



Pasha Automotive Services

Finished Vehicle Logistics – Law & Order

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VP Business Development & Admin.





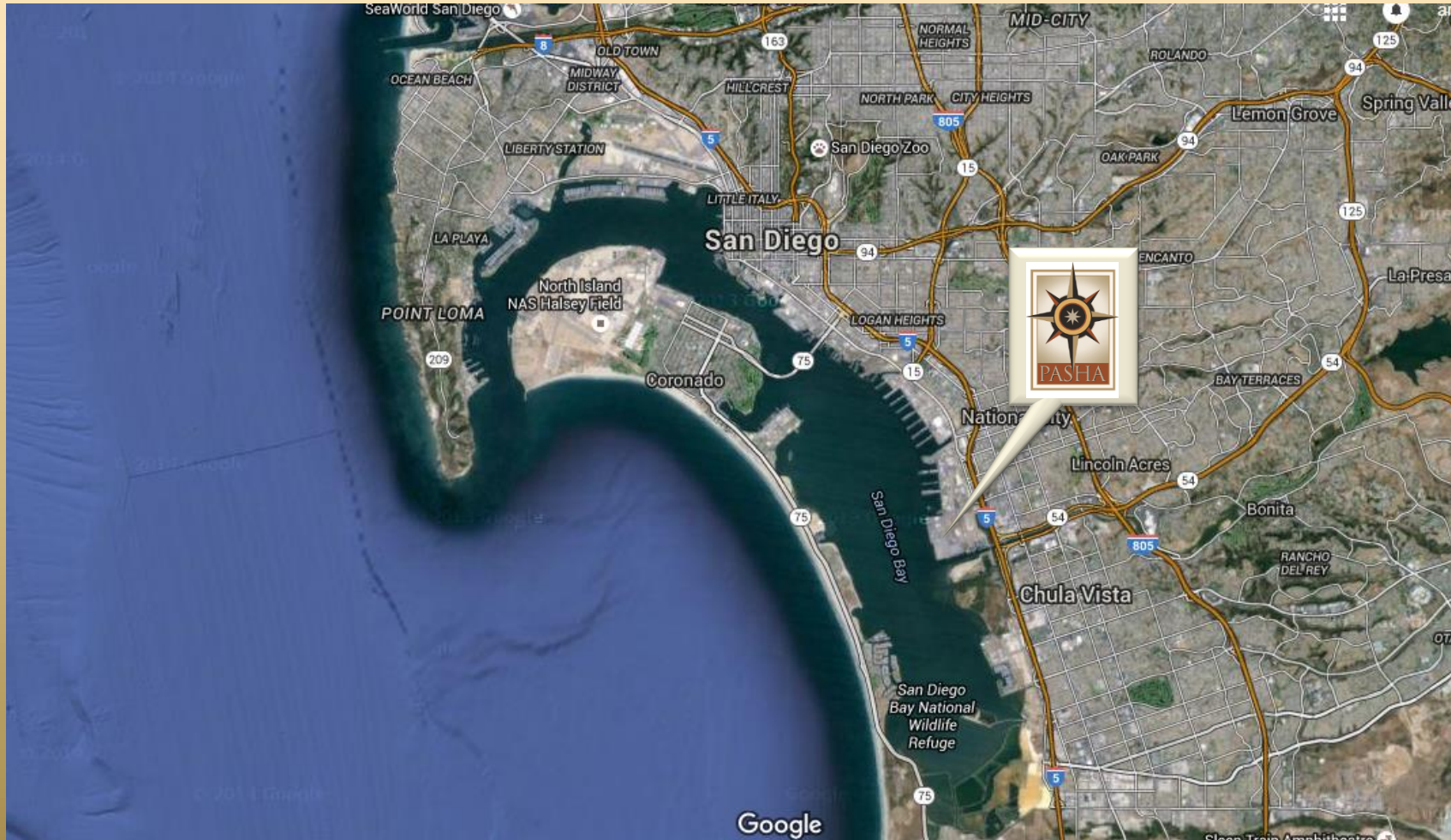
Regulatory Impact to FVL



1. Regulatory Agencies and Groups
2. Participation in local and federal environmental grant programs
3. Clean Water Act / Storm water management and countermeasures.
4. Electric vehicles on the terminal and beyond.
5. On terminal electric vehicle charging
6. Emissions Certification holds
7. Managing vessel emissions at berth



