	0.5	93%	0%	0%
Locomotives	**Subtotal**	**1**	**100%**	**0%**	**0%**
HDV	On-Terminal	0.3	11%	0%	0%
HDV	On-road	2.7	89%	1%	0%
HDV	**Subtotal**	**3**	**100%**	**1%**	**0%**
Port	**Total**	**214**		**100%**	**3.5%**
SoCAB AQMP	**Total**	**6,100**			

Table 7.8: 2019 CO_2e Emissions Contribution, metric tons and %

Category	Subcategory	CO_2e	Percent Emissions of Total	
			Category	Port
OGV	Auto carrier	7,618	3%	1%
OGV	Bulk vessel	12,791	4%	2%
OGV	Containership	93,927	32%	12%
OGV	Cruise	26,420	9%	3%
OGV	General cargo	2,784	1%	0%
OGV	Ocean tugboat	455	0%	0%
OGV	Miscellaneous	12,159	4%	2%
OGV	RoRo	4,294	1%	1%
OGV	Tanker	131,236	45%	16%
OGV	**Subtotal**	**291,774**	**100%**	**36%**
Harbor Craft	Assist tug	12,386	24%	2%
Harbor Craft	Harbor tug	3,638	7%	0%
Harbor Craft	Ferry	10,670	21%	1%
Harbor Craft	Ocean tugboat	13,361	26%	2%
Harbor Craft	Government	4,970	10%	1%
Harbor Craft	Excursion	1,509	3%	0%
Harbor Craft	Crewboat	4,788	9%	1%
Harbor Craft	Work boat	375	1%	0%
Harbor Craft	**Subtotal**	**51,698**	**100%**	**6%**
CHE	RTG crane	7,891	7%	1%
CHE	Forklift	2,800	3%	0%
CHE	Top handler, side pick	38,254	35%	5%
CHE	Other	3,549	3%	0%
CHE	Yard tractor	56,558	52%	7%
CHE	**Subtotal**	**109,052**	**100%**	**14%**
Locomotives	Switching	3,723	8%	0%
Locomotives	Line haul	43,516	92%	5%
Locomotives	**Subtotal**	**47,239**	**100%**	**6%**
HDV	On-Terminal	35,239	11%	4%
HDV	On-road	271,865	89%	34%
HDV	**Subtotal**	**307,104**	**100%**	**38%**
Port	**Total**	**806,866**		**100%**

SECTION 8 COMPARISON OF 2019 AND 2005 FINDINGS AND EMISSION ESTIMATES

This section provides a comparison of the emission estimates for 2019 and 2005 by source category. The baseline year used to compare every annual inventory is 2005. If there was a change in an emissions estimation methodology in 2019, the 2005 emissions were recalculated using 2005 activity data with the new methodology to provide a valid basis for comparison. Due to rounding, the values may not add up to the whole number values for the percentage change or total emissions at the bottom of each table.

Table 8.1: 2005-2019 Port Emissions Comparison by Source Category, tons, metric tons and %

	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
2005								
Ocean-going vessels	720	577	605	6,726	6,952	537	236	394,186
Harbor craft	45	41	45	1,107	5	294	70	44,746
Cargo handling equipment	47	44	47	1,289	11	398	65	103,710
Locomotives	43	40	43	1,273	76	179	66	60,579
Heavy-duty vehicles	205	196	205	5,273	37	1,523	318	391,610
Total	**1,060**	**898**	**945**	**15,667**	**7,081**	**2,931**	**755**	**994,832**
2019								
Ocean-going vessels	83	78	62	3,983	209	336	151	291,774
Harbor craft	22	20	22	637	1	458	69	51,698
Cargo handling equipment	4	4	3	274	1	697	29	109,052
Locomotives	21	20	21	592	1	135	33	47,239
Heavy-duty vehicles	7	7	7	1,127	3	172	28	307,104
Total	**138**	**129**	**115**	**6,613**	**214**	**1,799**	**309**	**806,866**
Change between 2005 and 2019 (percent)								
Ocean-going vessels	-88%	-86%	-90%	-41%	-97%	-37%	-36%	-26%
Harbor craft	-52%	-52%	-52%	-42%	-87%	56%	-1%	16%
Cargo handling equipment	-91%	-91%	-94%	-79%	-89%	75%	-55%	5%
Locomotives	-50%	-51%	-50%	-53%	-99%	-24%	-51%	-22%
Heavy-duty vehicles	-96%	-96%	-97%	-79%	-92%	-89%	-91%	-22%
Total	**-87%**	**-86%**	**-88%**	**-58%**	**-97%**	**-39%**	**-59%**	**-19%**

Table 8.2 provides a comparison of the number of vessel calls and container cargo throughput as well as the average TEUs per containership call between 2005 and 2019. Compared to 2005, container throughput is up 14%, while overall containership arrivals to POLB are down 27%. The average number of containers per containership is up 57% which is indicative of larger vessels calling at POLB.

Table 8.2: 2005-2019 Container Throughput and Vessel Call Comparison

Year	Container Throughput (TEU)	All Arrivals	Containership Arrivals	Average TEU per Call
2005	6,709,818	2,690	1,332	5,037
2019	7,632,032	2,104	967	7,892
Change	**14%**	**-22%**	**-27%**	**57%**

Table 8.3 presents the total net change in emissions for all source categories in 2019 compared to 2005.

Table 8.3: 2005-2019 Emissions Comparison, tons, metric tons and %

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2005	1,060	898	945	15,667	7,081	2,931	755	994,832
2019	138	129	115	6,613	214	1,799	309	806,866
Change	**-922**	**-769**	**-830**	**-9,054**	**-6,867**	**-1,132**	**-446**	**-187,966**
Change (%)	**-87%**	**-86%**	**-88%**	**-58%**	**-97%**	**-39%**	**-59%**	**-19%**

The following paragraphs summarize the overall reasons for the differences in 2005 and 2019 emissions by source category.

Ocean-Going Vessels

Emissions from OGV were lower in 2019 compared to 2005 levels as a result of significant increased participation in the Port's Vessel Speed Reduction program, implementation of the Green Flag incentive program, CARB's low sulfur marine fuel regulation requiring distillate fuels used by ocean going vessels with a maximum sulfur content of 0.1%, North American Emission Control Area (ECA), and implementation of the CARB's Vessel At-Berth shore power regulation. Emission reductions have also occurred due to increased vessel efficiency and utilization due to the deployment of larger container vessels that has resulted in fewer vessel calls. Additionally, industry consolidation and an increase in vessel alliances and sharing agreements has also resulted in better vessel utilization.

Harbor Craft

Harbor craft emissions decreased for all pollutants, except for CO and CO_2e. The decrease is due to the turnover to newer engines which have lower emission standards and the use of lower sulfur content fuel. Between 2005 and 2019, fleet turnover was accelerated as a result of CARB's in-use harbor craft regulations and grant funding made available, such as Carl Moyer and EPA grants, for the replacement of older engines with newer and cleaner engines. The increase in CO and CO_2e emissions is related to the impact from the introduction of cleaner engines that do not have lower standards and the increase in energy consumption in 2019 as compared to 2005.

Cargo Handling Equipment

Cargo handling equipment emissions decreased for all pollutants, except for CO and CO_2e. The decrease is due to fleet turnover to newer CHE which have lower emission standards and use of lower sulfur content fuel. Between 2005 and 2009, fleet turnover was accelerated as a result of the continued replacement and retrofit of existing equipment with cleaner engines and implementation of CAAP measures and the CARB in-use CHE regulation resulted in a cleaner fleet. The increase in CO emissions from cargo handling equipment is attributed to the addition of several gasoline-fuel yard tractors with higher CO emission rates compared to diesel yard tractors. The increase in CO_2e is mainly due to the increase in energy consumption in 2019 as compared to 2005 and lack of any CO_2e emission standards.

Locomotives

Emissions from rail locomotives were lower in 2019 compared to 2005 due in part to the turnover of locomotives to cleaner ultra-low emissions switching locomotives in the PHL and UP fleets. In addition, use of cleaner fuels and cleaner line haul locomotives by both UP and BNSF contributed to the reduced emissions.

Heavy-Duty Vehicles

Truck emissions were significantly lower in 2019 compared to 2005 due to the implementation of the Port's Clean Trucks Program requiring the use of trucks that meet cleaner on-road engine emission standards. Other factors include normal fleet turnover and decreased total vehicle miles travelled due to the increase in utilization of on-dock rail and changes in regional travel patterns.

Ocean-Going Vessels

Overall energy consumption (in terms of kWh) by OGV emission sources in 2005 and 2019 are shown in Table 8.4. The kWh associated with the Advanced Maritime Emission Control System (AMECS) technology generators are included with the auxiliary engine kWh shown in the table. The main engine activity has decreased through the years mainly due to the VSR program and fewer vessel calls, while the auxiliary engine activity has decreased due to shore power regulation and fewer vessel calls. The boiler activity increase is due to larger vessels staying longer at berth and no program or regulation to decrease the boiler activity.

Table 8.4: 2005-2019 OGV Energy Consumption Comparison by Emission Source, kWh

Year	All Emission Sources	Main Eng	Aux Eng	Boiler
2005	507,488,985	153,369,455	229,580,036	124,539,494
2019	369,415,669	84,147,313	142,415,734	142,852,622
Change	**-27%**	**-45%**	**-38%**	**15%**

The various emission reduction strategies for ocean-going vessels that were in effect in 2019 are listed in Table 8.5. A column has been added for vessels that used the Advanced Maritime Emission Control System (AMECS) technology as an alternative technology to shore power to comply with the CARB's Vessel At-Berth shore power regulation.

Table 8.5: 2005-2019 OGV Emission Reduction Strategies

	Percent (%) of All Calls					
Year	Fuel Switch Aux Eng	Fuel Switch Main Eng	VSR 20 nm	VSR 40 nm	Shore Power	AMECS
2005	14%	0%	68%	0%	0%	0%
2019	100%	100%	98%	93%	49%	1%

Table 8.6 summarizes the share of main engine IMO NO_x standards tier calls (Tier) for 2005 and 2019. The No Tier column represents vessels that do not have diesel engines, such as steamships. Tier I refers to calls by vessels meeting or exceeding Tier I standards (vessels constructed from 2000-2010), Tier II refers to calls by vessels meeting or exceeding Tier II standards (vessels constructed from 2011-2015), and Tier III refers to calls by vessels meeting or exceeding the Tier III standards, which are in effect in the North American ECA for vessels constructed on or after January 1, 2016.

Table 8.6: 2005-2019 OGV Main Engine Calls by IMO NO_x Tiers

Year	IMO Tier 0	IMO Tier I	IMO Tier II	IMO Tier III	No Tier
2005	54%	42%	0%	0.0%	4%
2019	15%	56%	28%	0.4%	0.1%

In 2019, one containership and five tanker vessels that visited the Port, met Tier III NO_x emission standards. NO_x emissions for Tier III vessels are 75% cleaner than Tier II vessels.

Harbor Craft

As shown in Table 8.7, compared to 2005, the harbor craft population count operating at the Port in 2019 decreased by 14%, and total engine count decreased only by 1%. However, there was a 16% increase in the overall energy consumption (kWh) from 2005 to 2019.

Table 8.7: 2005-2019 Harbor Craft Count and Energy Consumption Comparison

Year	Vessel Count	Engine Count	Total kWh
2005	92	301	67,684,712
2019	79	297	78,199,327
Change (%)	**-14%**	**-1%**	**16%**

Table 8.8 summarizes the distribution of engines based on EPA's engine standards for 2005 and 2019. Since 2005, the percentage of Tier 2 and Tier 3 engines increased significantly due to the introduction of newer vessels with newer engines into the fleet and replacements of existing higher-emitting engines with cleaner engines. Over the years, with better data collection techniques and better record keeping required with grant funded repowers, the number of engines of unknown tier level has decreased significantly.

Table 8.8: 2005-2019 Harbor Craft Engine Tier Change, %

	2005 Engine Count	2019 Engine Count	% Change
Unknown	102	2	-98%
Tier 0	86	7	-92%
Tier 1	102	14	-86%
Tier 2	11	159	1345%
Tier 3	0	115	100%
Total	**301**	**297**	**-1%**

Table 8.9 compares the harbor craft energy consumption (kWh) by engine tier. In 2019, 92% of energy consumed by harbor craft is from Tier 2 and 3 engines.

Table 8.9: 2005-2019 Engine Energy and Activity Change, kWh and %

Engine Tier	2005 kWh	2005 % of Total	2019 kWh	2019 % of Total
Tier 0	44,096,837	65.2%	101,183	0.1%
Tier 1	23,254,327	34.4%	6,186,173	7.9%
Tier 2	333,548	0.5%	52,582,476	67.2%
Tier 3	0	0.0%	19,329,496	24.7%
Total	**67,684,712**	**100%**	**78,199,327**	**100%**

Cargo Handling Equipment

Between 2005 and 2019, there was a 17% increase in the equipment count to accommodate an increase in TEU throughput and operational changes at the Port over the years. The largest increase is in electric equipment added at the Port. Despite the equipment count increase, there was only a 2% increase in energy consumption for fossil-fueled equipment, measured as total kWh. Table 8.10 only shows the energy consumption (in kWh) from fossil-fueled equipment. It does not include electric equipment consumption.

Table 8.10: 2005-2019 CHE Count and Energy Consumption Comparison

Year	Population	Activity (kWh)
2005	1,259	134,618,521
2019	1,478	137,925,864
Change (%)	**17%**	**2%**

Table 8.11 shows the equipment energy consumption (kWh) comparison for diesel fueled equipment by diesel engine tier and by non-diesel fueled equipment for calendar years 2019 and 2005. Among diesel equipment, 77% of the energy consumed in 2019, is from equipment with on-road engines and Tier 4 engines.

Table 8.11: CHE Energy Consumption Comparison by Engine Tier, kWh

Engine Type	Engine Tier	2005 kWh	2005 % of Total	2019 kWh	2019 % of Total
Diesel	Tier 0	12,023,155	9%	45,117	0.03%
Diesel	Tier 1	65,059,472	48%	7,600,725	6%
Diesel	Tier 2	49,337,838	37%	7,671,966	6%
Diesel	Tier 3	41,636	0.03%	2,565,114	2%
Diesel	Tier 4i	0	0%	21,983,491	16%
Diesel	Tier 4f	0	0%	45,695,380	33%
Diesel	Onroad	6,610,773	5%	37,886,508	27%
Gasoline		3,866	0.003%	13,335,965	10%
Propane		1,541,782	1%	1,141,597	1%
Total		**134,618,521**	**100%**	**137,925,864**	**100%**

Tables 8.12 and 8.13 compare the CHE emission reduction technologies and fuels used in 2019 with those used in 2005. There was a significant increase in the number of CHE equipped with cleaner on-road engines in 2019. Due to equipment turnover, in 2019 there are no longer equipment retrofitted with DOCs. All of the DPF retrofits installed are on equipment at Tier 3 or lower level.

Table 8.12: 2005-2019 CHE Emission Reduction Technology Equipment Count Comparison

Equipment	2005 DOC	2019 DOC	2005 On-road Engine	2019 On-road Engine	2005 DPF	2019 DPF	2005 BlueCAT	2019 BlueCAT	2005 Hybrid	2019 Hybrid
Forklift	40	0	0	0	0	36	0	11	0	0
RTG crane	11	0	0	0	0	21	0	0	0	15
Side handler	42	0	0	0	0	6	0	0	0	0
Top handler	92	0	0	0	0	50	0	0	0	0
Yard tractor	514	0	53	344	0	0	0	0	0	0
Other	2	0	0	5	0	5	0	5	0	0
Total	**701**	**0**	**53**	**349**	**0**	**118**	**0**	**16**	**0**	**15**

Table 8.13: 2005-2019 CHE Equipment Count by Fuel Type Comparison

Equipment	2005 Emulsified Fuel	2019 Emulsified Fuel	2005 O2 Diesel	2019 O2 Diesel	2005 ULSD	2019 ULSD	2005 Propane Engine	2019 Propane Engine	2005 Gasoline Engine	2019 Gasoline Engine
Forklift	3	0	4	0	0	98	122	102	1	24
RTG crane	16	0	12	0	0	54	0	0	0	0
Side handler	4	0	8	0	0	7	0	0	0	0
Top handler	10	0	10	0	0	188	0	0	0	0
Yard tractor	151	0	81	0	0	570	0	2	0	134
Other	2	0	0	0	0	67	11	12	1	2
Total	**186**	**0**	**115**	**0**	**0**	**984**	**133**	**116**	**2**	**160**

Table 8.14 shows a comparison of CHE counts by equipment type. In total, there was a 17% increase in equipment count from 2005 to 2019, with the largest increase for top handlers. In 2005, the count of electric ship to shore cranes was not included, therefor not available for comparison to total electric equipment count change. Electric equipment count has increased recently at the Port.

Table 8.14: 2005-2019 CHE Equipment Count and Change, %

Equipment	2005	2019	Change
Forklift	295	232	-21%
RTG crane	85	54	-36%
Side handler	43	7	-84%
Top handler	113	188	66%
Yard tractor	641	706	10%
Sweeper	15	20	33%
Electric	na	218	na
Other	67	53	-21%
Total	**1,259**	**1,478**	**17%**

Table 8.15 shows the electric equipment count for 2019 and compares to 2005. In 2005, the count of the electric ship to shore cranes was not included in the 2005 EI.

Table 8.15: 2005-2019 CHE Count of Electric Equipment

Equipment	2005 Electric	2019 Electric
AGV	0	72
ASC	0	47
Crane	0	6
Electric pallet jack	2	2
Forklift	3	8
Man Lift	0	2
Material handler	0	1
Ship to shore crane	na	72
Sweeper	0	1
Truck	0	6
Yard tractor	0	1
Total	**5**	**218**

Locomotives

Table 8.16 shows the various throughput comparisons for rail transportation in 2005 and 2019. The total port throughput between calendar years 2005 and 2019 was higher by 14% in 2019. The on-dock rail throughput was higher in 2019 than in 2005. The on-dock rail percent of total throughput increased from 16% to 21% between 2005 and 2019.

Table 8.16: 2005-2019 Container Throughput Comparison, TEU and %

	2005	2019	Change
Total Port Throughput	6,709,818	7,632,032	14%
Total On-Dock Rail*	1,094,765	1,616,992	48%
% On-Dock	16%		

*Based on average of 1.8 TEUs per container

Heavy-Duty Vehicles

Emissions from the HDV source category continue to be far lower than in 2005 due largely to the following factors affecting the overall age of the truck fleet and average idling times compared with 2005.

- Newer fleet of trucks due to the Port's Clean Trucks Program (CTP).
- The terminals optimized their gate systems and the use radio frequency identification (RFID) readers to identify trucks complying with the CTP provisions, which help reduce idling time.
- Automation and continuous improvement of turn time at terminals.

Table 8.17 shows total port-wide idling times reported in 2005 and 2019. Reported idling time decreased overall despite increases in TEU throughput and truck trips.

Table 8.17: 2005-2019 HDV Total Idling Time Comparison, hours and %

EI Year	Total Idling Time (hours)
2005	3,854,273
2019	2,857,207
Change (%)	**-26%**

Table 8.18 compares the vehicle miles traveled by heavy-duty trucks in 2005 and 2019. Reported on-terminal VMT in 2019 was higher than in 2005 because several terminals re-evaluated their operations and provided higher estimates of average on-terminal driving distances than in past years.

Table 8.18: 2005-2019 HDV Vehicle Miles Traveled Comparison, miles and %

Activity Locat	2005 VMT	2019 VMT	Change %
On-Terminal	2,866,476	5,237,843	83%
On-Road	213,716,895	169,505,239	-21%
	216,583,371	**174,743,082**	**-19%**

Compared to 2005, the average age of trucks visiting the Port has decreased from 11 to 7.6 years due to the Port's Clean Trucks Program launched in October 2008 requiring the progressive ban of pre-2007 trucks between 2008 and up to present.

