

Attachment A

Pearson Declaration

**DRAYAGE SERVICES
CONCESSION AGREEMENT
FOR ACCESS TO THE
PORT OF LOS ANGELES**

AGREEMENT NO. _____

THIS DRAYAGE SERVICES CONCESSION AGREEMENT ("Concession") is made and entered into the _____ day of _____, 20____, by and between the CITY OF LOS ANGELES, a municipal corporation, acting by and through its Board of Harbor Commissioners ("Port") and _____ ("Concessionaire"). Defined terms used and not otherwise defined herein shall have the meanings set forth in the Clean Air Action Plan Chapter of Port of Los Angeles Tariff No. 4 (Section 20).

For and in consideration of the promises, and of the terms, covenants and conditions hereinafter contained to be kept and performed by said parties, THE PARTIES HERETO DO MUTUALLY AGREE AS FOLLOWS:

I. DRAYAGE TRUCK CONCESSION RIGHTS GRANTED

- (a) Subject to the terms of this Concession, including without limitation the terms set forth on the Schedules attached hereto and incorporated herein by reference, the Port hereby grants to the Concessionaire a non-exclusive license to access Port property for the purpose of transporting containers and/or other cargo to and from marine terminals ("Drayage Service"). Concessionaire's right of access to and use of the Port's facilities under this Concession shall be solely for the purpose of conducting Drayage Service unless the Concessionaire obtains the Executive Director's prior written permission to access Port's property for other purposes. Concessionaire's rights under this Concession shall be non-exclusive and the Port intends to grant similar concession rights to other concessionaires who meet and remain in compliance with Concession requirements. This Concession is not transferable without prior written permission from the Port, which shall be conditioned upon (1) satisfaction in full of the transferor Concessionaire's obligations to the Port, and (2) the proposed transferee's compliance with Concession qualifications and requirements. Concessionaire requests to transfer shall be delivered to the Port in writing at least 30 days' advance of any proposed substantial change in the ownership and control of Concessionaire. The Port shall not unreasonably deny transfer of the Concession but may in its sole discretion choose to issue a new Concession in lieu of transfer. The Port shall not withhold consent to transfer the Concession to a wholly owned subsidiary of Concessionaire or to allow wholly owned subsidiaries of Concessionaire to operate under the rights granted by this Concession provided that such subsidiaries independently meet the requirements of a concessionaire. In the event that Concessionaire allows any wholly owned subsidiary to operate under the rights granted by this Concession, Concessionaire shall be legally liable to Port for all performance, payments, acts and omissions of such subsidiary related to this Concession.
- (b) Drayage Trucks providing Drayage Service to the Port and operating under the authority of and in compliance with the terms and conditions of this Concession shall be referred to herein as "Permitted Trucks." Permitted Trucks may include Drayage Trucks leased or owned and operated by Concessionaire

("Concessionaire's Trucks") or, during the Transition Period (to the extent permitted in Section III (d) below), leased or owned by contractor drivers and performing Drayage Service on behalf of Concessionaire under the authority of this Concession ("Contractors' Trucks"). Regardless of ownership status, Concessionaire shall cause all Permitted Trucks to comply fully with all of the terms and conditions of this Concession.

- (c) Concessionaire understands that, by granting this Concession to the Concessionaire, the Port has not secured drayage service contracts between Concessionaire and any customers, which contracts and obligations therein shall remain the sole responsibility of Concessionaire.

II. TERM OF AGREEMENT

This Concession shall be effective for a term of five (5) years commencing at 12:01 a.m. on October 1, 2008 and terminating at 12:00 midnight on September 30, 2013.

III. CONCESSION REQUIREMENTS

As a condition to the right to provide Drayage Services under this Concession, Concessionaire shall comply with all of the requirements set forth below and on the Schedules attached hereto and incorporated herein by reference (collectively, the "Concession Requirements") :

- (a) Licensed Motor Carrier. Concessionaire must be a licensed motor carrier in good standing and in compliance with the requirements of a valid license/permit under either (1) a California Motor Carrier Permit issued by the California Department of Motor Vehicles under the California Vehicle Code, or (2) a state Motor Carrier Permit issued by another U.S. state, or (3) a Federal Motor Carrier License (USDOT Number) and Operating Authority (MC Number).
- (b) Permitted Trucks. Concessionaire shall utilize Permitted Trucks (as defined in Section 1(b) above) to provide Drayage Service to the Port pursuant to this Concession. To qualify as a Permitted Truck, all Drayage Trucks providing Drayage Service operating under this Concession shall have required information entered into and kept updated in the Drayage Trucks Registry and shall comply at all times with Concession Requirements.
- (c) Driver Compliance. Concessionaire shall be responsible for the compliance and performance of its drivers or other personnel utilized pursuant to this Concession.
- (d) Driver Hiring. Concessionaire shall initially be permitted to utilize employees, independent contractor drivers (including without limitation owner operators), or a combination thereof to achieve its full complement of drivers driving its Permitted Trucks. Concessionaire shall be granted a transition period, as set forth in the schedule below, by which to transition its Concession drivers to 100% Employee Concession drivers by no later than December 31, 2013 ("Transition Period"). During the Transition Period, Concessionaire shall meet the interim annual fourth quarter milestones set forth below for the percentage of its Employee drivers. "Employee" for the purpose of this Concession shall have the same meaning as under Section 3121(d) of Title 26 of the United States Code, and may include

full-time, part-time, temporary or seasonal Employees to permit Concessionaire flexibility in driver staffing. The percentage of Concession drivers that are Employees during Employee Transition Period shall be calculated as a percentage of Employee drivers driving Permitted Trucks in Drayage Truck transactions at the Port's marine terminal gates based upon the proportionate number of such transactions by Employee drivers relative to those of non-Employees during the relevant time periods. Employee status data shall be collected electronically daily with each Permitted Truck transaction at the marine terminal gates. Reporting to both the Port and the Concessionaire will be made quarterly, to enable Concessionaire to monitor level of compliance and make adjustments to maintain the annual fourth quarter average. Compliance measurement and reporting to both the Port and the Concessionaire will be done annually, using the simple arithmetic average of all records for the fourth quarter (October 1 through December 31). After December 31, 2012, all Concession drivers shall be Employees. Subject to drivers meeting Concessionaire's reasonable employment standards and all other qualifications being equal, Concessionaire shall give a hiring preference to drivers with a history of providing drayage services to the Port. The ultimate decision as to hiring shall rest with Concessionaire. When Concessionaire has openings for Drayage Truck drivers or administrative staff, Concessionaire shall post such job openings at the First Source Workforce Development Office, a workforce development program that provides prospective employee applicants through a non-exclusive job referral system. Concessionaire shall also consult the First Source list of prospective employee applicants prior to hiring.

EMPLOYEE DRIVER SCHEDULE – TRANSITION PERIOD

IMPLEMENTATION DATE Fourth Quarter (Oct. 1 – Dec. 31) Average Measured on Below Dates	% OF CONCESSION DRIVERS THAT ARE EMPLOYEES Fourth Quarter (Oct. 1 – Dec. 31) Average Percentage
December 31, 2008	0 %
December 31, 2009	20 %
December 31, 2010	66 %
December 31, 2011	85 %
December 31, 2012	95 %
December 31, 2013	100%

- (e) Clean Truck Tariff. Concessionaire shall cause all Concessionaires' Permitted Trucks to be modernized by either retrofit or replacement to comply with the Clean Truck Program requirements in accordance with Section 20 of Port of Los Angeles Tariff No. 4. During the Transition Period (as defined in Section III(d)), Concessionaire shall confirm that all Contractors' Permitted Trucks that operate under its Concession also comply with the Clean Truck Program requirements in accordance with Section 20 of Port of Los Angeles Tariff No. 4.
- (f) Compliance with Truck Routes and Parking Restrictions. Concessionaire shall submit for approval by the Concession Administrator, an off-street parking plan that includes off-street parking location(s) for all Permitted Trucks. Concessionaire shall ensure that all Permitted Trucks are in compliance with on-street parking restrictions by local municipalities. Permitted Trucks not in service shall be staged off public streets and away from residential districts. Except when diverted by posted detours or at the direction of police, Port, or other traffic authorities, Concessionaire shall ensure that Permitted Trucks adhere to any truck routes specified by local and state authorities or the Port, including routes and permit requirements for hazardous materials, extra-wide, over-height and overweight loads.
- (g) Truck Maintenance. Concessionaire shall prepare an appropriate maintenance plan for all Permitted Trucks. Concessionaire shall be responsible for vehicle condition and safety and shall ensure that the maintenance of all Permitted Trucks, including retrofit equipment, is conducted in accordance with manufacturer's instructions. Maintenance records for all Permitted Trucks shall be available for inspection by the Concession Administrator during normal business hours or as previously arranged with Concessionaire.
- (h) Compliance with Truck Safety and Operations Regulations. Concessionaire shall ensure that all Permitted Trucks are in compliance with all applicable existing regulatory safety standards. Concessionaire shall maintain and make available for inspection by the Concession Administrator, all records required for compliance with the Port's Clean Trucks Program and all existing regulatory programs including U.S. Department of Transportation motor carrier safety regulations, and State of California Biennial Inspection of Terminals program. This includes driver qualifications, driver training, vehicle maintenance, safety inspection, controlled substances and alcohol testing and hours-of-service for all employee drivers and contractor drivers to the extent permitted during the Transition Period under Section III (d).
- (i) Driver Credential. Concessionaire shall ensure and keep records of enrollment in the Transportation Worker Identification Credential (TWIC) program, possession of a valid, current TWIC card and ongoing compliance with the requirements of the TWIC program by all Concession drivers, including employees and contractor drivers to the extent permitted during the Transition Period under Section III (d).
- (j) Compliance Tags. When entering and leaving Port Property and while on Port Property, Concessionaire shall ensure that each Permitted Truck is equipped with such means of Clean Trucks Program compliance verification as may be specified by the Marine Terminal Operators of the Port's Terminals.

- (k) Security. To support the Port's safety and security measures, Concessionaire shall ensure that all Permitted Trucks comply with applicable Federal, State, Municipal and Port security laws and regulations, including without limitation, the USA Patriot Act of 2001, Maritime Transportation Security Act of 2002 and Department of Homeland Security regulations, including terminal and facility security plans. When entering and leaving Port Property and while on Port Property, Permitted Trucks shall be subject to safety and security searches in accordance with applicable law.
- (l) Placards. When entering and leaving Port Property and while on Port Property, Concessionaire shall post placards on all Permitted Trucks referring members of the public to a phone number to report concerns regarding truck emissions, safety and compliance to the Concession Administrator and/or authorities.
- (m) Technology. When entering and leaving Port Property and while on Port Property, Concessionaire shall implement technology required for the Concession and /or the Clean Trucks Program. Port will consult with Concessionaires prior to requiring new technology.
- (n) Financial Capability. Prior to approval of Concession application, Concessionaire has demonstrated to the satisfaction of the Executive Director that it possesses the financial capability to perform its obligations under this Concession over the term of the Agreement.

IV. ADDITIONAL CONCESSION REQUIREMENTS – SCHEDULES AND CONCESSION BULLETINS

The parties agree that this Concession is granted subject to all of the terms and conditions set forth in the Schedules which are attached to this Concession and incorporated herein by reference. In addition, the Port and/or the Concession Administrator(s) shall publish from time to time, Concession Bulletins providing further detailed Concession procedures and information to Concessionaires.

- Schedule 1 - Concessionaire Information
- Schedule 2 – Concession Fees, Reporting and Audit Requirements
- Schedule 3 – Indemnification and Insurance Requirements
- Schedule 4 – Default and Termination

V. PROGRAM ADMINISTRATORS

The Port may designate one or more administrative agent(s) to administer the Clean Trucks Program and this Concession (“Program Administrators”). The Port shall provide written notice to Concessionaire of the designation of Program Administrator(s) and appropriate instructions regarding administrative policies and procedures to be handled by Program Administrator(s).

VI. COMPLIANCE WITH APPLICABLE LAWS

Concessionaire shall when entering and leaving Port Property and while on Port Property, comply with Port of Los Angeles Tariff No. 4 and all applicable federal, state and municipal laws, statutes, ordinances, rules and regulations that govern Concessionaire's operations, including without limitation, any laws, rules and regulations regulating motor carriers, transportation, hazardous materials, safety, security, employment, traffic, zoning and land use.

VII. INTEGRATION

This document constitutes the entire agreement between the parties to this Concession with respect to the subject matter set forth and supersedes any and all prior agreements or contracts on this subject matter between the parties, either oral or written. This Concession may not be amended, waived, or extended, in whole or in part, except in writing signed by all of the parties.

VIII. SEVERABILITY

Should any part of this Concession be determined by court or agency of competent jurisdiction to be unenforceable, unlawful, invalid, or subject to an order of temporary or permanent injunction from enforcement, such determination shall only apply to the specific provision and the remainder of this Concession shall continue in full force and effect.

IX. GOVERNING LAW / VENUE

This Agreement shall be governed by and construed in accordance with the laws of the State of California, without reference to the conflicts of law, rules and principles of such State. The parties agree that all actions or proceedings arising in connection with this Agreement shall be tried and litigated exclusively in the State or Federal courts located in the County of Los Angeles, State of California, in the judicial district required by court rules.

X. NOTICES

In all cases where written notice is to be given under this Agreement, service shall be deemed sufficient if said notice is deposited in the United States mail, postage prepaid. When so given, such notice shall be effective from the date of mailing of the same. For the purposes hereof, unless otherwise provided by notice in writing from the respective parties, notice to the Port shall be addressed to: Concession Administrator, P.O. Box 151, San Pedro, California 90733-0151, and notice to Concessionaire shall be addressed to it at the Business Address set forth in Schedule 1. Nothing herein contained shall preclude or render inoperative service of such notice in the manner provided by law.

XI. AFFIRMATIVE ACTION

Concessionaire, during the performance of this Agreement, shall not discriminate in its employment practices against any employee or applicant for employment because of employee's or applicant's race, religion, national origin, ancestry, sex, age, sexual orientation, disability, marital status, domestic partner status, or medical condition.

XII. WAGE AND EARNINGS ASSIGNMENT ORDERS/NOTICES OF ASSIGNMENTS

Concessionaire and/or any subcontractor are obligated to fully comply with all applicable state and federal employment reporting requirements for the Concessionaire and/or subcontractor's employees. Concessionaire and/or subcontractor shall certify that the principal owner(s) are in compliance with any Wage and Earnings Assignment Orders and Notices of Assignments applicable to them personally. Concessionaire and/or subcontractor will fully comply with all lawfully served Wage and Earnings Assignment Orders and Notices of Assignments in accordance with Cal. Family Code Sections 5230 et seq. Concessionaire or subcontractor will maintain such compliance throughout the term of this Concession.

XIII. EFFECTIVE DATE

The Effective Date of this Concession shall be the last date of the execution dates of the signatories to this Concession, as indicated opposite their signatures below.

THE CITY OF LOS ANGELES,
a municipal corporation,
by and through its Board of Harbor Commissioners

Dated: _____

By _____
Executive Director

Attest _____
Secretary

(CONCESSIONAIRE'S NAME),
a Corporation LLC Partnership
 Sole Proprietorship Other

Dated: _____

By _____
(Signature)

(Print/Type Name and Title of Authorized Signatory)

Attest _____

(Print/Type Name and Title of Attesting Corp. Secretary or Officer)

APPROVED AS TO FORM

_____, 20__
ROCKARD DELGADILLO, Los Angeles City Attorney

By _____
(Assistant/Deputy)

SCHEDULE 2 – CONCESSION FEES, REPORTING AND AUDITS

2.1 Concession Fees

- 2.1.1 A one time Concession fee of \$2500 will be assessed to the Concessionaire. The Concession fee shall be collected at the time of submission of the Concession Application.
- 2.1.2 For each Permitted Truck, an annual fee of \$100 will be assessed to the Concessionaire (Annual Truck Fees). The Annual Truck Fees will be collected (i) within 30 days of the Effective Date of this Concession for Permitted Trucks registered as of the Effective Date, (ii) within 30 days of registration of additional Permitted Trucks into the Drayage Truck Registry, and (iii) on the annual anniversary date that each Permitted Truck was registered in the Drayage Truck Registry (unless the Permitted Truck was registered prior to October 1, 2008 in which case its anniversary date shall be October 1). Trucks for which an annual fee has been paid for a particular year may be registered under multiple Port of Los Angeles Concessions without the payment of any additional annual fee of that year.
- A Substitute Truck (a truck that specifically is substituted for a particular Permitted Truck that is removed from the Drayage Truck Registry by Concessionaire) shall not be subject to an additional annual fee for the year in which the substitution occurs. A Substitute Truck inherits the anniversary date of the truck it replaces.
- 2.1.3. These fees will be used to cover administrative costs of the Concession. Payments shall be made by Concessionaire in the form of a check or such other form of payment as directed in writing by the Port or Concession Administrator.
- 2.1.4 The failure of Concessionaire to pay the fees specified herein on time is a breach of contract for which the Port may terminate (according to the procedures set forth Schedule 4 of this Concession, DEFAULT, TERMINATION AND WAIVER, or take such legal action hereunder as it deems necessary. The Port expects all fees to be paid on time and Concessionaire has agreed to pay on time.
- 2.1.5 No new or renewed Concession will be approved for a Concessionaire that has remaining unpaid balances under present or past Concessions, or has failed to submit required reports under the present Concessions, or is in Default which is continuing and has not been cured to the satisfaction of the Port.

2.2 Reporting Requirements

The Concessionaire shall be responsible to enter, update and maintain accurate data in the Drayage Truck Registry, Concession Registry and Driver Registry, and notify the Port or its designated agents within ten (10) business days of a change to any of the following information:

- (a) Drayage Truck Registry information, including for each Drayage Truck in service under the Concession, the year, make and model, status of compliance with EPA

- standards and retrofit, and annual miles driven, and any other information required by the Concession Administrator
- (b) Concessionaire Information (Schedule 1)
 - (c) Driver list and status of commercial driver's license, TWIC compliance and employee status
 - (d) Such other information related to the performance of this Concession as may reasonably be required by the Executive Directors and Concession Administrator

2.3 Periodic Reviews/Audits

Concessionaire agrees that while this Concession is in effect and for one year thereafter the Port, the Concession Administrator (or any other agent designated by the Port) may inspect any property, offices or equipment utilized by the Concessionaire to perform Drayage Service, and any files or records which the Port believes may demonstrate the extent to which the Concessionaire has complied or has failed to comply with requirements set forth in this Concession.

SCHEDULE 3 - INDEMNIFICATION AND INSURANCE

3.1 Indemnity

Except to the extent of any negligence or willful misconduct of Port, Concessionaire shall at all times indemnify, protect, defend, and hold harmless the Port and any and all of its boards, officers, agents, or employees from and against all claims, charges, demands, costs, expenses (including reasonable counsel fees), judgments, civil fines and penalties, liabilities or losses of any kind or nature whatsoever which may be sustained or suffered by or secured against the Port, its boards, officers, agents, or employees by reason of any damage to property, injury to persons, or any action that may arise out of the performance of this Concession that is caused by any act, omission, or negligence of Concessionaire, its boards, officers, agents, employees, contractors, subcontractors or Permitted Trucks.

3.2 General Liability Insurance

Concessionaire shall procure and maintain in effect throughout the term of this Concession, without requiring additional compensation from the Port, commercial general liability insurance covering personal and advertising injury, bodily injury, and property damage providing contractual liability, independent contractors, products and completed operations, and premises/operations coverages within Concessionaire's normal limits of liability but not less than One Million Dollars (\$1,000,000) combined single limit for injury or claim. Said limits shall provide first dollar coverage except that Executive Director may permit a self-insured retention or self-insurance in those cases where, in his or her judgment, such retention or self-insurance is justified by the net worth of Concessionaire. The insurance provided shall contain a severability of interest clause and shall provide that any other insurance maintained by Port shall be excess of Concessionaire's insurance and shall not contribute to it. In all cases, regardless of any deductible or retention, said insurance shall contain a defense of suits provision. Each policy shall contain an additional insured endorsement naming the City of Los Angeles Harbor Department, its boards, officers, agents, and employees and a 30-day notice of cancellation by receipted mail as shown in Exhibit "3-A".

3.3 Automobile Liability Insurance

Concessionaire shall ensure that the following insurance is in force at all times during the term of this Concession for all Permitted Trucks: automobile insurance within Concessionaire's normal limits of liability but not less than \$1,000,000 combined single limit per occurrence for transportation of all non-hazardous commodities, including oil and hazardous material in bulk and not less than \$5,000,000 combined single limit for transporting hazardous substances in cargo tanks, portable tanks or hopper-type vehicles with capabilities in excess of 3,500 water gallons, or hazardous materials meeting specified hazard classes or divisions within the Hazardous Material Table (49 CFR 172.101). Each policy shall contain an additional insured endorsement naming the City of Los Angeles Harbor Department, and its boards, officers, agents, and employees and an endorsement requiring 30 days' notice of cancellation by receipted mail as shown in Exhibit "3-B".

3.4 Workers' Compensation

Concessionaire shall certify that it is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and that the Concessionaire shall comply with such provisions before commencing the performance of the tasks under this Concession. Concessionaire shall submit Workers' Compensation policies that meet current California statutory requirements, and \$1,000,000 in employer's liability coverage, whether underwritten or by the state insurance fund or private carrier, which provide that the public or private carrier waives its right of subrogation against the Port in any circumstance in which it is alleged that actions or omissions of the Port contributed to the accident. See Exhibit "3-C".

3.5 Carrier Requirements

Except to the extent of any approved self-insurance, all insurance required by this Concession shall be placed with insurance carriers authorized to do business in the State of California and which are rated A-, VII or better in the Best's Insurance Guide. Carriers without a Best's rating shall meet comparable standards in another rating service acceptable to the Port.

3.6 Notice of Cancellation

Each insurance policy described above shall provide that it will not be canceled or reduced in coverage until after the Risk Manager of the Port has been given 30 days' prior written notice by registered mail.

3.7 Evidence of Insurance

Concessionaire shall ensure that Special Endorsement forms, attached hereto as Exhibits 3-A., 3-B and 3-C, are submitted to the Program Administrator as evidence of all required insurance. Alternatively, a certified copy of each policy containing the additional insured and 30-day cancellation notice language shall be furnished to Concession Administrator. The form of such policy or endorsement shall be subject to the approval of the Risk Manager of the Port.

3.8 Renewal of Policies

Except to the extent of any approved self-insurance,, at least 30 days prior to the expiration of each policy, Concessionaire shall furnish to Program Administrator a renewal endorsement or renewal certificate showing that the policy has been renewed or extended or, if new insurance has been obtained, evidence of insurance as specified above.

3.9. Right to Self-Insure

Upon written approval by the Executive Director, Concessionaire may self-insure if the following conditions are met:

1. Concessionaire has a formal self-insurance program in place prior to execution of this Concession. If a corporation, Concessionaire must have a formal resolution of its board of directors authorizing self-insurance.
2. Concessionaire agrees to protect the Port and the City, its boards, officers, agents and employees at the same level as would be provided by full insurance with respect to types of coverage and minimum limits of liability required by this Concession.
3. Concessionaire agrees to defend the Port and the City, its boards, officers, agents and employees in any lawsuit that would otherwise be defended by an insurance carrier.
4. Concessionaire agrees that any insurance carried by Port or the City is excess of Concessionaire's self-insurance and will not contribute to it.
5. Concessionaire provides the name and address of its claims administrator.
6. Concessionaire submits a Financial Statement or Balance Sheet prior to Executive Director's consideration of approval of self-insurance and annually thereafter evidence of financial capacity to cover the self-insurance.
7. Concessionaire agrees to inform Port in writing immediately of any change in its status or policy which would materially affect the protection afforded Port by this self-insurance.
8. Concessionaire has complied with all laws pertaining to self-insurance.