Regulatory Oversight & Support



Local:

- San Diego Unified Port District
- City of National City
- County of San Diego
- Air Pollution Control District
- San Diego Regional Water Quality Control Board

State:

- California Energy Commission
- California Air Resources Board
- California Coastal Commission
- State Lands Commission
- California Dept. of Industrial Relations

Federal:

- United States Coast Guard
- Occupational Safety and Health Administration
- Army Corps of Engineers
- Transportation Security Administration
- Customs & Border Protection



Grant and Funding Availability



Hybrid and Zero Emission Truck and Bus Voucher Incentive Program HVIP

Clean Vehicle Rebate Program

California Energy Commission Programs

Diesel Emission Reduction Act

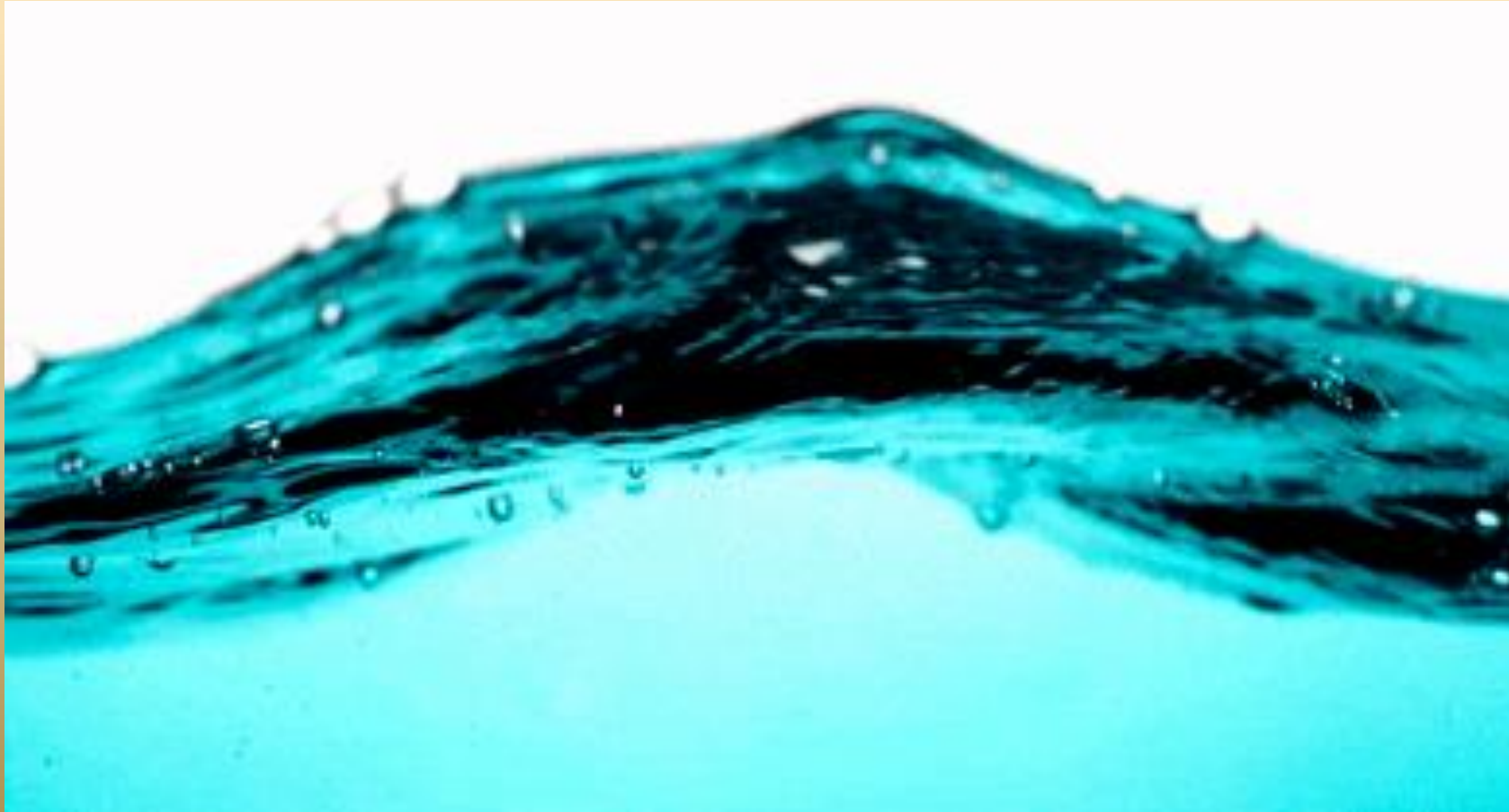
Air Quality Improvement Program

Partner with Public Agencies or Non-Profits

- Many grants are not available to private firms alone.
- Partner with Port, Municipal, State, Federal agencies to apply.
- Partner with Non-Profit Organizations to apply



The Clean Water Act and Storm Water Management



History of the Federal Water Pollution Control Act (1972)

Amendments:

- Clean Water Act (1977)
- Water Quality Act (1987)
- BEACH Act (2000)



Power Washing and Car Washing



Power Wash Anywhere!

The old days...



No Worry About Runoff
to storm drains!