SECTION 9 METRICS

To measure the effectiveness of emissions reduction strategies and progress towards the San Pedro Bay Emission Reduction Standards, the Port has established metrics to track emissions per unit of work by source category. Since port operations are varied with a mix of container and non-container cargo, the metrics listed in this section are based on TEU throughput and metric tons of cargo moved through the Port. Table 9.1 compares the amount of throughput in 2019 and 2005 in TEU.

Table 9.1: 2005-2019 Container and Cargo Throughput and Change, %

Year	Container Throughput (TEU)
2005	6,709,818
2019	7,632,032
Change (%)	**14%**

Tables 9.2 shows the port-wide tons of emissions per 10,000 TEU in 2005 and 2019. The tons of emissions per 10,000 TEU of cargo decreased in 2019; an improvement from 2005.

Table 9.2: 2005-2019 Emission Efficiency Metric Comparison, annual tons per 10,000 TEU

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2005	1.58	1.34	1.41	23.35	10.55	4.37	1.13	1,483
2019	0.18	0.17	0.15	8.66	0.28	2.36	0.41	1,057
Change (%)	**-89%**	**-87%**	**-89%**	**-63%**	**-97%**	**-46%**	**-64%**	**-29%**

SECTION 10 CAAP PROGRESS

The Port's annual emissions inventories serve as the primary tool to track progress towards achieving the Clean Air Action Plan's San Pedro Bay Standards. These standards consist of the following emission reduction goals:

- Mass Emissions Reduction Standards:
  - By 2014, reduce emissions by 72% for DPM, 22% for NO_x, and 93% for SO_x from 2005 levels
  - By 2023, reduce emissions by 77% for DPM, 59% for NO_x, and 93% for SO_x from 2005 levels

The reduction of goods movement-related emissions in 2019 compared to 2005 can be attributed to a number of initiatives, including emissions reduction programs identified in the CAAP and implemented by the Port, such as the Clean Trucks Program, Green Flag Vessel Speed Reduction Program, as well as CARB regulations requiring the use of shore power for vessels at berth and the use of cleaner vessel fuels.

Economic forecasts indicate cargo volumes through the Port of Long Beach will increase in upcoming years. While emission reductions are expected to continue in the future toward meeting the CAAP goals, the rapid rate of emission reductions in recent years may not continue as cargo volumes increase. However, continued implementation of the CAAP and regulatory programs will continue to provide emissions benefits from goods movement-related sources and may offset impacts from the projected growth in trade.

The mass emissions reduction standards are represented as a percentage reduction of emissions from 2005 levels. Table 10.1 summarizes the standardized estimates of emissions by source category for calendar years 2005 and 2019 using the 2019 methodology.

Table 10.1: 2005-2019 Emissions in tons and Reductions in % Compared to CAAP San Pedro Bay Emissions Reduction Standards

Category	2005		2019
DPM (tons)			
Ocean-going vessels	605		62
Harbor craft	45		22
Cargo handling equipment	47		3
Locomotives	43		21
Heavy-duty vehicles	205		7
Total	**945**		**115**
Cumulative DPM Emissions Reduction Achieved in 2019			**88%**
CAAP San Pedro Bay DPM Emissions Reduction Standards		**2014**	**72%**
		2023	**77%**
NO_x (tons)			
Ocean-going vessels	6,726		3,983
Harbor craft	1,107		637
Cargo handling equipment	1,289		274
Locomotives	1,273		592
Heavy-duty vehicles	5,273		1,127
Total	**15,667**		**6,613**
Cumulative NO_x Emissions Reduction Achieved in 2019			**58%**
CAAP San Pedro Bay NO_x Emissions Reduction Standards		**2014**	**22%**
		2023	**59%**
SO_x (tons)			
Ocean-going vessels	6,952		209
Harbor craft	5		1
Cargo handling equipment	11		1
Locomotives	76		1
Heavy-duty vehicles	37		3
Total	**7,081**		**214**
Cumulative SO_x Emissions Reduction Achieved in 2019			**97%**
CAAP San Pedro Bay SO_x Emissions Reduction Standards		**2014**	**93%**
		2023	**93%**

APPENDIX A:
REGULATORY AND SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (CAAP) MEASURES

APPENDIX A: REGULATORY AND SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (CAAP) MEASURES

This appendix summarizes the current regulatory initiatives and Port measures related to port activity that influenced 2019 emissions. Almost all goods movement-related emissions in and around the port come from five emission source categories: OGVs, HDVs, CHE, harbor craft, and locomotives. The responsibility for the emissions control of the majority of these sources falls under the jurisdiction of local (South Coast Air Quality Management District [SCAQMD]), state (CARB), or federal (U.S. Environmental Protection Agency [EPA]) agencies.

Clean Air Action Plan (CAAP) Strategies

At the end of 2017, the Ports of Long Beach and Los Angeles released the final CAAP 2017 Update[1]. The CAAP 2017 Update contains new strategies from all sources that move cargo through the ports, including the deployment of zero and near-zero emission trucks and cargo handling equipment, and the expansion of programs that reduce ship emissions. The focus of the Update is to work in collaboration with industry stakeholders, regulatory agencies, local communities, and environmental groups for the next 20 years to reduce emissions and combat climate change. The CAAP 2017 strategies that will affect future emission reductions for both Ports include:

- Advancing the Clean Trucks Program to phase out older trucks and transition to near-zero emissions in the early years and zero-emissions by 2035. Under this program, on March 2020, the boards of harbor commissioners of the City of Long Beach and the City of Los Angeles adopted the Clean Truck Fund Rate of $10 per loaded TEU moved by truck in and out of port terminals. There are certain exemptions for use of low NO_x and zero emissions trucks. Currently, Port staff are working on strategies to implement the Clean Truck Fund rates and develop priorities and guidance for distributing funds to incentivize transition to near-zero and zero-emission trucks.
- Requiring terminal operators to purchase zero-emissions equipment if feasible, or near-zero or cleanest available when procuring new equipment.
- Further reducing emissions from ships at-berth, and transitioning the oldest, most polluting ships out of the San Pedro Bay fleet.
- Accelerating the deployment of cleaner engines and operational strategies to reduce harbor craft emissions.
- Expanding use of on-dock rail to shift more cargo leaving the port to go by rail.

[1] *www.cleanairactionplan.org/documents/final-2017-clean-air-action-plan-update.pdf*

San Pedro Bay Emissions Reduction Standards

The 2017 CAAP Update did not alter the existing 2010 CAAP Update goals that set health risk and emission reduction standards but did incorporate two new emission targets to reduce GHGs from port-related sources as described below.

Health Risk Reduction Standard
To complement the CARB's Air Pollution Reduction Programs including the Diesel Risk Reduction Plan, the Ports of Long Beach and Los Angeles have developed the following standard for reducing overall goods movement-related health risk impacts, relative to 2005 emissions level:

- By 2020, reduce the population-weighted cancer risk attributed to port-related DPM pollution by 85% in highly-impacted communities located proximate to port sources and throughout the residential areas in the port region.

Emission Reduction Standard
Consistent with the ports' commitment to meet their fair-share of mass emission reductions of air pollutants, the Ports of Long Beach and Los Angeles developed the following standards for reducing air pollutant emissions from goods movement-related activities, relative to 2005 emission levels:

- By 2014, reduce emissions of NO_x by 22%, of SO_x by 93%, and of DPM by 72% to support attainment of the national fine particulate matter ($PM_{2.5}$) standards.
- By 2023, reduce emissions of NO_x by 59%, of SO_x by 93%, and of DPM by 77% to support attainment of the national and federal 8-hour ozone standards and national fine particulate matter ($PM_{2.5}$) standards.

2017 CAAP Update New Emission Reduction Targets
- Reduce GHGs from port-related sources to 40% below 1990 levels by 2030
- Reduce GHGs from port-related sources to 80% below 1990 levels by 2050

Regulatory Programs by Source Category

The following tables summarize current regulatory programs and CAAP measures by major source category that influenced 2019 emissions from goods movement-related operations at the Port.

Table A.1: OGV Emission Regulations, Standards and Policies

Agency	Regulation/Standard/Policy	Targeted Pollutants	Implementation Year	Impact
IMO	**NO_x Emission Standard for Marine Engines** *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Nitrogen-oxides-%28NOx%29-%E2%80%93-Regulation-13.aspx*	NO_x	2011 – Tier 2 2016 – Tier 3 for ECA only	Sets NO_x emission standard for auxiliary and propulsion engines over 130 kW output power on newly built vessels
IMO	**Low Sulfur Fuel Requirements for Marine Engines** *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Sulphur-oxides-%28SOx%29-%E2%80%93-Regulation-14.aspx*	DPM PM SO_x	2012 ECA – 1% Sulfur 2015 ECA – 0.1% Sulfur	Significantly reduces emissions due to low sulfur content in fuel by creating Emissions Control Area (ECA)
IMO	**Energy Efficiency Design Index (EEDI) for International Shipping** *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Technical-and-Operational-Measures.aspx*	CO_2 and other pollutants	2013	Increases the design efficiencies of ships relating to energy and emissions
IMO	**Initial IMO Strategy on reduction of GHG emissions from ships – Resolution MEPC 304 (72)** *www.unfccc.int/sites/default/files/resource/250_IMO%20submission_Talanoa%20Dialogue_April%202018.pdf*	GHG	2050 – 50%	Initial IMO Strategy on reduction of GHG emissions from ships by 50% in 2050 from 2008 level. The ultimate goal is to phase out GHG
EPA	**Emission Standards for Marine Diesel Engines above 30 Liters per Cylinder (Category 3 Engines); Aligns with IMO Annex VI marine engine NO_x standards and low sulfur requirement** *www.epa.gov/otaq/oceanvessels.htm#engine-fuel*	DPM PM NO_x SO_x	2011 – Tier 2 2016 – Tier 3	Auxiliary and propulsion on US-Flagged new built vessels; Use of low sulfur fuel

Table A.1 (continued): OGV Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
CARB	**Regulation to Reduce Emissions from Diesel Auxiliary Engines on Ocean-Going Vessels While At-Berth at a California Port** *www.arb.ca.gov/regact/2007/shorepwr07/shorepwr07.htm* and *www.arb.ca.gov/ports/shorepower/forms/regulatoryadvisory/regulatoryadvisory12232013.pdf*	All	2014 – 50% 2017 –70% 2020 – 80%	Vessels must use Shore power (or equivalent) requirement to reduce at-berth emissions. Compliance levels based on fleet percentage visiting the port.
CARB	**Ocean-going Ship Onboard Incineration** *www.arb.ca.gov/ports/shipincin/shipincin.htm*	DPM PM HC	2007	Vessels operators cannot incinerate within 3 nm of the California coast
SPBP CAAP	**CAAP Measure – OGV 1** **Vessel Speed Reduction (VSR) Program** *www.cleanairactionplan.org/strategies/ships/*	All	2008	Vessel operators within 20 nm and 40 nm of Point Fermin
SPBP CAAP	**CAAP Measure – OGV 2** **Reduction of At-Berth OGV Emissions** *www.cleanairactionplan.org/strategies/ships/*	All	2014	Shore power requirements. Vessel operators and terminals
SPBP CAAP	**CAAP Measure – OGV 5 and 6** **Cleaner OGV Engines and OGV Engine Emissions Reduction Technology Improvements** *www.cleanairactionplan.org/strategies/ships/*	DPM PM NO_x	2012	Vessel operators who choose to participate in technology demonstrations and/or Green Ship Incentive Program

Table A.2: Harbor Craft Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
EPA	**Emission Standards for Harbor Craft Engines** *www.epa.gov/ regulations-emissions-vehicles-and-engines/domestic-regulations-emissions-marine-compression*	All	2009 – Tier 3 2014 – Tier 4 for 800 hp or greater	Commercial marine diesel engines with displacement less than 30 liters per cylinder
CARB	**Low Sulfur Fuel Requirement for Harbor Craft** *www.arb.ca.gov/regact/carblohc/carblohc.htm*	DPM PM NO_x SO_x	2006 – 15 ppm	Use of low sulfur diesel fuel in commercial harbor craft operating in SCAQMD
CARB	**Regulation to Reduce Emissions from Diesel Engines on Commercial Harbor Craft** *www.arb.ca.gov/regact/2010/chc10/chc10.htm*	DPM PM NO_x	2009 to 2020 - Depending on engine model year	Most harbor craft homeported in SCAQMD must meet more stringent emissions limits according to a compliance schedule
SPBP CAAP	**CAAP Measure – HC 1 Performance Standards for Harbor Craft** *www.cleanairactionplan.org/strategies/harbor-craft/*	All	2009 to 2020 - Depending on engine model year	Modernization of harbor craft operating in San Pedro Bay Ports.

Table A.3: Cargo Handling Equipment Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
EPA	**Emission Standards for Non-Road Diesel Powered Equipment** *www.epa.gov/otaq/standards/nonroad/nonroadci.htm*	All	2008-2015	All non-road (also known as off-road) equipment.
CARB	**Regulation for Cargo Handling Equipment Operating at Ports and Intermodal Railyards** *www.arb.ca.gov/regact/2011/cargo11/cargo11.htm*	All	2007-2017; Opacity test compliance starting in 2016	All cargo handling equipment operating at ports and intermodal railyards.
CARB	**New Emission Standards, Test Procedures, for Large Spark Ignition (LSI) Engine Forklifts and Other Industrial Equipment** *www.arb.ca.gov/regact/2008/lsi2008/lsi2008.htm*	All	2007 – Phase 1 2010 – Phase 2	Emission standards for large spark-ignition engines 25 hp or greater.
CARB	**Fleet Requirements for Large Spark Ignition Engines** *www.arb.ca.gov/regact/2010/offroadlsi10/lsifinalreg.pdf*	All	2009-2013	More stringent emissions requirements for fleets of large spark ignition engine equipment fleets.
SPBP CAAP	**CAAP Measure – CHE1 Performance Standards for CHE** *www.cleanairactionplan.org/strategies/cargo-handling-equipment/*	All	2007-2014	Turnover to Tier 4 cargo handling equipment per lease renewal agreement

Table A.4: Railroad Locomotives Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
EPA	**Emission Standards for New and Remanufactured Locomotives and Locomotive Engines- Latest Regulation** *www.epa.gov/otaq/standards/nonroad/locomotives.htm*	DPM NO_x	2011 through 2013 – Tier 3 2015 – Tier 4	All new and remanufactured locomotive engines.
EPA	**Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel** *www.epa.gov/otaq/fuels/dieselfuels/regulations.htm*	SOx PM	2010	All locomotive engines
CARB	Low Sulfur Fuel Requirement for Intrastate Locomotives *www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate*	SO_x NO_x PM	2007	Intrastate locomotives, mainly switchers
CARB	**Statewide 1998 and 2005 Memorandum of Understanding (MOUs)** *www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate*	NO_x	2010	UP and BNSF locomotives
SPBP CAAP	**CAAP Measure – RL1 Pacific Harbor Line (PHL) Rail Switch Engine Modernization** *www.cleanairactionplan.org/strategies/trains/*	PM	2010	PHL switcher engines
SPBP CAAP	**CAAP Measure – RL2 Class 1 Line-haul and Switcher Fleet Modernization** *www.cleanairactionplan.org/strategies/trains/*	All	2023 – Tier 3	Class 1 locomotives at ports
SPBP CAAP	**CAAP Measure – RL3 New and Redeveloped Near-Dock Rail Yards** *www.cleanairactionplan.org/strategies/trains/*	All	2020 – Tier 4	New near-dock rail yards

Table A.5: Heavy-Duty Vehicles Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
CARB/EPA	**Emission Standards for New 2007+ On-Road Heavy-Duty Vehicles** *www.arb.ca.gov/msprog/onroadhd/reducstd.htm*	NO_x PM	2007 2010	All new on-road diesel heavy-duty vehicles
CARB	**Heavy-Duty Vehicle On-Board Diagnostics (OBD and OBDII) Requirement** *www.arb.ca.gov/msprog/obdprog/section1971_1_clean2013.pdf*	NOx PM	2010+	All new on-road heavy-duty vehicles
CARB	**Ultra-Low Sulfur Diesel Fuel Requirement** *www.arb.ca.gov/regact/ulsd2003/ulsd2003.htm*	All	2006 - ULSD	All on-road heavy-duty vehicles
CARB	**Drayage and Truck and Bus Regulation** (amended in 2011 and 2014) *www.arb.ca.gov/msprog/onroad/porttruck/drayagevtruckbus.pdf*	All	Phase in started in 2009	All drayage trucks operating at California ports
CARB	**Low NOx Software Upgrade Program** *www.arb.ca.gov/msprog/hdsoftware/hdsoftware.htm*	NO_x	Starting 2005	1993 to 1998 on-road heavy-duty vehicles that operate in California
CARB	**Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Regulation** *www.arb.ca.gov/cc/hdghg/hdghg.htm*	CO_2	Phase 1 starting in 2012	Heavy-duty tractors that pull 53-foot+ trailers in CA
CARB	**Assembly Bill 32 requiring GHG reductions targets and Governor's Executive Order B – 30-15** *www.arb.ca.gov/cc/ab32/ab32.htm and www.gov.ca.gov/news.php?id=18938*	CO_2	GHG emissions reduction goals in 2020	All sectors identified in Climate Change Scoping Plan, including Goods Movement Sector.
SPBP CAAP	**CAAP Measure – HDV1 Performance Standards for On-Road Heavy-Duty Vehicles; Clean Truck Program** *www.cleanairactionplan.org/strategies/trucks/*	All	Phase-in starting in 2008	On-road heavy-duty vehicles that operate at POLB must have 2007 or newer engines by 2012.