3.10 Accident Reports

Concessionaire shall report in writing to Executive Director within fifteen (15) calendar days after it, its officers or managing agents have knowledge of any accident or occurrence involving death or bodily injury to a person who, as a result of the injury, immediately receives medical treatment away from the scene of the accident, or damage in excess of Two Thousand Five Hundred Dollars (\$2500.00) to property, occurring upon Port property, or elsewhere within the Harbor District of the City of Los Angeles if Concessionaire's officers, agents, employees, contractors, subcontractors or Permitted Trucks are involved in such an accident or occurrence. Such report shall contain to the extent available (1) the name and

address of the persons involved, (2) a general statement as to the nature and extent of injury or damage, (3) the date and hour of occurrence, (4) the names and addresses of known witnesses, and (5) such other information as may be known to Concessionaire, its officers or managing agents.

**City of Los Angeles
Los Angeles Harbor Department - Risk Management Section
GENERAL LIABILITY - ADDITIONAL INSURED ENDORSEMENT**

In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed as follows:

1. **ADDITIONAL INSURED.** The City of Los Angeles Harbor Department, its officers, agents and employees are included as additional insured's with regard to liability and defense of claims arising from the operations and uses performed by or on behalf of the named insured regardless of whether liability is attributable to the named insured or a combination of the named and the additional insured.
2. **CONTRIBUTION NOT REQUIRED.** Any other insurance maintained by the City of Los Angeles Harbor Department shall be excess of this insurance and shall not contribute with it.
3. **SEVERABILITY OF INTEREST.** This insurance applies separately to each insured against whom claim is made or suit is brought except with respect to the company's limits of liability. The inclusion of any person or organization as an insured shall not affect any right which such person or organization would have as a claimant if not so included.
4. **CANCELLATION NOTICE.** With respect to the interest of the additional insured, the insurance shall not be canceled, changed in coverage, reduced in limits or non-renewed except after thirty (30) days prior written notice by certified mail return receipt requested has been given to both the City Attorney of Los Angeles and the Board of Harbor Commissioners addressed as follows:

City Attorney
Harbor Division
425 South Palos Verdes Street
San Pedro, CA 90731

Board of Harbor Commissioners
425 South Palos Verdes Street
San Pedro, CA 90731
Attn: Risk Manager

5. **APPLICABILITY.** This insurance pertains to the operations and/or tenancy of the named insured under all written agreements and permits in force with the City of Los Angeles Harbor Department unless checked below in which case only the following specific agreements and permits with the City of Los Angeles Harbor Department are covered:

Agreement/Permit Number(s): _____

Except as stated above, nothing herein shall be held to waive, alter or extend any of the limits, conditions, agreements or exclusions of the policy to which this endorsement is attached.

<p>I _____ (print/type name), warrant that I have authority to bind the below-listed insurance company and by my signature hereon do so bind this company.</p> <p>Signature: _____ Authorized Representative (ORIGINAL SIGNATURE required on copy furnished to the Board of Harbor Commissioners)</p> <p>Title: _____</p> <p>Organization: _____</p> <p>Address: _____</p> <p>Telephone: _____</p>	<p>Report claims pursuant to this insurance to:</p> <p>Name: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <hr/> <p>Includes (check as applicable):</p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Broad Form Property Damage</td> <td><input type="checkbox"/> Contractual Liability</td> </tr> <tr> <td><input type="checkbox"/> Personal Injury</td> <td><input type="checkbox"/> Owned Automobiles</td> </tr> <tr> <td><input type="checkbox"/> Independent Contractors</td> <td><input type="checkbox"/> Non-Owned Automobiles</td> </tr> <tr> <td><input type="checkbox"/> Premises-Operations</td> <td><input type="checkbox"/> Hired Automobiles</td> </tr> <tr> <td><input type="checkbox"/> Explosion-Collapse Hazard</td> <td><input type="checkbox"/> Fire Legal Liability</td> </tr> <tr> <td><input type="checkbox"/> Underground Hazard</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input type="checkbox"/> Products/Completed Operations</td> <td><input type="checkbox"/> _____</td> </tr> </table>	<input type="checkbox"/> Broad Form Property Damage	<input type="checkbox"/> Contractual Liability	<input type="checkbox"/> Personal Injury	<input type="checkbox"/> Owned Automobiles	<input type="checkbox"/> Independent Contractors	<input type="checkbox"/> Non-Owned Automobiles	<input type="checkbox"/> Premises-Operations	<input type="checkbox"/> Hired Automobiles	<input type="checkbox"/> Explosion-Collapse Hazard	<input type="checkbox"/> Fire Legal Liability	<input type="checkbox"/> Underground Hazard	<input type="checkbox"/> _____	<input type="checkbox"/> Products/Completed Operations	<input type="checkbox"/> _____		
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	From																
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<input type="checkbox"/> Self-insured Retention \$ _____																	
For _____ (Coverage)																	
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Other Conditions:

Named Insured and Address			
Insurance Company	Policy Number	Endorsement Number	Effective Date of Endorsement

**City of Los Angeles
Los Angeles Harbor Department - Risk Management Section
AUTO LIABILITY - ADDITIONAL INSURED ENDORSEMENT**

In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed as follows:

1. **ADDITIONAL INSURED.** The City of Los Angeles Harbor Department, its officers, agents and employees are included as additional insureds with regard to liability and defense of claims arising from the operations and uses performed by or on behalf of the named insured regardless of whether liability is attributable to the named insured or a combination of the named and the additional insured.
2. **CONTRIBUTION NOT REQUIRED.** Any other insurance maintained by the City of Los Angeles Harbor Department shall be excess of this insurance and shall not contribute with it.
3. **SEVERABILITY OF INTEREST.** This insurance applies separately to each insured against whom claim is made or suit is brought except with respect to the company's limits of liability. The inclusion of any person or organization as an insured shall not affect any right which such person or organization would have as a claimant if not so included.
4. **CANCELLATION NOTICE.** With respect to the interest of the additional insured, the insurance shall not be canceled, changed in coverage, reduced in limits or non-renewed except after thirty (30) days prior written notice by certified mail return receipt requested has been given to both the City Attorney of Los Angeles and the Board of Harbor Commissioners addressed as follows:

City Attorney
Harbor Division
425 South Palos Verdes Street
San Pedro, CA 90731

Board of Harbor Commissioners
425 South Palos Verdes Street
San Pedro, CA 90731
Attn: Risk Manager

5. **APPLICABILITY.** This insurance pertains to the operations and/or tenancy of the named insured under all written agreements and permits in force with the City of Los Angeles Harbor Department unless checked below in which case only the following specific agreements and permits with the City of Los Angeles Harbor Department are covered:

Agreement/Permit Number(s): _____

Except as stated above, nothing herein shall be held to waive, alter or extend any of the limits, conditions, agreements or exclusions of the policy to which this endorsement is attached.

<p>I _____ (print/type name), warrant that I have authority to bind the below-listed insurance company and by my signature hereon do so bind this company.</p> <p>Signature: _____ Authorized Representative (ORIGINAL SIGNATURE required on copy furnished to the Board of Harbor Commissioners)</p> <p>Title: _____</p> <p>Organization: _____</p> <p>Address: _____</p> <p>Telephone: _____</p>	<p>Report claims pursuant to this insurance to:</p> <p>Name: _____</p> <p>Address: _____</p> <p>Telephone: _____</p> <hr/> <p>Includes (check as applicable):</p> <p><input type="checkbox"/> All Autos</p> <p><input type="checkbox"/> Owned Automobile <input type="checkbox"/> Hired Automobile</p> <p><input type="checkbox"/> Non-owned Automobile <input type="checkbox"/> _____</p>		
<p>Type of Coverage</p>	<p>Limits of Liability</p> <p style="text-align: center;">From _____</p> <p style="text-align: center;">To _____</p> <p style="text-align: center;"><input type="checkbox"/> Per Claim <input type="checkbox"/> Per Occurrence</p>	<p>Policy Period</p> <p style="text-align: center;">From _____</p> <p style="text-align: center;">To _____</p> <p style="text-align: center;"><input type="checkbox"/> Per Claim <input type="checkbox"/> Per Occurrence</p>	<p><input type="checkbox"/> Deductible \$ _____</p> <p><input type="checkbox"/> Self-insured Retention \$ _____</p> <p>For _____ (Coverage)</p> <p style="text-align: center;"><input type="checkbox"/> Per Claim <input type="checkbox"/> Per Occurrence</p>

Other Conditions:

Named Insured and Address			
Insurance Company	Policy Number	Endorsement Number	Effective Date of Endorsement

City of Los Angeles
Los Angeles Harbor Department - Risk Management Section
WORKERS' COMPENSATION / EMPLOYER'S LIABILITY - SPECIAL ENDORSEMENT

In consideration of the premium charged and notwithstanding any inconsistent statement in the policy to which this endorsement is attached or any endorsement now or hereafter attached thereto, it is agreed as follows:

1. **APPLICABILITY.** This insurance pertains to the operations and/or tenancy of the named insured unless checked below in which case only the following specific agreements with the City of Los Angeles Harbor Department are covered:

Agreement/Permit Number(s): _____

2. **CANCELLATION NOTICE.** With respect to the interests of the City of Los Angeles Harbor Department, this insurance shall not be canceled, changed in coverage, reduced in limits or non-renewed except after thirty (30) days prior written notice by certified mail return receipt requested has been given to both the City Attorney of Los Angeles and the Board of Harbor Commissioners addressed as follows:

City Attorney
Harbor Division
425 South Palos Verdes Street
San Pedro, CA 90731

Board of Harbor Commissioners
425 South Palos Verdes Street
San Pedro, CA 90731
Attn: Risk Manager

Except as stated above, nothing herein shall be held to waive, alter or extend any of the limits, conditions, agreements or exclusions of the policy to which this endorsement is attached.

I _____ (print/type name), warrant that I have authority to bind the below-listed insurance company and by my signature hereon do so bind this company. Signature: _____ Authorized Representative (ORIGINAL SIGNATURE required on copy furnished to the Board of Harbor Commissioners) Title: _____ Organization: _____ Address: _____ _____ Telephone: _____	Includes (check as applicable): <input type="checkbox"/> Broad Form All States Endorsement <input type="checkbox"/> Voluntary Compensation Endorsement <input type="checkbox"/> United States Longshoremens and Harbor Workers Compensation Act <input type="checkbox"/> Jones Act <input type="checkbox"/> Other Continental Shelf Endorsement <input type="checkbox"/> _____ <input type="checkbox"/> _____
---	--

Type of Coverage	Limits of Liability	Policy Period
<i>Workers' Compensation</i>	<i>Statutory</i>	From
<i>Employer's Liability</i>		To

Other Provisions:

Named Insured and Address			
Insurance Company	Policy Number	Endorsement Number	Effective Date of Endorsement

SCHEDULE 4 – DEFAULT AND TERMINATION

4.1 Default

In the event Concessionaire commits an event of Default (as defined in Section 4.2, below), such event shall be deemed a Default and the Port shall give Concessionaire written notice of such Default and the opportunity for the Concessionaire to cure or contest the Default as set forth in the notice in accordance with Sections 4.3 through 4.4 herein. If the Concession is terminated pursuant to Section 4.4 herein, the Port may deny any and all access to Port property by the Concessionaire except to permit Concessionaire to remove its property. In the event that the nature of the Default is such that it cannot be cured within the applicable cure period, Concessionaire must take substantial steps toward corrections within the cure period, and diligently continue efforts to complete the cure of the Default as soon as is reasonably practicable during which time the applicable remedy will not be imposed. In the event that a Notice of Default is issued by Port to Concessionaire, the provisions of Sections 4.3 and 4.4 below shall apply.

4.2 Events of Default

Circumstances that constitute a default under this Concession by Concessionaire (“Default”) shall include, without limitation, the following:

- (a) Any act or failure to act which operates to deprive Concessionaire any of the rights, powers, licenses, permits or authorities necessary for the proper conduct and operation of Drayage Service in accordance with applicable laws;
- (b) Any failure to comply with the terms and conditions of this Concession;
- (c) Abandonment or discontinuance of Drayage Service for sixty (60) consecutive days;
- (d) Repeated violations of traffic rules and regulations in and around the Harbor District or disregard of public safety;
- (e) Any violation of the Patriot Act of 2001 or Department of Homeland Security regulations, including any facility security plan;
- (f) Any fraud or misrepresentation in the Concession application, information or data submitted to the Port required under the Concession;
- (g) Any effort to misrepresent that a Drayage Truck complies with Section 20 of Port Tariff No. 4, to disable or fail to maintain in proper operation emission-control equipment that has been installed in Drayage Trucks in Drayage Service, or any use of a Drayage Truck in Drayage Service that does not comply with Section 20 of Port Tariff No. 4;
- (h) Any assignment or transfer of this Concession or substantial change in the ownership and control of Concessionaire that is not in accordance with Section 1(a) of this Concession;
- (i) The bankruptcy of Concessionaire; or the appointment of a receiver for Concessionaire; or assignment of this Concession for the benefit of creditors; or
- (j) The failure to pay or repeated late payment of fees due under Schedule 2, Concession Fees; or
- (k) Violation of a Port Tariff, a City Ordinance, a State law, or a Federal law.

Any action by a Concessionaire’s boards, officers, agents, employees, contractors, subcontractors or Permitted Trucks shall be deemed to be an action by Concessionaire for purposes of this Concession. If Concessionaire has undertaken obligations contained in truck-

grant or other agreements, with the Port or with others, this Concession shall not affect such obligations contained in such other agreements.

4.3. Concession Enforcement Procedures

The following procedures shall apply in the event the Port issues a Notice of Default to Concessionaire.

- 4.3.1. The Executive Director, or any employee of the Port designated by the Executive Director, may issue a Notice of Default to a Concessionaire whenever there is reason to believe that the Concessionaire has breached this Concession or committed an event of Default
- 4.3.2. A Notice of Default shall be in writing, signed by the Executive Director or his/her designee, state in detail the nature of the Default, state the cure period and terms of cure, the Remedy that may be imposed if the Default is not cured within the time permitted and not properly contested as permitted herein, and shall be delivered by first class mail, overnight courier delivery or personal delivery to the business address provided by the Concessionaire in its Application, or to any officer of the Concessionaire.
- 4.3.3. A Notice of Default is an exercise of the Port's proprietorship of the Harbor District and of Port land and facilities and is not an action of the City of Los Angeles in its sovereign capacity. A Notice of Default and any Remedy imposed by a Notice of Default is independent of, and without prejudice to, any civil or criminal proceeding, claim, penalty, fine, sanction, or remedy that may be instituted or imposed by any governmental entity, including the City, by reason of the same Default giving rise to the Notice of Default.
- 4.3.4. A Notice of Default shall also state whether the Default is being designated by the Port as a Minor Default or a Major Default.
- 4.3.5. Minor Defaults.
 - 4.3.5.1 The Remedy stated in a Notice of Default which is designated by the Port as a Minor Default shall be effective and final thirty (30) calendar days after the Notice of Default is mailed or personally delivered, unless the Concessionaire has delivered a completed Notice of Contest to the Port, on a form for such a purpose, that it contests the Notice of Default within fourteen (14) calendar days.
 - 4.3.5.2. If the Concessionaire has delivered a completed Notice of Contest under Section 4.3.5.1, the Executive Director will designate a person (the "Hearing Officer"), who did not sign the Notice of Default, to hold an Informal Hearing on the Notice of Default. At the Informal Hearing, the Port and the Concessionaire will present any relevant information and legal contentions with respect to the Notice of Default. The Informal Hearing shall be conducted informally under such procedures as may be designated by the Hearing Officer and any rules of evidence may be dispensed with. The Decision of the Hearing Officer on the Notice of Default shall be final when rendered and shall include either upholding

the Notice of Default and the Remedy stated therein or disallowing the Notice of Default. The Decision shall be in writing and signed by the Hearing Officer, but need not be accompanied by reasons or findings.

4.3.6. Major Defaults

- 4.3.6.1. The Remedy stated in a Notice of Default which is designated by the Port as a Major Default shall be effective and final sixty (60) calendar days after the Notice of Default is mailed or personally delivered, unless (i) the Concessionaire has delivered a completed Notice of Contest to the Port, on a form for such a purpose, that it contests the Notice of Default within thirty (30) calendar days, or (ii) the Notice of Default contains the finding set forth in Section 4.3.6.4, in which event the Remedy shall take immediate effect as provided in Section 4.3.6.4.
- 4.3.6.2. If the Concessionaire has delivered a completed Notice of Contest under Section 4.3.6.1, the Executive Director will designate a person (the "Hearing Officer"), who did not sign the Notice of Default, to hold an Informal Hearing on the Notice of Default. At the Informal Hearing, the Port and the Concessionaire will present any relevant information and legal contentions with respect to the Notice of Default. The Informal Hearing shall be conducted informally under such procedures as may be designated by the Hearing Officer and any rules of evidence may be dispensed with. A transcription or recording of the Informal Hearing shall be made. The decision of the Hearing Officer on the Notice of Default shall be final, except as stated in Section 4.3.6.3. The Decision shall include any of the following results: (a) upholding the Notice of Default and the Remedy stated therein; (b) upholding the Notice of Default but ordering a greater or lesser Remedy than stated in the Notice; or (c) disallowing the Notice of Default. The Decision shall be in writing, signed by the Hearing Officer, and shall briefly state the Hearing Officer's reasons for the Decision.
- 4.3.6.3. The decision of the Hearing Officer under Section 4.3.6.2 shall be final unless either the Concessionaire or the Port staff, within ten (10) calendar days requests that the Decision be reviewed by the Executive Director. The Executive Director or his/her designee shall conduct the review based upon the record created before the Hearing Officer and such further arguments as may be ordered. The Decision upon review shall be in writing and shall contain the Remedy. The Decision upon review shall be final and whatever sanction is upheld thereby shall take effect ten (10) days after the Decision.
- 4.3.6.4. A Notice of Default which designates a Major Default may contain a finding that the Default constitutes a substantial risk of physical danger or injury to the Port, its customers or facilities, or persons or property at or near the Port. Such a Notice of Default may contain a Remedy that takes effect immediately upon issuance of the Notice and is intended to prevent or lessen the risk of danger or injury. If such an immediate Remedy is contained in the Notice of Default, the Remedy shall take effect immediately and shall remain in effect pending the procedures contained

in Sections 4.3.6.2 and 4.3.6.3. If the Concessionaire completes a Notice of Contest, the Port will endeavor to hold an Informal Hearing as expeditiously as possible.

4.4 Remedy

The potential Remedy will be contained in a Notice of Default and may be imposed by the Port for a breach of this Concession or other event of Default as follows:

- 4.4.1. For a Minor Default any one or more of the following may be contained in a Notice of Default as a Remedy and imposed by the Port:
 - (a) A warning letter;
 - (b) An order that corrective action be undertaken within a specified period of time;
 - (c) An order that the cost of investigation and administration of the Default be paid to the Port;
 - (d) An order that a course of education or training be completed within a specified period of time.

- 4.4.2. For a Major Default any one or more of the following may be contained in a Notice of Default as a Remedy and imposed by the Port:
 - (a) Any Remedy provided for a Minor Default;
 - (b) An order suspending for a period not to exceed thirty (30)] days the right of the Concessionaire to provide Drayage Services at the Port;
 - (c) An order of revocation of this Concession Agreement and of the right of the Concessionaire to provide Drayage Services at the Port.

- 4.4.3. For any Major Default in which there is a finding of willful or intentional fraud or misrepresentation of material information in the Concession application, information or data submitted to the Port required under the Concession, the Port may order the revocation of the Concession Agreement and of the right of the Concessionaire to provide Drayage Services at the Port, without the opportunity to cure the Default.

- 4.4.4. The failure to comply with a Remedy imposed by the Port shall itself be grounds for a Notice of a Major Default.

Attachment B

Pearson Declaration

San Pedro Bay Ports Clean Air Action Plan

Economic Analysis

Proposed Clean Truck Program



September 7, 2007

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**San Pedro Bay Ports Clean Air Action Plan
Proposed Clean Truck Program
ECONOMIC ANALYSIS**

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San Pedro Bay Ports Clean Air Action Plan Proposed Clean Truck Program

ECONOMIC ANALYSIS

Executive Summary

In essence, the Clean Truck Program is designed to reduce emissions from the heavy duty trucks involved in port drayage to improve the health of people living in the communities surrounding the ports of Los Angeles and Long Beach. It does this by requiring the Licensed Motor Carriers (*LMC*) that arrange for the movement of containers to and from the ports to become licensed concessionaires, and from 2008-2012, gradually bring the trucks under their auspices up to 2007 emission standards. During this period, this research found that for a variety of reasons, the port truck driver pay will likely rise from its current median of \$12 an hour to roughly \$20 an hour.

Clean Environment, Strong Economy. If the Clean Truck Program is successful, the Southern California Air Quality Management District estimated that from 2008-2025, it will yield a cumulative economic benefit of \$4.7 to \$5.9 billion due to reductions in premature deaths, lost work time and medical problems. Of this community benefit, 95% would come from 230-1,450 fewer deaths. With the program in place, the ports should be able to move forward with their infrastructure plans. Eventually, this will allow them expand to a capacity of 42.5 million TEUs. By roughly 2025, that will result in the ability of the ports to support 300,000 to 600,000 new jobs that would be lost if that infrastructure cannot be built.

Challenges & Strategies. In the coming years, this analysis found that the port drayage sector will face significant challenges that will put great pressure on port drayage firms. These include the cost of retrofitting or replacing trucks; the Transportation Workers Identification Credential (*TWIC*) process that will reduce the number of drivers able to enter the port gates; the need for more drivers to handle port growth; and a looming shortage of drivers both locally and nationally. To meet these challenges, several strategies were reviewed. These included the need by *LMCs* to offer higher pay to lure drivers regardless of whether they work as independent owner operators (*IOO*) or employees. The use of the existing combination of *LMCs* and *IOOs* to meet the challenge of cleaning up the trucking fleet. And, addressing the truck clean-up process by having the *LMCs* own and clean-up the vehicles and use employee-drivers.

The Dilemma. Regardless of the challenges or the strategies for addressing them, one essential dilemma continually arose in this analysis. As the port drayage sector is currently organized, neither the *LMCs* nor their *IOOs* have the financial strength to solve the new challenges facing them. The lack of barriers to entry into the sector has led to ferocious price competition and left them with little bargaining power vis-à-vis the shipping lines and beneficial cargo owners for whom they work. This has left the firms in the sector with low net incomes and little net worth. Thus, the *LMCs* do not have the internal ability to pay more to *IOOs* to lure them into the field. Neither do the *LMCs* or the *IOOs* have the ability to self-fund the clean-up of the trucking fleet.

In effect, this means that the Clean Truck Program is forced to pressure the weakest links in the supply chain to rapidly clean-up the heavy duty trucks. Ideally, the extra costs imposed on the *LMCs* and/or *IOOs* to do so would be passed along to their customers in higher prices. That would mean that the externalities like diesel emissions and poor public health, caused by the acceleration in the use of the international supply chain, would be rapidly paid by the people receiving the goods. Eventually, that will occur. However, because of the weak negotiating power of the port drayage sector, prices will only likely go up when a crisis occurs due to the inability of the *LMCs* to afford moving the freight. This analysis shows that by the time the transition in prices is over, many of the *LMCs* will no longer exist.