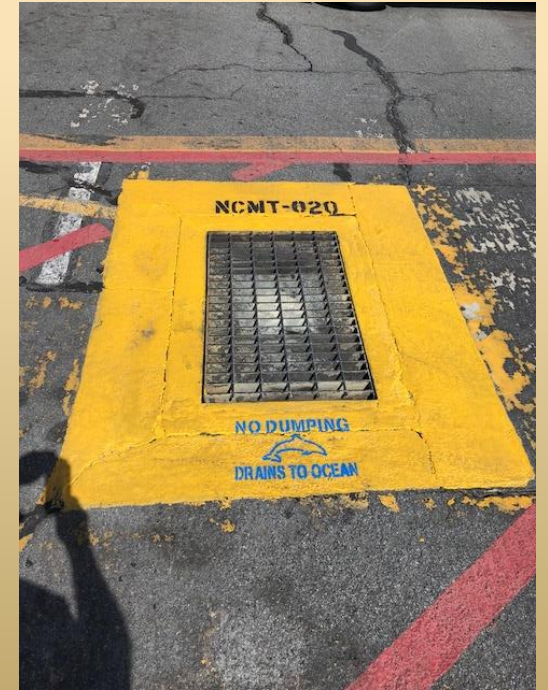
Power Washing and Car Washing



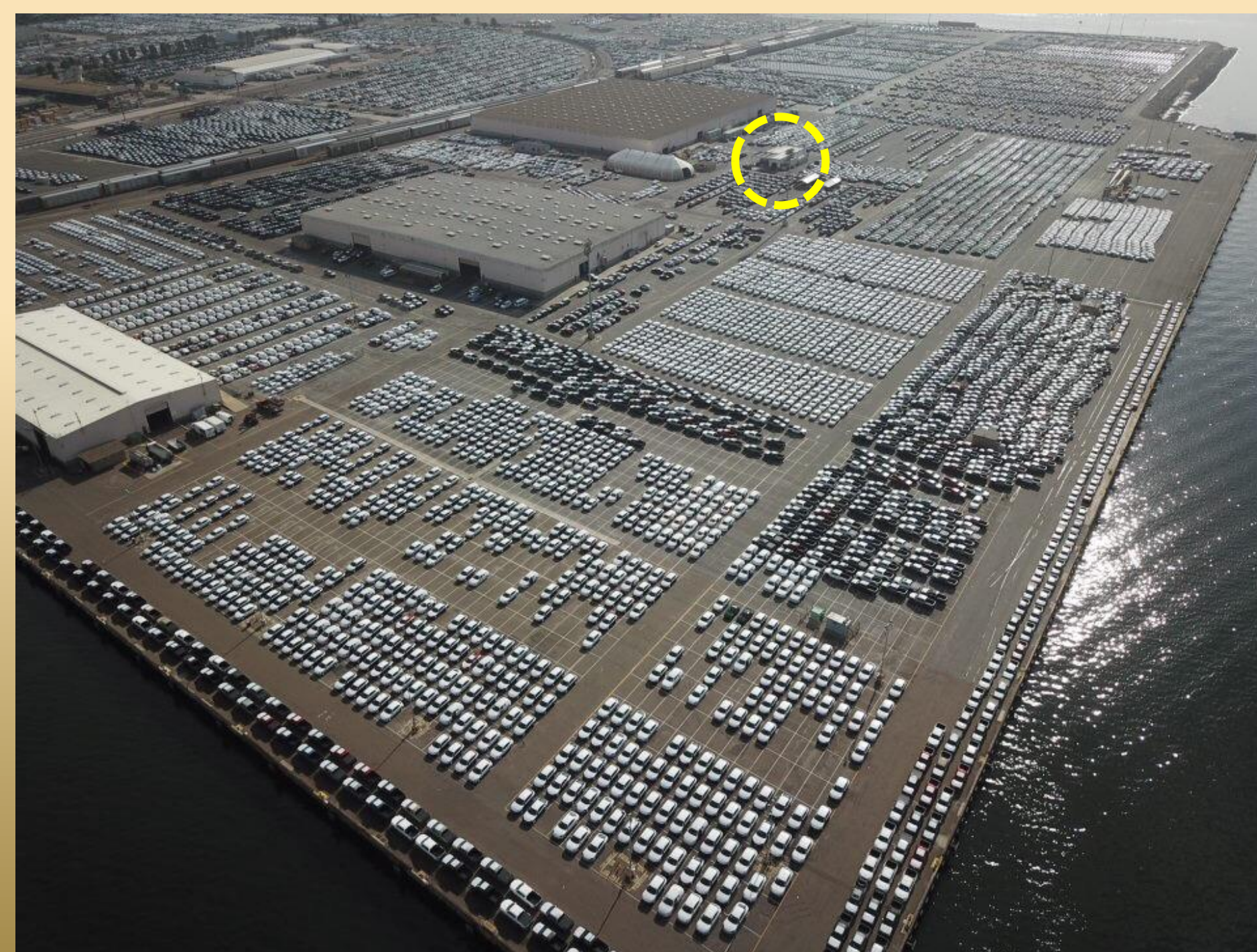
Today!



- Recycled water
- Reverse osmosis filtration
- Drains to Industrial Sewer
- Containment barrier



Storm water
runoff closely
monitored!



So why is car washing impactful to finished vehicle logistics?

Here is the Terminal.

Here is the car wash!

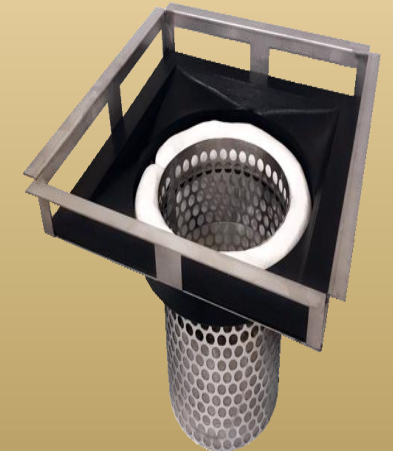
Rather than bringing the power washing to the vehicle, you bring the vehicle to the car wash.