APPENDIX B:
CARGO HANDLING EQUIPMENT DATA

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
AGV	AGV001	Gottwald	CT 70 BN	Electric					2395	CHE Electric		
AGV	AGV002	Gottwald	CT 70 BN	Electric					2835	CHE Electric		
AGV	AGV003	Gottwald	CT 70 BN	Electric					2793	CHE Electric		
AGV	AGV004	Gottwald	CT 70 BN	Electric					2751	CHE Electric		
AGV	AGV005	Gottwald	CT 70 BN	Electric					2871	CHE Electric		
AGV	AGV007	Gottwald	CT 70 BN	Electric					2853	CHE Electric		
AGV	AGV008	Gottwald	CT 70 BN	Electric					2664	CHE Electric		
AGV	AGV009	Gottwald	CT 70 BN	Electric					2835	CHE Electric		
AGV	AGV010	Gottwald	CT 70 BN	Electric					2287	CHE Electric		
AGV	AGV011	Gottwald	CT 70 BN	Electric					2750	CHE Electric		
AGV	AGV012	Gottwald	CT 70 BN	Electric					2836	CHE Electric		
AGV	AGV013	Gottwald	CT 70 BN	Electric					2865	CHE Electric		
AGV	AGV014	Gottwald	CT 70 BN	Electric					2766	CHE Electric		
AGV	AGV015	Gottwald	CT 70 BN	Electric					2829	CHE Electric		
AGV	AGV016	Gottwald	CT 70 BN	Electric					2819	CHE Electric		
AGV	AGV017	Gottwald	CT 70 BN	Electric					2872	CHE Electric		
AGV	AGV018	Gottwald	CT 70 BN	Electric					2832	CHE Electric		
AGV	AGV019	Gottwald	CT 70 BN	Electric					2814	CHE Electric		
AGV	AGV020	Gottwald	CT 70 BN	Electric					2768	CHE Electric		
AGV	AGV021	Gottwald	CT 70 BN	Electric					2690	CHE Electric		
AGV	AGV022	Gottwald	CT 70 BN	Electric					2779	CHE Electric		
AGV	AGV023	Gottwald	CT 70 BN	Electric					2509	CHE Electric		
AGV	AGV024	Gottwald	CT 70 BN	Electric					2860	CHE Electric		
AGV	AGV025	Gottwald	CT 70 BN	Electric					3113	CHE Electric		
AGV	AGV026	Gottwald	CT 70 BN	Electric					2570	CHE Electric		
AGV	AGV027	Gottwald	CT 70 BN	Electric					2779	CHE Electric		
AGV	AGV028	Gottwald	CT 70 BN	Electric					2855	CHE Electric		
AGV	AGV029	Gottwald	CT 70 BN	Electric					2306	CHE Electric		
AGV	AGV030	Gottwald	CT 70 BN	Electric					2919	CHE Electric		
AGV	AGV031	Gottwald	CT 70 BN	Electric					2686	CHE Electric		
AGV	AGV032	Gottwald	CT 70 BN	Electric					2887	CHE Electric		
AGV	AGV033	Gottwald	CT 70 BN	Electric					2768	CHE Electric		
AGV	AGV034	Gottwald	CT 70 BN	Electric					2937	CHE Electric		
AGV	AGV035	Gottwald	CT 70 BN	Electric					2933	CHE Electric		
AGV	AGV036	Gottwald	CT 70 BN	Electric					2540	CHE Electric		
AGV	AGV037	Gottwald	CT 70 BN	Electric					2449	CHE Electric		
AGV	AGV038	Gottwald	CT 70 BN	Electric					2698	CHE Electric		
AGV	AGV039	Gottwald	CT 70 BN	Electric					2834	CHE Electric		
AGV	AGV040	Gottwald	CT 70 BN	Electric					2820	CHE Electric		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
AGV	AGV041	Gottwald	CT 70 BN	Electric					2888	CHE Electric		
AGV	AGV042	Gottwald	CT 70 BN	Electric					2874	CHE Electric		
AGV	AGV043	Gottwald	CT 70 BN	Electric					2239	CHE Electric		
AGV	AGV044	Gottwald	CT 70 BN	Electric					2799	CHE Electric		
AGV	AGV045	Gottwald	CT 70 BN	Electric					2700	CHE Electric		
AGV	AGV046	Gottwald	CT 70 BN	Electric					2961	CHE Electric		
AGV	AGV047	Gottwald	CT 70 BN	Electric					2770	CHE Electric		
AGV	AGV048	Gottwald	CT 70 BN	Electric					2938	CHE Electric		
AGV	AGV049	Gottwald	CT 70 BN	Electric					2856	CHE Electric		
AGV	AGV050	Gottwald	CT 70 BN	Electric					2891	CHE Electric		
AGV	AGV051	Gottwald	CT 70 BN	Electric					2948	CHE Electric		
AGV	AGV052	Gottwald	CT 70 BN	Electric					2920	CHE Electric		
AGV	AGV053	Gottwald	CT 70 BN	Electric					2766	CHE Electric		
AGV	AGV054	Gottwald	CT 70 BN	Electric					2930	CHE Electric		
AGV	AGV055	Gottwald	CT 70 BN	Electric					2629	CHE Electric		
AGV	AGV056	Gottwald	CT 70 BN	Electric					2541	CHE Electric		
AGV	AGV057	Gottwald	CT 70 BN	Electric					2670	CHE Electric		
AGV	AGV058	Gottwald	CT 70 BN	Electric					140	CHE Electric		
AGV	AGV059	Gottwald	CT 70 BN	Electric					905	CHE Electric		
AGV	AGV060	Gottwald	CT 70 BN	Electric					1289	CHE Electric		
AGV	AGV061	Gottwald	CT 70 BN	Electric					909	CHE Electric		
AGV	AGV062	Gottwald	CT 70 BN	Electric					750	CHE Electric		
AGV	AGV063	Gottwald	CT 70 BN	Electric					314	CHE Electric		
AGV	AGV064	Gottwald	CT 70 BN	Electric					563	CHE Electric		
AGV	AGV065	Gottwald	CT 70 BN	Electric					944	CHE Electric		
AGV	AGV066	Gottwald	CT 70 BN	Electric					933	CHE Electric		
AGV	AGV067	Gottwald	CT 70 BN	Electric					480	CHE Electric		
AGV	AGV068	Gottwald	CT 70 BN	Electric					977	CHE Electric		
AGV	AGV069	Gottwald	CT 70 BN	Electric					222	CHE Electric		
AGV	AGV070	Gottwald	CT 70 BN	Electric					153	CHE Electric		
AGV	AGV071	Gottwald	CT 70 BN	Electric					617	CHE Electric		
AGV	AGV072	Gottwald	CT 70 BN	Electric					428	CHE Electric		
AGV	AGV073	Gottwald	CT 70 BN	Electric					178	CHE Electric		
Automatic Stacking Crane	ASC01L	ZPMC		Electric					2531	CHE Electric		
Automatic Stacking Crane	ASC01W	ZPMC		Electric					2182	CHE Electric		
Automatic Stacking Crane	ASC02L	ZPMC		Electric					2553	CHE Electric		
Automatic Stacking Crane	ASC02W	ZPMC		Electric					1696	CHE Electric		
Automatic Stacking Crane	ASC03L	ZPMC		Electric					2619	CHE Electric		
Automatic Stacking Crane	ASC03W	ZPMC		Electric					1835	CHE Electric		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Automatic Stacking Crane	ASC04L	ZPMC		Electric					2740	CHE Electric		
Automatic Stacking Crane	ASC04W	ZPMC		Electric					2376	CHE Electric		
Automatic Stacking Crane	ASC05L	ZPMC		Electric					2813	CHE Electric		
Automatic Stacking Crane	ASC05W	ZPMC		Electric					2418	CHE Electric		
Automatic Stacking Crane	ASC06L	ZPMC		Electric					2344	CHE Electric		
Automatic Stacking Crane	ASC06W	ZPMC		Electric					1502	CHE Electric		
Automatic Stacking Crane	ASC07L	ZPMC		Electric					2534	CHE Electric		
Automatic Stacking Crane	ASC07W	ZPMC		Electric					2137	CHE Electric		
Automatic Stacking Crane	ASC08L	ZPMC		Electric					2641	CHE Electric		
Automatic Stacking Crane	ASC08W	ZPMC		Electric					2422	CHE Electric		
Automatic Stacking Crane	ASC09L	ZPMC		Electric					2598	CHE Electric		
Automatic Stacking Crane	ASC09W	ZPMC		Electric					2348	CHE Electric		
Automatic Stacking Crane	ASC10L	ZPMC		Electric					2507	CHE Electric		
Automatic Stacking Crane	ASC10W	ZPMC		Electric					2521	CHE Electric		
Automatic Stacking Crane	ASC11L	ZPMC		Electric					2945	CHE Electric		
Automatic Stacking Crane	ASC11W	ZPMC		Electric					2136	CHE Electric		
Automatic Stacking Crane	ASC12L	ZPMC		Electric					2504	CHE Electric		
Automatic Stacking Crane	ASC12W	ZPMC		Electric					2480	CHE Electric		
Automatic Stacking Crane	ASC13L	ZPMC		Electric					2729	CHE Electric		
Automatic Stacking Crane	ASC13W	ZPMC		Electric					2215	CHE Electric		
Automatic Stacking Crane	ASC14L	ZPMC		Electric					2715	CHE Electric		
Automatic Stacking Crane	ASC14W	ZPMC		Electric					2391	CHE Electric		
Automatic Stacking Crane	ASC15L	ZPMC		Electric					2661	CHE Electric		
Automatic Stacking Crane	ASC15W	ZPMC		Electric					2467	CHE Electric		
Automatic Stacking Crane	ASC16L	ZPMC		Electric					2974	CHE Electric		
Automatic Stacking Crane	ASC16W	ZPMC		Electric					2321	CHE Electric		
Automatic Stacking Crane	ASC17L	ZPMC		Electric					2882	CHE Electric		
Automatic Stacking Crane	ASC17W	ZPMC		Electric					2264	CHE Electric		
Automatic Stacking Crane	ASC18L	ZPMC		Electric					2761	CHE Electric		
Automatic Stacking Crane	ASC18W	ZPMC		Electric					2285	CHE Electric		
Automatic Stacking Crane	ASC19L	ZPMC		Electric					2672	CHE Electric		
Automatic Stacking Crane	ASC19W	ZPMC		Electric					2406	CHE Electric		
Automatic Stacking Crane	ASC20L	ZPMC		Electric					2613	CHE Electric		
Automatic Stacking Crane	ASC21L	ZPMC		Electric					2419	CHE Electric		
Automatic Stacking Crane	ASC22L	ZPMC		Electric					2476	CHE Electric		
Automatic Stacking Crane	ASC23L	ZPMC		Electric					2770	CHE Electric		
Automatic Stacking Crane	ASC23W	ZPMC		Electric					2175	CHE Electric		
Automatic Stacking Crane	ASC24L	ZPMC		Electric					2508	CHE Electric		
Automatic Stacking Crane	ASC24W	ZPMC		Electric					2245	CHE Electric		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Automatic Stacking Crane	ASC25L	ZPMC		Electric					2857	CHE Electric		
Automatic Stacking Crane	ASC25W	ZPMC		Electric					2254	CHE Electric		
Bulldozer	AEP00545	Caterpillar		Diesel			2004	200	1500	CHE Diesel		
Cone Vehicle	IBC 001	Motrec		Diesel	Kubota	V1505-ET04	2016	35	1197	CHE Diesel		
Cone Vehicle	IBC 002	Motrec		Diesel	Kubota	V1505-ET04	2016	35	1812	CHE Diesel		
Cone Vehicle	IBC 003	Motrec		Diesel	Kubota	V1505-ET04	2016	35	2908	CHE Diesel		
Cone Vehicle	IBC 004	Motrec		Diesel	Kubota	V1505-ET04	2016	35	3469	CHE Diesel		
Cone Vehicle	IBC 005	Motrec		Diesel	Kubota	V1505-ET04	2016	35	2427	CHE Diesel		
Crane	218001	Linkbelt	HSP-8015	Diesel	GMC	50435001	1985	334	20	CHE Diesel		
Crane	#2T	Terex	RT555	Diesel	Cummins	QSB 6.7	2016	173	298	CHE Diesel		
Crane	203002	American	325	Electric			1980		0	CHE Electric		
Crane	217002	Gottwald	330EG	Electric			2006		30	CHE Electric		
Crane	IY001	ZPMC		Electric					1983	CHE Electric		
Crane	IY002	ZPMC		Electric					2385	CHE Electric		
Crane	IY003	ZPMC		Electric					2569	CHE Electric		
Crane	IY004	ZPMC		Electric					1221	CHE Electric		
Electric Pallet Jack	#31	Toyota	8HBE30	Electric	Toyota	AC drive motc	2013		94	CHE Electric		
Electric Pallet Jack	#32	Toyota	8HBE30	Electric	Toyota	AC drive motc	2013		188	CHE Electric		
Excavator	108019	Caterpillar	345B	Diesel	Caterpillar	3176C	2002	322	0	CHE Diesel		
Excavator	108021	Caterpillar	345CL	Diesel	Caterpillar	C13	2005	371	0	CHE Diesel		
Forklift	2009	Taylor		Diesel	Cummins	11.5 T	2002	173	2169	CHE Diesel	8/25/2014	
Forklift	2010	Taylor	THD360L	Diesel	Cummins	11.5 T	2002	173	540	CHE Diesel	8/25/2014	
Forklift	2069	Taylor	TX360M	Diesel	Cummins	11.5 T	2007		340	CHE Diesel	12/1/2011	
Forklift	2793	Taylor	TH350L	Diesel	Cummins	11.5 T	2005	150	659	CHE Diesel	8/25/2014	
Forklift	2794	Taylor	TH350L	Diesel	Cummins	11.5 T	2005	150	970	CHE Diesel	8/25/2014	
Forklift	3001	Caterpillar	P33000D	Diesel	Caterpillar	6M60-TLA3T	2008	148	1680	CHE Diesel		
Forklift	3002	Caterpillar	P33000D	Diesel	Caterpillar	6M60-TLA3T	2008	148	1752	CHE Diesel		
Forklift	3010	Yale	GLP100	Diesel	Vortec	5 T	2012	117	373	CHE Diesel		
Forklift	3016	Taylor	T520M	Diesel	Cummins	25 ton	2008		421	CHE Diesel	12/1/2011	
Forklift	17501	Mitsubishi	FD80	Diesel	Mitsubishi	8 T	2006	117	100	CHE Diesel	1/1/2012	
Forklift	17502	Mitsubishi	FD80	Diesel	Mitsubishi	8 T	2006	117	100	CHE Diesel	1/1/2012	
Forklift	30205	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	2044	CHE Diesel		
Forklift	30206	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	1725	CHE Diesel		
Forklift	30207	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	989	CHE Diesel		
Forklift	30208			Diesel			2018	220	159	CHE Diesel		
Forklift	30290	Taylor	THD 300	Diesel	Cummins	15 T	1990	183	100	CHE Diesel	1/1/2014	
Forklift	30294	Taylor	T-300M	Diesel			2003	165	1094	CHE Diesel	9/10/2014	
Forklift	30295	Taylor	T300M	Diesel	Cummins	QSB5.9	2004	165	1412	CHE Diesel		
Forklift	30296	Taylor	T300M	Diesel	Cummins	QSB5.9	2004	165	1186	CHE Diesel	6/6/2014	

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Forklift	30300	Taylor	TX300M	Diesel	Cummins		2014		2492	CHE Diesel		
Forklift	30301	Taylor	TX300M	Diesel	Cummins		2014		1886	CHE Diesel		
Forklift	33000	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel	4/20/2015	
Forklift	33001	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel	4/20/2015	
Forklift	33002	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel	4/30/2015	
Forklift	33003	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel	5/6/2015	
Forklift	33004	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel	5/8/2015	
Forklift	33005	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel	5/19/2015	
Forklift	33006	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	33007	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	33008	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	33009	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	33010	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	33011	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	33012	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	33013	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel		
Forklift	35200	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2015		659	CHE Diesel		
Forklift	35202	Taylor	TX300M	Diesel	Cummins		2014		2307	CHE Diesel		
Forklift	35203	Taylor	XL360L	Diesel	Cummins	QSB6.7	2018	173	723	CHE Diesel		
Forklift	35204	Taylor	XL360L	Diesel	Cummins	QSB6.7	2018	173	314	CHE Diesel		
Forklift	36000	Taylor	HX360L	Diesel	Cummins	QSB6.7	2018		943	CHE Diesel		
Forklift	40210	Magna Lift	40OB412FS	Diesel	Caterpillar	20 T	2007	176	150	CHE Diesel	1/1/2012	
Forklift	40212	Magna Lift	40PBL12FS	Diesel	Cummins	20 T	2007	117	150	CHE Diesel	1/1/2012	
Forklift	40213	Taylor	TXH400L	Diesel	Cummins	20 T	2008	117	150	CHE Diesel	5/11/2015	
Forklift	40214	Taylor	TXH400L	Diesel	Cummins	20 T	2008	117	150	CHE Diesel	5/15/2015	
Forklift	55200	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel		
Forklift	55201	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel		
Forklift	55202	Otek	55SC	Diesel	Caterpillar	28 T	2000	176	150	CHE Diesel	1/1/2014	
Forklift	55203	Otek	55SC	Diesel	Caterpillar	28 T	2001	176	100	CHE Diesel	1/1/2014	
Forklift	55204	Otek	55SC	Diesel	Caterpillar	28 T	2001	176	100	CHE Diesel	1/1/2014	
Forklift	55206	Hoist	P550	Diesel	Cummins	28 T	2007	215	150	CHE Diesel	5/20/2015	
Forklift	55208	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel		
Forklift	55209	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel		
Forklift	72000	Taylor	36 T	Diesel		36 T	2017		100	CHE Diesel		
Forklift	03-088	JLG Skytrak	8042 T4F	Diesel	Cummins	QSF3.8	2015	110	57	CHE Diesel		
Forklift	03-089	JLG Skytrak	8042 T4F	Diesel	Cummins	QSF3.8	2015	110	214	CHE Diesel		
Forklift	10 W	Hyster	H210D	Diesel			2017	120	1350	CHE Diesel		
Forklift	11 W	Hyster	H210D	Diesel	Cummins		2015	110	1475	CHE Diesel		
Forklift	12 W	Hyster	H210D	Diesel	Cummins		2014	110	1363	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Forklift	13 W	Hyster	H155FT	Diesel			2017		651	CHE Diesel		
Forklift	14 W	Hyster	H155XL2	Diesel	Cummins		2015	75	5146	CHE Diesel		
Forklift	15 W	Hyster	H210HD	Diesel	Cummins		2015	75	1172	CHE Diesel		
Forklift	16 W	Hyster	H155XL2	Diesel	Cummins		2015	75	1451	CHE Diesel		
Forklift	28609R	Taylor	XH350L	Diesel	Cummins	35000 lbs	2015	160	4765	CHE Diesel		
Forklift	29381R	Taylor		Diesel	Cummins	32000 lbs	2015	173	3910	CHE Diesel		
Forklift	29382R	Taylor	X360M	Diesel		32000 lbs	2015	173	387	CHE Diesel		
Forklift	29795R	Taylor	X360M	Diesel	Cummins	32000 lbs	2015	173	2883	CHE Diesel		
Forklift	4 W	Hyster	H210D	Diesel	Cummins		2013	110	1071	CHE Diesel		
Forklift	5 W	Hyster	H210D	Diesel	Cummins		2013	110	1631	CHE Diesel		
Forklift	6 W	Hyster	H190D	Diesel	Cummins		2008	120	595	CHE Diesel	1/1/2014	
Forklift	7 W	Hyster	H210D	Diesel	Cummins		2015	120	1449	CHE Diesel		
Forklift	70FP1	Hyster	XL2	Diesel	Hyster	7.5 T	1995	120	250	CHE Diesel		
Forklift	8 W	Hyster	H210D	Diesel	Cummins		2017	120	1474	CHE Diesel		
Forklift	9 W	Hyster	H 210HD	Diesel	Perkins		2017	125	1141	CHE Diesel		
Forklift	F007E0197	Hyster	H210HD	Diesel	Cummins	QSB6.7-155	2002	155	200	CHE Diesel	1/1/2014	
Forklift	F007E0246	Hyster	H210HD	Diesel	Perkins	1106C-E60TA	2003	155	225	CHE Diesel	1/1/2014	
Forklift	F007E0246	Hyster	H210HD	Diesel	Perkins	1106C-E60TA	2003	155	225	CHE Diesel	1/1/2014	
Forklift	F007E0246	Hyster	H210HD	Diesel	Perkins	1106C-E60TA	2003	155	225	CHE Diesel	1/1/2014	
Forklift	F007E0247	Hyster	H210HD	Diesel	Perkins	1106C-E60TA	2003	155	225	CHE Diesel	1/1/2013	
Forklift	F007E0247	Hyster	H210HD	Diesel	Perkins	1106C-E60TA	2003	155	225	CHE Diesel	1/1/2014	
Forklift	F118.11	Catepillar		Diesel	Mitsubishi	DP50K-2	2008	64	1	CHE Diesel	1/1/2013	
Forklift	F158-10	Hyster		Diesel	Kubota		2018	73	291	CHE Diesel		
Forklift	F159-10	Hyster		Diesel	Kubota		2018	73	367	CHE Diesel		
Forklift	F160-10	Hyster		Diesel	Kubota		2018	73	290	CHE Diesel		
Forklift	F161-10	Hyster		Diesel	Kubota		2018	73	50	CHE Diesel		
Forklift	F162.36	Taylor		Diesel	Cummins	QSB6.7	2018	173	1393	CHE Diesel		
Forklift	F163.36	Taylor		Diesel	Cummins	QSB6.7	2018	173	1246	CHE Diesel		
Forklift	F164-11	Clark		Diesel	Duetz	TD3.6L4	2018	74	215	CHE Diesel		
Forklift	F165-11	Clark		Diesel	Duetz	TD3.6L4	2018	74	176	CHE Diesel		
Forklift	FL 03-310	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	265	CHE Diesel		
Forklift	FL 03-311	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	275	CHE Diesel		
Forklift	FL 03-312	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	523	CHE Diesel		
Forklift	FL 03-313	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	403	CHE Diesel		
Forklift	FL4500		4,500 lbs	Diesel			1996	50	10	CHE Diesel		
Forklift	FL550	Taylor	X550M	Diesel	Isuzu	55000 lbs	2015	100	41	CHE Diesel		
Forklift	FLBL	Hyster		Diesel			1995	60	520	CHE Diesel		
Forklift	L-1	Linde	H80D	Diesel			2008	125	1484	CHE Diesel	1/1/2017	
Forklift	L-2	Linde	H80D	Diesel			2008	125	375	CHE Diesel	1/1/2017	