Where financial institutions have a role to play, such as assisting in fleet investments, most IOOs and LMCs do not have the balance sheets or return on investment or sales to make them candidates for obtaining loans or equity partners. Here, one change that might help the program would be some form of port sponsored loan guarantees. Meanwhile, the Clean Truck Program's phase-in period, as well as the Fleet Modernization Grant Program, do provide some relief. However, neither is sufficient to overcome the fundamental lack of financial power in the current port drayage sector. In the case of the Fleet Modernization Grant Program, the analysis shows that funding will need to be front loaded due to the Transportation Impact Fees (*TIF*) imposed on the LMCs or IOOs. In year one of the 5-year phase-in process, the reduction on profits due to the TIFs on dirty trucks entering the ports would force the LMCs or IOOs to try to retrofit or replace their trucks immediately. All of the grant funds would thus be sought in that first year.

Changing Market Conditions. At its core, the crucial issue facing the port drayage industry is the fact that there are no regulatory or financial barriers to new firms entering the business. That is the reason for the intense competition and the lack of negotiating power that LMCs face in trying to impact the prices paid to them by the economically powerful ocean shipping lines and beneficial cargo owners. This situation appears to be changing because a variety of higher costs from both the marketplace (*e.g., higher wages*) and the Clean Truck Program will likely make it impossible for poorly financed new LMCs to be started. For the same reasons, some of the weaker existing LMCs will also likely leave the business. The LMCs that survive the process will thus be in a stronger bargaining position with their customers. Since the low labor costs and lack of pricing power have been the reasons why national trucking firms have not been involved in the port drayage sector, the changes occurring in the sector will probably encourage national trucking firms to consider being competitors in it.

In creating the rules under which the Clean Truck Program will be implemented, the ports must thus seek to ensure that the program does not so devastate the LMCs that significant shares of port drayage capacity are lost. However, given the weakened state of the sector, it seems almost impossible for the rules to be set in way that none of the players will be hurt.

Research Effort. These conclusions were reached through the following research effort. Step one in the analysis was a survey of 403 truckers at two terminal gates at each of the two ports. In addition, over 50 LMCs were interviewed, mostly one-on-one, and 136 LMCs were surveyed by telephone. A few national trucking firms were interviewed, some that use IOOs and some with employees. In addition, interviews were held with beneficial cargo owners, Teamsters Union officials, ILWU officials, a terminal operator, freight forwarders and LMCs not involved in moving port cargo. Research was reviewed on a wide variety of topics including port security issues, IRS tax codes industry financials, trucking regulations and economic reports. Statistics were compiled on truck driver pay and benefits, truck prices, industrial land costs and multi-modal transportation costs. With this background, five topics were analyzed to understand the impact of market forces, security regulations and the Clean Truck Program.

Structure of Current Industry. First, was the structure of the current industry. It found the LMCs are actually not trucking companies but rather brokers that arrange for the movement of cargo. As such, they do not have a deep base of assets. As indicated above, the intense competition among LMCs has left them with very little pricing power. This has resulted in average returns on their revenues of just 5%. The bulk of their cost is the 70% of revenue they pay, on average, to their IOOs to actually move cargo. The IOOs receive a median gross income of \$75,000, pay \$46,000 in costs and earn a median net income of \$29,000. On an hourly basis,

they average about \$12.00. IOOs are required to have their trucks inspected for safety and maintenance every 90 days with the records maintained by themselves and often their LMCs. The California Highway Patrol is mandated to review these records every two years but only has the budget to reach about half the IOOs and trucking fleets.

Impact of TWIC. A review of the security measures expected from the Department of Homeland Security indicates that drivers with issues of legal work status or those convicted of a long list of crimes will be barred from port entry. Based upon the survey of drivers (22%: *definitely not apply for TWIC*), LMC interviews (*median of 15% of drivers will not qualify*), Homeland Security New York estimate (*50% would be disqualified*) and U.S. Department of Transportation HAZMAT rules (*20% will not qualify*), it was estimated that 15% to 22% of the current port drivers would be barred by the TWIC rules. They will have to be replaced from drivers not currently in the port drayage sector. A look at what is being paid to IOOs in the Inland Empire, and employee drivers and construction workers in Los Angeles County and elsewhere, found that it would take about \$20 an hour to lure new drivers to port drayage. That is a significant increase over the current \$12 an hour. The mathematics found that replacing the 2,500 to 3,700 IOOs with the 16,800 trucks frequently accessing the ports would require a price increase of **24.3%**. This also assumes the LMCs used the lack of capacity to raise their returns from 5% to 8%.

For most container movements, the trucking costs are quite small and this increase would take them from \$150 to \$187 on a move near the ports and \$300 to \$373 on a move to the Inland Empire. That is a fraction of the \$2,575 cost of the other modes of transportation involved in a containers journey. On the median \$70,000 value of the goods in a container, the new prices would represent only 0.05% and 0.1% of that value. Meanwhile, given the lack of negotiating power for LMCs, the price will only move up over time. If 50% of customers agreed to an immediate increase and the others agreed in equal shares over six months, LMCs would still be hurt badly. An average smaller LMC's net cash flow loss would be \$126,100, reducing the average owner's equity by 35% from \$362,200 to \$236,100. Larger LMCs would have an average cash flow loss of \$449,000, reducing the average owner's equity by 25% from \$1.77 million to \$1.32 million.

Impact of Clean Truck Program Using LMC:IOO Model. With the ports continuing to grow, by 2012 there will be a need for 3,400 more drivers than today. Combined with the loss due to TWIC, the total need would be 5,900 to 7,100. By 2012, from 42% to 55% of IOOs would be new to port drayage, assuming no retirements or turnover of current drivers. This underscores the need for the \$20 rate to lure new ones. Beyond that extra cost, the LMCs face a TIF for each time an IOO drove a truck not up to 2007 emission standards into the port. If the TIF was \$50, the median annual cost to the LMCs would be \$15,400 (*median 308 trips*). Since LMCs have a median pre-tax profit for each truck under their auspices of \$5,400, they would lose \$10,000 a year on the truck until the IOO retrofitted or replaced it. This would put intensive pressure on the IOO to do so or be forced out of the business.

If the IOO replaces it, a \$20,000 grant from the Fleet Modernization Grant Program would pay for it with no tax consequence to the IOO because the full amount could be written off immediately under IRS Section 179. However with every IOO trying to do this, the grant program would immediately need \$212 million for the 37% of the fleet that can be retrofitted. For new trucks, there are two issues. Each IOO would ask for a grant of \$80,000 from the grant program. That would represent an immediate need of \$850 million in grant funds for the 63% of

the fleet that cannot be retrofitted. Altogether, the first year grant fund need would be \$1.1 billion. Hence the need for it to be frontloaded.

Meanwhile, an IOO would need to borrow \$28,500 to pay the balance due on a \$100,000 tractor plus 8.5% in sales taxes. However, our research suggests that most IOOs are not in a position to have strong credit ratings. In addition, the only collateral they would be able to offer is their \$20,000 interest in the truck. Also, the ports would lien the vehicle for their \$80,000 interest meaning the lender would be in second lien position. Without a port sponsored loan guarantee program, few if any IOOs would be able to get such loans. One alternative would be to have the LMCs increase prices to their customers enough to generate the monies needed to pool funds and assist the LMCs with their \$28,500 financial gap. They would need to increase their prices \$18,000 to cover the 63% share of IOO's needing help. The price increase to cover those funds plus other costs to the LMC and raising their profit margin from 5% to 7% would be **48.6%**.

As indicated earlier, trucking costs are quite small and this increase would take them from \$150 to \$223 on a move near the ports and \$300 to \$446 on a move to the Inland Empire. That is a fraction of the \$2,575 cost of the other modes of transportation involved. On the median \$70,000 value of the goods in a container, the new prices would represent only 0.1% and 0.2% of that value. Again, given the lack of negotiating power for LMCs, the price will only adjust upwards over time. If 50% of customers agreed to an immediate increase and the others agreed in equal shares over six months, an average smaller LMC's net cash flow loss would be \$247,000, reducing average owner's equity by 68% from \$362,200 to \$115,200. Larger LMCs would have an average cash flow loss of \$879,600, reducing the average owner's equity by 50% from \$1.77 million to \$888,900.

Impact of Clean Truck Program Using Employee-Drivers & Owned Trucks. The full Clean Truck Program proposal is for the LMCs to acquire trucks from the IOOs and have them retrofitted or replaced. They would be driven by employee-drivers and parked in a truck yard. Each of these three costs affects the price increase they will need.

- While the retrofitting or replacement of trucks was proposed over a five year period, the mathematics of the TIF fees would put the LMCs under pressure to buy and clean-up a fleet immediately. Assuming the Fleet Modernization Grant Program was frontloaded, the cost of the clean-up effort would still be more expensive than for IOOs. First the LMCs would have to acquire trucks to be retrofitted or replaced. Second, they would face tax consequences from the grants since they would be receiving \$20,000 or \$80,000 on several trucks, putting them well over the Section 179 threshold of \$112,000.

For the LMCs, the immediate average cash flow outlay of buying a truck and paying taxes on the \$20,000 grant to retrofit it would be \$39,500. The immediate average cash flow of buying a old truck to salvage, paying \$20,000 for their share of a \$100,000 new vehicle plus \$8,500 in sales taxes, and also paying for the tax consequences of the \$80,000 grant would be \$56,200. If half the fleet involved was retrofitted and half was replaced, the average cost would be **\$47,900**. As with IOOs, the LMCs lack the financial power to obtain these funds without a port sponsored guarantee program.

- If an LMC is to hire drivers at \$20 per hour for 45 hours a week (*overtime: 1 hour a day*), 50 weeks a year, the cost would be \$46,700. On each driver, the LMC it is assumed to pay \$13,600 in benefits. All of these costs are state mandated except for 90% of the premiums on a medical insurance policy for the driver only. The cost would total

\$60,300. Also, the employee driver has 110 fewer minutes a day of work due to mandated breaks, morning preparation and evening clean-up and time waiting for repairs. Further, they work 60 minutes less a day than IOOs. The time they have available is thus 28% less than the IOOs and there would be a need for extra drivers to make up for the time lost compared to the IOOs. The total cost is thus **\$77,400** to replace the IOOs. Increase in staff overhead due to owning trucks and employing drivers is assumed to be offset by slip-seating and the expanded use of technology such as Radio Frequency Identification and Automatic Vehicle Locators.

- Based upon the cost per truck of acquiring facilities found in markets across the country including Sacramento, it was possible to estimate those costs for Fontana (50%), the Mid-Cities San Gabriel Valley areas (25%) and South Bay (25%). Based upon the assumption that firms would locate in these three areas by the percentages shown, it was determined the cash flow outlay to acquire a facility would be **\$21,300**.

Combined, the employee/truck ownership/yard approach would cost the LMC **\$146,500** per truck. Compared to the costs today, the firm would require a price increase of **80%** to keep itself in the same position, except for an increase from 5% to 6% in its return on sales for taking on these extra burdens.

Even with an 80% increase, trucking costs remain relatively insignificant. This increase would take them from \$150 to \$270 on a move near the ports and \$300 to \$540 on a move to the Inland Empire. That remains a fraction of the \$2,575 cost of the other modes of transportation involved. On the median \$70,000 value of the goods in a container, the new prices would represent only 0.17% and 0.34% of that value. Again, given the lack of negotiating power for LMCs, the price will only adjust upwards over time. If 50% of customers agreed to an immediate increase and the others agreed in equal shares over six months, an average smaller LMC's net cash flow loss would be \$410,000, wiping out the average owner's equity of \$362,200 and leaving the company's equity at -\$47,800 (*bankrupt*). A larger LMC would have an average cash flow loss of \$1.46 million, reducing the average owner's equity by 83% from \$1.77 million to \$308,600.

Changing Conditions. As was discussed earlier, at its core, the crucial issue facing the port drayage industry is the lack of regulatory or financial barriers to new firms entering the business. The result has been intense competition and the lack of LMC negotiating power over the prices paid to them by their far more powerful customers. The higher costs from both the marketplace (*e.g., higher wages*) and the Clean Truck Program will likely make it impossible for poorly financed new LMCs to start and cause weaker LMCs to leave the business. The surviving LMCs will thus be in a stronger bargaining position. Since the low labor costs and lack of pricing power have been the reasons national trucking firms have not been involved in the port drayage, the changes occurring in the sector will encourage them to enter it. Ultimately, the industry will likely be made up of stronger local LMCs and those national firms that enter the market. Together, they should be able to work with ports to use the technologies now available to lower costs and increase productivity in terms of "turn" times and throughput.

Again, the challenge for the Clean Truck Program rules is to create rules that ensure that the program does not so devastate the LMCs to the point that a significant share of port drayage capacity is lost. However, given the sector's weakened state, there are firms and people who will

inevitably be hurt. A very rough estimate puts the losses at 376 mostly smaller LMCs and 1,500 back office workers and 376 owners of small businesses that locally serve the industry.

Summary. At its core, the Clean Truck Program is design to reduce air emissions in a timely fashion yielding an economic benefit to the community of \$4.7 to \$5.9 billion due to a reduction in premature deaths, loss of work and fewer medical problems. Some 95% of this benefit will come from 230-1,450 people not dying. With the program in place, the ports will be in a position to get their infrastructure plans approved. This will allow them to expand to their 42.5 million TEU capacity by the period 2020-2030. The result will be the ability of the ports to support 300,000 to 600,000 new jobs that would be lost if that infrastructure cannot be built.

Unfortunately, there is a cost of attaining these goals. That will be the closure of some LMCs and the loss of some of the non-driving jobs and small businesses involved with them, as well as the closing off of port drayage as a route to upward mobility for some workers. It is the type of choice that has led to the expression, “there is no such thing as a free lunch.” It is the reason that economics is often referred to as “the dismal science.”

San Pedro Bay Ports Clean Air Action Plan

Analysis: Proposed Clean Truck Program

John E. Husing, Ph.D., Economics & Politics, Inc.
Thomas E. Brightbill, CGR Management Consultants, LLC
Peter A. Crosby, CGR Management Consultants, LLC

1. Background

On November 20, 2006, at a special joint meeting of the Los Angeles Board of Harbor Commissioners and the Long Beach Board of Harbor Commissioners, the San Pedro Bay Ports Clean Air Action Plan (CAAP) was unanimously adopted. In doing so, the Commissioners acknowledged the fact that the Ports “ability to accommodate the projected growth in trade will depend upon their ability to address adverse environmental impacts (*and, in particular, air quality impacts*) that result from such trade. The [CAAP] is designed to develop mitigation measures and incentive programs necessary to reduce air emissions and health risks while allowing port development to continue.”¹

Among the major elements of the CAAP are strategies designed to significantly reduce the emissions from the Heavy Duty Vehicles that move containers in and out of the ports. This effort, known as the Clean Truck Program, has two intertwined objectives:

- Conversion or retrofitting of the truck drayage fleet to cleaner technologies.
- Ensuring that the fleet is maintained at a level to stay clean.

In designing a program to achieve these clean air objectives, the ports have proposed implementation measures that also attempt to address three other concerns:

- One is the fear that the often reported shortage of U.S. truck drivers will ultimately lead to an insufficient number of drivers to haul the growing volume of port containers.
- Related has been the issue of driver compensation since, on average, port truckers appear to be among the lowest paid workers in the supply chain.
- Additionally, there is concern that trucking operations are conducted in a way that enhances port security.

As implementation measures for the Clean Truck Program have been discussed, additional considerations have been raised. Importantly, the Transportation Security Administration and U.S. Coast Guard are about to undertake the Transportation Worker Identification Credential (TWIC) program. This effort will likely reduce the supply of drivers eligible to access all U.S. ports as under its draft provisions:

“Workers must provide biographic and biometric information to apply for a TWIC and pay a fee of \$107–\$159 to cover all costs associated with the TWIC program. A TWIC applicant must complete a TSA security threat assessment and will be disqualified from obtaining a TWIC if he or she has been convicted or incarcerated for certain crimes within prescribed time periods, lacks legal presence and/or authorization to work in the United States, has a connection to terrorist activity, or has been determined to lack mental capacity.”²

¹ San Pedro Bay Ports Clean Air Action Plan, Overview, P. 13.

² Transportation Worker Identification Credential (TWIC) Implementation in the Maritime Sector; Department Of Homeland Security, Transportation Security Administration, United States Coast Guard, 2006, p. 18.

In addition, the proposed implementation program has raised numerous issues relative to the economics of the port drayage system. These include, but are not limited to:

- The profitability or lack of profitability of the Licensed Motor Carriers (*LMC*) that currently arrange for the movement of containers to and from the ports.³
- The productivity or lack of productivity of the current business model whereby most containers are hauled by truckers who are Independent Owner Operators (*IOO*) working under contract to LMCs.
- If required, the degree to which LMCs can or cannot successfully transition to becoming companies that own trucks and conduct trucking operations themselves. Most are currently service firms that sell trucking services and arrange container movements. As such, they have balance sheets with few tangible assets. As full scale trucking firms, LMCs would shift to being heavily asset based operations.
- The reasonableness or lack of reasonableness in the share of the revenue received by LMCs that are paid to IOOs for moving containers.
- The level of oversight or lack of oversight on matters including insurance, maintenance, safety, and health status that LMCs exercise over the IOOs that contract to haul containers for them.
- The willingness or lack of willingness of IOOs to become employees of LMCs and the pay, working conditions and lifestyle considerations that influence their views.
- The efficiency or lack of efficiency in the speed at which containers inside the port gates can be loaded once truck drivers arrive outside the gates to pick them up.
- The pricing power or lack of pricing power of LMCs vis-à-vis the shipping lines that assign LMCs a portion of transportation revenues that shipping lines have negotiated with end-users like national retailers. These “store-door” contracts typically encompass the full cost of moving containers from Asia to their final U.S. destinations across combinations of ocean shipping lines, trucking firms and/or railroads.
- The extent to which LMCs of various sizes will or will not have the financial ability to bridge the transition between when the Clean Truck Program increases their gate fees or operating costs and when they can raise their prices to cover these costs.

Also, wider economic issues will likely impact the success of the Port Truck Program. Potentially important among these are:

- The compensation conditions necessary to ensure the availability of a sufficient number of drivers and trucks to move the growing volume of port containers.
- If LMCs are required to own trucking fleets, the terms and conditions under which financial institutions would assist them in acquiring the trucks owned by their IOOs as well as finance the LMCs’ share of replacing these older trucks with new rigs as required by the Clean Truck Program.

³ With reference to port drayage, the term LMC and trucking company will be used interchangeably in this report.

- If the program results in a consolidation in the number of LMCs, the impact that this will have on administrative and support personnel working in the industry as well as the survival of the largely Hispanic small businesses that currently help maintain trucks in the port area (e.g., repair, tire, electrical, body & fender).
- The extent to which the fees on non-conforming trucks during the five year transition period to clean vehicles may put some LMCs at such a competitive disadvantage that they cannot survive.

Given the wide variety of economic issues raised by the Clean Truck Program, the Ports of Los Angeles and Long Beach have retained Economics & Politics, Inc. (*Dr. John Husing*) and CGR Management Consultants (*Tom Brightbill, Peter Crosby*) to study the implications of the five iterations of the effort. In sequence, this report looks at:

1. The impact of the introduction of the TWIC program.
2. The added impact of the 5-year program to buy or retrofit trucks to 2007 standards with no other changes in the industry.
3. The further impact of having LMCs become concessionaires with strict obligations to oversee the insurance, safety, and health status of the IOOs working with them as well as to ensure that trucks are replaced or retrofitted to 2007 standards and maintained at that level.
4. The impact of having, instead, the LMCs become concessionaires with the obligation of acquiring trucks from their IOOs, replacing or retrofitting them to 2007 standards, maintaining them, and employing their former IOOs and possibly others as drivers.
5. The added impact on the port drayage sector of large trucking corporations making the decision to become competitors in it.

2. Clean Air & A Growing Economy

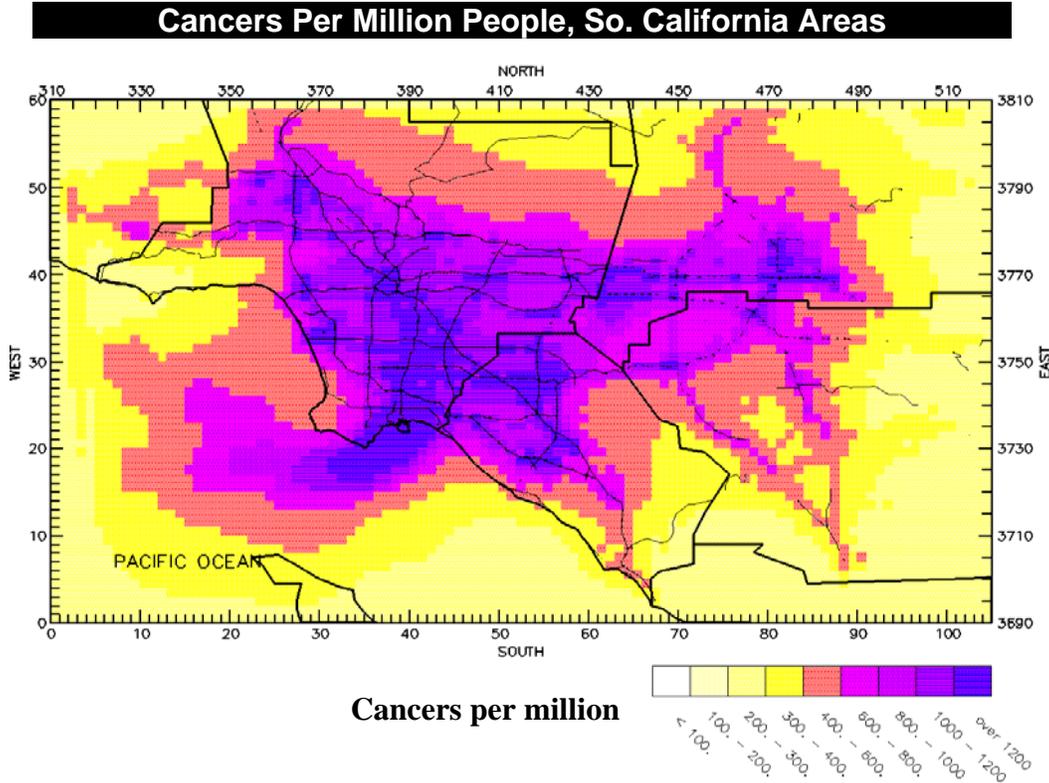
Clean Air Action Plan. The importance of the CAAP adopted by the Ports of Los Angeles and Long Beach was highlighted by the fact that “in 2000, the Southern California Air Quality Management District (*SCAQMD*) released results from its second Multiple Air Toxics Exposure Study, which raised concerns about the impact of emissions from ships, trucks and trains in the vicinity of the Ports and major transportation corridors.”⁴ That report showed the degree to which health risks were inordinately high near the ports and along Southern California’s transportation corridors.⁵

As a result, the overview of the CAAP stated that, “the Ports share the goal of reducing air pollution from existing and future port operations to acceptable regulatory health risk thresholds. The Ports take responsibility to implement the measures in this [CAAP]. The generally accepted health risk threshold for individual proposed projects is a 10 in 1,000,000 additional cancer risk. It is recognized that the standardized modeling used to measure this risk is imperfect. Therefore, the [CAAP] is multi-faceted. The [CAAP] includes stringent San Pedro Bay-wide standards that achieve real emissions reductions; a nested set of implementation strategies; investment in the

⁴ San Pedro Bay Ports Clean Air Action Plan Technical Report, Port of Los Angeles, Port of Long Beach, p. 3.