Cost:

- More Time
- More Labor
- Potential for damage

Routine Maintenance and Monitoring

- Filtration cleaning (39 drain inlets)
- Keep areas around drains clear
- Check filtration media condition





Storm Water Management



Preventing Waste from Entering Storm Water Runoff

- Frequent mechanical sweeping of FPR and vehicle storage areas.
- Maintain logs of sweeping schedules and areas.
- Every time an area is clear, take the opportunity to sweep it!



Storm Water Management



Rust Never Sleeps, and no such thing as a small oil spill!

- Keep metal posts, fire hydrants, and other yard fixtures painted to prevent rust.
- Prompt cleanup of oil or other hazmat spills, not matter how small!
- Rust is a source for heavy metal contamination



Storm Water Management



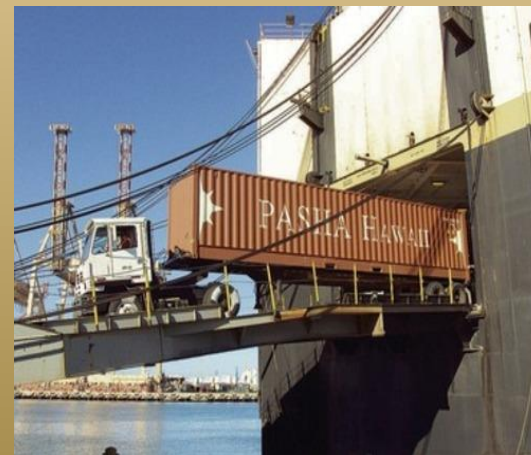
The old days...



Today!



Electric Vehicles On and Off Terminal



- New Electric Tractors
- Use for auto-haul and container drayage.



E-Vehicle Charging



Virtually Every OEM is Demanding e-vehicle charging.

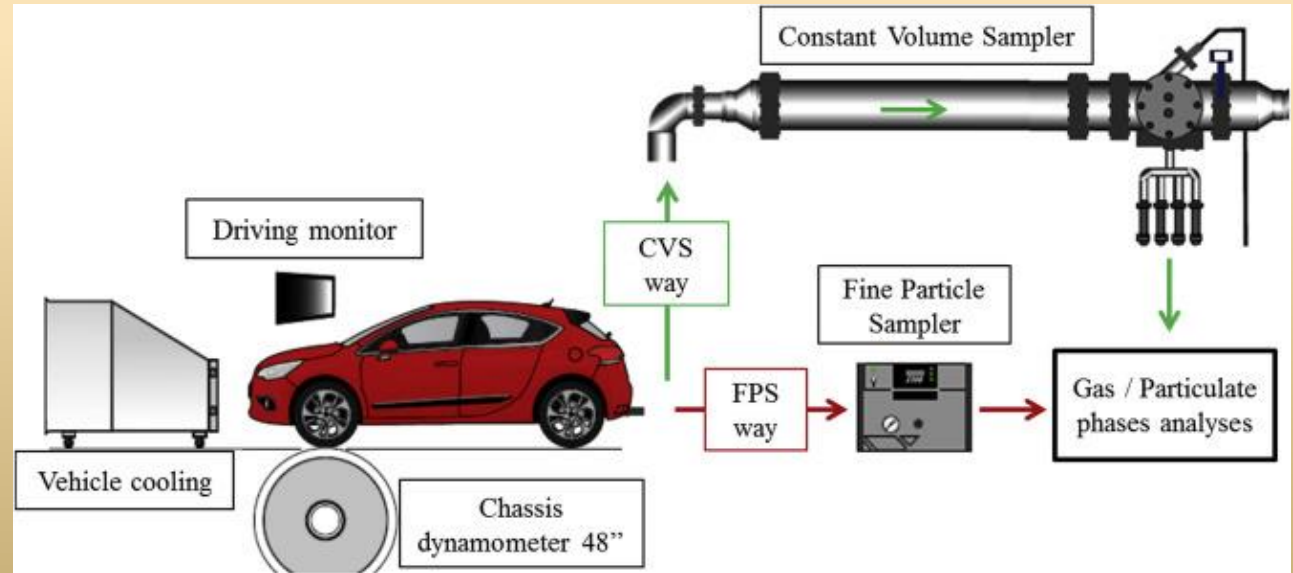
- Every OEM is expressing interest, or establishing requirements for e-vehicle charging.
- Used for both OEM customer units and on-terminal vehicles.
- Chargers require space and adequate power source.