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Forklift	L-3	Linde	H80D	Diesel			2008	125	676	CHE Diesel	12/1/2015	
Forklift	#11	Toyota	7FBEU15	Electric	Toyota	AC drive motc	1995		798	CHE Electric		
Forklift	#12	Toyota		Electric	Taylor-Dunn	DC Drive Mot	1995		415	CHE Electric		
Forklift	#13	Toyota	7FBEU20	Electric	Toyota	AC drive motc	1995		440	CHE Electric		
Forklift	#30	Toyota	7FBEU15	Electric	Toyota	AC drive motc	2013		290	CHE Electric		
Forklift	#33	Raymond		Electric	Raymond	AC drive motc	2012		7	CHE Electric		
Forklift	FL-090	Hyster	N40ZRS2	Electric					13	CHE Electric		
Forklift	FL-091	Hyster	N40ZRS2	Electric					59	CHE Electric		
Forklift	FL100			Electric			2006		0	CHE Electric		
Forklift	6000	Mitshubishi	K25	Gasoline	Nissan	6,000 lb	2013	59	796	CHE Gasoline		
Forklift	6001	Mitshubishi	K25	Gasoline	Nissan	6,000 lb	2013	59	594	CHE Gasoline		
Forklift	6002	Mitsubishi	K25	Gasoline		6,000 lb	2013		279	CHE Gasoline		
Forklift	6003	Mitsubishi	K25	Gasoline		6,000 lb	2013		404	CHE Gasoline		
Forklift	6004	Mitsubishi	K25	Gasoline		6,000 lb	2013		291	CHE Gasoline		
Forklift	6005	Mitsubishi	K25	Gasoline		6,000 lb	2013		522	CHE Gasoline		
Forklift	7001	Mitshubishi	K25	Gasoline	Nissan	6,000 lb	2013	59	945	CHE Gasoline		
Forklift	7002	Mitshubishi	K25	Gasoline	Nissan	6,000 lb	2013	59	541	CHE Gasoline		
Forklift	7003	Mitshubishi	K25	Gasoline	Nissan	7000 lb	2013	59	744	CHE Gasoline		
Forklift	7004	Mitshubishi	K25	Gasoline	Nissan	7000 lb	2013	59	266	CHE Gasoline		
Forklift	7005	Mitsubishi	K25	Gasoline		6,000 lb	2013		533	CHE Gasoline		
Forklift	7006	Mitsubishi	K25	Gasoline		7,000 lb	2013		243	CHE Gasoline		
Forklift	7008	Mitsubishi	K25	Gasoline		7,000 lb	2013		721	CHE Gasoline		
Forklift	7009	Mitsubishi	K25	Gasoline		7,000 lb			630	CHE Gasoline		
Forklift	7010	Mitsubishi	K25	Gasoline		7,000 lb	2013		479	CHE Gasoline		
Forklift	8000	Mitsubishi	FG40N	Gasoline			2016		1202	CHE Gasoline		
Forklift	8020	Mitsubishi	FG40N	Gasoline		8,000 lb	2012		6	CHE Gasoline		
Forklift	8033	Mitsubishi	H80XM	Gasoline			2002		1035	CHE Gasoline		
Forklift	8210	Mitsubishi	FG40N	Gasoline	Nissan	8,000 lb	2012	59	261	CHE Gasoline		
Forklift	L5	Mitsubishi	FG40N	Gasoline	Mitsubishi	TB45	2011	72	378	CHE Gasoline		
Forklift	L6	Mitsubishi	FG40N	Gasoline	Mitsubishi	TB45	2011	72	584	CHE Gasoline		
Forklift	L7	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	226	CHE Gasoline		
Forklift	L8	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	211	CHE Gasoline		
Forklift	L9	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	266	CHE Gasoline		
Forklift	75	Hyster	H60FT	LPG	Mazda	2.2	2014	46	210	CHE Propane		
Forklift	76	Hyster	H60FT	LPG	Mazda	2.2	2014	46	183	CHE Propane		
Forklift	78	Hyster	H60FT	LPG	Mazda	2.2	2014	46	119	CHE Propane		
Forklift	79	Hyster	H60FT	LPG	Mazda	2.2	2014	46	327	CHE Propane		
Forklift	80	Hyster	H60FT	LPG	Mazda	2.2	2014	46	391	CHE Propane		
Forklift	541	Toyota	42-4FGC25-:	LPG			1985	62	169	CHE Propane		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Forklift	593	Clark	C25L	LPG	Cummins	5000 lbs	2010	70	2053	CHE Propane		
Forklift	811	Clark	C25L	LPG		5000 lbs	2015	75	1720	CHE Propane		
Forklift	812	Clark	C25L	LPG		5000 lbs	2015	75	400	CHE Propane		
Forklift	1007	Hyster	H100XM	LPG	Vortec	5 T	2002	117	254	CHE Propane		
Forklift	1008	Hyster	H100XM	LPG	Vortec	5 T	2002	117	783	CHE Propane		
Forklift	1801	Yale	GLP100	LPG	Vortec	5 T	2005	117	380	CHE Propane		
Forklift	1802	Yale	GLP100	LPG	Vortec	5 T	2005	117	492	CHE Propane		
Forklift	5050	Clark	C25L	LPG	GM	DPSIB2.7GLP	2013	96	2181	CHE Propane		
Forklift	5051	Clark	C25L	LPG	GM	DPSIB2.7GLP	2013	96	1954	CHE Propane		
Forklift	5052	Clark	C25L	LPG	GM	DPSIB2.7GLP	2013	96	2020	CHE Propane		
Forklift	5053	Clark	C25L	LPG	GM	DPSIB2.7GLP	2014	96	2087	CHE Propane		
Forklift	5054	Clark	C25L	LPG	GM	DPSIB2.7GLP	2014	96	1620	CHE Propane		
Forklift	5055	Clark	C25L	LPG	GM	DPSIB2.7GLP	2014	96	1380	CHE Propane		
Forklift	5056	Clark	C25L	LPG	GM	DPSIB2.7GLP	2014	96	1920	CHE Propane		
Forklift	6016	Caterpillar	GP30K	LPG		6,000 lb	2000	62	240	CHE Propane		
Forklift	6017	Caterpillar	GP30K	LPG		6,000 lb	2000	62	298	CHE Propane		
Forklift	6036	Caterpillar	P6000	LPG	Nissan	K21	2004	62	245	CHE Propane		
Forklift	10117	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10118	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10119	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10120	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10121	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10122	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10123	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10124	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10125	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	10126	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane		
Forklift	#27	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	46	CHE Propane		
Forklift	#34	Toyota	8FGU30	LPG	Toyota	4Y ECS	2013	57	376	CHE Propane		
Forklift	#35	Toyota	8FGU30	LPG	Toyota	4Y ECS	2013	57	387	CHE Propane		
Forklift	#36	Toyota	8FGU30	LPG	Toyota	4Y ECS	2014	57	202	CHE Propane		
Forklift	#37	Toyota	8FGU30	LPG	Toyota	4Y ECS	2014	57	192	CHE Propane		
Forklift	#8	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	4	CHE Propane		
Forklift	#9	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	30	CHE Propane		
Forklift	2005f	Caterpillar	PG55N1	LPG	GCT	12000 lbs	2017	141	253	CHE Propane		
Forklift	28782R	Clark	C25L	LPG		5000 lbs	2015	70	1336	CHE Propane		
Forklift	28784R	Clark	C25L	LPG		5000 lbs	2015	70	1158	CHE Propane		
Forklift	29252R	Clark	C25L	LPG		5000 lbs	2013	70	1212	CHE Propane		
Forklift	29783R	Clark	C25L	LPG		5000 lbs	2015	70	1212	CHE Propane		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Forklift	5049F	Clark	C25L	LPG	GM	DPSIB2.7GLP	2013	96	1695	CHE Propane		
Forklift	F006V0225	Hyster	H155XL	LPG	Perkins	1004-4	2012	103	150	CHE Propane		
Forklift	F111.4			LPG				84	162	CHE Propane		
Forklift	F129.5			LPG		QSB 6.7	2013	74	101	CHE Propane		
Forklift	F130.5			LPG		QSB 6.7	2013	74	91	CHE Propane		
Forklift	F131.5			LPG		QSB 6.7	2013	74	176	CHE Propane		
Forklift	F132.5			LPG		QSB 6.7	2013	74	174	CHE Propane		
Forklift	F133.5			LPG		QSB 6.7	2013	74	128	CHE Propane		
Forklift	FL-071	Mitsubishi	FG30K	LPG	Mitsubishi	4G64	2000		212	CHE Propane		
Forklift	FL-077	Hyster	Fortis 80	LPG	Kubota	WG3800	2014	46	381	CHE Propane		
Forklift	FL-082	Hyster	H60FT	LPG	Kubota	WG3800	2015	46	99	CHE Propane		
Forklift	FL-083	Hyster	H60FT	LPG	Kubota	WG3800	2015	46	182	CHE Propane		
Forklift	FL-084	Hyster	H60FT	LPG	Kubota	WG3800	2015	46	140	CHE Propane		
Forklift	FL-085	Hyster	H60FT	LPG	Kubota	WG3800	2015	46	141	CHE Propane		
Forklift	FL-086	Hyster	H60FT	LPG	Kubota	WG3800	2015	46	159	CHE Propane		
Forklift	FL-087	Hyster	H60FT	LPG	Kubota	WG3800	2015	46	126	CHE Propane		
Forklift	FL-092	Hyster	H80FT	LPG	Kubota	WG3800	2015	98	270	CHE Propane		
Forklift	FL-093	Hyster	H80FT	LPG	Kubota	WG3800	2015	98	327	CHE Propane		
Forklift	FL-094	Hyster	H80FT	LPG	Kubota	WG3800	2015	98	1793	CHE Propane		
Forklift	FLBD100A	Hyster	S155XL	LPG		11.5 T	2000	100	200	CHE Propane		
Forklift	FLBD100B	Hyster	S155XL	LPG		11.5 T	2000	100	200	CHE Propane		
Forklift	FLBD100C	Komatsu		LPG			2004	50	1500	CHE Propane		
Forklift	FLBL20			LPG			1995	120	624	CHE Propane		
Forklift	FLBL50A	Hyster	H35xm	LPG	Case	5 T	1995	45	52	CHE Propane		
Forklift	FLBL50B	Toyota	7Fgu25	LPG	Toyota	5 T	2004	50	52	CHE Propane		
Forklift	H80XM	Hyster	H80XM	LPG	GM	6 cyl	2004	94	120	CHE Propane		
Forklift	LGB17	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane		
Forklift	LGB18	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane		
Forklift	LGB19	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane		
Forklift	LGB20	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane		
Forklift	LGB21	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane		
Forklift	LGB22	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane		
Forklift	LGB23	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane		
Forklift	LGB24	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane		
Forklift	LGB25	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane		
Forklift	LGB26	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane		
Forklift	LGB27	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane		
Forklift	LGB28	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane		
Forklift	own455a	Toyota	8FGU30	LPG	Toyota	4Y	2018	57	700	CHE Propane		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Forklift	own455b	Toyota	8FGU30	LPG	Toyota	4Y	2010	57	300	CHE Propane		
Forklift	SSAD1	Toyota		LPG		3 T	1987	122	0	CHE Propane		2008
Forklift	SSAD10	Toyota		LPG		3 T	1987	122	15	CHE Propane		2008
Forklift	SSAD11	Toyota		LPG		3 T	1987	122	0	CHE Propane		2008
Forklift	SSAD12	Clark	CGP25	LPG		3 T	1993	122	290	CHE Propane		2008
Forklift	SSAD13	Clark	CGP25	LPG		3 T	1995	122	240	CHE Propane		
Forklift	SSAD15	Clark	CGP25	LPG		3 T	1995	122	100	CHE Propane		
Forklift	SSAD17	Clark	CGP25	LPG		3 T	1995	122	100	CHE Propane		
Forklift	SSAD18	Toyota		LPG		3 T	1987	122	0	CHE Propane		2008
Forklift	SSAD19	Toyota		LPG		3 T	1987	122	0	CHE Propane		2008
Forklift	SSAD20	Toyota		LPG		3 T	1987	122	0	CHE Propane		
Forklift	SSAD23	Toyota	15.000#	LPG		3 T	2008		150	CHE Propane		
Forklift	SSAD24	Toyota	15,000#	LPG		3 T	2008		390	CHE Propane		
Forklift	SSAD26	Toyota		LPG		5 T	1987	122	0	CHE Propane		2008
Forklift	SSAD4	Toyota		LPG		5 T	1987	122	0	CHE Propane		2008
Forklift	SSAD6	Toyota		LPG		5 T	1987	122	0	CHE Propane		2008
Forklift	SSAD8	Toyota		LPG		5 T	1987	122	0	CHE Propane		2008
Forklift	SSAD9	Toyota		LPG		5 T	1987	122	140	CHE Propane		2008
Hybrid RTG	TT28	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1262	CHE Diesel		
Hybrid RTG	TT29	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1111	CHE Diesel		
Hybrid RTG	TT30	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1520	CHE Diesel		
Hybrid RTG	TT31	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1356	CHE Diesel		
Hybrid RTG	TT32	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1563	CHE Diesel		
Hybrid RTG	TT33	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1315	CHE Diesel		
Hybrid RTG	TT34	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1534	CHE Diesel		
Hybrid RTG	TT35	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1483	CHE Diesel		
Hybrid RTG	TT41	Paceco-Mitsı		Diesel	Caterpillar	C7.1	2016	250	1700	CHE Diesel		
Hybrid RTG	TT42	Paceco-Mitsı		Diesel	Caterpillar	C7.1	2016	250	1483	CHE Diesel		
Hybrid RTG	TT43	Paceco-Mitsı		Diesel	Caterpillar	C7.1	2016	250	1580	CHE Diesel		
Hybrid RTG	TT44	Paceco-Mitsı		Diesel	Caterpillar	C7.1	2016	250	1346	CHE Diesel		
Hybrid RTG	TT45	Paceco-Mitsı		Diesel	Caterpillar	C7.1	2016	250	1453	CHE Diesel		
Hybrid RTG	TT46	Paceco-Mitsı		Diesel	Caterpillar	C7.1	2016	250	1504	CHE Diesel		
Hybrid RTG	TT47	Paceco-Mitsı		Diesel	Caterpillar	C7.1	2016	250	1525	CHE Diesel		
Loader	10059	Kubota	R520S	Diesel			2003	50	1500	CHE Diesel		
Loader		Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	872	CHE Diesel		
Loader	#10LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	1698	CHE Diesel		
Loader	#11LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	1896	CHE Diesel		
Loader	#14LD	Caterpillar	980M	Diesel	Caterpillar	C13	2017	420	1697	CHE Diesel		
Loader	#8LD	Caterpillar	980K	Diesel	Caterpillar	C13	2012	402	993	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Loader	#9LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	1655	CHE Diesel		
Loader	70L1	Catepillar	950B	Diesel	Caterpillar		1985	200	250	CHE Diesel		
Loader	K1Y00340	CAT	982-M	Diesel		C-13	2014			CHE Diesel		
Loader	KRS00297	CAT	980-M	Diesel		C-13	2014			CHE Diesel		
Loader	ownload	Caterpillar	972M	Diesel	Caterpillar		2017	272	1912	CHE Diesel		
Man Lift	1004004	JLG	600S	Diesel	Perkins	404-22T	2009	62	116	CHE Diesel		
Man Lift	1004011	JLG	1200SJP	Diesel	Deutz	TD2011L04	2008	75	1128	CHE Diesel		
Man Lift	62660003	JLG	600S	Diesel	Deutz	TD2.9L4	2014	67	286	CHE Diesel		
Man Lift	32601TLL	JLG		Diesel			2012		200	CHE Diesel		
Man Lift	ML	Genie	S-85	Diesel			2009			CHE Diesel		
Man Lift	ML001	JLG		Diesel			2006		2	CHE Diesel		
Man Lift	ML002	JLG		Diesel			2013		232	CHE Diesel		
Man Lift	ML10	JLG	1350SJP	Diesel	Deutz	TCD2.9L4	2017	99	761	CHE Diesel		
Man Lift	ML316	JLG		Diesel			2000		43	CHE Diesel		
Man Lift	SC-139			Diesel			2013	62	232	CHE Diesel		
Man Lift	SC-156	JLG		Diesel	Deutz	TCD 3.6L4	2015	100	196	CHE Diesel		
Man Lift	SC-99			Diesel			2013	74	144	CHE Diesel		
Man Lift	#21	JLG	1.93E+05	Electric	JLG	AC drive motc	2001		0	CHE Electric		
Man Lift	#22	JLG	1930ES	Electric	JLG	AC drive motc	2003		0	CHE Electric		
Man Lift	ML08	Genie	S60	Gasoline	Ford	LRG425-EFI	2000	82	42	CHE Gasoline		
Man Lift	ML09	JLG	600S	Gasoline	Ford	LRG425-EFI	2004	82	100	CHE Gasoline		
Material Handler	108031	Caterpillar	345CMH	Diesel	Caterpillar	C13	2005	371	1603	CHE Diesel	9/15/2011	
Material Handler	110003	Caterpillar	375-L	Diesel	Caterpillar	C15	2008	717	0	CHE Diesel	6/22/2011	
Material Handler	110008	Caterpillar	375L	Electric	Reliance		1995		0	CHE Electric		
Miscellaneous	SC-123	Peco		Diesel	Kubota		2010	13	2119	CHE Diesel		
Miscellaneous	SC-124	Peco		Diesel	Kubota		2010	13	831	CHE Diesel		
Rail pusher	3501011	RailKing	RK 330	Diesel	Cummins	QSB6.7 195	2013	195	328	CHE Diesel		
Rail pusher	SC-138			Diesel			2013	150	879	CHE Diesel		
Rail pusher	SC-140			Diesel			2013	260	584	CHE Diesel		
Rub-trd Gantry Crane	10RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	4033	CHE Diesel	12/27/2013	
Rub-trd Gantry Crane	11RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2003	CHE Diesel	11/22/2013	
Rub-trd Gantry Crane	14RTG	ZPMC	RC40.6/64	Diesel	CAT	C15	2013	515	3713	CHE Diesel		
Rub-trd Gantry Crane	15RTG	ZPMC	RC40.6/64	Diesel	CAT	C15	2013	515	3100	CHE Diesel		
Rub-trd Gantry Crane	16RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3782	CHE Diesel		
Rub-trd Gantry Crane	17RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3923	CHE Diesel		
Rub-trd Gantry Crane	18RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3614	CHE Diesel		
Rub-trd Gantry Crane	1RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2786	CHE Diesel	2/26/2014	
Rub-trd Gantry Crane	20RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3558	CHE Diesel		
Rub-trd Gantry Crane	21RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3597	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Rub-trd Gantry Crane	22RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3128	CHE Diesel		
Rub-trd Gantry Crane	23RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3556	CHE Diesel		
Rub-trd Gantry Crane	24RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	2831	CHE Diesel		
Rub-trd Gantry Crane	25RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3627	CHE Diesel		
Rub-trd Gantry Crane	26RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	2792	CHE Diesel		
Rub-trd Gantry Crane	27RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	4025	CHE Diesel		
Rub-trd Gantry Crane	2RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	3467	CHE Diesel	1/31/2014	
Rub-trd Gantry Crane	3RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	2686	CHE Diesel	6/24/2013	
Rub-trd Gantry Crane	4RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	1980	CHE Diesel	1/31/2014	
Rub-trd Gantry Crane	5RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	2116	CHE Diesel	1/31/2014	
Rub-trd Gantry Crane	6RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1508	CHE Diesel	11/4/2013	
Rub-trd Gantry Crane	7RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2237	CHE Diesel	11/1/2013	
Rub-trd Gantry Crane	8RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1320	CHE Diesel	10/21/2013	
Rub-trd Gantry Crane	9RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	4	CHE Diesel	1/27/2014	
Rub-trd Gantry Crane	ZT06	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2003	946	1045	CHE Diesel		
Rub-trd Gantry Crane	ZT07	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2003	946	1168	CHE Diesel		
Rub-trd Gantry Crane	ZT08	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1285	CHE Diesel		
Rub-trd Gantry Crane	ZT09	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1226	CHE Diesel		
Rub-trd Gantry Crane	ZT10	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1377	CHE Diesel		
Rub-trd Gantry Crane	ZT11	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1800	CHE Diesel	4/26/2013	
Rub-trd Gantry Crane	ZT12	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2293	CHE Diesel	12/15/2014	
Rub-trd Gantry Crane	ZT13	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2322	CHE Diesel	3/29/2013	
Rub-trd Gantry Crane	ZT14	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	781	CHE Diesel	3/20/2013	
Rub-trd Gantry Crane	ZT15	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2157	CHE Diesel	3/26/2013	
Rub-trd Gantry Crane	ZT19			Diesel			2002		1211	CHE Diesel	4/26/2013	
Rub-trd Gantry Crane	ZT34	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	2863	CHE Diesel	3/15/2013	
Rub-trd Gantry Crane	ZT35	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043		CHE Diesel	2/15/2013	
Rub-trd Gantry Crane	ZT36	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	1354	CHE Diesel	4/24/2013	
Rub-trd Gantry Crane	ZT37	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	1227	CHE Diesel	4/22/2013	
Side pick	15253	Taylor	TECSP157-8	Diesel	Cummins	B5.9C	2000	205	18	CHE Diesel	6/21/2013	
Side pick	15255	Taylor	TECSP157-8	Diesel	Cummins	QSB5.9	2003	205	21	CHE Diesel	6/6/2013	
Side pick	15256	Taylor	TECSP157-8	Diesel	Cummins	QSB5.9	2005	205	5	CHE Diesel	6/6/2013	
Side pick	15257	Taylor		Diesel			2017	205	323	CHE Diesel		
Side pick	15264	Taylor	TECSP157/8	Diesel	Cummins	B5.9C	2002	205	938	CHE Diesel	3/2/2013	
Side pick	15265	Taylor	TECSP157/8	Diesel	Cummins	QSBB5.9C	2006	205	1715	CHE Diesel	5/2/2013	
Side pick	15266	Taylor	TECSP157/8	Diesel	Cummins	QSBB5.9C	2006	205	894	CHE Diesel	5/2/2013	
Skid Steer Loader	MWD0234	CAT	226-B	Diesel			2011			CHE Diesel		
Skid Steer Loader	SSL1	Caterpillar	226D	Diesel		C2.2	2015	67	664	CHE Diesel		
STS Crane	G3			Electric					428	CHE Electric		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
STS Crane	G4			Electric					252	CHE Electric		
STS Crane	PT10			Electric					1372	CHE Electric		
STS Crane	PT11			Electric					2439	CHE Electric		
STS Crane	PT12			Electric					2503	CHE Electric		
STS Crane	PT14			Electric					1797	CHE Electric		
STS Crane	PT15			Electric					701	CHE Electric		
STS Crane	PT16			Electric					646	CHE Electric		
STS Crane	PT17			Electric					2230	CHE Electric		
STS Crane	PT18			Electric					2458	CHE Electric		
STS Crane	PT-19			Electric					2278	CHE Electric		
STS Crane	PT-20			Electric					2251	CHE Electric		
STS Crane	PT7			Electric					684	CHE Electric		
STS Crane	PT8			Electric					241	CHE Electric		
STS Crane	PT9			Electric					125	CHE Electric		
STS Crane	STS 001	ZPMC		Electric			2015		506	CHE Electric		
STS Crane	STS 002	ZPMC		Electric			2015		1960	CHE Electric		
STS Crane	STS 003	ZPMC		Electric			2015		2695	CHE Electric		
STS Crane	STS 004	ZPMC		Electric			2015		2755	CHE Electric		
STS Crane	STS 005	ZPMC		Electric			2015		3000	CHE Electric		
STS Crane	STS 006	ZPMC		Electric			2015		3018	CHE Electric		
STS Crane	STS 007	ZPMC		Electric			2015		2982	CHE Electric		
STS Crane	STS 008	ZPMC		Electric			2015		2965	CHE Electric		
STS Crane	STS 009	ZPMC		Electric			2016		3067	CHE Electric		
STS Crane	STS 010	ZPMC		Electric			2016		3074	CHE Electric		
STS Crane	STS 011	ZPMC		Electric			2018		1195	CHE Electric		
STS Crane	STSC20			Electric						CHE Electric		
STS Crane	STSC21			Electric						CHE Electric		
STS Crane	STSC22			Electric						CHE Electric		
STS Crane	STSC23			Electric						CHE Electric		
STS Crane	STSC24			Electric						CHE Electric		
STS Crane	STSC25			Electric						CHE Electric		
STS Crane	STSC26			Electric						CHE Electric		
STS Crane	STSC27			Electric						CHE Electric		
STS Crane	STSC28			Electric						CHE Electric		
STS Crane	STSC29			Electric						CHE Electric		
STS Crane	STSC30			Electric						CHE Electric		
STS Crane	STSC31			Electric						CHE Electric		
STS Crane	STSC33			Electric						CHE Electric		
STS Crane	STSC40			Electric						CHE Electric		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
STS Crane	STSC41			Electric						CHE Electric		
STS Crane	STSC42			Electric						CHE Electric		
STS Crane	STSC43			Electric						CHE Electric		
STS Crane	STSC44			Electric						CHE Electric		
STS Crane	STSC45			Electric						CHE Electric		
STS Crane	STSC46			Electric						CHE Electric		
STS Crane	STSC47			Electric						CHE Electric		
STS Crane	STSC48			Electric						CHE Electric		
STS Crane	STSC49			Electric						CHE Electric		
STS Crane	STSC50			Electric						CHE Electric		
STS Crane	STSC51			Electric						CHE Electric		
STS Crane	STSC52			Electric						CHE Electric		
STS Crane	STSC53			Electric						CHE Electric		
STS Crane	STSC54			Electric						CHE Electric		
STS Crane	STSC55			Electric						CHE Electric		
STS Crane	STSC56			Electric						CHE Electric		
STS Crane	STSC57			Electric						CHE Electric		
STS Crane	STSC80			Electric						CHE Electric		
STS Crane	STSC81			Electric						CHE Electric		
STS Crane	STSC82			Electric						CHE Electric		
STS Crane	STSC83			Electric						CHE Electric		
STS Crane	STSC84			Electric						CHE Electric		
STS Crane	STSC85			Electric						CHE Electric		
STS Crane	STSC86			Electric						CHE Electric		
STS Crane	STSC87			Electric						CHE Electric		
STS Crane	STSC88			Electric						CHE Electric		
STS Crane	STSC89			Electric						CHE Electric		
STS Crane	STSC90			Electric						CHE Electric		
STS Crane	STSC91			Electric						CHE Electric		
STS Crane	STSC92			Electric						CHE Electric		
STS Crane	STSC93			Electric						CHE Electric		
STS Crane	STSC94			Electric						CHE Electric		
Sweeper	4877	Johnson	VS562	Diesel	Cummins	B6.7	2019	300	40	CHE Diesel		
Sweeper	23007	Tennant	Centurion	Diesel			2005	180		CHE Diesel		
Sweeper	03-103	Elgin	Pelican	Diesel	John Deere	4045TE270	2006	114	112	CHE Diesel		
Sweeper	23SWP160	Tymco		Diesel					603	CHE Diesel		
Sweeper	23SWP160	Peterbuilt		Diesel					38	CHE Diesel		
Sweeper	23SWP190	Tymco		Diesel					435	CHE Diesel		
Sweeper	SC-158	TYMCO		Diesel	Cummins		2015	200	247	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Sweeper	SC-158	TYMCO		Diesel	John Deere		2015	75	247	CHE Diesel		
Sweeper	SW106	Elgin	Crosswind	Diesel			2019	220	0	CHE Diesel		
Sweeper	SW20new	Tymco	600	Diesel			2018	210	500	CHE Diesel		
Sweeper	SW-21	Schwarze	S3481	Diesel	Isuzu	4HEZXS	2002	190	387	CHE Diesel		
Sweeper	V007	Elgin	Whirlwind	Diesel	Cummins	ISB10	2014	200	1338	CHE Diesel		
Sweeper	#26	Tennant	5700XP	Electric	Tennant	AC drive motor			0	CHE Electric		
Sweeper	#25	Tennant	800	LPG	Tennant	Gas/LP Ford 2.3 liter			39	CHE Propane		
Sweeper	03-105	Advance		LPG			2015	114	36	CHE Propane		
Sweeper	owned6	Tennant	S30	LPG	GM	1.6L	2013	55	100	CHE Propane		
Sweeper	SC-155			LPG	Kubota		2016	47	36	CHE Propane		
Sweeper	SW#2		6650XP	LPG			2004	125	20	CHE Propane		
Sweeper	SW100	Tennant		LPG			2005	50	200	CHE Propane		
Sweeper	SW18	Edgen		LPG			1982	135	30	CHE Propane		
Top handler	6158	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2002	300	679	CHE Diesel	4/11/2012	
Top handler	6159	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2004	300	0	CHE Diesel	3/29/2012	
Top handler	6163	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2005	300	0	CHE Diesel	4/26/2012	
Top handler	6179	Taylor	THDC-9555	Diesel	Cummins	LT 10-C	2006	250	0	CHE Diesel	4/9/2012	
Top handler	6196	Taylor	TXC976	Diesel			2008		13	CHE Diesel	2/1/2011	
Top handler	6197	Taylor	TXC976	Diesel			2008		188	CHE Diesel	2/1/2011	
Top handler	6198	Taylor	TXC976	Diesel			2008		614	CHE Diesel	2/1/2011	
Top handler	36001	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	1498	CHE Diesel		
Top handler	36002	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	1909	CHE Diesel		
Top handler	36003	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2201	CHE Diesel		
Top handler	36004	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2004	CHE Diesel		
Top handler	36005	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2345	CHE Diesel		
Top handler	36006	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2142	CHE Diesel		
Top handler	36007	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2306	CHE Diesel		
Top handler	36008	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	1575	CHE Diesel		
Top handler	36009	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2074	CHE Diesel		
Top handler	36010	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	1972	CHE Diesel		
Top handler	36011	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2512	CHE Diesel		
Top handler	36012	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2281	CHE Diesel		
Top handler	36013	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2210	CHE Diesel		
Top handler	36014	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	1916	CHE Diesel		
Top handler	36015	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2527	CHE Diesel		
Top handler	36016	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2620	CHE Diesel		
Top handler	36017	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2768	CHE Diesel		
Top handler	36018	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2251	CHE Diesel		
Top handler	36019	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2629	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Top handler	36020	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2569	CHE Diesel		
Top handler	36021	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2288	CHE Diesel		
Top handler	36022	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2333	CHE Diesel		
Top handler	36023	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2344	CHE Diesel		
Top handler	36024	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2230	CHE Diesel		
Top handler	36025	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2565	CHE Diesel		
Top handler	36026	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2288	CHE Diesel		
Top handler	36027	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2194	CHE Diesel		
Top handler	36028	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2229	CHE Diesel		
Top handler	36029	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2235	CHE Diesel		
Top handler	36030	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	1744	CHE Diesel		
Top handler	36031	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2285	CHE Diesel		
Top handler	36032	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2282	CHE Diesel		
Top handler	36033	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2783	CHE Diesel		
Top handler	36034	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2649	CHE Diesel		
Top handler	36035	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2555	CHE Diesel		
Top handler	36036	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	1982	CHE Diesel		
Top handler	36037	Taylor	TXLC976	Diesel	Volvo	TAD-1360VE	2012	343	2210	CHE Diesel		
Top handler	80202	Taylor		Diesel			2011	330	1950	CHE Diesel		
Top handler	80206	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	1520	CHE Diesel	4/27/2013	
Top handler	80207	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	1553	CHE Diesel	1/28/2013	
Top handler	80210	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	330	1851	CHE Diesel	4/27/2013	
Top handler	80211	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	1566	CHE Diesel	2/13/2013	
Top handler	80215	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	335	441	CHE Diesel	12/1/2012	
Top handler	80216	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	335	1598	CHE Diesel	4/27/2013	
Top handler	80224	Taylor	THDC 955	Diesel	Cummins	M11-C	1999	275	1807	CHE Diesel	7/29/2013	
Top handler	80225	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1048	CHE Diesel	7/29/2013	
Top handler	80226	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1470	CHE Diesel	7/30/2013	
Top handler	80227	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	2272	CHE Diesel	7/30/2013	
Top handler	80228	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	2040	CHE Diesel	7/30/2013	
Top handler	80229	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	2040	CHE Diesel	4/24/2013	
Top handler	80230	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	2492	CHE Diesel	4/29/2013	
Top handler	80231	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	1596	CHE Diesel	4/25/2013	
Top handler	80234	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	2092	CHE Diesel	4/25/2013	
Top handler	80235	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	1820	CHE Diesel	4/30/2013	
Top handler	80236	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	2945	CHE Diesel	4/29/2013	
Top handler	80237	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	2012	CHE Diesel	4/29/2013	
Top handler	80238	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	1997	CHE Diesel	4/19/2013	
Top handler	80239	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	1481	CHE Diesel	4/27/2013	