⁵ Multiple Air Toxics Exposure Study II, March 2000 Southern California Air Quality Management District.

development and integration of new/cleaner technologies into port operations; and creation of a comprehensive monitoring and tracking program that will document progress on all of these elements.”⁶ By its fifth year, the technical report supporting the CAAP calls for the program to achieve annual reductions in three pollutants due to measures affecting ocean going vessels, cargo handling equipment and heavy duty vehicles:⁷



Source: SCAQMD, Multiple Air Toxics Exposure Study II, March 2000

- **Diesel particulate matter (DPM)** released as a result of port operations would be 2,068 tons instead of the 3,898 tons that port growth would have created, a 1,830 ton reduction or -47%.
- **Oxides of nitrogen (NOx)** emissions would be 23,032 tons instead of the 41,985 tons the growth would have generated, an 18,953 reduction or -45%.
- **Sulfur oxide (SOx)** emissions would be 8,061 tons instead of the 16,933 tons that would have come from normal growth trends, an 8,872 ton reduction or -52%.

Decreased emissions of this magnitude will result in beneficial side effects for the community. For example, there would be fewer air pollution related illness such as asthma and cancer. That, in turn, would reduce health care costs for families and insurance companies. It would also mean fewer lost work days for workers living in the area. It would mean that vulnerable people who might not have survived in the air basin will, in fact, live full and productive lives.

⁶ San Pedro Bay Ports Clean Air Action Plan Technical Report, Port of Los Angeles, Port of Long Beach, p. 10.

⁷ San Pedro Bay Ports Clean Air Action Plan Technical Report, Tables 6-1, 6-2, 6-3, p. 157.

Clean Truck Program. In the statement by the Presidents of the Los Angeles and Long Beach harbor commissions that prefaced the announcement of the CAAP, it was indicated that:

“A critical initiative in the Plan is a massive effort to deal with the well-recognized problem of heavily polluting trucks driven by underpaid drivers. These trucks produced 10% of Port-related diesel particulate emissions and fully 25% of the NOx emissions. The Ports have identified over 16,000 individual vehicles that make 80% of the trips to and from Port terminals, so cleaning up those vehicles would eliminate a significant portion of Port-related air pollution.”⁸

As proposed, the Clean Truck Program contains five elements. In summary, they include:⁹

- A 5-year program to replace/retrofit to at least 2007 emission standards (*0.01 grams per brake horsepower-hour & cleanest NOx when replaced*) the 16,800 trucks regularly serving the ports and have them driven by people earning the prevailing wage. [*highlighting added*]
- A program restricting operation of trucks at the ports that do not meet CAAP clean air standards and imposing fees and transportation charges to pay for cleaner trucks. The charges to be imposed on “shippers” not drivers.
- A program to invite private trucking companies to hire drivers on terms offering incentives and conditions to achieve the CAAP goals while resulting in adequately paid drivers.
- A program to start with infusion of cash from Gateway Cities Program to fund 500 trucks to demonstrate the applicability of new retrofit technologies. The demonstration program is to start in first quarter 2008 with the full 16,800 truck program starting shortly thereafter.
- Ports to issue requests for proposal that will encourage truck fleets of alternatively fueled vehicles like LNG.

Given these instructions from their Commissioners, the port staffs drafted a plan to implement the Clean Truck Program. The following are key elements of it:¹⁰

- Licensed Motor Carriers will be required to pay a nominal fee for a concession giving them the right to have trucks enter the port gates. Application fees will range from \$500-\$2,150 depending on number of trucks with permit fees costing \$150 per truck.¹¹
- Over a 5-year period, concessionaire truck owners will be required to use trucks that the meet EPA 2007 or newer standards; or retrofitted trucks manufactured in 1996 or later; or trucks replaced under the Gateway Cities Truck Modernization Program.

⁸ President’s Statements, Final 2006 San Pedro Bay Ports Clean Air Action Plan, Port of Los Angeles, Port of Long Beach, November 20, 2006.

⁹ See footnote, page 3.

¹⁰ Ports of Los Angeles and Long Beach Proposed Clean Trucks Program, April 12, 2007, Explanatory Memorandum.

¹¹ San Pedro Bay Ports Clean Trucks Program, Briefing Paper, ENVIRON International Corporation, July 2007, p. 6

- Concessionaires will scrap and replace the oldest of the 16,800 trucks working in the ports, and retrofit the others with the aid of a port grant program. This will occur over a 5-year period, with progressively more recent non-retrofitted trucks barred from the ports until only those meeting the EPA 2007 standard can enter. During the transition, trucks not meeting that standard will be required to pay a fee each time they enter the gate. The proposed truck phase-out schedule is:¹²
 - 1/1/2008** ban pre-1989 trucks
 - 1/1/2009** ban 1989-1993 trucks
 - 1/1/2010** ban un-retrofitted 1994-1995 trucks
 - 1/2/2011** ban un-retrofitted 1999-2003 trucks
 - 1/1/2012** ban un-retrofitted 2004-2006 trucks
- After a 5-year transition period, concessionaires must own, operate and maintain their truck fleet and employ drivers to deliver drayage services to the ports. The proposed truck ownership and driver employment schedule is:¹³

6/30/2008	20%
6/30/2009	50%
6/30/2010	60%
6/30/2011	80%
6/30/2012	100%
- A truck Fleet Modernization Grant Program will be established to pay up to 80% of replacing an old truck with a new truck and up to 100% of labor and materials for installation of retrofits to qualifying trucks. Only trucks owned by concessionaires that will be driven by employees will be eligible. The program will use funds from the CAAP, Southern California Air Quality Management District (*SCAQMD*), Truck Impact Fees and possibly State Proposition 1B. Trucks must be installed with automatic vehicle locators (*AVL*) and Radio Frequency ID (*RFID*) transponder devices and essentially be used exclusively for port drayage.¹⁴

As indicated by the Presidents of the Boards of Harbor Commissioners of Los Angeles and Long Beach, the objective of the Clean Truck Program is to assist in the reduction in the environmental and health impacts of the operations of the two facilities. Specifically, the ports have estimated that in 2001-2002, Heavy Duty Vehicles accounted for 10% of the Diesel Particulate Matter (*DPM*), 26% of the nitrogen oxides (*NOx*) and 1% of the sulfur oxide (*SOx*) released by the use within the port area.¹⁵

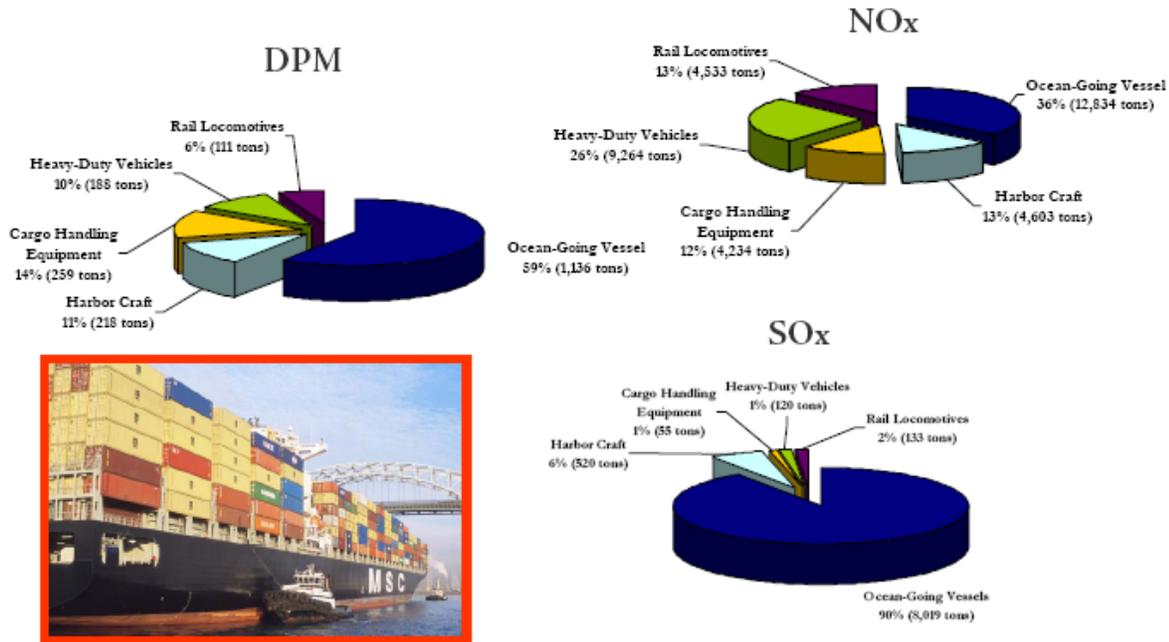
¹² ENVIRON International Corp., July 2007, p. 5.

¹³ Environ Briefing Paper, p. 7-8.

¹⁴ Environ Briefing Paper, p. 7.

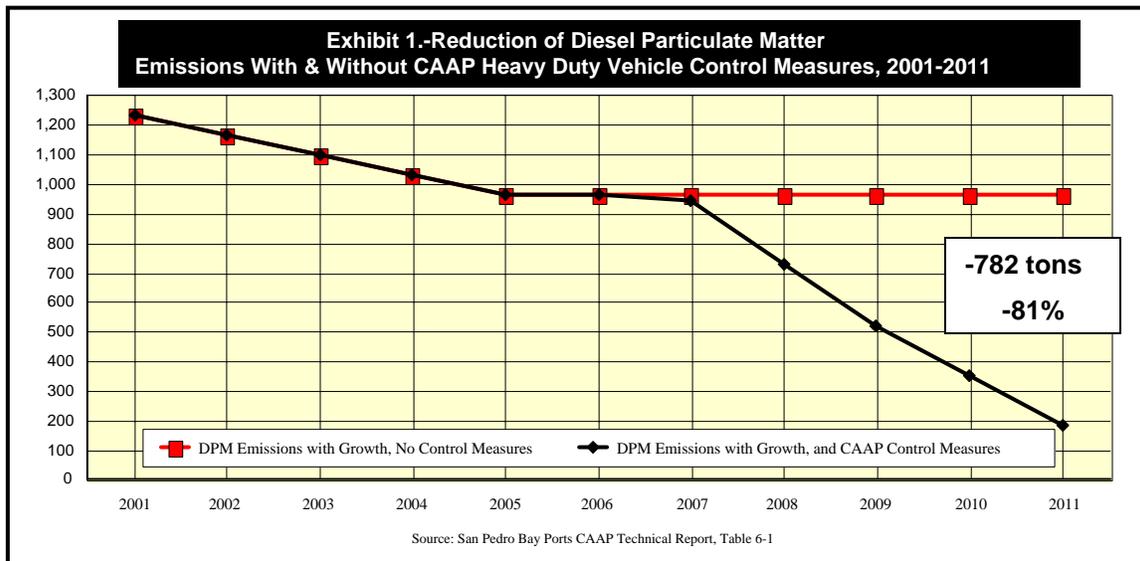
¹⁵ San Pedro Bay Ports Clean Air Action Plan Technical Report, Port of Los Angeles, Port of Long Beach, p. 14, from slide prepared by Environmental Management Division, Port of Los Angeles.

Pollutant Contribution by Source



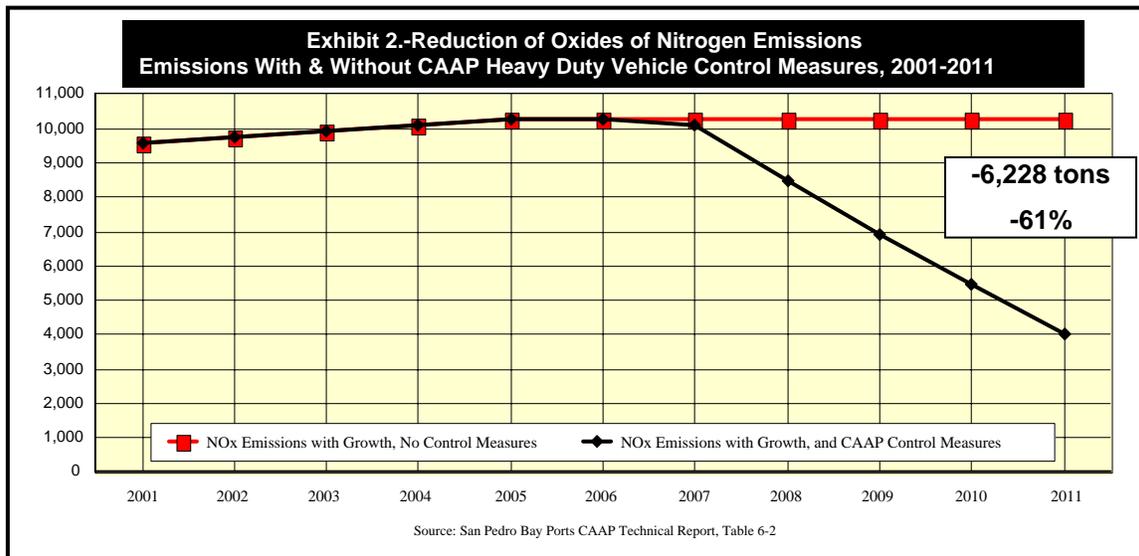
Port of Los Angeles Baseline 2001 & Port of Long Beach Baseline 2002

As a result, over five years, the goal of the Clean Truck Program is to seriously reduce DPM and NOx emissions from Heavy Duty Vehicles. If the program is implemented as planned, the ports estimate that it would achieve the following reductions by year #5:¹⁶



¹⁶ San Pedro Bay Ports Clean Air Action Plan Technical Report, Tables 6-1, 6-2, 6-3, p. 157.

- **Diesel particulate matter (DPM)** released as a result of port operations would be 184 tons instead of the 966 tons that port growth would have created, a 782 ton reduction or -81% (*Exhibit 1*).
- **Oxides of nitrogen (NOx)** emissions would be 4,041 tons instead of the 41,985 tons the growth would have generated, a 6,228 reduction or -61% (*Exhibit 2*).
- **Sulfur oxide (SOx)** emissions would be seven tons instead of the nine tons that would have come from normal growth trends, a two ton reduction or -22%.



Clean Truck Program: Economic Benefits of Health Impacts. Implementation of the San Pedro Bay Ports Clean Truck Program will reduce particulate air pollution and result in public health improvements. Studies have shown a strong relationship between particulate air pollution and premature deaths, respiratory and cardiovascular illnesses, and other health effects. The South Coast Air Quality Management District (*SCAQMD*) staff estimated the health benefits from implementation of the Clean Truck Program, as described below. To provide additional confidence for the analyses, benefits were estimated and monetized using two methodologies:

- The first is that used by the California Air Resources Board (*CARB*) for the health benefit analysis of its recently adopted off-road diesel vehicles rule. This methodology uses health benefit factors developed by *CARB* applied to the expected emission reductions from the Port Truck Program.
- The second methodology is that used by the *SCAQMD* in the recently adopted 2007 Air Quality Management Plan (*AQMP*). This methodology uses air quality model simulations to analyze changes in emissions and resultant ambient pollution levels with implementation of the port truck program.

Both analyses conducted by *SCAQMD* are limited to health benefits due to reductions of ambient particulate levels. Additional health benefits not quantified in these analyses would be anticipated from reductions in regional ozone levels. In addition, these analyses did not estimate benefits from reductions in localized cancer risks associated with reductions in diesel particulate matter near facilities where trucks operate.

Estimated Value of Health Benefits Using CARB Off-Road Rule Methodology.

Epidemiological studies have shown strong relationship between ambient particular matter (PM) and premature deaths and respiratory and cardiovascular illnesses. CARB has established factors to link emissions of primary and secondary PM to the adverse health effects.¹⁷ These factors have evolved over time to reflect advancements in epidemiological research. These factors also vary by air basin to reflect differences in population densities and composition of pollutants.

Using (1) the most recent port inventory data, (2) the most recent factors that CARB established for the health benefit analysis of its off-road diesel equipment rule and (3) the emissions of primary PM and NOx (*secondary diesel PM*) resulting from the Ports Clean Truck Program, the number of avoided cases for various health effects resulting from implementation of the Port Truck Program was calculated for the period 2008 to 2025 (*Exhibit 3*).¹⁸ The analysis concluded that the truck program would reduce between 230 and 1,450 premature deaths.

Exhibit 3. Cumulative Health Effects, CARB Off-Road Rule Methodology Port Truck Program 2008-2025			
Health Effect	Avoided Cases		
	Low	Mean	High
Premature Death	230	840	1,450
Hospital Admissions-Respiratory	110	180	250
Hospital Admissions-Cardiovascular	210	330	520
Asthma & Lower Respiratory Symptoms	9,870	25,390	40,520
Acute Bronchitis	0	2,100	4,550
Work Day Loss	126,790	149,600	172,380
Minor Restricted Activity Days	701,790	859,460	1,016,650

Source: Southern California Air Quality Management District, 2007

The monetized value associated with the avoided health effects in Exhibit 3 ranges from \$1.7 billion to \$10.1 billion with the **median at \$5.9 billion** (*in 2006 dollars*).¹⁹ The value of avoided premature deaths accounts for approximately 95 percent of the estimated benefit. The estimated value of an avoided death is \$8.2 million for 2007, based on wage premiums for fatality risks of various jobs and risks of accidental deaths. Values for later years are adjusted to account for inflation and growth in real income. These valuations are consistent with the U.S. EPA's economic valuation methodology for health benefit assessments.

Using the same methodology discussed above, the SCAQMD staff also estimated program benefits using the AQMP emissions inventory. Using that inventory, there would be 180 to 1,110 avoided premature deaths due to the Program (*Exhibit 4*). The monetary value associated

¹⁷ California Air Resources Board, Goods Movement Action Plan, Appendix A: Quantification of the Health Impacts and Economic Valuation of Air Pollution from Ports and Goods Movement in California, Sacramento (pp. 61-62), CA, 2006.

¹⁸ California Air Resources Board, Proposed Regulation for In-use Off-road Diesel Vehicles, Appendix C: Health Impacts from Off-road Diesel Vehicles, Sacramento, CA, 2007.

¹⁹ Based on a 3-percent discount rate. If a 7-percent discount rate were used, the range would be from \$1.3 to \$7.8 billion with the median at \$4.5 billion.

with the avoided health effects in Exhibit 2 ranges from \$1.3 billion to \$8 billion with the **median at \$4.7 billion** (in 2006 dollars).²⁰

Exhibit 4. Cumulative Health Effects Using AQMP Emissions Inventory Port Truck Program 2008-2025			
Health Effect	Avoided Cases		
	Low	Mean	High
Premature Death	180	650	1110
Hospital Admissions-Respiratory	90	140	190
Hospital Admissions-Cardiovascular	160	260	400
Asthma & Lower Respiratory Symptoms	7,570	19,440	30,990
Acute Bronchitis	0	1,610	3,470
Work Day Loss	97,140	114,600	132,040
Minor Restricted Activity Days	486,550	595,720	704,530

Source: Southern California Air Quality Management District, 2007

Estimated Value of Health Benefits Using 2007 AQMP Methodology. This method uses air pollution models to analyze changes in pollution levels and used a ratio of air quality improvement from the Port Truck Program to the overall AQMP to calculate benefits. Specifically, regional PM2.5 annual air quality model simulations were conducted to determine the future year (2014) PM2.5 air quality assuming full implementation of the Port Truck Program. The average PM2.5 air quality benefit was then compared to the net air quality improvement presented in the 2007 AQMP PM2.5 attainment demonstration simulation. The percentage of the air quality improvement attributable to the implementation of the port truck program was calculated as the ratio of the two model simulations. This ratio was then used to apportion the PM2.5 health benefits projected in the 2007 AQMP Draft Final Socioeconomic Analysis to estimate the benefits of the proposed program. The benefits were further apportioned throughout the 2008-2025 period to account for the implementation schedule and natural fleet turnover. This methodology relies on the truck emission inventory in the AQMP and is not based on the latest port inventory.

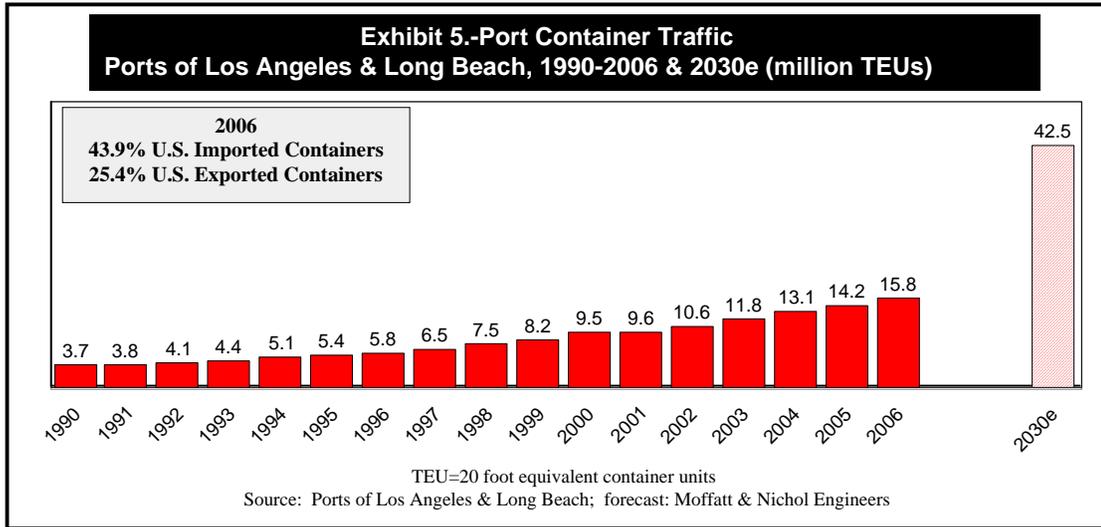
Based on this methodology, the SCAQMD staff estimated benefits from avoided deaths and illnesses to be approximately **\$5.4 billion dollars** during the period from 2008 through 2025. This benefit estimate determined through the AQMP methodology is similar to the results of the analysis using the CARB methodology and AQMP inventories described above in Section II (*i.e.*, median value of \$4.7 billion).

Employment & Economic Impact of Ports. As indicated, the Commissioners of the Ports of Los Angeles and Long Beach are well aware of the need to achieve reductions in air emissions to better the environment and improve the health of people living near the ports and throughout Southern California. At the same time, they understand the vital economic role their facilities play in the economic life of the region and the country. This has been underscored by several reports that have estimated the impact of the ports on Southern California and the nation.

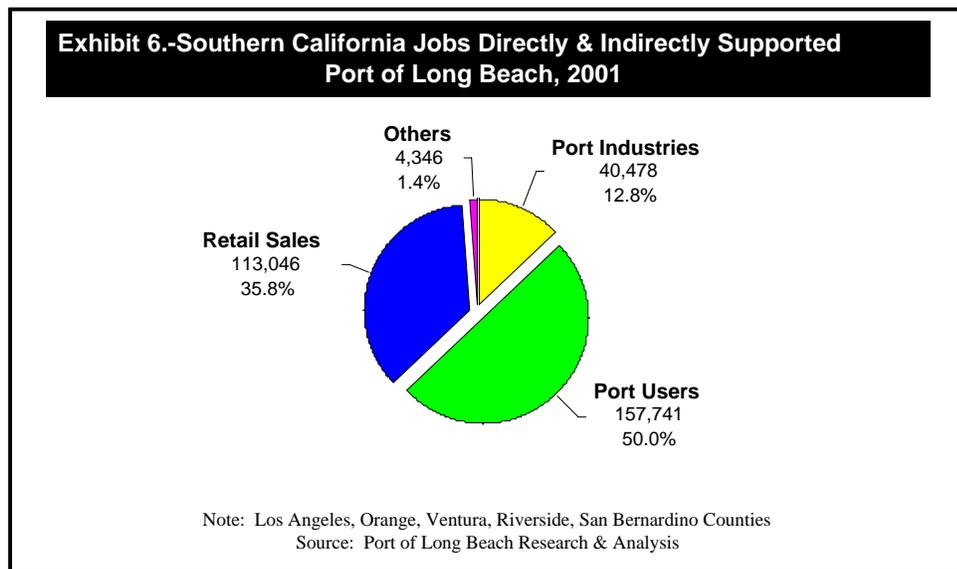
One measure is the share of U.S. containers that the flow through the Ports of Los Angeles and Long Beach. In 2006, the two ports reported that 15.8 million twenty foot equivalent container

²⁰ Based on a 3-percent discount rate. If a 7-percent discount rate were used, the range would be from \$1.1 to \$6.5 billion with the median at \$3.8 billion.

units (TEU) passed through them. This included 43.9% of U.S. imported containers and 25.4% of U.S. exported containers. While market forces are expected to try and take container volume much higher, the infrastructure constrained 2030 consensus forecast puts the volume at 42.5 million TEUs (Exhibit 5). The constraints on this forecast come from the capacity of Southern California’s transportation system. This forecast would represent a compound annual increase of 4.48% from 2006-2030, compared to the annualized growth of 8.84% that occurred between 2000-2006. Industry actually sees growth of over 6%, if the infrastructure can handle it.