Emissions Certification Holds



| VEHICLE EMISSION CONTROL INFORMATION | | | |
|--|--|--------------|------------------|
| A motor co, inc. | ENGINE FAMILY | EFN2.8YBT2BA | OBD II CERTIFIED |
| | DISPLACEMENT | 2.8L | |
| THIS VEHICLE CONFORMS TO U.S. EPA AND STATE OF CALIFORNIA REGULATIONS APPLICABLE TO 1997 MODEL YEAR NEW TLEV PASSENGER CARS. | | | |
| REFER TO SERVICE MANUAL FOR ADDITIONAL INFORMATION TUNE-UP CONDITIONS: NORMAL OPERATING ENGINE TEMPERATURE, ACCESSORIES OFF, COOLING FAN OFF, TRANSMISSION IN NEUTRAL | | | |
| EXHAUST EMISSIONS STANDARDS CERTIFICATION IN-USE | STANDARD CATEGORY TLEV TLEV INTERMEDIATE | | |
| SPARK PLUG TYPE NGK BPRE-11 GAP: 1.1mm | CATALYST | EFN2.8YBT2BA | |
| | | | |



- Long lead time for emissions certification is creating the need to hold and store vehicles while waiting for final emissions certification prior to wholesale.
- Especially prevalent on new model launches.



At Berth Emissions Reduction



- Original “bonnet” style, dock mounted emissions collection system.



- Newer “AMECS” barge mounted emissions collection system.



At Berth Emissions Reduction



- Utilizing Shore Power or “Cold Ironing”.



At Berth Emissions Reduction



RO/RO Vessels

**Arrival
Time at Berth
Begins!**

**2 hours
for arrival
(lines, ramps, customs)**

**Current 8 hour ILWU
Discharge Shift**

**2 hours
for departure
(lines, ramps, customs)**

**Departure
Time at Berth Ends!**

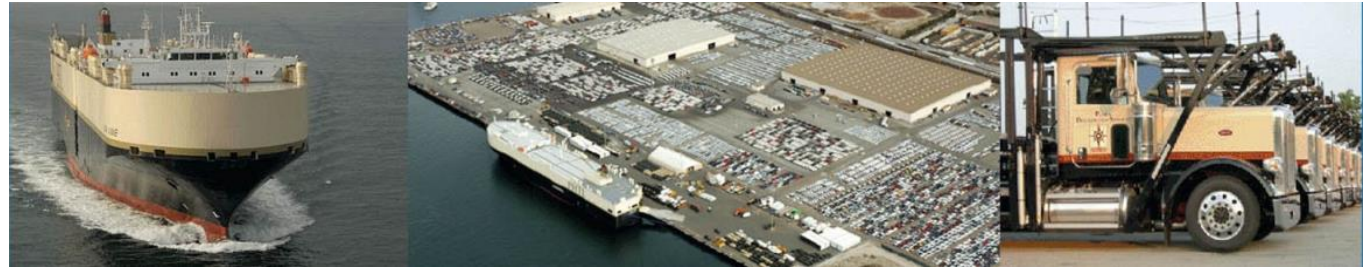


Emissions reduction window 8 – 12 hours

- Emission Filtration or Shore Power requires one hour to connect/disconnect
- Auxiliary power onboard requires 30 – 45 minutes to start up when disconnecting
- RO/RO can flex labor up or down to complete discharge in an 8 hour shift
- The maximum elimination of at berth emissions is likely only 8 – 10 hours