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Top handler	80240	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	3574	CHE Diesel	4/22/2013	
Top handler	80241	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	2119	CHE Diesel	4/22/2013	
Top handler	80242	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	2476	CHE Diesel	4/27/2013	
Top handler	80243	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	3264	CHE Diesel	4/27/2013	
Top handler	80249	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2007	275	1745	CHE Diesel	12/1/2012	
Top handler	80250	Taylor	THDC 955	Diesel	Cummins		2000	275	1627	CHE Diesel	12/1/2012	
Top handler	80252	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1903	CHE Diesel	7/31/2013	
Top handler	80257	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2501	CHE Diesel	4/27/2013	
Top handler	80258	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2560	CHE Diesel	12/1/2012	
Top handler	80259	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	1832	CHE Diesel	12/1/2012	
Top handler	80260	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2706	CHE Diesel	4/27/2013	
Top handler	80261	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	1886	CHE Diesel	4/27/2013	
Top handler	80262	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	1797	CHE Diesel	4/27/2013	
Top handler	80265	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	1387	CHE Diesel	4/27/2013	
Top handler	80266	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	2232	CHE Diesel	4/27/2013	
Top handler	80281	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	691	CHE Diesel		
Top handler	80282	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	687	CHE Diesel		
Top handler	80283	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	863	CHE Diesel		
Top handler	80284	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	807	CHE Diesel		
Top handler	80285	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	1648	CHE Diesel		
Top handler	80286	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	2388	CHE Diesel		
Top handler	80287	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	893	CHE Diesel		
Top handler	80288	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	1166	CHE Diesel		
Top handler	80289	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	2090	CHE Diesel		
Top handler	80290	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2007	275	2497	CHE Diesel	12/1/2012	
Top handler	80291	Taylor		Diesel			2011	330	1606	CHE Diesel		
Top handler	80292	Taylor		Diesel			2011	330	2814	CHE Diesel		
Top handler	80293	Taylor		Diesel			2011	330	2001	CHE Diesel		
Top handler	80294	Taylor		Diesel			2011	330	2281	CHE Diesel		
Top handler	80295	Taylor		Diesel			2011	330	1961	CHE Diesel		
Top handler	80296	Taylor		Diesel			2011	330	2216	CHE Diesel		
Top handler	80297	Taylor		Diesel			2011	330	2191	CHE Diesel		
Top handler	80298	Taylor		Diesel			2011	330	2105	CHE Diesel		
Top handler	80299	Taylor		Diesel			2011	330	2073	CHE Diesel		
Top handler	80300	Taylor		Diesel			2011	330	1860	CHE Diesel		
Top handler	80301	Taylor		Diesel			2014		2471	CHE Diesel		
Top handler	80302	Taylor		Diesel			2014		2295	CHE Diesel		
Top handler	80303	Taylor		Diesel			2014		2392	CHE Diesel		
Top handler	80304	Taylor	XLC-976	Diesel	Cummins		2015		2591	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Top handler	80305			Diesel			2015		2973	CHE Diesel		
Top handler	80306			Diesel			2015		3103	CHE Diesel		
Top handler	80307			Diesel			2015		3086	CHE Diesel		
Top handler	80308	Taylor		Diesel			2011	330	2015	CHE Diesel		
Top handler	80309	Taylor		Diesel			2011	330	2520	CHE Diesel		
Top handler	80310			Diesel			2015		3029	CHE Diesel		
Top handler	80311			Diesel			2015		2131	CHE Diesel		
Top handler	80312	Taylor		Diesel			2011	330	2804	CHE Diesel		
Top handler	80314	Taylor		Diesel			2012	330	1782	CHE Diesel		
Top handler	80315	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	586	CHE Diesel		
Top handler	80316	Taylor	XLC976	Diesel	Volvo	TAD1371VE	2017	285	796	CHE Diesel		
Top handler	80317			Diesel			2018		3408	CHE Diesel		
Top handler	80318	Taylor		Diesel			2018		1370	CHE Diesel		
Top handler	80319	Taylor		Diesel			2018		1614	CHE Diesel		
Top handler	80320	Taylor		Diesel			2019		250	CHE Diesel		
Top handler	80361			Diesel			2018		3337	CHE Diesel		
Top handler	80362			Diesel			2018		3214	CHE Diesel		
Top handler	80363			Diesel			2019		1426	CHE Diesel		
Top handler	80364			Diesel			2019		1425	CHE Diesel		
Top handler	80365			Diesel			2019		584	CHE Diesel		
Top handler	80366			Diesel			2019		848	CHE Diesel		
Top handler	03-963	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	0	CHE Diesel		
Top handler	03-964	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	0	CHE Diesel		
Top handler	03-965	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	1435	CHE Diesel		
Top handler	03-966	Hyster	HY	Diesel	Cummins	QSL9-350	2013	350	0	CHE Diesel		
Top handler	360L3	Hyster		Diesel	Cummins	QSL9	2015	350	603	CHE Diesel		
Top handler	360L4	Hyster		Diesel	Cummins	QSL9	2015	350	347	CHE Diesel		
Top handler	360L5	Hyster		Diesel	Cummins	QSL9	2015	350	433	CHE Diesel		
Top handler	6TPK17000	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	2474	CHE Diesel		
Top handler	6TPK17001	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	2638	CHE Diesel		
Top handler	6TPK17002	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	3367	CHE Diesel		
Top handler	6TPK17003	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	3241	CHE Diesel		
Top handler	6TPK17004	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	3184	CHE Diesel		
Top handler	6TPK17005	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	3389	CHE Diesel		
Top handler	6TPK17006	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	3466	CHE Diesel		
Top handler	6TPK17007	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	3564	CHE Diesel		
Top handler	6TPK17008	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	2906	CHE Diesel		
Top handler	6TPK17009	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2017	388	3171	CHE Diesel		
Top handler	6TPK18000	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2018	388	1681	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Top handler	6TPK18001	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2018	388	2309	CHE Diesel		
Top handler	6TPK18002	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2018	388	1542	CHE Diesel		
Top handler	6TPK18003	Taylor	XLC 976	Diesel	Volvo	TAD-1371VE	2018	388	1611	CHE Diesel		
Top handler	F 112.95	Taylor		Diesel	Cummins	QSM11	2007	350	149	CHE Diesel	1/1/2013	
Top handler	F 113.95	Taylor		Diesel	Cummins	QSM11	2007	350	0	CHE Diesel	1/1/2013	
Top handler	F 114.95	Taylor		Diesel	Cummins	QSM11	2007	350	69	CHE Diesel	1/1/2013	
Top handler	F 115.95	Taylor		Diesel	Cummins	QSM11	2007	350	89	CHE Diesel	1/1/2013	
Top handler	F 116.95	Taylor		Diesel	Cummins	QSM11	2007	350	1	CHE Diesel	1/1/2013	
Top handler	F 117.36	Taylor		Diesel	Cummins	QSM11	2010	350	56	CHE Diesel	1/1/2013	
Top handler	F 122.95	Taylor		Diesel	Volvo	TAD 1360VE	2011	343	336	CHE Diesel		
Top handler	F 123.95	Taylor		Diesel	Volvo	TAD 1360VE	2011	343	399	CHE Diesel		
Top handler	F 124.95	Taylor		Diesel	Volvo	TAD 1360VE	2011	343	283	CHE Diesel		
Top handler	F 125.95			Diesel		TAD 1360VE	2013	343	152	CHE Diesel		
Top handler	F 127.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	768	CHE Diesel		
Top handler	F 128.35	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	243	CHE Diesel		
Top handler	F 134.36	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	209	CHE Diesel		
Top handler	F 135.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	1529	CHE Diesel		
Top handler	F 136.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	1652	CHE Diesel		
Top handler	F 137.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	1261	CHE Diesel		
Top handler	F 138.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	1832	CHE Diesel		
Top handler	F 139.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	2142	CHE Diesel		
Top handler	F 140.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	2436	CHE Diesel		
Top handler	F 141.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	2134	CHE Diesel		
Top handler	F 142.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	1314	CHE Diesel		
Top handler	F 143.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	1973	CHE Diesel		
Top handler	F 144.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	1424	CHE Diesel		
Top handler	F 145.95	Taylor		Diesel	Volvo	TAD1371-75V	2015	382	2037	CHE Diesel		
Top handler	F 146.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2315	CHE Diesel		
Top handler	F 147.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2249	CHE Diesel		
Top handler	F 148.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	1634	CHE Diesel		
Top handler	F 149.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2278	CHE Diesel		
Top handler	F 150.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	1838	CHE Diesel		
Top handler	F 151.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2092	CHE Diesel		
Top handler	F 152.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2635	CHE Diesel		
Top handler	F 153.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2063	CHE Diesel		
Top handler	F 154.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	750	CHE Diesel		
Top handler	F 155.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2053	CHE Diesel		
Top handler	F 156.95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	1307	CHE Diesel		
Top handler	F 157-95	Taylor		Diesel	Volvo	TAD1371-75V	2016	382	2261	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Top handler	F159.95			Diesel			2019	382	0	CHE Diesel		
Top handler	F160.95			Diesel			2019	382	0	CHE Diesel		
Top handler	F161.95			Diesel			2019	382	0	CHE Diesel		
Top handler	F162.95			Diesel			2019	382	0	CHE Diesel		
Top handler	RS-001	Hyster	RS 45-31CH	Diesel	Cummins	QSL9-350	2013	350	125	CHE Diesel		
Top handler	TH1000	TAYLOR	75000#	Diesel		40 T	1979	174	60	CHE Diesel	1/1/2014	
Tractor	TRC20	Kubota	M59	Diesel	Kubota	2403M	2009	59	80	CHE Diesel		
Tractor	1370	United Tract	SM-50F	LPG	Ford	CSG6491	1996	101	1220	CHE Propane		3/20/2012
Tractor	1371	United Tract	SM-50F	LPG	Ford	CSG6491	1996	101	1220	CHE Propane		8/23/2012
Tractor	1372	United Tract	SM-50-F	LPG			1997	101	47	CHE Propane		7/13/2010
Tractor	1375	United Tract	SM-50F	LPG	Ford	CSG6491	1996	101	1248	CHE Propane		8/21/2012
Tractor	1376	United Tract	SM-50F	LPG	Ford	CSG6491	1996	101	1110	CHE Propane		4/27/2010
Truck	22680	Ford	F-750	Diesel	Caterpillar	3126	2006	210	250	CHE On Road Diesel		
Truck	1304008	Freightlinger	ISB6.7	Diesel	Cummins	M2106	2011	300	300	CHE On Road Diesel		
Truck	1315002	Terex	TR45	Diesel	Cummins	QSK19	2009	525	292	CHE Diesel		
Truck	1315003	Terex	TR45	Diesel	Cummins	QSK19	2009	525	1127	CHE Diesel		
Truck	01TAN	International	Transtar	Diesel					53	CHE Diesel		
Truck	02TAN	International	Transtar	Diesel					1007	CHE Diesel		
Truck	03TAN	International	Workstar	Diesel					1706	CHE Diesel		
Truck	55151000T	Freightliner	Combo	Diesel			2016		314	CHE Diesel		
Truck	NWT	Ford	F750	Diesel	Ford	6.7	2016	270	1338	CHE Diesel		
Truck	SC-162	McClellan		Diesel	Cummins	L9	2018	177	48	CHE On Road Diesel	1/21/2014	
Truck	SC-60	Ford		Diesel			1998	230	73	CHE On Road Diesel	9/7/2013	
Truck	SC-85	Sterline		Diesel			2006	300	729	CHE On Road Diesel	1/21/2014	
Truck	#14	Taylor-Dunn	B0-210-36	Electric	Taylor-Dunn	DC Drive Mot	2008		148	CHE Electric		
Truck	#15	Taylor-Dunn	B0-210-36	Electric	Taylor-Dunn	DC Drive Mot	2008			CHE Electric		
Truck	#16	Taylor-Dunn	MX-016-00	Electric	Taylor-Dunn	DC Drive Mot	2008		85	CHE Electric		
Truck	#17	Taylor-Dunn	MX-016-00	Electric	Taylor-Dunn	DC Drive Mot	2009		62	CHE Electric		
Truck	#18	Taylor-Dunn	MX-016-00	Electric	Taylor-Dunn	DC Drive Mot	2009		151	CHE Electric		
Truck	#20T	Taylor-Dunn	B5-440-48	Electric	Taylor-Dunn	DC Drive Mot	2016		126	CHE Electric		
Yard tractor	707	Kalmar		Diesel	Cummins	ISB6.7 200	2012	200	4338	CHE On Road Diesel		
Yard tractor	827	Ottawa	T2	Diesel	Cummins	QSB6.7 Tier 4	2015	164	952	CHE Diesel		
Yard tractor	5046	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2272	CHE On Road Diesel		
Yard tractor	5047	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2387	CHE On Road Diesel		
Yard tractor	5048	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1861	CHE On Road Diesel		
Yard tractor	5049	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2071	CHE On Road Diesel		
Yard tractor	5301	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2128	CHE On Road Diesel		
Yard tractor	5302	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2406	CHE On Road Diesel		
Yard tractor	5304	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2274	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	5305	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1397	CHE On Road Diesel		
Yard tractor	5306	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1700	CHE On Road Diesel		
Yard tractor	5307	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2194	CHE On Road Diesel		
Yard tractor	5308	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2303	CHE On Road Diesel		
Yard tractor	5309	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1426	CHE On Road Diesel		
Yard tractor	5545	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1143	CHE On Road Diesel		
Yard tractor	5546	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2038	CHE On Road Diesel		
Yard tractor	5547	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1955	CHE On Road Diesel		
Yard tractor	5548	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1890	CHE On Road Diesel		
Yard tractor	5549	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1979	CHE On Road Diesel		
Yard tractor	5550	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	858	CHE On Road Diesel		
Yard tractor	5551	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2579	CHE On Road Diesel		
Yard tractor	5553	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2556	CHE On Road Diesel		
Yard tractor	5554	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2535	CHE On Road Diesel		
Yard tractor	5555	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	119	CHE On Road Diesel		
Yard tractor	5556	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2061	CHE On Road Diesel		
Yard tractor	5557	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2401	CHE On Road Diesel		
Yard tractor	5559	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1719	CHE On Road Diesel		
Yard tractor	5560	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2908	CHE On Road Diesel		
Yard tractor	5601	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1616	CHE On Road Diesel		
Yard tractor	5602	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2233	CHE On Road Diesel		
Yard tractor	5603	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1045	CHE On Road Diesel		
Yard tractor	5604	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2198	CHE On Road Diesel		
Yard tractor	5605	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2271	CHE On Road Diesel		
Yard tractor	5606	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2134	CHE On Road Diesel		
Yard tractor	5607	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2212	CHE On Road Diesel		
Yard tractor	5608	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1679	CHE On Road Diesel		
Yard tractor	5609	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1592	CHE On Road Diesel		
Yard tractor	5610	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2169	CHE On Road Diesel		
Yard tractor	5626	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1886	CHE On Road Diesel		
Yard tractor	5627	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1991	CHE On Road Diesel		
Yard tractor	5628	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1320	CHE On Road Diesel		
Yard tractor	5629	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2292	CHE On Road Diesel		
Yard tractor	5799	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	0	CHE On Road Diesel		
Yard tractor	5800	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2167	CHE On Road Diesel		
Yard tractor	5801	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2456	CHE On Road Diesel		
Yard tractor	5802	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2674	CHE On Road Diesel		
Yard tractor	5803	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2552	CHE On Road Diesel		
Yard tractor	5805	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1930	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	5806	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1588	CHE On Road Diesel		
Yard tractor	5807	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2493	CHE On Road Diesel		
Yard tractor	5808	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2057	CHE On Road Diesel		
Yard tractor	5809	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2016	CHE On Road Diesel		
Yard tractor	5810	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1786	CHE On Road Diesel		
Yard tractor	5811	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2530	CHE On Road Diesel		
Yard tractor	5812	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2395	CHE On Road Diesel		
Yard tractor	5813	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2299	CHE On Road Diesel		
Yard tractor	5814	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2552	CHE On Road Diesel		
Yard tractor	5849	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2105	CHE On Road Diesel		
Yard tractor	5850	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2107	CHE On Road Diesel		
Yard tractor	5851	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2177	CHE On Road Diesel		
Yard tractor	5852	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2234	CHE On Road Diesel		
Yard tractor	5853	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2762	CHE On Road Diesel		
Yard tractor	5854	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2264	CHE On Road Diesel		
Yard tractor	5855	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2192	CHE On Road Diesel		
Yard tractor	5856	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2325	CHE On Road Diesel		
Yard tractor	5857	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2145	CHE On Road Diesel		
Yard tractor	5858	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1991	CHE On Road Diesel		
Yard tractor	5859	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2102	CHE On Road Diesel		
Yard tractor	5860	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1497	CHE On Road Diesel		
Yard tractor	5861	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2341	CHE On Road Diesel		
Yard tractor	5862	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2275	CHE On Road Diesel		
Yard tractor	5863	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2256	CHE On Road Diesel		
Yard tractor	5864	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2320	CHE On Road Diesel		
Yard tractor	5866	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2321	CHE On Road Diesel		
Yard tractor	5867	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	939	CHE On Road Diesel		
Yard tractor	5868	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2431	CHE On Road Diesel		
Yard tractor	5869	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1358	CHE On Road Diesel		
Yard tractor	5870	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1688	CHE On Road Diesel		
Yard tractor	5871	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2384	CHE On Road Diesel		
Yard tractor	5872	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1763	CHE On Road Diesel		
Yard tractor	5873	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1730	CHE On Road Diesel		
Yard tractor	5874	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2296	CHE On Road Diesel		
Yard tractor	5875	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1815	CHE On Road Diesel		
Yard tractor	5876	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1641	CHE On Road Diesel		
Yard tractor	5878	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1989	CHE On Road Diesel		
Yard tractor	5879	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1625	CHE On Road Diesel		
Yard tractor	5880	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2647	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	5881	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2437	CHE On Road Diesel		
Yard tractor	5882	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2356	CHE On Road Diesel		
Yard tractor	5883	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	0	CHE On Road Diesel		
Yard tractor	5884	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1738	CHE On Road Diesel		
Yard tractor	5885	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2059	CHE On Road Diesel		
Yard tractor	5886	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2129	CHE On Road Diesel		
Yard tractor	5887	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1782	CHE On Road Diesel		
Yard tractor	5888	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2481	CHE On Road Diesel		
Yard tractor	5889	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2265	CHE On Road Diesel		
Yard tractor	5890	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2385	CHE On Road Diesel		
Yard tractor	5891	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1825	CHE On Road Diesel		
Yard tractor	5892	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2085	CHE On Road Diesel		
Yard tractor	5893	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2199	CHE On Road Diesel		
Yard tractor	35001	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2100	CHE On Road Diesel		
Yard tractor	35002	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2083	CHE On Road Diesel		
Yard tractor	35003	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2272	CHE On Road Diesel		
Yard tractor	35004	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2257	CHE On Road Diesel		
Yard tractor	35005	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2121	CHE On Road Diesel		
Yard tractor	35006	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1814	CHE On Road Diesel		
Yard tractor	35007	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2297	CHE On Road Diesel		
Yard tractor	35008	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2478	CHE On Road Diesel		
Yard tractor	35009	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1779	CHE On Road Diesel		
Yard tractor	35010	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2251	CHE On Road Diesel		
Yard tractor	35011	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1702	CHE On Road Diesel		
Yard tractor	35012	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1400	CHE On Road Diesel		
Yard tractor	35013	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	625	CHE On Road Diesel		
Yard tractor	35014	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1733	CHE On Road Diesel		
Yard tractor	35015	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1827	CHE On Road Diesel		
Yard tractor	35016	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2431	CHE On Road Diesel		
Yard tractor	35017	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2124	CHE On Road Diesel		
Yard tractor	35018	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2425	CHE On Road Diesel		
Yard tractor	35019	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2357	CHE On Road Diesel		
Yard tractor	35020	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2161	CHE On Road Diesel		
Yard tractor	35021	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1959	CHE On Road Diesel		