Meanwhile, there have been numerous studies that have estimated the international trade flowing through the San Pedro Bay ports on various geographic regions:



- For 2001, the staff of the Port of Long Beach estimated that 315,611 jobs in the five Southern California counties (*Los Angeles, Orange, Riverside, San Bernardino, Ventura*) were directly and indirectly supported by their port’s activities (Exhibit 6).²¹

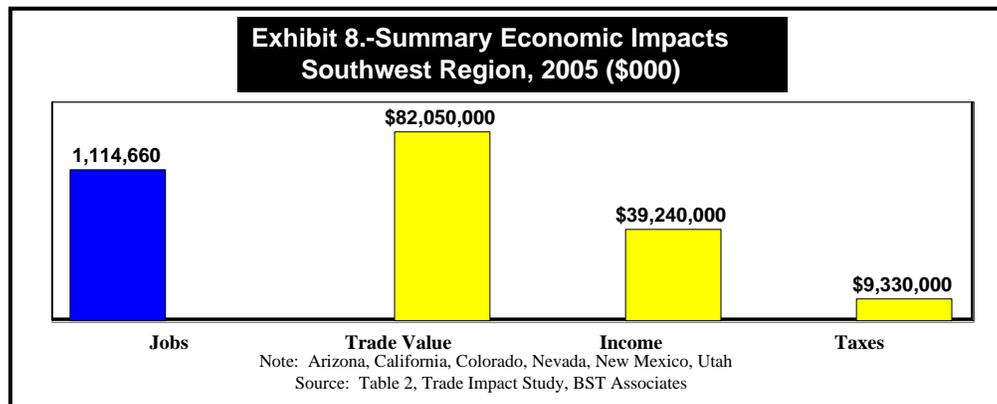
²¹ The Port of Long Beach Economic Impacts, Contributing to the Local, State & National Economies, Economic Impact Five County Region, 2001, Port of Long Beach.

Since recently revised CA Employment Development Department (*EDD*) data put the area's total 2001 wage and salary employment at 6,852,500,²² the port alone was responsible for one of every 22 jobs (4.6%) in the five county Southern California area.

Exhibit 7.- Trade Flows Through CA's Largest Seaports, 2004					
U.S. Rank	California Port	Total (bi)	Imports (bi)	Exports (bi)	Total: 2000-2004
1	Los Angeles	\$148.5	\$130.7	\$17.8	45.9%
3	Long Beach	\$92.0	\$74.8	\$17.2	-6.3%
10	Oakland	\$26.9	\$18.3	\$8.7	7.5%
29	Port Hueneme	\$6.5	\$6.4	\$0.1	42.3%
34	San Diego	\$4.8	\$4.7	\$0.1	1.3%
39	Richmond	\$3.6	\$3.4	\$0.2	322.2%
	Total All California Ports	\$289.1	\$244.4	\$44.7	
	Total All U.S. Ports	\$948.7	\$718.8	\$230.0	
	L.A.-LB Port Volume	\$240.5	\$205.5	\$35.0	
	LA-LB of U.S.	25.4%	28.6%	15.2%	
	LA-LB of CA	83.2%	84.1%	78.3%	

Sources: U.S. Census Bureau, Foreign Trade Division

- For 2004, the Public Policy Institute of California reported U.S. Census Bureau data showing that the ports of Los Angeles (\$148.5 billion) and Long Beach (\$92.0 billion) handled a combined \$240.5 billion or 25.4% of the \$948.7 billion in two way trade that passed through all U.S. ports. Their volume also represented 83.2% of the \$289.1 billion in two way trade passing through all of California's ports (*Exhibit 7*).²³



- For 2005, a study prepared for the Alameda Corridor Transportation Authority and the Ports of Los Angeles and Long Beach by BST Associates found that trade flowing through the ports in 2005 was responsible for 1,114,660 jobs, \$82.1 billion in trade value, \$39.2 billion in income and \$9.3 billion in taxes their Southwestern area: California, Arizona, Colorado, Nevada, New Mexico and Utah (*Exhibit 8*).²⁴

²² Total All Industry Employment, 2001, CA Employment Development Department, revised in 2006.

²³ California and the Global Economy: Recent Facts and Figures, 2006 Edition, Jon Haverman, Ethan Jennings, Howard Shatz, Public Policy Institute of California, Table 12, p. 25.

²⁴ Trade Impact Study Final Report, BST Associates Market Research & Strategic Planning, July 2007, Table 2, p.8.

- For 2005, the Los Angeles Economic Development Corporation (*LAEDC*) indicated that international trade was directly responsible for 450,100 jobs in the five Southern California counties. Their data included Los Angeles International Airport. This employment represented 6.4% of the 7,016,000 jobs in this area. Unlike the work by the Port of Long Beach, their research did not estimate the jobs that were indirectly created due to spending in the local economy by the people who held these positions.²⁵
- For 2005, a study as part of the Multi-County Goods Movement Action Plan (*MCGMAP*) funded by SCAG, Caltrans, San Diego Association of Governments, and seven county transportation agencies built upon the 450,100 direct trade job estimate of the LAEDC. The MCGMAP study estimated that the port portion of these jobs at 386,000. It was 396,000 jobs if Port Hueneme and Port of San Diego are included.

The MCGMAP study also estimated the indirect 2005 employment that would be supported by the four ports at 344,050 jobs for a total job impact in the seven Southern California counties (*San Diego and Imperial added*) of 740,103. That represented one of every 11 of the 8,416,100 that existed in the seven county area (8.8%). Note, it was conservatively found that each port related job indirectly supported 0.87 jobs in the general economy.

Potential Lost Economic Impact if CAAP Unsuccessful. If port trade reaches the constrained consensus forecasted level of 42.5 million TEUs by 2030, the MCGMAP study found that direct port related employment in Southern California would reach 857,000 jobs, up 461,000. However, if the CAAP fails and sufficient port infrastructure is not built, it will fall short of this level. If the lack of port facilities restricted volume to 2/3rds of the constrained consensus level, only 697,500 direct new jobs would be created. This would mean 159,500 fewer direct jobs by 2030. If lack of facilities restricted volume to 1/3rd of the consensus level, only 542,100 direct new jobs would be created by 2030. Lack of growth would mean 304,900 fewer direct positions.²⁶

In 2030, if San Pedro Bay port trade reached the constrained consensus forecast of 42.5 million TEUs, the total direct *and indirect* port related employment would reach 1,601,000, up 861,000 jobs from the 740,000 in 2005. If the failure of the CAAP led to a lack of port infrastructure and volume was restricted to 2/3rds of that constrained forecast, only 1,303,000 total jobs would supported, a gain of 563,000 from 2005. That would represent **a loss of 298,000** direct and indirect jobs that otherwise would have been created. If the failure of the CAAP caused port volume to be restricted to 1/3rd of the constrained consensus level, the total jobs supported would reach 1,013,000, a gain of 273,000 from 2005. That would represent a loss of 588,000 direct and indirect jobs that otherwise would have been created.²⁷

²⁵ International Trade Trends & Impacts, The Southern California Region, 2005 and 2006 Forecast, Los Angeles Economic Development Corporation, Table 5, p.23.

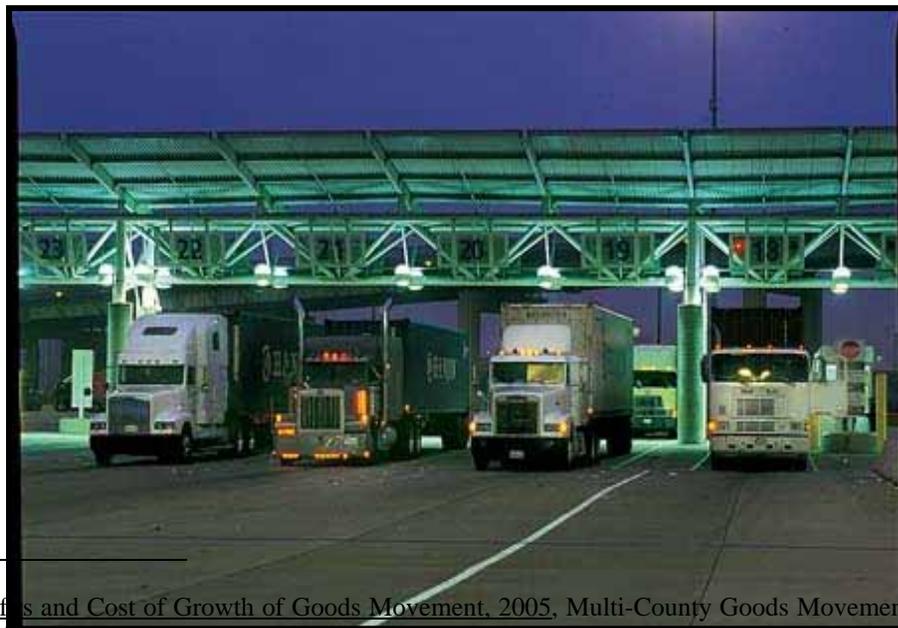
²⁶ Economic Impact of Southern California's Ports, 2005, Multi-County Goods Movement Action Plan report, 2007, John Husing, Exhibit 22, p. 16.

²⁷ Economic Impact of Southern California's Ports, 2005, Exhibit 22, p. 16.

A separate MCGMAP study showed that the sectors involved in Southern California’s logistics activities had average pay of \$47,411 in 2005. At the low end, truck transportation was at \$36,317. This was the weighted average of \$31,093 for port truck firms and \$38,827 for non-port firms. Together, they represented the second largest share of goods movement jobs at 92,294 (*Exhibit 9*).²⁸



Using their various methodologies, these several reports, from a wide variety of analysts, show that the Ports of Los Angeles and Long Beach are very important assets to the Southern California and U.S. economies. The livelihoods of large numbers of people today and in the future will depend upon their success. Again, this is why the Port Commissioners have indicated that “the [CAAP] is designed to develop mitigation measures and incentive programs necessary to reduce air emissions and health risks *while allowing port development to continue.*”²⁹ [*italics added*]



²⁸ Economic Benefits and Cost of Growth of Goods Movement, 2005, Multi-County Goods Movement Action Plan report, 2007, John Husing, Exhibit 12, p. 2-5 and trucking sector discussion p. 2-1 to p. 2-2.

²⁹ San Pedro Bay Ports Clean Air Action Plan, Overview, P. 13.

3. Port Drayage Motor Carriage: LMC-IOO Model

Container movements to and from the ports of Los Angeles and Long Beach are largely organized by Licensed Motor Carriers (LMC). Contrary to the implication of their name, most of these entities are not trucking companies in the common understanding of the term. Rather, they are essentially service companies that contract with either ocean shipping lines or with customs brokers, freight forwarders or beneficial cargo owners (*e.g., national retailers, exporters*) to move containers. To physically transport the cargo, almost all of the LMCs rely upon independent owner operators (IOOs) who own trucks and contract with the LMCs to handle their container moves. Below is an explanation of how this system works.

Nationally, there are more than 600,000 for-hire motor carriage companies.³⁰ While port drayage firms are a small segment of this industry, they are not a defined subset of it and no federal or state agency collects specific data on them. While not defined, port drayage motor carriage firms are commonly understood to be companies picking up or dropping off goods at a seaport as part of the nation's ocean based international trade. Today, they are closely associated with the movement of containerized cargo.

Frequency Classification. For most port drayage motor carriers, all or a portion of their business involves hauling cargo through a port gate. A significant number of firms may have some drivers who enter the ports on a regular basis, but have a majority of their business with other types of trucking or logistics services. A few motor carriers may engage in port drayage on a seasonal basis due to the nature of the products they haul (*e.g., agricultural commodities*). Others may serve the port only during peak seasons like Christmas. The San Pedro Bay harbors classify drayage truck operators based upon their frequency of port entry. Of a total of 41,000 trucks doing so in 2005:³¹

- Frequent: More than 7.0 times a week - 7,000 trucks
- Semi-frequent: 3.5 but less than 7.0 times a week – 9,800 trucks
- Infrequent: Less than 3.5 times a week 24,200 trucks

The first two of these categories represent roughly 80% of the port effort and thus are the 16,800 vehicles to be replaced or retrofitted to serious reduce heavy duty vehicle emissions.

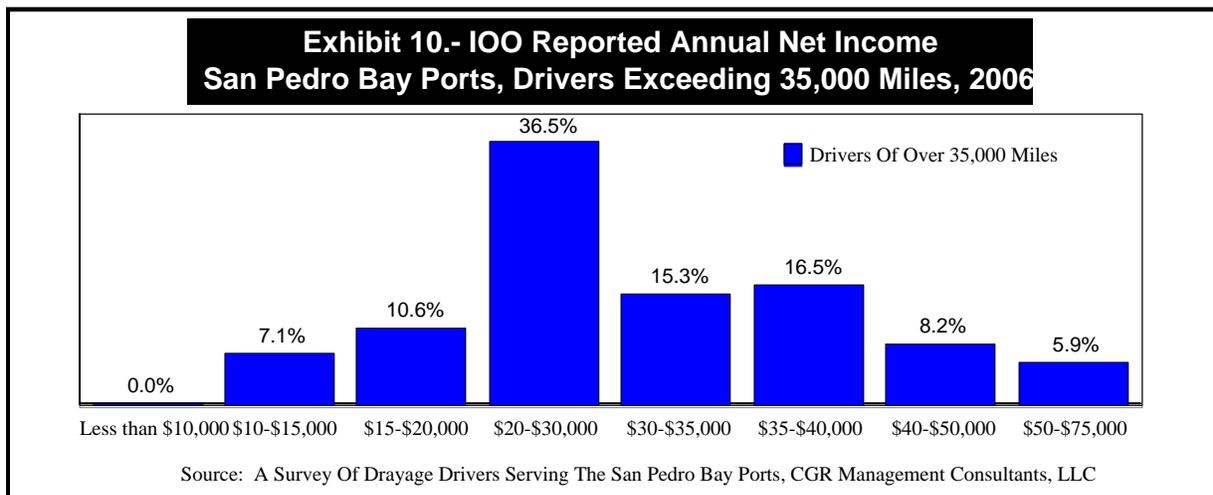
Independent Owner Operators. Port drayage is a very competitive activity. Lack of barriers to entry has created a very competitive port drayage sector. One result has been the creation of a larger number of **independent owner operators (IOO)**. These entrepreneurial drivers own, maintain and drive their own tractors. In the case of the ports, they contract with an LMC to haul freight for them on a trip-by-trip basis. The IOOs are independent contractors and retain the prerogative of declining any particular load requested by their LMC, not working on a given day, and contracting with more than one LMC at the same time. The IOOs are not motor carriage companies since they are not authorized to provide for-hire services to end users. Under California and federal law, they must conform to all driver safety rules plus truck safety and maintenance regulations (*see safety & maintenance section below*). Two recent surveys of IOO

³⁰ Standard Motor Carriage and Transportation Statistics, Volume.12, Issue 2 reports as of August 2005, there were 613,242 for-hire, U.S. mail and other U.S. interstate motor carriers on file with the Federal Motor Carrier Safety Administration.

³¹ San Pedro Bay Ports Clean Air Action Plan Technical Report, November 2006, p. 57.

drivers have been conducted at the ports of Los Angeles and Long Beach. They have yielded similar results with regards to pay in the industry:

- Dr. Kristen Monaco of California State University Long Beach surveyed drivers as they entered the port gates and found that 2006 median net pay was \$36,550.³² She also found that pay had risen 1.5% per annum from 2003-2006. Applying that rate to her 2006 pay levels yields a 2007 estimated median of \$37,098. Using that figure, and the fact that Dr. Monaco found that the IOOs she interviewed worked an average of 60 hours per week, 50 weeks a year, the median hourly pay was calculated at \$12.37.³³ As entrepreneurs, these drivers do not have paid vacation, employer paid social security, employer paid workers compensation insurance or health insurance.
- CGR interviewed drivers in early 2007 as part of a survey for the Gateway Cities Council of Governments. They were able to partially verify their data with tax returns. Their work found a 2007 median income of \$29,000. The lower annual pay levels appear to be explained by the fact that the drivers cited an average workweek of 50 hours versus 60 hours reported by Dr. Monaco.³⁴ This difference may be accounted for by the fact that CGR interviewed drivers at LMC yard locations and may have captured a higher percentage of short haul drivers waiting to be sent for loads. Using the 50 hour workweek that CGR found the IOOs median hourly earnings of \$11.60. Again, as self-employed workers, they do not have paid vacation, employer paid social security, workers compensation or health insurance.



An important fact emerging from the CGR study was that 14.1% of the IOOs who drove over 35,000 miles netted in excess of \$40,000 a year (*Exhibit 10*). Given their incomes, this group of entrepreneurial drivers are unlikely to be willing to work for less.

³² Incentivizing Truck Retrofitting in Port Drayage: A Study of Drivers at the Ports of Los Angeles and Long Beach, Kristen Monaco, Ph.D., Department of Economics, California State University Long Beach, January 2007, p. 23.

³³ Monaco, p. 19.

³⁴ A Survey of Drayage Drivers Serving the San Pedro Ports, CGR Management Consultants, LLC, March 26, 2007. Available at <http://www.gatewaycog.org/publications>, p. 24 at <http://www.gatewaycog.org/publications>.

Licensed Motor Carriers. Another result of the ease with which firms can enter the port drayage business has been the growth of Licensed Motor Carriers (*LMC*) to an estimated 800-1,200. At the ports of Los Angeles and Long Beach, it is these entities that contract with shippers to move cargo to and from the harbors. They also contract with customs brokers, freight forwarders and end-users to move containers.

As indicated, most LMCs contract with IOOs to actually enter the port gates to pick-up or deliver freight. That said, it is the LMCs that are contractually responsible for port drayage. They must also ensure that the IOOs working with them conform to driver safety rules and meet truck safety and maintenance regulations plus state insurance requirements. On a daily basis, the IOOs working with an LMC report to a dispatcher and are assigned loads. The price the IOOs receive for hauling these loads has been predetermined by agreement and generally depends upon the distance of the haul.

It is industry practice for the formal relationships between the IOOs and the LMCs to be 90-day rotating contracts. Again, as independent contractors, the IOOs have the right to not report for work on any given day, as well as refuse any load, and work for multiple LMCs. However, given the dependence of the IOOs on the LMCs for work and the need by LMCs to keep drivers, the relationships with the well-established LMCs appear to be much stronger and last longer. The most sophisticated LMCs have Automatic Vehicle Locator (*AVL*) devices on the trucks of their IOOs and can identify their locations in real time.

By using IOOs, as opposed to investing in tractors and hiring employee-drivers, the LMCs require little capital investment, minimal administrative staff, and hence low fixed costs. They are thus not traditional trucking firms which have substantial capital invested in their vehicles. The minimal financial investment and low level of staffing required to start an LMC are reasons why so many smaller ones have come into existence (*see pricing power section below*).

It is generally accepted that there are 800-1,200 LMCs providing some level of drayage with the San Pedro Bay ports. Most are located in the greater Los Angeles metropolitan area, though some are located in places like the Central Valley. Locations tend to depend on the share of their business in port drayage, the location of their customers (*e.g., Central Valley for agricultural haulers*) and when and where they were founded. Infrequent callers at the Ports tend to be located farther away. Also, the larger the LMC, the more likely they will engage in a variety of non-drayage operations. For the largest, many of their drivers likely do no port drayage work.³⁵

LMC Size. To ascertain the characteristics of the LMCs serving the ports, two approaches were taken. One was a telephone survey of 136 firms or over 10% of the LMCs. The second was one-on-one and group interviews with over 50 companies. One result of the survey was to ascertain the size of the LMCs classified by total number of drivers, whether they were involved in port drayage work or not.³⁶ It found (*Exhibit 11*):

³⁵ These activities can include non-port related motor carriage, warehousing, transloading, cross docking, sorting and transshipment of goods, logistics management, local delivery of truckload or less than truckload lots or acting as third party logistics firms providing fleets services for a variety of organizations.

³⁶ The LMC phone survey was conducted Monday- Friday, 8am to 5pm. CGR principals and consultants made calls. The contact list was randomly selected from the eModal motor carrier and vendor list for the ports that gave LMC identification, address, contacts person, titles and phone numbers. The contacts were founders, owners, presidents, operations managers, dispatchers, controllers or office managers who registered the LMC with eModal.

- 57.6% had 25 or fewer drivers
- 18.2% had 76 or more drivers
- Median (*half firms above & half below*) number of drivers was 22.1
- The mean, distorted by the influence of larger firms was 61.2

These facts verify that the LMCs serving the ports are predominately smaller firms.

Exhibit 11.-LMCs By Number of Drivers, 2007		
Driver Range	Share	Cumulative Share
1 to 10	21.2%	21.2%
11 to 25	36.4%	57.6%
26-75	24.2%	81.8%
76-250	13.6%	95.5%
251-1,000	4.5%	100.0%
Total	100.0%	

Source: LMC Telephone Survey, CGR Management Services, August 2007

LMC Container Turns. A second result of the survey provided the distribution of average container turns undertaken by an LMC’s driver during a day (*Exhibit 12*):

- 39.6% averaged 2.0 to 2.4 turns per day
- 72.9% averaged under 3.0 turns per day, meaning 27.1% averaged 3.0 turns or more
- Median was 2.0 turns per day
- The mean, impact by some more aggressive IOOs, was 2.6 turns per day

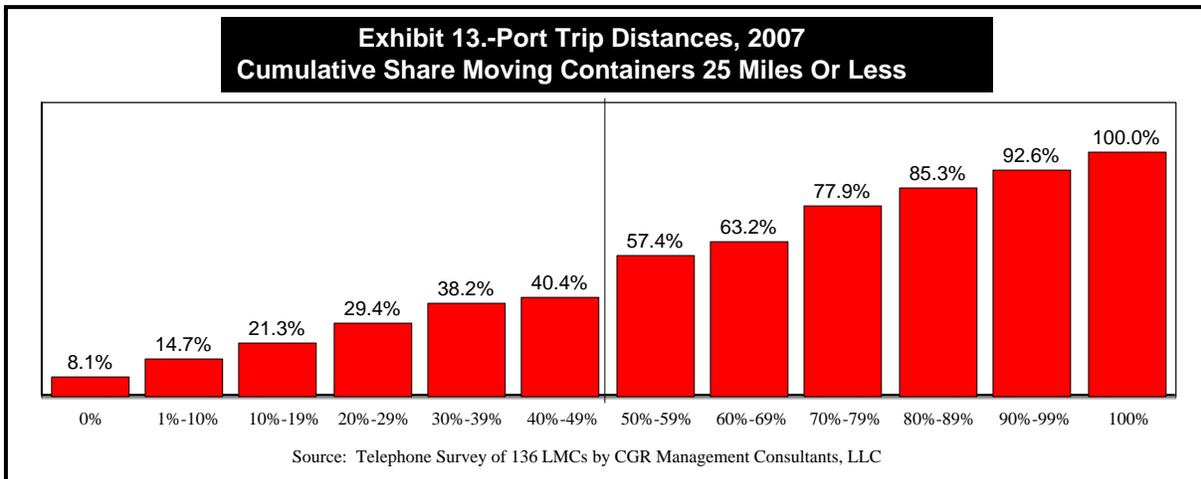
Exhibit 12.-Average Container Turns A Day, 2007		
Container Turns	Share	Cumulative Share
1.0 to 1.9	15.6%	15.6%
2.0 to 2.4	39.6%	55.2%
2.5 to 2.9	17.7%	72.9%
3.0 to 4.0	18.8%	91.7%
4.0 to 5.0	7.3%	99.0%
Over 5.0	1.0%	100.0%
Total	100.0%	

Source: LMC Telephone Survey, CGR Management Services, August 2007

The median number of container turns that drivers are able to make in picking up loads at the ports and bringing them to their destination is 2.0. It is affected by the longer distances that the drivers for some LMCs must drive (*see Length of LMC Trips*). The mean number of container turns was higher at 2.6. It is pulled up because 27.1% drivers are able to make 3.0 or more turns per day. They likely work for the LMCs whose business primarily involves moving containers from the ports to nearby facilities. This measure also is affected by the efficiency of port operations in getting containers on to trucks.