Emissions at Berth



Container Vessels

**Arrival
Time at Berth
Begins!**

**2 hours
for arrival
(lines, cranes, customs)**

**24 – 31+ Hour
Discharge, multiple shifts**

**2 hours
for departure
(lines, cranes, customs)**

**Departure
Time at Berth Ends!**



Emissions reduction window 24 – 30 hours

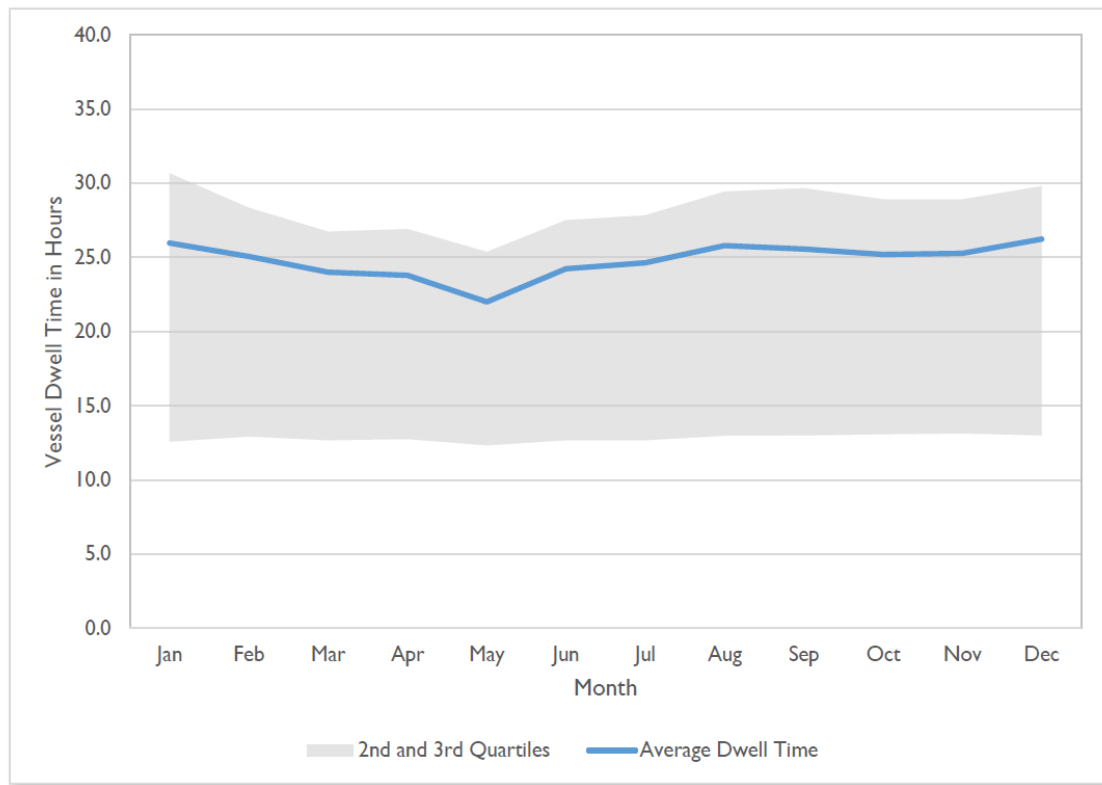
- Emission Filtration or Shore Power requires one hour to connect/disconnect
- Auxiliary power onboard requires 30 – 45 minutes to start up when disconnecting
- A Container Vessel discharge is limited by terminal crane number and capacity, less flexible
- The maximum elimination of at berth emissions is 24 – 30 hours



Emissions at Berth



Figure 3-8: Average U.S. Container Vessel Dwell Times, 2016 (n=18,500)



KEY: n = number of observations.

NOTE: May is missing data for ports in Southern California.

SOURCE: USDOT, BTS and Volpe Center, calculated using AIS data provided by ERDC.