Yard tractor	35022	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2111	CHE On Road Diesel		
Yard tractor	35023	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2260	CHE On Road Diesel		
Yard tractor	35024	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	0	CHE On Road Diesel		
Yard tractor	35025	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2627	CHE On Road Diesel		
Yard tractor	35026	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2364	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	35027	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1805	CHE On Road Diesel		
Yard tractor	35028	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2330	CHE On Road Diesel		
Yard tractor	35029	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2527	CHE On Road Diesel		
Yard tractor	35030	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2731	CHE On Road Diesel		
Yard tractor	35031	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2785	CHE On Road Diesel		
Yard tractor	35032	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2774	CHE On Road Diesel		
Yard tractor	35033	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1509	CHE On Road Diesel		
Yard tractor	35034	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2303	CHE On Road Diesel		
Yard tractor	35035	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1344	CHE On Road Diesel		
Yard tractor	35036	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2678	CHE On Road Diesel		
Yard tractor	35037	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1903	CHE On Road Diesel		
Yard tractor	35038	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2512	CHE On Road Diesel		
Yard tractor	35041	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1581	CHE On Road Diesel		
Yard tractor	35042	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2392	CHE On Road Diesel		
Yard tractor	35043	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2119	CHE On Road Diesel		
Yard tractor	35044	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1413	CHE On Road Diesel		
Yard tractor	35045	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1523	CHE On Road Diesel		
Yard tractor	35046	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2279	CHE On Road Diesel		
Yard tractor	35047	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2251	CHE On Road Diesel		
Yard tractor	35049	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2450	CHE On Road Diesel		
Yard tractor	35050	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2016	CHE On Road Diesel		
Yard tractor	35051	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1713	CHE On Road Diesel		
Yard tractor	35052	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1892	CHE On Road Diesel		
Yard tractor	35053	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2587	CHE On Road Diesel		
Yard tractor	35054	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2485	CHE On Road Diesel		
Yard tractor	35055	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2005	CHE On Road Diesel		
Yard tractor	35056	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2269	CHE On Road Diesel		
Yard tractor	35057	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2227	CHE On Road Diesel		
Yard tractor	35058	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2584	CHE On Road Diesel		
Yard tractor	35060	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2415	CHE On Road Diesel		
Yard tractor	35061	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1972	CHE On Road Diesel		
Yard tractor	35062	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2813	CHE On Road Diesel		
Yard tractor	35063	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2001	CHE On Road Diesel		
Yard tractor	35064	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1343	CHE On Road Diesel		
Yard tractor	35065	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2497	CHE On Road Diesel		
Yard tractor	35066	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2425	CHE On Road Diesel		
Yard tractor	35067	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2585	CHE On Road Diesel		
Yard tractor	35068	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3015	CHE On Road Diesel		
Yard tractor	35069	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2815	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	35070	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	0	CHE On Road Diesel		
Yard tractor	04-194	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	88	CHE On Road Diesel		
Yard tractor	04-195	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	102	CHE On Road Diesel		
Yard tractor	28838R	Ottawa	T2	Diesel	Cummins	QSB6.7 Tier 4	2015	164	899	CHE Diesel		
Yard tractor	29524R	Kalmar		Diesel	Cummins	ISB6.7 200	2012	200	1918	CHE On Road Diesel		
Yard tractor	30205R	Kalmar		Diesel	Cummins	ISB6.7 200	2015	200	472	CHE On Road Diesel		
Yard tractor	5UTR1600(	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2249	CHE Diesel		
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2471	CHE Diesel		
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2557	CHE Diesel		
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3302	CHE Diesel		
Yard tractor	5UTR1600-	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2308	CHE Diesel		
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2708	CHE Diesel		
Yard tractor	5UTR1600(	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2579	CHE Diesel		
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2095	CHE Diesel		
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2727	CHE Diesel		
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2510	CHE Diesel		
Yard tractor	5UTR1601(	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2778	CHE Diesel		
Yard tractor	5UTR1601:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2258	CHE Diesel		
Yard tractor	5UTR1601:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2647	CHE Diesel		
Yard tractor	5UTR1601:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3279	CHE Diesel		
Yard tractor	5UTR1900:	Ottawa	4x2	Diesel			2019	225	0	CHE Diesel		
Yard tractor	5UTR1900:	Ottawa	4x2	Diesel			2019	225	0	CHE Diesel		
Yard tractor	H072	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	113	CHE Diesel		
Yard tractor	H073	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	126	CHE Diesel		
Yard tractor	H074	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2180	CHE Diesel		
Yard tractor	H075	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2094	CHE Diesel		
Yard tractor	H076	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2167	CHE Diesel		
Yard tractor	H077	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2429	CHE Diesel		
Yard tractor	H078	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2068	CHE Diesel		
Yard tractor	H079	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2177	CHE Diesel		
Yard tractor	H080	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	1961	CHE Diesel		
Yard tractor	H081	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2093	CHE Diesel		
Yard tractor	H082	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2052	CHE Diesel		
Yard tractor	H083	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2107	CHE Diesel		
Yard tractor	H084	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2085	CHE Diesel		
Yard tractor	H085	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2180	CHE Diesel		
Yard tractor	H086	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2435	CHE Diesel		
Yard tractor	H087	Kalmar/Otta	T2	Diesel	Cummins	QSB6.7225	2016	225	2177	CHE Diesel		
Yard tractor	H-106	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1754	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	H-107	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1595	CHE On Road Diesel		
Yard tractor	H-108	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1789	CHE On Road Diesel		
Yard tractor	H-109	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	22	CHE On Road Diesel		
Yard tractor	H-110	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1810	CHE On Road Diesel		
Yard tractor	H-111	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	2061	CHE On Road Diesel		
Yard tractor	H-112	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	2074	CHE On Road Diesel		
Yard tractor	H-113	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	2183	CHE On Road Diesel		
Yard tractor	H-118	Capacity	TJ7000	Diesel	Edelbrock	454 Engine	2017	204	117	CHE Diesel		
Yard tractor	H-119	Capacity	TJ7000	Diesel	Edelbrock	454 Engine	2017	204	977	CHE Diesel		
Yard tractor	H-121	Capacity	TJ7000	Diesel	Edelbrock	454 Engine	2017	204	635	CHE Diesel		
Yard tractor	H-280	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1801	CHE On Road Diesel		
Yard tractor	H-281	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	958	CHE On Road Diesel		
Yard tractor	H-282	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1957	CHE On Road Diesel		
Yard tractor	H-283	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1860	CHE On Road Diesel		
Yard tractor	H-417	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1703	CHE On Road Diesel		
Yard tractor	H-418	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2087	CHE On Road Diesel		
Yard tractor	H-419	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1908	CHE On Road Diesel		
Yard tractor	H-420	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1981	CHE On Road Diesel		
Yard tractor	H-421	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1923	CHE On Road Diesel		
Yard tractor	H-422	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	919	CHE On Road Diesel		
Yard tractor	H-423	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2102	CHE On Road Diesel		
Yard tractor	H-424	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1546	CHE On Road Diesel		
Yard tractor	H-425	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	112	CHE On Road Diesel		
Yard tractor	H-426	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2268	CHE On Road Diesel		
Yard tractor	H-427	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2352	CHE On Road Diesel		
Yard tractor	H-428	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1994	CHE On Road Diesel		
Yard tractor	H-429	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1245	CHE On Road Diesel		
Yard tractor	H-430	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2123	CHE On Road Diesel		
Yard tractor	H-431	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1805	CHE On Road Diesel		
Yard tractor	H-432	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1801	CHE On Road Diesel		
Yard tractor	H-433	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2218	CHE On Road Diesel		
Yard tractor	H-434	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2332	CHE On Road Diesel		
Yard tractor	H-435	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2035	CHE On Road Diesel		
Yard tractor	H-436	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2035	CHE On Road Diesel		
Yard tractor	H-437	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2443	CHE On Road Diesel		
Yard tractor	H-438	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2643	CHE On Road Diesel		
Yard tractor	H-439	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2458	CHE On Road Diesel		
Yard tractor	H-507	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1610	CHE On Road Diesel		
Yard tractor	H-508	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2007	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	H-509	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1912	CHE On Road Diesel		
Yard tractor	H-510	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2033	CHE On Road Diesel		
Yard tractor	H-511	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2008	CHE On Road Diesel		
Yard tractor	H-512	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1897	CHE On Road Diesel		
Yard tractor	H-513	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2116	CHE On Road Diesel		
Yard tractor	H-514	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2447	CHE On Road Diesel		
Yard tractor	H-515	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1983	CHE On Road Diesel		
Yard tractor	H-516	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1690	CHE On Road Diesel		
Yard tractor	H-517	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2301	CHE On Road Diesel		
Yard tractor	H-518	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1673	CHE On Road Diesel		
Yard tractor	H-519	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1724	CHE On Road Diesel		
Yard tractor	H-520	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1913	CHE On Road Diesel		
Yard tractor	H7002	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2357	CHE Diesel		
Yard tractor	H7004	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2024	CHE Diesel		
Yard tractor	H7005	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2054	CHE Diesel		
Yard tractor	H7006	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1364	CHE Diesel		
Yard tractor	H7007	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2296	CHE Diesel		
Yard tractor	H7008	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2454	CHE Diesel		
Yard tractor	H7010	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2237	CHE Diesel		
Yard tractor	H7011	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2419	CHE Diesel		
Yard tractor	H7012	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2871	CHE Diesel		
Yard tractor	H7013	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1925	CHE Diesel		
Yard tractor	H7014	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1898	CHE Diesel		
Yard tractor	H7015	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2027	CHE Diesel		
Yard tractor	H7016	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1921	CHE Diesel		
Yard tractor	H7017	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2354	CHE Diesel		
Yard tractor	H7018	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1920	CHE Diesel		
Yard tractor	H7019	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2018	CHE Diesel		
Yard tractor	H7020	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1944	CHE Diesel		
Yard tractor	H7055	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1493	CHE Diesel		
Yard tractor	H7056	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2020	CHE Diesel		
Yard tractor	H7057	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2197	CHE Diesel		
Yard tractor	H7058	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2894	CHE Diesel		
Yard tractor	H7059	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2532	CHE Diesel		
Yard tractor	H7060	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2268	CHE Diesel		
Yard tractor	H7061	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2163	CHE Diesel		
Yard tractor	H7063	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2209	CHE Diesel		
Yard tractor	H7064	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2288	CHE Diesel		
Yard tractor	H7065	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1965	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	H7066	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2308	CHE Diesel		
Yard tractor	H7067	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1356	CHE Diesel		
Yard tractor	H7068	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1920	CHE Diesel		
Yard tractor	H7070	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2109	CHE Diesel		
Yard tractor	H7071	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2184	CHE Diesel		
Yard tractor	H7072	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2092	CHE Diesel		
Yard tractor	H7073	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2480	CHE Diesel		
Yard tractor	H7074	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2139	CHE Diesel		
Yard tractor	H7075	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225		CHE Diesel		
Yard tractor	H7076	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1943	CHE Diesel		
Yard tractor	H7077	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2420	CHE Diesel		
Yard tractor	H7078	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2120	CHE Diesel		
Yard tractor	H7079	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2925	CHE Diesel		
Yard tractor	H7080	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2025	CHE Diesel		
Yard tractor	H7081	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2448	CHE Diesel		
Yard tractor	H7082	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	249	CHE Diesel		
Yard tractor	H7083	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1949	CHE Diesel		
Yard tractor	H7084	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2190	CHE Diesel		
Yard tractor	H7085	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1624	CHE Diesel		
Yard tractor	H7086	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2229	CHE Diesel		
Yard tractor	H7087	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2759	CHE Diesel		
Yard tractor	H7088	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2100	CHE Diesel		
Yard tractor	H7089	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2078	CHE Diesel		
Yard tractor	H7090	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2155	CHE Diesel		
Yard tractor	H7091	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1468	CHE Diesel		
Yard tractor	H7092	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2866	CHE Diesel		
Yard tractor	H7093	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2321	CHE Diesel		
Yard tractor	H7094	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2750	CHE Diesel		
Yard tractor	H7095	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2648	CHE Diesel		
Yard tractor	H7096	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1215	CHE Diesel		
Yard tractor	H7097	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1983	CHE Diesel		
Yard tractor	H7098	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2192	CHE Diesel		
Yard tractor	H7099	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2274	CHE Diesel		
Yard tractor	H7100	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2840	CHE Diesel		
Yard tractor	H7101	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2493	CHE Diesel		
Yard tractor	H7102	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1250	CHE Diesel		
Yard tractor	H7103	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2323	CHE Diesel		
Yard tractor	H7104	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2245	CHE Diesel		
Yard tractor	H7105	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2078	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	H7106	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	0	CHE Diesel		
Yard tractor	H7107	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2330	CHE Diesel		
Yard tractor	H7108	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2251	CHE Diesel		
Yard tractor	H7109	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	2375	CHE Diesel		
Yard tractor	H7110	Kalmar/Otta		Diesel	Cummins	6.7 QSB	2016	225	1980	CHE Diesel		
Yard tractor	LAYT0021	Ottawa		Diesel			2008		160	CHE On Road Diesel		
Yard tractor	LAYT0022	Ottawa		Diesel			2008		0	CHE On Road Diesel		
Yard tractor	LAYT0023	Ottawa		Diesel			2008		190	CHE On Road Diesel		
Yard tractor	T202	Kalmar		Diesel	Cummins	ISB 200	2007	200	689	CHE On Road Diesel		
Yard tractor	T203	Kalmar		Diesel	Cummins	ISB 200	2007	200	521	CHE On Road Diesel		
Yard tractor	T207	Kalmar		Diesel	Cummins	ISB 200	2007	200	155	CHE On Road Diesel		
Yard tractor	T209	Kalmar		Diesel	Cummins	ISB 200	2007	200	889	CHE On Road Diesel		
Yard tractor	T211	Kalmar		Diesel	Cummins	ISB 200	2007	200	1,517	CHE On Road Diesel		
Yard tractor	T212	Kalmar		Diesel	Cummins	ISB 200	2007	200	402	CHE On Road Diesel		
Yard tractor	T213	Kalmar		Diesel	Cummins	ISB 200	2007	200	8	CHE On Road Diesel		
Yard tractor	T214	Kalmar		Diesel	Cummins	ISB 200	2007	200	785	CHE On Road Diesel		
Yard tractor	T215	Kalmar		Diesel	Cummins	ISB 200	2008	200	1,155	CHE On Road Diesel		
Yard tractor	T216	Kalmar		Diesel	Cummins	ISB 200	2008	200	313	CHE On Road Diesel		
Yard tractor	T218	Kalmar		Diesel	Cummins	ISB 200	2008	200	764	CHE On Road Diesel		
Yard tractor	T219	Kalmar		Diesel	Cummins	ISB 200	2008	200	705	CHE On Road Diesel		
Yard tractor	T220	Kalmar		Diesel	Cummins	ISB 200	2008	200	6	CHE On Road Diesel		
Yard tractor	T221	Kalmar		Diesel	Cummins	ISB 200	2008	200	354	CHE On Road Diesel		
Yard tractor	T222	Kalmar		Diesel	Cummins	ISB 200	2008	200	818	CHE On Road Diesel		
Yard tractor	T225	Kalmar		Diesel	Cummins	ISB 200	2008	200	680	CHE On Road Diesel		
Yard tractor	T226	Kalmar		Diesel	Cummins	ISB 200	2008	200	1243	CHE On Road Diesel		
Yard tractor	T228	Kalmar		Diesel	Cummins	ISB 200	2008	200	307	CHE On Road Diesel		
Yard tractor	T229	Kalmar		Diesel	Cummins	ISB 200	2008	200	570	CHE On Road Diesel		
Yard tractor	T231	Kalmar		Diesel	Cummins	ISB 200	2008	200	1017	CHE On Road Diesel		
Yard tractor	T232	Kalmar		Diesel	Cummins	ISB 200	2008	200	1257	CHE On Road Diesel		
Yard tractor	T233	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	447	CHE On Road Diesel		
Yard tractor	T234	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	602	CHE On Road Diesel		
Yard tractor	T235	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	537	CHE On Road Diesel		
Yard tractor	T236	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	428	CHE On Road Diesel		
Yard tractor	T238	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	921	CHE On Road Diesel		
Yard tractor	T240	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	590	CHE On Road Diesel		
Yard tractor	T242	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	777	CHE On Road Diesel		
Yard tractor	T243	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	624	CHE On Road Diesel		
Yard tractor	T245	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	945	CHE On Road Diesel		
Yard tractor	T246	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	610	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	T248	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	669	CHE On Road Diesel		
Yard tractor	T249	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	722	CHE On Road Diesel		
Yard tractor	T250	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	384	CHE On Road Diesel		
Yard tractor	T251	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	892	CHE On Road Diesel		
Yard tractor	T253	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	322	CHE On Road Diesel		
Yard tractor	T257	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1606	CHE On Road Diesel		
Yard tractor	T258	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	796	CHE On Road Diesel		
Yard tractor	T259	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	800	CHE On Road Diesel		
Yard tractor	T262	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1385	CHE On Road Diesel		
Yard tractor	T264	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	850	CHE On Road Diesel		
Yard tractor	T265	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	848	CHE On Road Diesel		
Yard tractor	T267	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1334	CHE On Road Diesel		
Yard tractor	T268	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	244	CHE On Road Diesel		
Yard tractor	T270	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	108	CHE On Road Diesel		
Yard tractor	T271	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	377	CHE On Road Diesel		
Yard tractor	T272	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	252	CHE On Road Diesel		
Yard tractor	T274	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	300	CHE On Road Diesel		