Length of LMC Trips. Given the impact of port truck traffic on congestion near the two harbors and along routes moving inland, another important finding was the share of drayage trips

that were under 25 miles from the ports. This is an indication of the extent to which trucks are primarily moving containers to nearby cross-docks, warehouses or intermodal rail yards, as opposed to moving them longer distances. The more extensive trips would be to places like the Inland Empire with its large base of distribution facilities or cross-country (*Exhibit 13*):



- A cumulative total of 40.4% of LMCs indicated that less than half of their port trips stayed within 25 miles of the harbors.
- For all LMCs, the median share of port drayage conducted within 25 miles of the harbors was 50%, with the other 50% involved container moves of more than 25 miles from the ports (*not shown*).
- The mean share of LMC port drayage within 25 miles of the harbors was nearly the same at 49.4% (*not shown*). On average, 50.6% of LMCs moved containers over 25 miles.

These data suggest that over about half of the port drayage business involves moving containers to locations that are not within the immediate vicinity of the harbors.

Share of LMC Operations In Port Drayage By Size. Depending upon size, LMCs have much different levels of dependency on port drayage for the success of their companies (*Exhibit 14*). To look at this and other issues, the LMCs were classified into five size categories based upon the one-on-one interviews conducted for this project. These categories reflected the underlying business organizations required to handle the amounts of drayage business implied by having access to varying levels of drivers and trucks. The telephone survey provided 132 usable results for gaining an understanding of these five size categories.

A key result showed the extent to which port operations were crucial to the success of LMCs of various sizes. As would be expected, it showed that the smaller an LMC, the greater its dependency upon port drayage work. Thus, for firms with 1-10 trucks, 83.1% of their effort was port drayage. It was 79.4% for those with 11-25 trucks and 76.2% for LMCs with 26-75 trucks. After that, the share of drayage business falls off dramatically. It is only 40.6% for LMCs with 76 to 250 trucks and 25.2% for firms with 251 or more trucks (*Exhibit 14*).

These are important results as they mean that the LMCs that are the largest and likely the strongest financially are the ones able to exercise independence from decision making by the ports, the shipping lines and the beneficial cargo owners like national retailers. The reverse is

the case for the smaller LMCs. They are close to totally reliant upon those entities for their success and survival and are less able to negotiate favorable rates on their own.

Exhibit 14.-LMC Share Of Business In Drayage & Share of Drayage Moves, 2007												
1	2	3	4	5	6	7	8	9	10	11	12	13
Source	Survey	Survey	#3/#4	Data Sheet	Firms Wgted	Distribute #6	#7*1,000	#8*#5	#9*#4	Exhibit 12	#10*#11	Distribute #12
Size	Driver & Trucks	Number Firms	Average Drivers	Weighted Drayage	Weighting	Wgt .Firm Distribution	LMCs	Equivalent FT LMCs	Trucks	Median Turns	Containers A Day	Market Share
1-10	157	28	5.6	83.1%	23.3	24.6%	246	204	1,143	2.0	2,286	5.1%
11-25	856	48	17.8	79.4%	38.1	40.3%	403	320	5,709	2.0	11,417	25.4%
26-75	1,500	32	46.9	76.2%	24.4	25.8%	258	196	9,207	2.0	18,414	41.0%
76-250	2,469	18	137.2	40.6%	7.3	7.7%	77	31	4,311	2.0	8,623	19.2%
251 & Up	3,100	6	516.7	25.2%	1.5	1.6%	16	4	2,075	2.0	4,149	9.2%
Total	8,082	132	61.2	46.2%	94.6	100.0%	1,000	756	22,444	2.0	44,889	100.0%

Share of Port Drayage by Size of LMCs. An important question addressed in Exhibit 14 is the extent to which the containers moving through the San Pedro Bay ports are handled by LMCs of various sizes. To do so, the number of firms in each size category was weighted by the share of that group's operations that involve port drayage (*column 5*). Note, these calculations did not reduce the number of LMCs, they only showed the distribution of firms based on their estimated involvement in port drayage (*column 7*). That was done by multiplying the weighted shares in each category times the 1,000 LMCs (*mid-point of 800-1,200*) estimated to be operating at the harbors. Of the 1,000, the result estimated the array of firms, weighted by their number of trucks and share of drayage work. The range was 246 in the 1-10 truck group to 16 for those with 251 or more (*column 8*).

Since none of the categories of LMCs was found to be 100% dedicated to port drayage, it was necessary to calculate the number of full-time equivalent firms in each group, by reducing the 1,000 firms using the shares of drayage found in each size category. Thus, for the 246 LMCs allocated to the 1-10 group, only 83.1% of their effort was in port drayage. They are thus acting like 204 companies totally involved in drayage (*column 9*). In each category, the average number of trucks and drivers was determined by the survey (*column 4*). Using those averages, the total number of trucks in each group was calculated (*column 10*). Above (*Exhibit 12*), it was shown that each truck in the drayage industry can make a median of 2.0 turns a day. Using that factor with the number of trucks estimated in each category allows an estimate of the number of containers each group is capable of processing per day (*column 12*). By size category, the resulting shares of the port drayage business were (*column 13*):

- 1-12 trucks 5.1%
- 11-25 trucks 25.4%
- 26-75 trucks 41.0%
- 76-250 trucks 19.2%
- 251 or more 9.2%

Note, these calculations are an estimate of the capability of each size category of LMCs if the number of trucks and drivers that define that category are always in use. Clearly, this is not the case. Some IOO drivers only work part time. The volume of containers has seasonal ebbs and

flows. In addition, the number of containers that can be handled by each size group is overestimated to the extent that moving the goods in one container may take as many as three trucking operations. One might take a container to an LMC's yard. A second one might move it from there to a cross-dock so goods can be transferred from a sea to a landside container. A third might move the landside container from there to an intermodal railyard. The distributions above thus assume that these considerations affect all five of the size categories equally. To the extent they do not, there would be a change in the relative importance of the various groups.

That said, the conclusion is that at the ports of Los Angeles and Long Beach, the bulk of port drayage capacity among mid-sized and smaller firms with 71.5% of the business handle by firms with from 1-75 trucks.

Safety & Maintenance. While market activities in the trucking industry are not regulated, safety is. Since 2000, firms in interstate commerce, including those in port drayage, are subject to audits of their driver logs, truck insurance, safety and maintenance records by the U.S. Department of Transportation (DOT) through its Federal Motor Carrier Safety Administration (FMCSA). However, the agency's staffing level has meant that these regulatory efforts have been limited. Thus, in 2006, FMCSA conducted just 10,353 compliance reviews nationally out of an industry with over 700,000 registered motor carriers or under 2%.³⁷

In California, trucking firms are more vigorously regulated by the California Highway Patrol (CHP) through its Biannual Inspection Program (BIT)³⁸: "Under the program, all motor carrier (*truck*) operators are required to have their truck "terminals" inspected by CHP every 25 months to ensure that the operator is in compliance with state laws and regulations designed to promote highway safety. A terminal is the location where the vehicles are garaged and maintained. According to CHP, as of July 2006 about 68,000 terminals had enrolled in the program. These terminals range in size from one truck (*owner-operator*) to more than 100 trucks."³⁹

"During the inspection, CHP inspectors check the physical condition of a sample of the trucks and trailers in a given terminal, as well as review the maintenance and driver records (*including vehicle inspection reports,*⁴⁰ *repair records, and time cards for drivers*) for compliance with state laws and regulations ... The Governor's [FY2008] budget request[ed] an increase of \$7.7 million and 71.5 positions to enable CHP to double its terminal inspections from about 18,000 to 37,000 annually ... The department currently inspects only about one-half of the terminals required to be inspected in a given year."⁴¹

³⁷ Motor Carrier Safety: the FMCSA's Oversight of High-Risk Carriers, Opening Statement, Hon. Peter DeFazio's, House Transportation & Infrastructure Committee, Subcommittee on Highways and Transit Hearing, July 11, 2007.

³⁸ California Vehicle Code Section 34501.12 requires any person or organization directing the operation of certain trucks or trailers to participate in an inspection program conducted by the California Highway Patrol (CHP). The law requires the CHP to inspect California truck terminals every two years.

³⁹ Analysis of the 2007-08 Budget Bill: Transportation, California Highway Patrol (2720), California Legislative Analysts Office.

⁴⁰ California Vehicle Code 34505.5(a) a truck operator must have vehicle safety inspections every 90-day conducted by qualified inspectors. California Vehicle Code Section 34505.5(c) requires that inspection records be maintained for two years.

⁴¹ Analysis of the 2007-08 Budget Bill: Transportation, California Highway Patrol (2720).

The most sophisticated LMCs maintain detailed copies of the truck safety and maintenance inspection records as well as driver licenses, physical examinations, driving time logs and insurance of the IOOs that work with them. They do so as it is in their financial and liability interest to ensure that their IOOs are in compliance with state laws. They also assist the CHP by arranging for truck inspections of their IOOs. Many of the sophisticated LMCs have contracts with consulting firms such as National Safety Compliance to assist them with records management and in dealing with the DOT and CHP.⁴² Interviews with smaller LMCs (0-20 IOOs) did not reveal similar record keeping for their IOOs. Reduced formal oversight is perhaps to be expected given the small sizes and cost burden of their non-driving office staffs.⁴³

Profitability. Nationally, the motor carriage industry is relatively unprofitable due to its competitive nature, with “operating ratios” showing that costs absorb well over 90% of revenues. The industry is competitive at all levels. For example, the largest 50 national companies hold less than 30% of the market.⁴⁴ Large publicly held motor carriage companies are the most profitable. However, these big firms are not comparable to port drayage carriers because of the average length of their hauls, breadth of their services and the fact that only a very small number engage in drayage at any of the major ports. Interestingly, all of the publicly traded motor carriage companies are classified as “small capitalization” companies by Wall Street criteria.

Port Drayage LMCs Estimated Profiles. Of the 800 to 1,200 LMCs estimated to be involved with moving cargo at the San Pedro Bay ports, it was shown that only 18.1% have over 75 employees (*Exhibit 11*). Over half, 57.6%, have 25 or fewer drivers and trucks with 21.2% having 10 or less. Container drayage at the San Pedro Bay ports is not an activity in which well known firms are generally involved.

Industry statistics indicate that motor carriage firms of all types have average revenues of \$120,000 to \$150,000 per driver (*IOO or employee*). This suggests that LMCs with 25 drivers can be expected to have revenues in the range of \$3.0 to \$3.5 million annually. DOT requires trucking firms with annual revenues over \$3 million to file a Form M comprehensive annual financial report. Exhibit 15 provides highlights from those entities filing Form M nationally that had revenues between \$3 and \$5 million in 2003, the latest year available.⁴⁵

Based on interviews for this analysis and other reports on the San Pedro Bay ports, the firms reported in Exhibit 15 are generally larger than the typical local drayage LMC.⁴⁶ It thus represents a reasonable upper estimate of performance and profitability for these local

⁴² David Raslowsky, President (949)472-0645; cell (714)308-8476 draslowsky@nsc.com <http://www.ncs2000.com>

⁴³ A discussion of the likely pattern of office staff hiring, based on cost was held with Terry Klenske, Chairman of San Bernardino County’s Workforce Investment Board and President of Dalton Trucking, a firm with 150 trucks. He indicated that trucking firms can only afford to add certain functions as they reach size thresholds. From 0-25 trucks, dispatch and accounts receivable are added; after 25 trucks, specialists in regulatory compliance, human resources and accounts payable begin to be added.

⁴⁴ First Research Industry Profile, “Motor carriage” updated June 2007. <http://www.firstresearch.com>

⁴⁵ Motor Carrier Annual Reports 2003 for Class I and II Carriers. American Trucking Association, ISBN 0-88711-424-5. Data cited is for TL General Freight carriers with revenues between \$3 and \$5 million.

⁴⁶ A Survey of Drayage Drivers Serving the San Pedro Ports, CGR Management Consultants LLC, March 26, 2007. Available at <http://www.gatewaycog.org/publications>. Incentivizing Truck Retrofitting in Port Drayage: A Study of Drivers at the Ports of Los Angeles and Long Beach, Kristen Monaco, Ph.D., Department of Economics, California State University Long Beach, January 2007.

operations. Importantly, note that the “operating ratio”⁴⁷ indicates that operating costs equaled **99.4%** of revenue for the firms that reported on Form M.

Exhibit 15.-Trucking Company Operating Statistics, 2003 Companies With \$3 to \$5 Million In Revenue	
Statistic	Value
Average Total Operating Revenues	\$4,109,000
Operating Ratio	99.4%
Average Net Operating Income (pretax)	\$24,425
Return on Capital	2.19%
Return on Owners Equity	5.29%
Total Assets	\$1,347,000
Accounts Receivable included in Total Assets	\$413,000
Total Owners Equity or Capital	\$362,200
Average number of drivers (32) and support employees (4)	36

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, Form M, 2003 as reported by the American Trucking Association.

This implies that a significant number of companies in this category had operating losses for the reporting year. Note also that for smaller firms, many owner expenses like automobiles and meals likely cause their true business costs to be somewhat overstated. Still, these data are consistent with the roughly 5% operating ratios orally reported by local LMCs during the interviews for this project. The \$128,000 revenue per driver reported (*\$4.1 million/32 estimated average drivers*) is in line, though lower, than the overall industry experience cited earlier.⁴⁸

Assets & Financing Power. Adjusting the average total assets (*\$1,347,000*) for accounts receivable (*\$413,000*), the average Form M reporting firm had just \$934,000 in assets such as trucks, furniture, fixtures, leasehold improvements or computer systems. This low investment level means that the use of IOOs, whose trucks would not be reported on Form M, is central to their operations.

Meanwhile, the modest amount of owner’s equity or capital (*\$362,200*) indicates a limited ability to buy new equipment without external financing. This low level of equity, as well as the low returns on equity (5.29%) and capital (2.19%), also represent significant hurdles to their ability to borrow or attract new capital. Given these facts, personal owner guarantees would be expected on any significant new debts or leases and the interest rates would likely be high, given the risk of lending to firms with low capitalization and profitability.

⁴⁷ The operating ratio is commonly used to describe financial results of operations. It is total operating expenses divided by total operating revenue. Pre-tax profit as a percent of revenues is 1 minus the operating ratio. Thus lower operating ratios represent more profitable operations.

⁴⁸ In addition to the 188 carriers reporting \$3 to \$5 million revenue on Form M for 2003, CGR also examined the data for 67 carriers that reported “container” hauling as one of their top three lines of business. This classification includes all types of container hauling and is not exclusive to drayage (*port*) movements. These carriers are substantially larger with average revenues of \$14.6 million and a Net Operating Income before tax of \$398,400 for an Operating Ratio of 97.3% or a pre-tax operating profit of 2.7% of operating revenues. These firms, however, tend to have multiple lines of business beyond trucking per se and earn almost as much from non-trucking activities. As a result, the average income after taxes is \$517,800. They also have a more leveraged capital structure which results in a higher return on owner’s equity. The relatively low amount of owner’s equity, \$1.8 million, clearly indicates that these carriers employ mostly IOOs and do not own any substantial number of tractors.

Pricing Power. One reason LMCs have thin financials, as well as the relatively low average pay of IOOs (\$31,000 vs. \$38,600 median for Southern Californian employee-drivers),⁴⁹ is the lack of pricing power of LMCs versus ocean shipping lines and beneficial cargo owners. Annually, some of shipping lines meet and establish rates that they will charge to beneficial cargo owners, like national retailers, to move their cargo from its point of origination to its final destination. The ocean lines can do so as they have limited anti-trust immunity. While these agreements are often honored in the breach, ocean carriers tend to assign a portion of their “store-door” contract revenues to the process of hauling containers between the ports and nearby locations. This portion of the store-door rate is revenue to the LMCs that provide the drayage. Given the intense LMC competition, the shippers are generally able to find a firm willing to move their freight at the rate they want to pay. There is thus limited LMC pricing power under this arrangement.

Some end-users contract with the shipping lines to have their cargo moved only to the ports. These beneficial cargo owners take responsibility for arranging with LMCs to have their containers delivered to their facilities. Here, the LMCs have some ability to negotiate rates and may also be able to contract for higher margin services beyond just transporting containers.

However, while the market power of the shipping lines is quite strong, that of the LMCs is very weak due to the extreme competitiveness of the port drayage industry. This is one result of deregulation and the resulting practice of using of IOOs. As indicated, it has meant that LMCs are essentially service companies that arrange to move freight and contract with IOOs to physically transport it. This has made it relatively easy for entrepreneurs to form new LMCs since the capital investment required to begin is minimal. Often, this occurs when a dispatcher breaks away from an established LMC and takes along personal relationships with a few IOOs and several customers. The result has been the formation of a large number of thinly financed small competitors. There is a widely held belief in the port drayage industry that even at quite low price levels, shipping lines can almost always find an LMC willing to contract to move a container.

LMC:IOO Model Summary. The port drayage business is quite entrepreneurial and very competitive in its current mode of operation. Currently, the industry is largely organized with LMCs obtaining business from shipping lines, brokers, freight forwarders and beneficial cargo owners while relying upon IOOs to physically move the cargo. It appears that about two-thirds of the containers moved through the ports of Los Angeles and Long Beach are handled by LMCs with 75 or fewer drivers and trucks. This partially results from the fact that the larger LMCs tend to have their operations less concentrated in port drayage, with the reverse also true. While a good deal of port drayage activity is carried out near the harbors, some of 40.4% of the LMCs indicated that less than half of their port trips are within a 25 mile radius of the ports. Port efficiency is important to the LMCs and their drivers, as any increase in the number of containers handled in a day per truck increases their potential income. Today, the median such “turns” is 2.0. That translates to a rate of 308 containers per year by the average drayage driver.

The relationship between LMCs and IOOs is a close one, with the most sophisticated LMCs maintaining detailed records on their IOOs. These include records on the legally mandated requirements that the IOOs must follow such as licensing, physical examinations, driving time logs and insurance as well as records on the 90-day safety and maintenance check-ups that must be performed on their vehicles. The intensive competition, plus lack of pricing power, has

⁴⁹ See Exhibit 18, p. 32.

resulted in an industry in which neither the typical LMCs or the average IOOs are particularly profitable.

4. Transportation Workers Identification Credential

As indicated earlier, the Transportation Security Administration (*TSA*) and U.S. Coast Guard will eventually undertake the Transportation Worker Identification Credential (*TWIC*) program. This effort will reduce the supply of drivers eligible to access all U.S. ports as under its provisions:

“A *TWIC* applicant must complete a *TSA* security threat assessment and will be disqualified from obtaining a *TWIC* if he or she has been convicted or incarcerated for certain crimes within prescribed time periods, lacks legal presence and/or authorization to work in the United States, has a connection to terrorist activity, or has been determined to lack mental capacity.”⁵⁰

Thus, a key provision of Code of Federal Regulations (*CFR*) 1572.105 indicates with regards to residency status that “a [*TWIC*] applicant applying for a security threat assessment must be:

1. A citizen of the United States who has not renounced or lost his or her United States’ citizenship; or
2. A lawful permanent resident of the United States, as defined in section 101(a)(20) of the Immigration and Nationality Act (8 U.S.C. 1101); or
3. An individual who is: (i) in lawful nonimmigrant status and possesses valid evidence of unrestricted employment authorization; or (ii) a refugee admitted under 8 U.S.C. 1157 and possesses valid evidence of unrestricted employment authorization; or (iii) an alien granted asylum under 8 U.S.C. 1158, and possesses valid evidence of unrestricted employment authorization.”⁵¹

Also, those with the following convictions will be disallowed a *TWIC* card (*CFR 1572.103*):⁵²

1. Espionage or conspiracy to commit espionage
2. Sedition or conspiracy to commit sedition
3. Treason or conspiracy to commit treason
4. A federal crime of terrorism (*18 U.S.C. 2332(g)*) or comparable State law
5. A crime involving a *TSI* (*transportation security incident*). Note: A transportation security incident is a security incident resulting in a significant loss of life, environmental damage, transportation system disruption, or economic disruption in a particular area. The term "economic disruption" does not include a work stoppage or other employee-related action not related to terrorism and resulting from an employer-employee dispute.
6. Improper transportation of a hazardous material under 49 U.S.C. 5124 or a comparable state law

⁵⁰ Transportation Worker Identification Credential (*TWIC*) Implementation in the Maritime Sector; Department Of Homeland Security, Transportation Security Administration, United States Coast Guard, 2006, p. 18.

⁵¹ Code of Federal Regulations, Chapter XII, (10-1-06 Edition) p 396.

⁵² *TWIC* Enrollment Port Brief, Lockheed Martin and Deloitte Consulting LLP, June 6, 2007, p.11-12.

7. Unlawful possession, use, sale, distribution, manufacture, purchase...or dealing in an explosive or explosive device
8. Murder
9. Threat or maliciously conveying false information knowing the same to be false, concerning the deliverance, placement, or detonation of an explosive or other lethal device in or against a place of public use, a state or government facility, a public transportation system, or an infrastructure facility
10. Certain Racketeer Influenced and Corrupt Organizations Act violations where one of the predicate acts consists of one of the permanently disqualifying crimes
11. Attempt to commit the crimes in items (1)-(4)
12. Conspiracy or attempt to commit the crimes in items (5)-(10)
13. Convictions for (1)-(4) are not eligible for a waiver

Also denied would be those convicted within 7 years, or released from incarceration within 5 years or indicted or with wants or warrants associated with:

1. Unlawful possession, use, sale, manufacture, purchase, distribution or dealing in a firearm or other weapon
2. Extortion
3. Dishonesty, fraud, or misrepresentation, including identity fraud and money laundering (*except welfare fraud and passing bad checks*)
4. Bribery
5. Smuggling
6. Immigration violations
7. Distribution, possession w/intent to distribute or importation of a controlled substance
8. Arson
9. Kidnapping or hostage taking
10. Rape or aggravated sexual abuse
11. Assault with intent to kill
12. Robbery
13. Fraudulent entry into a seaport
14. Lesser violations of the RICO (*Racketeer Influenced and Corrupt Organizations*) Act
15. Conspiracy or attempt to commit crimes listed on this page

Driver Survey Reaction When the TWIC program is instituted, it will lead to some reduction in the supply of drivers and hence the trucks available for port drayage. A first cut of this impact can be estimated from CGR's Port Truck survey that was conducted for this report.⁵³

Altogether, 409 drivers were surveyed orally, mostly in Spanish. They were interviewed in line sitting in their trucks, at food trucks or at terminal operators' check-in/check-out areas. Surveys were administered at lunch (46.7%), in the evening (49.1%) and in the morning (4.2%). Two Port of Los Angeles terminals were used (*Evergreen & China*

⁵³ See Appendix A for the survey methodology and complete results.