Figure 3-8 shows, the month-to-month U.S. average dwell time for Container vessels

- In 2016, the average container vessel dwell time at U.S. ports was 24.8 hours.
- 50 percent of container vessels had dwell times between 12.6 and 30.7 hours

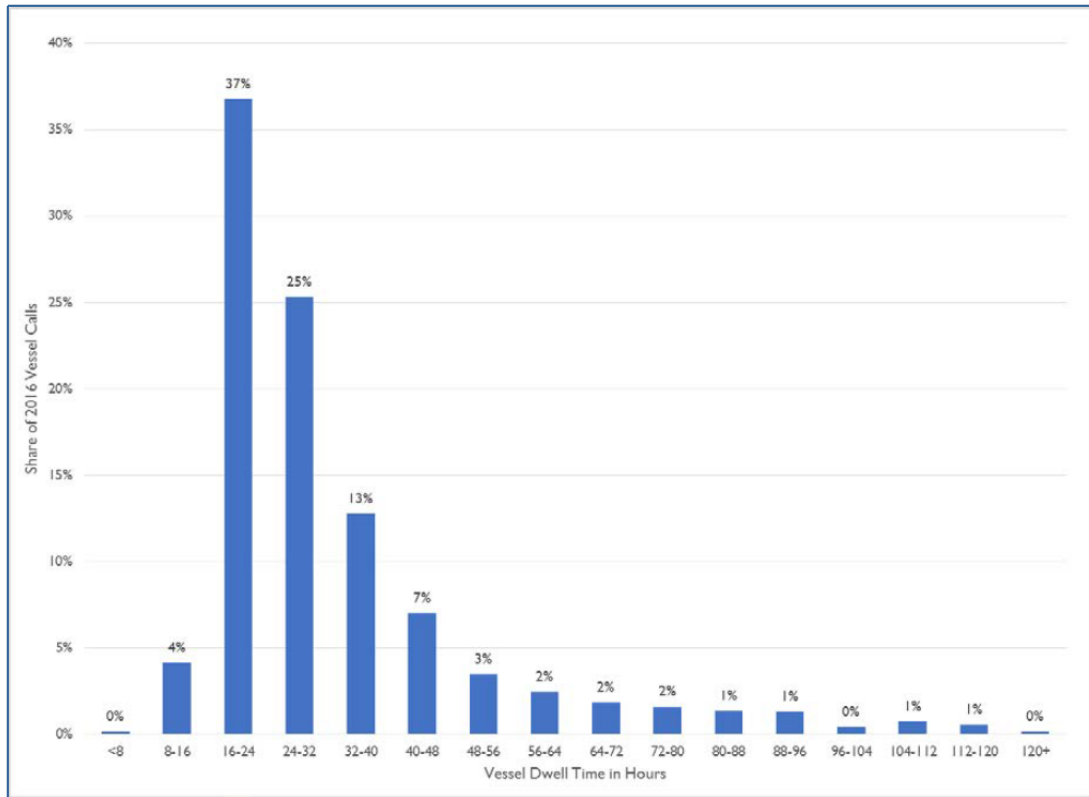
Source: PORT PERFORMANCE FREIGHT STATISTICS PROGRAM: ANNUAL REPORT TO CONGRESS 2017 USDOT



Emissions at Berth



Figure 3-9: Distribution of Container Vessel Dwell Times, 2016 (n=18,500)



SOURCE: USDOT, BTS and Volpe Center, calculated using AIS data provided by ERDC.

Dwell Time Variability and Scheduled Vessel Calls

Despite stability of the U.S. average in Figure 3-8, review of the AIS data reveals that dwell times vary widely between vessels, ports, and even different calls by the same vessel at the same port.

Figure 3-9 shows the distribution of the dwell times in Figure 3-8.

Source: PORT PERFORMANCE FREIGHT STATISTICS PROGRAM: ANNUAL REPORT TO CONGRESS 2017 USDOT



Thank you!