Yard tractor	T276	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	803	CHE On Road Diesel		
Yard tractor	T277	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	645	CHE On Road Diesel		
Yard tractor	T280	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	289	CHE On Road Diesel		
Yard tractor	T282	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	360	CHE On Road Diesel		
Yard tractor	T283	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	356	CHE On Road Diesel		
Yard tractor	T285	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1057	CHE On Road Diesel		
Yard tractor	T286	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	220	CHE On Road Diesel		
Yard tractor	T287	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	742	CHE On Road Diesel		
Yard tractor	T288	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	268	CHE On Road Diesel		
Yard tractor	T290	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	327	CHE On Road Diesel		
Yard tractor	T291	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1565	CHE On Road Diesel		
Yard tractor	T292	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	66	CHE On Road Diesel		
Yard tractor	T293	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1257	CHE On Road Diesel		
Yard tractor	T294	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	978	CHE On Road Diesel		
Yard tractor	T300	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1344	CHE Diesel		
Yard tractor	T301	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1103	CHE Diesel		
Yard tractor	T303	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1027	CHE Diesel		
Yard tractor	T304	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1113	CHE Diesel		
Yard tractor	T305	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1150	CHE Diesel		
Yard tractor	T306	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1134	CHE Diesel		
Yard tractor	T307	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1322	CHE Diesel		
Yard tractor	T309	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1212	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	T310	Kalmar		Diesel	Cummins	QSB6.7	2015	173	438	CHE Diesel		
Yard tractor	T311	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1201	CHE Diesel		
Yard tractor	T312	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1446	CHE Diesel		
Yard tractor	T313	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1174	CHE Diesel		
Yard tractor	T314	Kalmar		Diesel	Cummins	QSB6.7	2015	173	0	CHE Diesel		
Yard tractor	T315	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1571	CHE Diesel		
Yard tractor	T316	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1346	CHE Diesel		
Yard tractor	T317	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1063	CHE Diesel		
Yard tractor	T318	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1299	CHE Diesel		
Yard tractor	T319	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1818	CHE Diesel		
Yard tractor	T320	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1262	CHE Diesel		
Yard tractor	T321	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1076	CHE Diesel		
Yard tractor	T322	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1258	CHE Diesel		
Yard tractor	T323	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1183	CHE Diesel		
Yard tractor	T324	Kalmar		Diesel	Cummins	QSB6.7	2015	173	869	CHE Diesel		
Yard tractor	T325	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1289	CHE Diesel		
Yard tractor	T326	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1248	CHE Diesel		
Yard tractor	T327	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1933	CHE Diesel		
Yard tractor	T328	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1732	CHE Diesel		
Yard tractor	T329	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2187	CHE Diesel		
Yard tractor	T330	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2199	CHE Diesel		
Yard tractor	T331	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2135	CHE Diesel		
Yard tractor	T332	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1916	CHE Diesel		
Yard tractor	T333	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1865	CHE Diesel		
Yard tractor	T334	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2233	CHE Diesel		
Yard tractor	T335	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2155	CHE Diesel		
Yard tractor	T336	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2091	CHE Diesel		
Yard tractor	T337	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2127	CHE Diesel		
Yard tractor	T338	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2363	CHE Diesel		
Yard tractor	T339	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1618	CHE Diesel		
Yard tractor	T340	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1996	CHE Diesel		
Yard tractor	T341	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2281	CHE Diesel		
Yard tractor	T342	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2176	CHE Diesel		
Yard tractor	T343	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2218	CHE Diesel		
Yard tractor	T344	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2354	CHE Diesel		
Yard tractor	T345	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2135	CHE Diesel		
Yard tractor	T346	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2252	CHE Diesel		
Yard tractor	T347	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2155	CHE Diesel		
Yard tractor	T348	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2239	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	T349	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1942	CHE Diesel		
Yard tractor	T350	Kalmar		Diesel	Cummins	QSB6.7	2018	173	2144	CHE Diesel		
Yard tractor	T351	Kalmar		Diesel	Cummins	QSB6.7	2018	173	3092	CHE Diesel		
Yard tractor	T-400	Kalmar		Diesel	Cummins	QSB6.7	2019	173	218	CHE Diesel		
Yard tractor	T-401	Kalmar		Diesel	Cummins	QSB6.7	2019	173	588	CHE Diesel		
Yard tractor	T-402	Kalmar		Diesel	Cummins	QSB6.7	2019	173	711	CHE Diesel		
Yard tractor	T-403	Kalmar		Diesel	Cummins	QSB6.7	2019	173	311	CHE Diesel		
Yard tractor	T-404	Kalmar		Diesel	Cummins	QSB6.7	2019	173	317	CHE Diesel		
Yard tractor	T-405	Kalmar		Diesel	Cummins	QSB6.7	2019	173	393	CHE Diesel		
Yard tractor	T-406	Kalmar		Diesel	Cummins	QSB6.7	2019	173	39	CHE Diesel		
Yard tractor	T-407	Kalmar		Diesel	Cummins	QSB6.7	2019	173	79	CHE Diesel		
Yard tractor	T-408	Kalmar		Diesel	Cummins	QSB6.7	2019	173	668	CHE Diesel		
Yard tractor	T-409	Kalmar		Diesel	Cummins	QSB6.7	2019	173	174	CHE Diesel		
Yard tractor	T-410	Kalmar		Diesel	Cummins	QSB6.7	2019	173	726	CHE Diesel		
Yard tractor	T-411	Kalmar		Diesel	Cummins	QSB6.7	2019	173	392	CHE Diesel		
Yard tractor	T-412	Kalmar		Diesel	Cummins	QSB6.7	2019	173	33	CHE Diesel		
Yard tractor	T-413	Kalmar		Diesel	Cummins	QSB6.7	2019	173	341	CHE Diesel		
Yard tractor	T-414	Kalmar		Diesel	Cummins	QSB6.7	2019	173	85	CHE Diesel		
Yard tractor	T-415	Kalmar		Diesel	Cummins	QSB6.7	2019	173	99	CHE Diesel		
Yard tractor	T-416	Kalmar		Diesel	Cummins	QSB6.7	2019	173	65	CHE Diesel		
Yard tractor	T-417	Kalmar		Diesel	Cummins	QSB6.7	2019	173	620	CHE Diesel		
Yard tractor	T-418	Kalmar		Diesel	Cummins	QSB6.7	2019	173	64	CHE Diesel		
Yard tractor	T-419	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-420	Kalmar		Diesel	Cummins	QSB6.7	2019	173	76	CHE Diesel		
Yard tractor	T-421	Kalmar		Diesel	Cummins	QSB6.7	2019	173	75	CHE Diesel		
Yard tractor	T-422	Kalmar		Diesel	Cummins	QSB6.7	2019	173	581	CHE Diesel		
Yard tractor	T-423	Kalmar		Diesel	Cummins	QSB6.7	2019	173	4	CHE Diesel		
Yard tractor	T-424	Kalmar		Diesel	Cummins	QSB6.7	2019	173	152	CHE Diesel		
Yard tractor	T-425	Kalmar		Diesel	Cummins	QSB6.7	2019	173	191	CHE Diesel		
Yard tractor	T-426	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-427	Kalmar		Diesel	Cummins	QSB6.7	2019	173	64	CHE Diesel		
Yard tractor	T-428	Kalmar		Diesel	Cummins	QSB6.7	2019	173	76	CHE Diesel		
Yard tractor	T-429	Kalmar		Diesel	Cummins	QSB6.7	2019	173	78	CHE Diesel		
Yard tractor	T-430	Kalmar		Diesel	Cummins	QSB6.7	2019	173	32	CHE Diesel		
Yard tractor	T-431	Kalmar		Diesel	Cummins	QSB6.7	2019	173	146	CHE Diesel		
Yard tractor	T-432	Kalmar		Diesel	Cummins	QSB6.7	2019	173	138	CHE Diesel		
Yard tractor	T-433	Kalmar		Diesel	Cummins	QSB6.7	2019	173	74	CHE Diesel		
Yard tractor	T-434	Kalmar		Diesel	Cummins	QSB6.7	2019	173	18	CHE Diesel		
Yard tractor	T-435	Kalmar		Diesel	Cummins	QSB6.7	2019	173	57	CHE Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	T-436	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-437	Kalmar		Diesel	Cummins	QSB6.7	2019	173	58	CHE Diesel		
Yard tractor	T-438	Kalmar		Diesel	Cummins	QSB6.7	2019	173	81	CHE Diesel		
Yard tractor	T-439	Kalmar		Diesel	Cummins	QSB6.7	2019	173	89	CHE Diesel		
Yard tractor	T-440	Kalmar		Diesel	Cummins	QSB6.7	2019	173	91	CHE Diesel		
Yard tractor	T-441	Kalmar		Diesel	Cummins	QSB6.7	2019	173	104	CHE Diesel		
Yard tractor	T-442	Kalmar		Diesel	Cummins	QSB6.7	2019	173	51	CHE Diesel		
Yard tractor	T-443	Kalmar		Diesel	Cummins	QSB6.7	2019	173	34	CHE Diesel		
Yard tractor	T-444	Kalmar		Diesel	Cummins	QSB6.7	2019	173	101	CHE Diesel		
Yard tractor	T-445	Kalmar		Diesel	Cummins	QSB6.7	2019	173	58	CHE Diesel		
Yard tractor	T-446	Kalmar		Diesel	Cummins	QSB6.7	2019	173	70	CHE Diesel		
Yard tractor	T-447	Kalmar		Diesel	Cummins	QSB6.7	2019	173	116	CHE Diesel		
Yard tractor	T-448	Kalmar		Diesel	Cummins	QSB6.7	2019	173	49	CHE Diesel		
Yard tractor	T-449	Kalmar		Diesel	Cummins	QSB6.7	2019	173	66	CHE Diesel		
Yard tractor	T-450	Kalmar		Diesel	Cummins	QSB6.7	2019	173	88	CHE Diesel		
Yard tractor	T-451	Kalmar		Diesel	Cummins	QSB6.7	2019	173	71	CHE Diesel		
Yard tractor	T-452	Kalmar		Diesel	Cummins	QSB6.7	2019	173	32	CHE Diesel		
Yard tractor	T-453	Kalmar		Diesel	Cummins	QSB6.7	2019	173	68	CHE Diesel		
Yard tractor	T-454	Kalmar		Diesel	Cummins	QSB6.7	2019	173	82	CHE Diesel		
Yard tractor	T-455	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-456	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-457	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-458	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-459	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-460	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-461	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-462	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-463	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-464	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-465	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	T-466	Kalmar		Diesel	Cummins	QSB6.7	2019	173	0	CHE Diesel		
Yard tractor	UTR001	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2665	CHE On Road Diesel		
Yard tractor	UTR002	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	3218	CHE On Road Diesel		
Yard tractor	UTR003	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1996	CHE On Road Diesel		
Yard tractor	UTR004	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2889	CHE On Road Diesel		
Yard tractor	UTR005	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	3551	CHE On Road Diesel		
Yard tractor	UTR006	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	833	CHE On Road Diesel		
Yard tractor	UTR007	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1870	CHE On Road Diesel		
Yard tractor	UTR008	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2996	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	UTR009	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	996	CHE On Road Diesel		
Yard tractor	UTR010	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	3162	CHE On Road Diesel		
Yard tractor	UTR011	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2200	CHE On Road Diesel		
Yard tractor	UTR012	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2903	CHE On Road Diesel		
Yard tractor	UTR013	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2759	CHE On Road Diesel		
Yard tractor	UTR014	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2448	CHE On Road Diesel		
Yard tractor	UTR015	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2146	CHE On Road Diesel		
Yard tractor	UTR016	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1800	CHE On Road Diesel		
Yard tractor	UTR017	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1598	CHE On Road Diesel		
Yard tractor	UTR018	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2983	CHE On Road Diesel		
Yard tractor	UTR019	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1295	CHE On Road Diesel		
Yard tractor	UTR020	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1552	CHE On Road Diesel		
Yard tractor	UTR021	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2330	CHE On Road Diesel		
Yard tractor	UTR022	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2069	CHE On Road Diesel		
Yard tractor	UTR023	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2842	CHE On Road Diesel		
Yard tractor	UTR024	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1590	CHE On Road Diesel		
Yard tractor	UTR025	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	3224	CHE On Road Diesel		
Yard tractor	UTR026	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2611	CHE On Road Diesel		
Yard tractor	UTR027	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1662	CHE On Road Diesel		
Yard tractor	UTR028	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2700	CHE On Road Diesel		
Yard tractor	UTR029	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2478	CHE On Road Diesel		
Yard tractor	UTR030	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	3699	CHE On Road Diesel		
Yard tractor	UTR031	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2827	CHE On Road Diesel		
Yard tractor	UTR032	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	4051	CHE On Road Diesel		
Yard tractor	UTR033	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2883	CHE On Road Diesel		
Yard tractor	UTR034	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	511	CHE On Road Diesel		
Yard tractor	UTR035	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2423	CHE On Road Diesel		
Yard tractor	UTR036	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	913	CHE On Road Diesel		
Yard tractor	UTR037	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1319	CHE On Road Diesel		
Yard tractor	UTR038	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1235	CHE On Road Diesel		
Yard tractor	UTR039	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	891	CHE On Road Diesel		
Yard tractor	UTR040	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	625	CHE On Road Diesel		
Yard tractor	UTR041	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	364	CHE On Road Diesel		
Yard tractor	UTR042	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	175	CHE On Road Diesel		
Yard tractor	UTR043	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	183	CHE On Road Diesel		
Yard tractor	UTR044	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	167	CHE On Road Diesel		
Yard tractor	UTR045	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	67	CHE On Road Diesel		
Yard tractor	UTR046	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR047	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	15	CHE On Road Diesel		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	UTR048	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR049	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	182	CHE On Road Diesel		
Yard tractor	UTR050	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR051	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR052	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR053	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR054	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR055	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR056	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR057	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR058	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR059	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR060	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	UTR061	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel		
Yard tractor	YTW	Capacity	6BTA	Diesel	Cummins		2013	135	963	CHE Diesel		
Yard tractor	H-088	Dina		Gasoline	Chevy	454-FI	2011	335	1118	CHE Gasoline		
Yard tractor	H-089	Dina		Gasoline	Chevy	454-FI	2011	335	1320	CHE Gasoline		
Yard tractor	H-090	Dina		Gasoline	Chevy	454-FI	2011	335	1206	CHE Gasoline		
Yard tractor	H-091	Dina		Gasoline	Chevy	454-FI	2011	335	1057	CHE Gasoline		
Yard tractor	H-092	Dina		Gasoline	Chevy	454-FI	2011	335	1059	CHE Gasoline		
Yard tractor	H-093	Dina		Gasoline	Chevy	454-FI	2011	335	1017	CHE Gasoline		
Yard tractor	H-094	Dina		Gasoline	Chevy	454-FI	2011	335	1193	CHE Gasoline		
Yard tractor	H-095	Dina		Gasoline	Chevy	454-FI	2011	335	970	CHE Gasoline		
Yard tractor	H-096	Dina		Gasoline	Chevy	454-FI	2011	335	1199	CHE Gasoline		
Yard tractor	H-097	Dina		Gasoline	Chevy	454-FI	2011	335	1177	CHE Gasoline		
Yard tractor	H-098	Dina		Gasoline	Chevy	454-FI	2011	335	1239	CHE Gasoline		
Yard tractor	H-099	Dina		Gasoline	Chevy	454-FI	2011	335	1135	CHE Gasoline		
Yard tractor	H-100	Dina		Gasoline	Chevy	454-FI	2011	335	1251	CHE Gasoline		
Yard tractor	H-101	Dina		Gasoline	Chevy	454-FI	2011	335	907	CHE Gasoline		
Yard tractor	H-102	Dina		Gasoline	Chevy	454-FI	2011	335	1057	CHE Gasoline		
Yard tractor	H-104	Dina		Gasoline	Chevy	454-FI	2011	335	935	CHE Gasoline		
Yard tractor	H-105	Dina		Gasoline	Chevy	454-FI	2011	335	1167	CHE Gasoline		
Yard tractor	H-521	Dina		Gasoline	Chevy	454-FI	2011	335	296	CHE Gasoline		
Yard tractor	H-522	Dina		Gasoline	Chevy	454-FI	2011	335	393	CHE Gasoline		
Yard tractor	H-603	Dina		Gasoline	Chevy	454-FI	2011	335	666	CHE Gasoline		
Yard tractor	H-604	Dina		Gasoline	Chevy	454-FI	2011	335	392	CHE Gasoline		
Yard tractor	H-605	Dina		Gasoline	Chevy	454-FI	2011	335	976	CHE Gasoline		
Yard tractor	H-606	Dina		Gasoline	Chevy	454-FI	2011	335	724	CHE Gasoline		
Yard tractor	H-608	Dina		Gasoline	Chevy	454-FI	2011	335	959	CHE Gasoline		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	H-609	Dina		Gasoline	Chevy	454-FI	2011	335	846	CHE Gasoline		
Yard tractor	H-610	Dina		Gasoline	Chevy	454-FI	2011	335	1083	CHE Gasoline		
Yard tractor	H-6101	Dina		Gasoline	Chevy	454-FI	2011	335	639	CHE Gasoline		
Yard tractor	H-6103	Dina		Gasoline	Chevy	454-FI	2011	335	1000	CHE Gasoline		
Yard tractor	H-6104	Dina		Gasoline	Chevy	454-FI	2011	335	645	CHE Gasoline		
Yard tractor	H-6106	Dina		Gasoline	Chevy	454-FI	2011	335	883	CHE Gasoline		
Yard tractor	H-6107	Dina		Gasoline	Chevy	454-FI	2011	335	956	CHE Gasoline		
Yard tractor	H-6108	Dina		Gasoline	Chevy	454-FI	2011	335	945	CHE Gasoline		
Yard tractor	H-611	Dina		Gasoline	Chevy	454-FI	2011	335	688	CHE Gasoline		
Yard tractor	H-6111	Dina		Gasoline	Chevy	454-FI	2011	335	1121	CHE Gasoline		
Yard tractor	H6113	Dina		Gasoline	Chevy		2019	335	934	CHE Gasoline		
Yard tractor	H6114	Dina		Gasoline	Chevy		2019	335	840	CHE Gasoline		
Yard tractor	H6115	Dina		Gasoline	Chevy		2019	335	474	CHE Gasoline		
Yard tractor	H6116	Dina		Gasoline	Chevy		2019	335	943	CHE Gasoline		
Yard tractor	H6117	Dina		Gasoline	Chevy		2019	335	916	CHE Gasoline		
Yard tractor	H6118	Dina		Gasoline	Chevy		2019	335	688	CHE Gasoline		
Yard tractor	H6119	Dina		Gasoline	Chevy		2019	335	961	CHE Gasoline		
Yard tractor	H-612	Dina		Gasoline	Chevy	454-FI	2011	335	934	CHE Gasoline		
Yard tractor	H6120	Dina		Gasoline	Chevy		2019	335	688	CHE Gasoline		
Yard tractor	H6121	Dina		Gasoline	Chevy		2019	335	913	CHE Gasoline		
Yard tractor	H6122	Dina		Gasoline	Chevy		2019	335	1102	CHE Gasoline		
Yard tractor	H6123	Dina		Gasoline	Chevy		2019	335	876	CHE Gasoline		
Yard tractor	H6124	Dina		Gasoline	Chevy		2019	335	782	CHE Gasoline		
Yard tractor	H6125	Dina		Gasoline	Chevy		2019	335	914	CHE Gasoline		
Yard tractor	H6126	Dina		Gasoline	Chevy		2019	335	772	CHE Gasoline		
Yard tractor	H6127	Dina		Gasoline	Chevy		2019	335	903	CHE Gasoline		
Yard tractor	H6128	Dina		Gasoline	Chevy		2019	335	555	CHE Gasoline		
Yard tractor	H6129	Dina		Gasoline	Chevy		2019	335	916	CHE Gasoline		
Yard tractor	H6130	Dina		Gasoline	Chevy		2019	335	681	CHE Gasoline		
Yard tractor	H6131	Dina		Gasoline	Chevy		2019	335	686	CHE Gasoline		
Yard tractor	H6132	Dina		Gasoline	Chevy		2019	335	410	CHE Gasoline		
Yard tractor	H6133	Dina		Gasoline	Chevy		2019	335	353	CHE Gasoline		
Yard tractor	H6134	Dina		Gasoline	Chevy		2019	335	486	CHE Gasoline		
Yard tractor	H6135	Dina		Gasoline	Chevy		2019	335	104	CHE Gasoline		
Yard tractor	H6136	Dina		Gasoline	Chevy		2019	335	0	CHE Gasoline		
Yard tractor	H6137	Dina		Gasoline	Chevy		2019	335	186	CHE Gasoline		
Yard tractor	H6138	Dina		Gasoline	Chevy		2019	335	82	CHE Gasoline		
Yard tractor	H6139	Dina		Gasoline	Chevy		2019	335	85	CHE Gasoline		
Yard tractor	H-614	Dina		Gasoline	Chevy	454-FI	2011	335	936	CHE Gasoline		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	H6140	Dina		Gasoline	Chevy		2019	335	70	CHE Gasoline		
Yard tractor	H-619	Dina		Gasoline	Chevy	454-FI	2011	335	1236	CHE Gasoline		
Yard tractor	H-620	Dina		Gasoline	Chevy	454-FI	2011	335	673	CHE Gasoline		
Yard tractor	H-627	Dina		Gasoline	Chevy	454-FI	2011	335	811	CHE Gasoline		
Yard tractor	H-628	Dina		Gasoline	Chevy	454-FI	2011	335	1231	CHE Gasoline		
Yard tractor	H-629	Dina		Gasoline	Chevy	454-FI	2011	335	1107	CHE Gasoline		
Yard tractor	H-630	Dina		Gasoline	Chevy	454-FI	2011	335	1478	CHE Gasoline		
Yard tractor	H-631	Dina		Gasoline	Chevy	454-FI	2011	335	424	CHE Gasoline		
Yard tractor	H-632	Dina		Gasoline	Chevy	454-FI	2011	335	90	CHE Gasoline		
Yard tractor	H-633	Dina		Gasoline	Chevy	454-FI	2011	335	1306	CHE Gasoline		
Yard tractor	H-634	Dina		Gasoline	Chevy	454-FI	2011	335	1323	CHE Gasoline		
Yard tractor	H-635	Dina		Gasoline	Chevy	454-FI	2011	335	1060	CHE Gasoline		
Yard tractor	H-636	Dina		Gasoline	Chevy	454-FI	2011	335	1371	CHE Gasoline		
Yard tractor	H-639	Dina		Gasoline	Chevy	454-FI	2011	335	1175	CHE Gasoline		
Yard tractor	H-640	Dina		Gasoline	Chevy	454-FI	2011	335	1167	CHE Gasoline		
Yard tractor	H-643	Dina		Gasoline	Chevy	454-FI	2011	335	1755	CHE Gasoline		
Yard tractor	H-644	Dina		Gasoline	Chevy	454-FI	2011	335	1175	CHE Gasoline		
Yard tractor	H-645	Dina		Gasoline	Chevy	454-FI	2011	335	1119	CHE Gasoline		
Yard tractor	H-646	Dina		Gasoline	Chevy	454-FI	2011	335	946	CHE Gasoline		
Yard tractor	H-649	Dina		Gasoline	Chevy	454-FI	2011	335	1096	CHE Gasoline		
Yard tractor	H-650	Dina		Gasoline	Chevy	454-FI	2011	335	1257	CHE Gasoline		
Yard tractor	H-653	Dina		Gasoline	Chevy	454-FI	2011	335	954	CHE Gasoline		
Yard tractor	H-654	Dina		Gasoline	Chevy	454-FI	2011	335	1287	CHE Gasoline		
Yard tractor	H-655	Dina		Gasoline	Chevy	454-FI	2011	335	1098	CHE Gasoline		
Yard tractor	H-656	Dina		Gasoline	Chevy	454-FI	2011	335	1365	CHE Gasoline		
Yard tractor	H-657	Dina		Gasoline	Chevy	454-FI	2011	335	881	CHE Gasoline		
Yard tractor	H-658	Dina		Gasoline	Chevy	454-FI	2011	335	997	CHE Gasoline		
Yard tractor	H-659	Dina		Gasoline	Chevy	454-FI	2011	335	948	CHE Gasoline		
Yard tractor	H-660	Dina		Gasoline	Chevy	454-FI	2011	335	947	CHE Gasoline		
Yard tractor	H-661	Dina		Gasoline	Chevy	454-FI	2011	335	1818	CHE Gasoline		
Yard tractor	H-662	Dina		Gasoline	Chevy	454-FI	2011	335	816	CHE Gasoline		
Yard tractor	H-664	Dina		Gasoline	Chevy	454-FI	2011	335	1457	CHE Gasoline		
Yard tractor	H-665	Dina		Gasoline	Chevy	454-FI	2011	335	1184	CHE Gasoline		
Yard tractor	H-666	Dina		Gasoline	Chevy	454-FI	2011	335	1037	CHE Gasoline		
Yard tractor	H-667	Dina		Gasoline	Chevy	454-FI	2011	335	1271	CHE Gasoline		
Yard tractor	H-668	Dina		Gasoline	Chevy	454-FI	2011	335	1073	CHE Gasoline		
Yard tractor	H-669	Dina		Gasoline	Chevy	454-FI	2011	335	1269	CHE Gasoline		
Yard tractor	H-671	Dina		Gasoline	Chevy	454-FI	2011	335	1128	CHE Gasoline		
Yard tractor	H-694	Dina		Gasoline	Chevy	454-FI	2011	335	853	CHE Gasoline		