Shipping) for 221 of the surveys or 54.0%. In 2006, the port accounted for 53.7% of the San Pedro Bay TEUs. Two Long Beach terminals accounted for 188 surveys (*California United Terminal & Long Beach Container Terminal*) or 46.0%. In 2006, the port accounted for 46.3% of the 2006 TEUs. While total randomness was impossible, it is important to note that CGR results were consistent with the 2006 survey work by Dr. Kristen Monaco of California State University (CSU) Long Beach (*Dr. Monaco*):⁵⁴

- Mean and median age (39 *Dr. Monaco*; 42 *CGR*)
- Mean years driving (8.7 *Dr. Monaco*; 8.6 *CGR*)
- Mean truck year (1995 *Dr. Monaco*; 1995 *CGR*)
- Median truck year (1996 *Dr. Monaco*; 1996 *CGR*)
- Share of employee drivers (17% *Dr. Monaco*; 15% *CGR*)
- Interviewee rejection rate (35% *Dr. Monaco, 2004*; 27% *CGR*)

For the TWIC portion of this analysis, the key question on the Port Truck survey was:

“The federal government Department of Homeland Security will soon require a Transportation Worker Identification Certificate “TWIC” card for everyone who enters a port. This card will be required to enter a port and pick up or drop off a container. To receive a TWIC card, you must be either a US citizen, or have a green card, or a legal work permit, and pass a security test **AND** you must not have any felony (*serious crime*) convictions within 7 years or prison time within 5 years. Given these conditions to obtain the TWIC card, how likely are you to apply for one?”

Surveys Completed: 409

YES: **234 (57.2%)** I will definitely apply
MAYBE: **85 (20.8%)** I may or may not apply
NO: : **90 (22.0%)** I definitely will not apply

If the “Maybe” responses were distributed in the same proportion as the “Yes” or “No” answers, the shares would have been:

YES: **295 (72.2%)**
NO: : **114 (27.8%)**

CGR interviewed the surveying interviewers to understand the unwritten strength of the reactions that were given in answering this question. The interviewers said that those who answered either “Yes” or “No” on whether they would apply for a TWIC card were firm in their responses. The hesitant ones ranked themselves in the “Maybe” category. It is also important to note that to the extent the survey was random, it gives heavier weight to drivers who go through the gates frequently versus those who do so less often. This is an important consideration when considering the impact of TWIC on the ability of the ports to handle future cargo volumes.

LMC Views. The research for this analysis also involved interviewing nearly 70 companies most of which were LMCs. They ranged in size to several with under five trucks to the largest,

⁵⁴ Incentivizing Truck Retrofitting in Port Drayage, A Study of Drivers at the Ports of Los Angeles & Long Beach, Kristen Monaco, Ph.D., CA State University Long Beach, January 2007 p. 18 and powerpoint p. 4.

Cal Cartage, with nearly 1,000 trucks. In the course of these sessions, the firms were asked what share of their IOOs they expected to lose as a result of TWIC. Most indicated that they anticipated losing 10% or less of their own IOOs but expected the sector to lose from **0% to 20%**, with most estimating about 15%. Interestingly, almost all were of the opinion that someone else's firm would lose the bulk of these people.

There appear to be two main reasons why the LMCs expect the driver loss rates from TWIC to be lower than was found in the driver's survey. In part, it is due to a belief in their own drivers because they know them. In part, it is because an IOO must have Class "A" license. To get one, they must present social security and residency documentation to the California Department of Motor Vehicles (DMV).⁵⁵ In recent years, DMV has tightened the documentation process and the LMCs seem to believe that this has likely weeded out most of the industry's undocumented workers. However, they acknowledge that there are likely LMCs whose IOOs have not been as carefully checked as their own.

Meanwhile, several LMCs acknowledged a lack of understanding about the potential impact of the TWIC law's numerous felony provisions. Those requirements go far beyond those required to gain a Class "A" driver's license. For that reason, they recognize that there are an unknown number of IOOs who might not be able to get a TWIC card. This appears to be the main reason for the range of **0% to 20%**.

Florida's Experience. Today, one state has a port access process similar to TWIC. Specifically:

Section 311.125, F.S., requires public, active Florida ports to use a Uniform Port Access Credential card (FUPAC) to control port access and enhance port security. This section of statute further requires that the system be designed to conform, as closely as possible, to criteria established by the United States Transportation Security Administration for a Transportation Worker Identification Card (TWIC).⁵⁶

Apparently, "Florida has credentialed over 100,000 port workers throughout the state. This means that the FBI and [Florida Department of Law Enforcement] have conducted extensive background checks."⁵⁷ This process is not a centralized one and there are no public data on the number of people rejected by the processes. However, rejections are reported to the Florida Department of Law Enforcement. According to Nevin Smith of that agency, "hundreds have been rejected for jobs since early 2001 because of criminal pasts."⁵⁸ Calls to the Port of Miami found that for that single facility, 292 of 37,236 or 1% of people who applied for FUPAC cards were rejected.⁵⁹ Most of these were in the program's first year. Since that time, few have been rejected as unqualified workers know better than to apply. The Florida experience is helpful in showing the share of people rejected by the system. It does not, however, provide any insight regarding the greater question of workers who chose not to apply for port access.

⁵⁵ Driver License and Identification (ID) card Information, CA DMV http://www.dmv.ca.gov/dl/dl_info.htm
Requirement includes social security card plus birth date verification and legal presence in the U.S. requirements.

⁵⁶ Project Number 2008-378, Florida Senate Interim Work Plan 2008 Session.

⁵⁷ Congressional Record, U.S. Rep. Kathy Castor, quoted in June 2007 Report of Florida Legislative Committee on Intergovernmental Relations.

⁵⁸ Job Cuts Feared Over Port Security ID, NewsMax.com Wires Friday, April 21, 2006.

⁵⁹ Interview with James Maes, Assistant Director for Security, Port of Miami, (305) 215-9804.

Other Reports. There has been a lot written about the TWIC program in the news media. Often these views have been alarmist. Thus, the Wall Street Journal reported that:

Unauthorized workers often carry false Social Security numbers or work under the names of others. But bosses at the area's dozens of trucking companies say they're not in the position to verify whether documents provided by employment-seeking immigrants are authentic. Such undocumented drivers account for as many as half of the port-trucking work force nationwide, estimates Michael H. Belzer, professor of industrial relations at Wayne State University. By comparison, more than 50 percent of crop workers are undocumented, according to the U.S. Labor Department.⁶⁰ [*underlining added*]

After a briefing on TWIC in Alabama, the state's Press Register reported that:

"It has to do with our labor force and potential reduction of our labor force simply because of the cost of the card, the time it takes to get a card, and the qualifications for people to get a card," said Michael Douglas, managing partner at Premier Bulk Stevedoring LLC ... There was nothing definitive, other than sitting and waiting on the inevitable," he said. "I could see my workforce being reduced by 30 percent to 40 percent for people who don't qualify or don't want to pay \$140 for a work card." [*underlining added*]

In 2006, ABC News reported that:

"The Department of Homeland Security recently investigated the New York and New Jersey ports, and found stunning gaps in security. The new DHS report, obtained by ABC News, shows that of the 9,000 truckers checked, nearly half had evidence of criminal records. More than 500 held bogus driver's licenses, leaving officials unsure of their real identities."⁶¹ [*underlining added*]

Meanwhile, TSA has estimated that in its first year of implementation, the agency's HAZMAT regulation could mean a 20% reduction in the pool of qualified HAZMAT drivers.⁶² Significantly, the qualifications for a HAZMAT driver's license endorsement are very similar to those required by TWIC.⁶³ Also, in March 2006, the Pew Research Center Project issued a report on undocumented workers. It found that 8% or 576,000 were employed in the transportation and material handling sector where they represented 7% of all workers.⁶⁴

TWIC Driver Losses. Given this review of what is known and unknown about the impact of TWIC, it is clear that this report must tread carefully when deciding upon the program's likely impact on the loss of drivers and trucks on the drayage industry at the ports of Los Angeles and Long Beach. The following assumption is therefore made:

⁶⁰ Port security plan could slow deliveries, thin ranks of low-wage workers, Wall Street Journal October 17, 2006.

⁶¹ Criminal Records, Bogus Licenses Among Truckers at Key U.S. Port, Thousands of Port Truckers Go Unscreened, Yet Many Have Criminal Records, ABC News, March 7, 2006.

⁶² The U.S. Truck Driver Shortage, Analysis and Forecast, Global Insight, May 2005, p.33.

⁶³ Security Threat Assessment for Individuals Applying for a Hazardous Materials Endorsement for a Commercial Drivers License; Final Rule, Federal Register, May 5, 2003.

⁶⁴ The Size and Characteristics of the Unauthorized Migrant Population in the U.S., 2005, Pew Research Center Project, Pew Hispanic Center, March 7, 2006, p. 10-11.

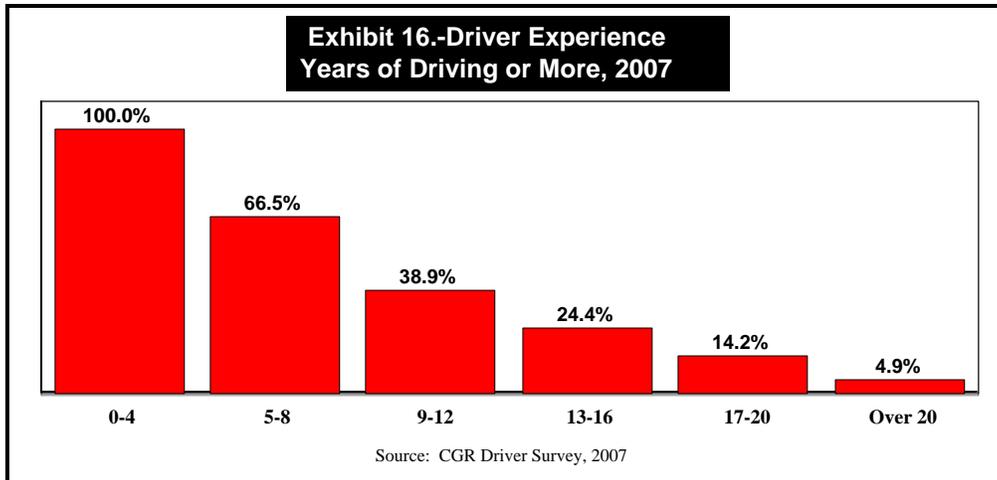
Given the driver's survey result that 22.0% indicated that "I will definitely not apply," and the belief by most of the LMCs that their own losses would be under 10% but that the industry's losses would be higher, the assumption here will be a loss from 15% to 22% of the current drivers most frequently arriving at the ports.

The rationale behind using the upper limit of 22.0% was as follows:

- The driver's survey methodology was consistent with that of Dr. Kristen Monaco and is valid in terms of giving a good picture of port drivers. Also, the survey was heavily weighted in favor of those drivers most frequently coming to the ports since on a random basis they were the most likely to be in line and thus included in the survey.
- The interview with the interviewers found that they felt that the 22.0% of drivers indicating they would definitely not apply was a strongly held opinion. No reasons for not applying were given. Speculation could run from understanding that their own prior legal issues would prevent them being approved for a TWIC's card, to concern that the documentation they had previously used to obtain driving licenses may be questioned. In these cases, the driver's position would likely not change when the reality of the program occurs.

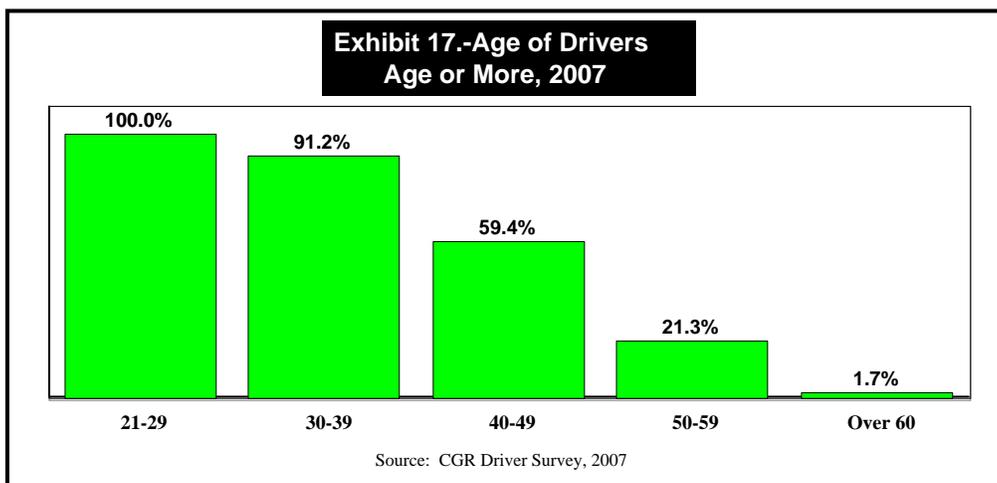
On the other hand, the negative reaction could simply have been one of not wanting to have "Big Brother" looking over their shoulders. Truckers, after all, are a notoriously independent group. In that case, when TWICs becomes required, economic necessity may cause them to reconsider.

- There are three rationales for not going up to the 27.8% that would include an allocation of the "Maybes." These drivers were unsure. Though some will no doubt break to the "No" side with more information, not including them allows room for error for drivers who said "No" but might reconsider once the reality of the program sets in.
- The very aggressive assessments of the TWIC impact found in the news are worrisome. The first two of the three reports cited appear based more upon speculation than hard evidence. However, the situation found by Homeland Security in New York-New Jersey appears to be based upon solid evidence about truck driver arrest histories. It gives rise to speculation that independent trucking is one sector of the economy where people with arrest records can find good jobs. However, TWIC would bar them from port drayage.
- The TSA's belief that its HAZMAT regulation would eliminate 20% of drivers is also a reason for using this upper limit.



The rationale behind using the lower limit of 15.0% was as follows:

- The average drayage driver has been driving for 8.6 years according to the CGR trucker survey. More importantly, the survey found 66.5% have been driving for five or more years (*Exhibit 16*). They are thus not new to the drayage industry. In addition, the drivers are not young. Their average age is 41.6 years old. Again, more importantly, 91.2% are 30 years or older and 59.7% are over 40 years of age (*Exhibit 17*).



These facts mean that the vast majority of the drivers have been licensed and have undergone license renewals for a considerable length of time. They are believed by their LMCs to be unlikely to run into issues of legal documentation. It also means that, in many cases, there have been long term relationships between the IOOs and the LMCs for whom they work. These facts are the reasons why the LMCs appear to believe that their drivers will be able to qualify for TWIC cards.

- Despite having those facts in evidence, the reason for using 15.0% as the lower limit, and not a lower figure, are threefold:
 - Criminal records have not barred some drivers from being licensed but would eliminate them from port drayage.

- TSA is of the belief that its very similar HAZMAT program will eliminate 20% of drivers.
- The Pew study that found 7% of trucking and material handling jobs are held by undocumented workers.

Using the 15% to 22% range, the significance of the implementation of TWIC can be estimated for the port drayage industry. Currently, there are roughly 16,800 trucks that the ports find passing through the gates on a frequent or semi-frequent base to haul containers. It is these trucks that the ports particularly wish to see replaced or retrofitted to 2007 standards. The calculations of the potential environmental and health benefits of the Clean Truck Program are based upon the ability of the program to do so. However, if TWIC knocks out 15% to 22% of these drivers, assuming they keep their trucks, the impact would be to lose 2,520 to 3,696 vehicles from the program:

- $16,800 \times 15\% = \underline{2,520}$ to $16,800 \times 22\% = \underline{3,696}$

Here, there would be two effects:

- To meet its goals, the ports would have to find a way to clean up roughly 2,500 to 3,700 other trucks that are impacting the air basin managed by the SCAQMD.
- With no increase in efficiency, the industry would have to replace these trucks and drivers to continue moving the same volume of containers through the ports.

Replacing Trucks. With some trucks diverted to non-drayage work because their owners either do not qualify for TWIC cards, or opted out of applying for them, the ports would need to find and clean-up 2,520 to 3,696 other trucks, not currently used in frequent or semi-frequent port drayage. Some could come from IOOs that are currently infrequently serving the ports. Others might be owned by drivers who might choose to start serving the ports. In either case, this would lead to the same net clear air effect on the basin and the harbor area. It would, however, appear to require some rethinking of the rules under which trucks would be eligible for subsidized replacement or retrofitting.

Replacing Drivers. A more difficult issue would appear to be that of replacing the drivers who frequently or semi-frequently serve the ports and would be lost due to the implementation of the TWIC program. Here, the relative pay of employee drivers in Southern California's various counties, as well as the relationship between the pay of employee drivers and IOOs, is relevant.

Exhibit 18.- Median Employee Pay, Six So. California Counties Truck Drivers, Heavy or Tractor Trailer, 1st Qtr. 2007				
County	Median Income	LA County Above/ Below	Employee Drivers	Driver Share
Los Angeles	\$36,858		31,800	43.5%
Orange	\$39,021	-5.5%	8,450	11.6%
Ventura	\$37,752	-2.4%	3,000	4.1%
San Diego	\$40,830	-9.7%	6,750	9.2%
Inland Empire	\$40,206	-8.3%	23,090	31.6%
So. Calif. (6-Counties)	\$38,569	-4.4%	73,090	100.0%
Non-LA County	\$39,887	-7.6%		

		IOO Above/Below 6-County Median		
IOOs – Dr. Monaco ¹	\$37,098	-3.8%		
IOOs - CGR ¹	\$29,000	-24.8%		

(1) IOO data for Monaco was for 2006. It was increased 1.5% for 2007 estimates.

Source: CA Employment Development Department Occupation Employment Survey, 2007; CGR Management Consultants; Kristen Monaco, Ph.D. CSU Long Beach

In examining these issues, the best available data on employee-driver pay scales is from the California Employment Department (*EDD*) through its Occupational Employment Survey (*OES*). For first quarter 2007, *EDD* found that there were 73,090 workers in the Southern California region's six major counties (*Los Angeles, Orange, San Diego, Riverside, San Bernardino, Ventura*) working in *OES* category 533032: Truck Drivers Heavy or Tractor Trailer. These drivers earn wages and salaries. IOOs are not included (*Exhibit 18*).

EDD: Employee-Driver Pay. As a group, the median pay of heavy truck drivers in Southern California (*one-half above/one-half below*) was \$38,569 based upon a 40 hour workweek, 52 weeks a year. By county, Los Angeles had the largest number of drivers (31,800; 43.5%) and the lowest median (\$36,858) pay. The Inland Empire had the second largest number of drivers (23,090; 31.6%) and the second highest median (\$40,206) pay, just under San Diego County (\$40,830). Looking only at firms not in Los Angeles County, their median pay was \$39,887.

Using the median, Los Angeles County's employee-drivers earn 2.4% to 9.7% *less* than drivers in the suburban counties. It is likely that the trucking firms in the county are more heavily involved in short haul work than firms located in the suburban counties. This is the case given the fact that the ports of Los Angeles and Long Beach are in the county as is 989 million square feet (54.8% of Southern California's 1,803 million square feet) of mostly older industrial space to which goods are often brought. The same is also true due to its several intermodal rail yards. In addition, the county is centrally located with regards to the region's consumer and other markets.

On the other hand, it seems likely that the higher pay that exists in the suburban counties is occurring because as a share of their trucking sectors, firms in those areas are proportionately more involved in long haul work. This would be most likely in relatively higher paying Inland Empire which contains 377 million square feet of relatively new distribution space (20.9% of Southern California total) and is the location of the passes in and out of Southern California (*Cajon: I-15 & San Geronio: I-10*). Note: Los Angeles County and the Inland Empire represent 75.7% of the industrial space in Southern California and have 75.1% of the heavy truck employee-drivers.

Surveys: IOO Pay. Meanwhile, as indicated in early 2007, CGR Management Consultants and Dr. Kristen Monaco of CSU Long Beach issued reports that estimated the net income of IOOs:

- Dr. Monaco surveyed drivers as they entered the port gates and found that 2006 median net pay was \$36,550.⁶⁵ She also found that pay had risen 1.5% per annum from 2003-2006. Applying that rate to her 2006 pay levels yielded a 2007 estimated median of \$37,098. Using that figure, and the fact that Dr. Monaco found that the

⁶⁵ Incentivizing Truck Retrofitting in Port Drayage: A Study of Drivers at the Ports of Los Angeles and Long Beach, Kristen Monaco, Ph.D., Department of Economics, California State University Long Beach, January 2007, p. 23.

IOOs she interviewed worked an average of 60 hours per week, 50 weeks a year, the median hourly pay was calculated at **\$12.37**.⁶⁶ As entrepreneurs, these drivers do not have paid vacation, employer paid social security, employer paid workers compensation insurance or health insurance.

- CGR interviewed drivers in early 2007 and partially verified their data with tax returns. They found a 2007 median income of \$29,000. The lower annual pay levels appear to be explained by the fact that the drivers cited an average workweek of 50 hours versus 60 hours for Dr. Monaco.⁶⁷ This difference may be accounted for by the fact that they were interviewed at LMC locations and may have been short haul drivers waiting to be sent for loads. Using the 50 hour workweek, CGR found the IOOs median hourly earnings of **\$11.60**. Again, as self-employed workers, they do not have paid vacation, employer paid social security, workers compensation or health insurance. Note: For drivers recording 35,000 or more miles, the CGR work found that 14.1% earned \$40,000 to \$75,000. For these IOOs, average compensation is \$16 to \$30 per hour.

Net IOO Income To Draw Replacement Drivers. With this background, it is possible to comment about the potential for replacing the loss of port drivers due to TWIC through various sources. There would appear to be four potential sources of new drivers:

1. IOOs not involved in port drayage

One potential source of new port drayage drivers would be IOOs located in Southern California that are not currently involved in port drayage. Here, non-employer firms in NAICS code 484 (*truck transportation*) are the relevant companies (*IOOs*). Primarily, they were identified by the U.S. Census Bureau using Schedule “C” tax filings with the U.S. Internal Revenue Service.⁶⁸ According to the Census Bureau, there were 37,194 such IOOs in Southern California during 2005 (*Exhibit 19*).⁶⁹ Of these IOOs, 91.6% were located in either Los Angeles County (22,897; 61.6%) and the Inland Empire (11,174; 30.0%).

**Exhibit 19.-Estimated Hourly Rates, 2005 to 1st Qtr. 2007
Non-Employer Trucking Firms, Southern California**

Market	Firms	Total Revenue	Average Gross Revenue	Estimated Net Revenue	Estimate Hourly Rate2005	Estimated Hourly Rate 1Q2007	2003-2005 Rate
Los Angeles County	22,897	\$1,857,664,000	\$81,131	\$31,409	\$12.56	\$13.83	8.00%
Orange County	2,497	\$228,418,000	\$91,477	\$35,414	\$14.17	\$15.27	6.17%
San Diego County	2,256	\$210,470,000	\$93,293	\$36,117	\$14.45	\$15.92	8.08%

⁶⁶ Monaco, p. 19.

⁶⁷ A Survey of Drayage Drivers Serving the San Pedro Ports, CGR Management Consultants LLC, March 26, 2007. Available at <http://www.gatewaycog.org/publications>, p. 24 at <http://www.gatewaycog.org/publications>.

⁶⁸ Non-employer Statistics data originate from administrative records of the Internal Revenue Service (IRS). Data are primarily comprised of sole proprietorship businesses filing IRS Form 1040, Schedule C, although some of the data is derived from filers of partnership and corporation tax returns that report no paid employees. These data undergo complex processing, editing, and analytical review at the Census Bureau to distinguish non-employers from employers, correct and complete data item.