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 3	Blue Cat
Yard tractor	H-695	Dina		Gasoline	Chevy	454-FI	2011	335	167	CHE Gasoline		
Yard tractor	H-696	Dina		Gasoline	Chevy	454-FI	2011	335	1293	CHE Gasoline		
Yard tractor	H-699	Dina		Gasoline	Chevy	454-FI	2011	335	1462	CHE Gasoline		
Yard tractor	H7112	Dina		Gasoline	Chevy	454-FI	2018	335	113	CHE Gasoline		
Yard tractor	H7113	Dina		Gasoline	Chevy	454-FI	2018	335	1595	CHE Gasoline		
Yard tractor	H7114	Dina		Gasoline	Chevy	454-FI	2018	335	1939	CHE Gasoline		
Yard tractor	H7115	Dina		Gasoline	Chevy	454-FI	2018	335	1736	CHE Gasoline		
Yard tractor	H7116	Dina		Gasoline	Chevy	454-FI	2018	335	2220	CHE Gasoline		
Yard tractor	H7117	Dina		Gasoline	Chevy	454-FI	2018	335	2117	CHE Gasoline		
Yard tractor	H7118	Dina		Gasoline	Chevy	454-FI	2018	335	1567	CHE Gasoline		
Yard tractor	H7119	Dina		Gasoline	Chevy	454-FI	2018	335	1264	CHE Gasoline		
Yard tractor	H7120	Dina		Gasoline	Chevy	454-FI	2018	335	1806	CHE Gasoline		
Yard tractor	H7121	Dina		Gasoline	Chevy	454-FI	2018	335	0	CHE Gasoline		
Yard tractor	H7122	Dina		Gasoline	Chevy	454-FI	2018	335	2027	CHE Gasoline		
Yard tractor	H7123	Dina		Gasoline	Chevy	454-FI	2018	335	2129	CHE Gasoline		
Yard tractor	H7124	Dina		Gasoline	Chevy	454-FI	2018	335	1907	CHE Gasoline		
Yard tractor	H7125	Dina		Gasoline	Chevy	454-FI	2018	335	1893	CHE Gasoline		
Yard tractor	H7126	Dina		Gasoline	Chevy	454-FI	2018	335	1787	CHE Gasoline		
Yard tractor	H7127	Dina		Gasoline	Chevy	454-FI	2018	335	1924	CHE Gasoline		
Yard tractor	H7128	Dina		Gasoline	Chevy	454-FI	2018	335	2151	CHE Gasoline		
Yard tractor	H7129	Dina		Gasoline	Chevy	454-FI	2018	335	1900	CHE Gasoline		
Yard tractor	H7130	Dina		Gasoline	Chevy	454-FI	2018	335	1338	CHE Gasoline		
Yard tractor	H7131	Dina		Gasoline	Chevy	454-FI	2018	335	978	CHE Gasoline		
Yard tractor	H7132	Dina		Gasoline	Chevy	454-FI	2019	335	21	CHE Gasoline		
Yard tractor	H7133	Dina		Gasoline	Chevy	454-FI	2019	335	787	CHE Gasoline		
Yard tractor	H7134	Dina		Gasoline	Chevy	454-FI	2019	335	1158	CHE Gasoline		
Yard tractor	H7135	Dina		Gasoline	Chevy	454-FI	2019	335	786	CHE Gasoline		
Yard tractor	H7136	Dina		Gasoline	Chevy	454-FI	2019	335	1306	CHE Gasoline		
Yard tractor	H7137	Dina		Gasoline	Chevy	454-FI	2019	335	973	CHE Gasoline		
Yard tractor	H7138	Dina		Gasoline	Chevy	454-FI	2019	335	837	CHE Gasoline		
Yard tractor	H7139	Dina		Gasoline	Chevy	454-FI	2019	335	94	CHE Gasoline		
Yard tractor	H7140	Dina		Gasoline	Chevy	454-FI	2019	335	97	CHE Gasoline		
Yard tractor	T142	Ottawa	Commando	LPG	Ford V10		2009	173	25	CHE Propane		
Yard tractor	T146	Ottawa	Commando	LPG	Ford V10		2009	173	98	CHE Propane		
Yard tractor				Electric						CHE Electric		