⁶⁹ Non-employer Statistics, 2005 transportation and warehousing Census Bureau, for Southern California’s counties. <http://www.census.gov/epcd/nonemployer/>

Ventura County	626	\$59,727,000	\$95,411	\$36,937	\$14.77	\$16.25	7.91%
Inland Empire	11,174	\$1,194,530,000	\$106,903	\$41,386	\$16.55	\$18.09	7.37%
Southern California	37,194	\$3,340,339,000	\$89,809	\$34,768	\$13.91	\$15.32	8.07%

Source: Non-employer Statistics, 2005 Transportation & Warehousing, NAICS 484 Truck Transportation, U.S. Census Bureau

The 2005 gross revenues for these IOOs averaged \$89,809. Using the 38.7% ratio of median gross income to median gross revenues for IOOs found by CGR in their 2007 study,⁷⁰ it is estimated that these IOOs had net revenues of \$34,768 in 2005. Assuming 50 hours per week for 50 weeks of work, the estimated hourly rate was \$13.91 in 2005. Based upon the rate of increase found in revenues found by the Census Bureau of 8.07%, the first quarter 2007 rate is an estimated \$15.32.

Many of these IOOs are likely to be currently serving the ports of Los Angeles and Long Beach. That is probably the reason that the estimated hourly rate in Los Angeles County, \$13.83, was much less than the rate in the suburban counties. For instance, in the Inland Empire, where the second largest share of these firms is located, the estimated rate was \$18.09 or 30.8% higher.

To lure some of these IOOs into port drayage, it must be assumed that their pay would have to be sufficiently above their current earnings to make a change worthwhile. Given the very blue collar nature of the Inland Empire's economy, and the fact that it has the second largest number of IOOs, it would be the most likely source for drawing the bulk of such additional firms.

Analysis: If a firm in the Inland Empire could earn a net of \$5,000 more in port drayage than its current business, that would seem like a sufficient incentive to make a change. Such a boost would require an average 2007 net income increase of 11% from \$45,233 (*50 hours a week, 50 weeks a year at \$15.32*) to \$50,208. This would represent an hourly net of \$20.08. A rate of that magnitude or higher would appear needed to cause inland based IOOs to consider port drayage work.

2. Los Angeles County employee-drivers

If port drayage firms are to lure drivers performing other functions in Los Angeles County, they must tap into a pool of some 31,800 heavy truck employee-drivers working in that area. As indicated, by comparison to drivers in other Southern California counties, those in Los Angeles County make less money. This would appear to indicate that many are already working in some form of short haul trucking. Their hourly compensation can be derived as follows:

- With the median at \$36,858, the hourly rate being paid to these drivers was \$17.72 per hour based upon the 40 hours a week, 52 weeks a year used by EDD's in its calculations (*2080 hours*). This can be assumed to be 2000 hours of work (*40 hours x 50 weeks*) and 80 hours of paid vacation (*40 hours x 2 weeks*). **Vacation pay** is thus worth \$0.68 per hour.
- In 2007, employers must pay half of the **social security tax** for their employees or 7.65% on income up to \$92,000. That represents \$1.36 per hour based upon the median pay of \$17.72.

⁷⁰ A Survey of Drayage Drivers Serving the San Pedro Ports, CGR Management Consultants LLC, March 26, 2007. Available at <http://www.gatewaycog.org/publications>, p. 24.

- Employers must pay California **state disability insurance (SDI)** and **unemployment insurance including a workforce investment board** rate. The SDI rate is 0.6%. For the median rate of \$17.72 per hour, that amounts to \$0.11 per hour. The combined unemployment insurance and WIB rate is 3.6% to a maximum of \$7,000 or an average of \$0.12 per hour for 2,080 hours a year.
- Employers must also pay **workers compensation insurance**. The 2007 rate assumed here is \$8.63 per \$100 of payroll. That is a modest rate for truckers (*job code 7219*) quoted by Hartford Insurance Co. of the Midwest and picked from a wide array of rates identified by the California Department of Insurance.⁷¹ That rate represents \$1.53 per hour based upon the \$17.72 median pay.
- Also, drivers are likely to receive some **medical insurance**. According to the 2007 Health Benefits Survey by Kaiser Family Foundation, 64% of companies with three to 199 employees that provide health insurance do so through Preferred Provider Organization coverage (*PPO*).⁷² In addition, 75% use plans that require an employee to make a contribution.⁷³ To cover a single person, the 2007 PPO rate had an average cost of \$4,505 per year with the employees typically paying \$491 (10.97%) and employer paying \$4,014 (89.1%). This benefit would be worth \$1.93 per hour based on 2,080 hours per year.

Combining the \$17.72 median hourly rate with vacation pay, employer's social security contribution, SDI, unemployment & WIB, workers compensation insurance and health benefits would mean that the average heavy duty truck driver in Los Angeles County is effectively earning median pay of **\$22.76** an hour. This breaks down to \$17.72 per hour, full pay for two weeks of vacation, plus \$5.04 in benefits. The full package is worth almost double exactly the **\$11.01 to \$11.60** an hour that Dr. Monaco and CGR found in interviewing IOOs.

Analysis: If the workers estimated to be lost to the ports from the introduction of TWIC are to be replaced, some drivers will likely have to be lured away from other heavy truck driving functions in Los Angeles County. At the median, these workers are earning roughly double what those serving the ports are making. Since 50% of workers earn less than the median of \$17.72 per hour plus \$5.04 in benefits (**\$22.76**), a rate sufficient to lure them into port drayage would be necessary.

According to EDD, the bottom 25% of the Los Angeles County's heavy truck drivers (7,900) earn \$15.17 per hour or less. That would put the bottom 37.5% (11,925) earning an estimated **\$16.45** per hour or less. Using calculations similar to those above, that rate would be worth **\$21.27** per hour to a worker including \$4.83 in benefits. That combined package should be sufficient to lure some of the 11,925 workers making *less than* that into port drayage from the county's general trucking industry. At 40 hours a week, 52 weeks a year, their annual pay would be \$34,306, sufficient for a household with a part time second wage earner to

⁷¹ California Workers' Compensation Rate Comparison, California Department of Insurance, 2007.

⁷² Among Firms Offering Health Benefits, Percentage of Covered Workers in Firms Offering the Following Plan Types, by Firm Size, 2006, Health Benefits Survey, Kaiser Family Foundation, Exhibit 4-4, p. 53.

⁷³ Average Annual Premiums for Covered Workers for Single Coverage, by Plan Type and Firm Size, 2006, Health Benefits Survey, Kaiser Family Foundation, Exhibit 6-4, p. 63.

reach the middle class income threshold for a family (\$40,000 to \$60,000). The full package would be \$44,246 in salary and benefits.

3. Long haul drivers who might be willing to convert to port drayage work

If port drayage firms are to lure drivers from the other major trucking market, the Inland Empire, they must tap into a pool of some 23,090 heavy truck employee-drivers working in that area. As indicated, by comparison to drivers in Los Angeles County, these drivers make more money. This could mean that many are involved in long haul trucking since, as stated, the two main routes through the mountains and into Southern California are located in the area. Their hourly compensation can be derived as follows:

- With the median at \$40,206, the hourly rate being paid to these drivers was \$19.33 per hour based upon the 40 hours a week, 52 weeks a year used by EDD (2080 hours). That was \$1.61 per hour or 9.1% more than pay in Los Angeles County (\$17.72). Again, this can be assumed to be 2,000 hours of work (40 hours x 50 weeks) and 80 hours of paid vacation (40 hours x 2 weeks). **Vacation pay** is thus worth \$0.74 per hour.
- In 2007, the employer paid **social security tax** at 7.65% represents \$1.48 per hour based upon the median pay of \$19.33.
- The employer must pay California **SDI** at 0.6%. For the median rate of \$19.33 per hour, that amounts to \$0.12 per hour. The combined **unemployment insurance and WIB** rate is 3.6% to a maximum of \$7,000 or an average of \$0.12 per hour for 2,080 hours a year.
- Using the same **workers compensation insurance rate** of \$8.63 per \$100 of payroll cited earlier, the benefit is worth \$1.67 per hour based upon the \$19.33 median pay.
- Allowing for the same **medical insurance** benefit discussed earlier with the employer paying \$4,014 for 89.1% of the cost of a PPO plan, the benefit would be worth \$1.93 per hour at 2,080 hours per year.

Combining the \$19.33 median hourly rate with vacation pay, employer's social security contribution, SDI, unemployment & WIB, workers compensation insurance and health benefits would mean that the average heavy duty truck driver in the Inland Empire is effectively earning median pay of **\$24.64** an hour. This breaks down to \$19.33 per hour, full pay for two weeks of vacation, plus \$5.31 in benefits. The full package is worth 8.3% more than the Los Angeles County combined rate of \$22.76. It is also well over double the **\$11.01 to \$11.60** an hour that Dr. Monaco and CGR found in their surveys.

Analysis: If the workers estimated to be lost to the ports from the introduction of TWIC are to be replaced, some drivers will likely have to be lured away from other heavy truck driving functions in the Inland Empire. At the median, these workers are earning well over double what those serving the ports are making. Since 50% of workers earn less than the median of \$19.33 per hour plus \$5.35 in benefits (\$24.68), a rate sufficient to lure some into port drayage would be necessary.

According to EDD, the bottom 25% of the Inland Empire's heavy truck drivers (5,773) earn \$15.96 per hour or less. That would put the bottom 37.5% (8,656) earning an estimated **\$17.65 or less**. Using calculations similar to those above,

that rate would be worth **\$22.67** per hour to a worker including \$5.03 in benefits. That combined package should be sufficient to lure some of the 8,656 workers making *less than* that into port drayage from the inland region's general trucking industry. At 40 hours a week, 52 weeks a year, their annual pay would be \$36,702, again sufficient for a household with a part time second wage earner to reach the middle class income threshold for a family (\$40,000 to \$60,000). The full package would be \$47,163 in salary and benefits.

4. Construction worker who might be willing to convert to port drayage work

It could be that port drayage firms will have to lure workers from other segments of the economy to make up for those estimated to be lost because of TWIC. Generally, it is felt that workers in the construction industry are the most logical ones to approach given their blue collar orientation and educational levels.⁷⁴ In Southern California, EDD estimated that there were 442,060 workers in construction occupations in first quarter 2007. Their hourly compensation can be derived as follows:

- The median hourly rate being paid to these workers was \$20.16 per hour based upon the 40 hours a week, 52 weeks a year used by EDD (2080 hours). This can be assumed to be 2000 hours of work (40 hours x 50 weeks) and 80 hours of paid vacation (40 hours x 2 weeks). **Vacation pay** is thus worth \$0.78 per hour.
- In 2007, the employer paid **social security tax** at 7.65% represents \$1.54 per hour based upon the median pay of \$20.16.
- The employer must pay California **SDI** at 0.6%. For the median rate of \$20.16 per hour, that amounts to \$0.12 per hour. The combined **unemployment insurance and WIB** rate is 3.6% to a maximum of \$7,000 or an average of \$0.12 per hour for 2,080 hours a year.
- Using an average **workers compensation insurance rate** for construction of \$6.50 per \$100 of payroll cited earlier, the benefit is worth \$1.31 per hour based upon the \$20.16 median pay.
- Allowing for the same **medical insurance** benefit discussed earlier with the employer paying \$4,014 for 89.1% of the cost of a PPO plan, the benefit would be worth \$1.93 per hour at 2,080 hours per year.

Combining the \$20.16 median hourly rate with vacation pay, employer's social security contribution, SDI, unemployment & WIB, workers compensation insurance and health benefits would mean that the average construction worker in Southern California is effectively earning median pay of \$25.18 an hour. This breaks down to \$20.16 per hour, full pay for two weeks of vacation, plus \$5.02 in benefits. This pay is also well over double the **\$11.01 to \$11.60** an hour that Dr. Monaco and CGR found in interviewing IOOs.

Analysis: If the workers estimated to be lost to the ports from the introduction of TWIC are to be replaced, some workers will likely have to be lured away from other occupations, with construction firms being the likely target. At the median, these workers are earning well over double what those serving the ports are making.

⁷⁴ The U.S. Truck Driver Shortage: Analysis and Forecast, Global Insight, May 2005, p. 30.

Since 50% of workers earn less than the median of \$20.16 per hour plus \$5.02 in benefits (\$25.18), a rate sufficient to lure some of them into port drayage would be necessary.

According to EDD, the bottom 25% of the Southern California's construction workers (110,515) earn \$14.50 per hour or less. That would put the bottom 37.5% (165,773) earning an estimated **\$17.33 or less**. Using calculations similar to those above, that rate would be worth **\$21.94** per hour to a worker including \$4.61 in benefits. That combined package should be sufficient to lure some of the 165,773 workers making *less than* that into port drayage from the Southern California's construction industry. At 40 hours a week, 52 weeks a year, their annual pay would be \$36,047, again sufficient for a household with a part time second wage earner to reach the middle class income threshold for a family (\$40,000 to \$60,000). The full package would be \$45,629 in salary and benefits.

Conclusion. If the TWIC program's criminal background and undocumented worker provisions result in a reduction of between 15% and 22% of the 16,800 drivers currently making frequent or semi-frequent trips through the gates of the ports of Los Angeles and Long Beach, there would be the loss of from 2,520 to 3,696 drivers. There would also be the loss of their trucks:

- The ports would need to find and clean-up 2,520 to 3,696 other trucks, not currently used in frequent or semi-frequent port drayage. This may require some rethinking of the rules under which trucks would be eligible for subsidized replacement or retrofitting.
- The ports would need to find 2,500 to 3,700 drivers. Here, the issue is one of income. Currently, the bulk of the work is being done by IOOs whose 2007 hourly rate has been estimated by Dr. Monaco at **\$12.37** per hour and CGR at **\$11.60** per hour. These drivers do not have paid vacation, employer paid social security, workers compensation or health insurance.
- To replace these drivers, there are essentially four possibilities:
 - In Southern California, there were 39,450 non-employer trucking companies in 2005. In Los Angeles County, where most are likely port drayage IOOs, the estimated 2007 average hourly net income was **\$13.83**. The second largest share was in the Inland Empire where the 2007 rate was estimated at \$18.09. It is the most likely source of additional port drayage IOOs. If an IOO in that area could earn \$5,000 more in port drayage, that would seem a sufficient incentive to shift. The area's average 2007 net income would have to rise about 11% from \$45,233 to \$50,208. This would mean a net rate of **\$20.08 an hour**.
 - In Los Angeles County, there are some 31,800 employee-drivers with many already doing short haul work. Of this group, the bottom 37.5% (11,925 drivers) earn an estimated **\$16.45** per hour or less. They also likely have vacation pay, employer's social security contribution, SDI, unemployment insurance, workers compensation insurance and possibly limited health benefits. The full package is worth **\$22.80 an hour**. Rates in this ballpark will likely be necessary to draw some of these drivers into port drayage work.
 - In the Inland Empire, there are some 23,090 employee-drivers with many likely involved in long haul work. Of this group, the bottom 37.5% (8,659 drivers) earn

an estimated \$17.65 per hour or less. They also likely have vacation pay, employer's social security contribution, SDI, unemployment insurance, workers compensation insurance and possibly limited health benefits. The full package is worth **\$22.71 an hour**. Rates at this level will likely be necessary to draw these drivers into port drayage work.

- In Southern California's construction industry, there are some 442,060 blue collar workers. The trucking industry often looks to them as a potential source of drivers. Of this group, the bottom 37.5% (*165,773 workers*) earn an estimated \$17.33 per hour or less. They also likely have vacation pay, employer's social security contribution, SDI, unemployment insurance, workers compensation insurance and possibly limited health benefits. The full package is worth **\$21.97 an hour**. Rates at this level will likely be necessary to draw some of these workers into port drayage work.

Note: In each case, it would appear that replacing a significant loss of port drayage drivers will require incomes nearly double the roughly **\$11.00-\$12.00 per hour** currently being earned by IOOs without benefits. The rates will have to move up to roughly **\$20 per hour**. As this occurs, the existing IOOs would not work for less than the newer drivers entering the field. The general pay level of all IOOs would thus move up to these higher levels.

This anticipated increase in the labor cost for LMCs again brings two other key elements of the port drayage industry into sharp focus:

- It was shown that the operating costs of LMCs are very high with most seeing 70% of their revenue going to IOOs and 95% or more needed to cover all operating costs.⁷⁵ If the cost of their IOOs goes up 100%, most LMCs must raise their rates or cease to exist.
- However, there is a distinct lack of pricing power for the LMCs vis-à-vis the ocean shipping lines and beneficial cargo owners like the national retailers. To date, this market relationship has kept LMC profits very low and meant that they have essentially seen no price increase for a lengthy period of time.

From these facts, it must be concluded that the port drayage industry is heading for a difficult period. If the LMCs cannot pay more, they will not be able to replace the 2,500 to 3,700 drivers and trucks lost due to TWIC. However, they cannot pay more if they cannot raise their prices. To date, they have shown little ability to do so. The question becomes: how will prices be raised? Here, there appear to be two general scenarios, one likely and one unlikely:

- **Crisis Path.** The most likely path is for a crisis to build as a lack of drivers and trucks due to TWIC means that some containers cannot be moved from the ports in a timely fashion. Retailers will see delivery delays and demand that shipping lines get the cargo to them on time. That will pressure the ocean lines to raise what they are paying to LMCs to get the job done. They will be reluctant to do so since the retailers will be unwilling to pay more for deliveries. The crisis will thus build. Ultimately, the rates paid to LMCs and by them to the IOOs will start to rise but not until a lot of cargo is left unmoved and ill will is created. As store-door contracts come due, some retailers may renegotiate to have the ocean lines only move freight to the ports and use their own

⁷⁵ Based upon LMC survey conducted for this report.

resources or negotiate directly with LMCs to move the containers to their final destination.

- **Downfield Vision.** A less likely path is for the ocean shipping lines, national retailers, and the ports to recognize early on that the loss of drivers due to TWIC will be forcing IOO pay and LMC rates to increase. If the major players wish this to occur outside of a crisis atmosphere, a meeting of minds might begin to be formulated whereby these players, as well as leaders among the LMCs, begin to develop sufficient downfield vision so that as an imminent driver shortage becomes evident, the pay scales to the IOOs and rates to the LMCs can begin to rise. That might eliminate decision making in a crisis context.

Eventually, when prices are raised, the amount will again have important implications for the port drayage sector. LMCs normally see 70% of their revenues passing through to IOOs, and have seen another 25% of their revenues going to other costs, giving them net pre tax profits of 5.0%. When prices rise, three types of scenarios appear likely (*Exhibit 20*):

- CGR’s 2007 survey of IOOs found that that the net income of IOOs was 38.7% of their median income.⁷⁶ The \$29,000 net median income in that study came from a median of \$75,000 in gross income paid to them by their LMCs. That meant IOOs had \$46,000 in operating costs. With LMCs estimated to be paying 70% of their revenues to IOOs, their revenues from clients were \$107,100 per driver. As LMC profits average 5%, they had a pre-tax profit of \$5,400 per IOO, leaving \$26,800 for their non-driver expenses.
- If IOO are to reach \$20 per hour, incomes would be \$50,000 (*50 weeks, 50 hours*) for an equal effort. There operating costs of \$46,000 would not change. This would require that they receive \$96,000 from their LMCs. That implies an increase in LMC revenues to \$137,100 per each IOO, given that 70% is passed on to their drivers. **This would represent a 29.4% price increase.** Raising prices would not increase LMCs non-driver costs of \$26,800, so their pre-tax profit would rise to \$14,400 per driver, a 2.7-fold increase.
- If LMCs were to raise their prices **24.6%**, annual revenue would rise to \$133,500 per driver, the \$101,000 gross income they would need to pay the IOOs to bring their net incomes to \$50,000 would be the same. Their \$26,800 in non-driver costs would also remain the same. That would double their pre-tax profit to \$10,700 per IOO (*5% to 8%*).

Exhibit 20.-Impact of Price Increase Scenarios on LMC Profitability, Per IOO Per Year								
	Current Ratios		29.4% Price Increase IOO Income to \$20/Hr.		24.6% Price Increase To yield Some Extra LMC Profit		24.3% Price Increase Keeps LMC Profit The Same	
To IOOs	\$75,000	70.0%	\$96,000	70.0%	\$96,000	71.9%	\$96,000	74.9%
Non-IOO Costs	\$26,800	25.0%	\$26,800	19.5%	\$26,800	20.1%	\$26,800	20.9%
Pre Tax Margin	\$5,400	5.0%	\$14.4	10.5%	\$10,700	8.0%	\$5,400	4.2%
Total	\$107,100	100.0%	\$137.1	100.0%	\$133,500	100.0%	\$128,100	100.0%

Source: Economics & Politics Inc. & CGR Management Consultants, LLC

⁷⁶ A Survey of Drayage Drivers Serving the San Pedro Ports, CGR Management Consultants LLC, March 26, 2007. Available at <http://www.gatewaycog.org/publications>, p. 24.

- If IOOs were to receive the \$96,000 gross income needed for their net incomes to reach \$50,000, but LMC profits were to stay at \$5,400 per driver, then the LMCs would have to **raise their prices 19.5%**. Annual revenue would then be \$128,100 per IOO. Of that amount: \$96,000 would go to IOOs and \$26,800 to non-driver costs, leaving LMC pre-tax profit unchanged at \$5,400 per driver.

Given the weak profit position of the LMCs today, if they gain any market power, a scenario like the second of these three examples (**24.6% price increase**) would appear to be the minimum acceptable to them. The first would be a tough sell to the ocean shipping lines and beneficial cargo owners. However, the last option would be unacceptable to the LMCs as it would make them nothing more than conduits for channeling money to their IOOs. According to Moffatt & Nichol's data a 24.6% increase would raise port drayage costs from \$150 to \$187 per container for trips near the ports and \$300 to \$373 to the Inland Empire. This fee is still minor compared to the \$2,575 in costs for other portions of a container's journey. These higher costs would represent just 0.05% to 0.1% of the \$70,000 median value of a container's contents.

Transition. Assuming optimistically that LMCs could pass 50% a price increase of this magnitude immediately to their customers in higher prices, but the other 50% only agreed to the increase in equal shares over six months (*8.3% per month*), cash flow difficulties in the transition would impact the LMCs. For an average smaller IOOs, they would have a net cash flow loss of \$126,075 reducing their average owner's equity from \$362,200 to \$236,125. Larger IOOs would have average cash flow losses of \$448,950, reducing their average owner's equity from \$1.77 million to \$1.32 million (*See "Transition" page 72 for calculation's details*).

5. Clean Truck Program: LMC:IOO Model

At its core, the Clean Truck Program of the ports of Los Angeles and Long Beach is a major element of the CAAP. As discussed in the introduction, its central purpose is to significantly reduce the emissions from the Heavy Duty Vehicles that move containers in and out of the ports. It intends to do so, first, by converting or retrofitting the truck drayage fleet to cleaner technologies according to a strict schedule, and second, by ensuring that the fleet is maintained in a manner that keeps it clean.

As requested by the ports, this section of the analysis isolates the impact of the Clean Air Program's clean air provisions from other considerations. It thus examines the impact of converting, retrofitting and maintaining a clean trucking fleet serving the harbors. It delays an in-depth discussion of changes in the business model until Section 6 below.

Goal. In speaking directly about the goal of cleaning-up the Heavy Duty Trucks serving the ports, a portion of the preface to the CAAP announcement by the presidents of the Los Angeles and Long Beach harbor commissions stated:

These trucks produced 10% of Port-related diesel particulate emissions and fully 25% of the NOx emissions. The Ports have identified over 16,000 individual vehicles that make 80% of the trips to and from Port terminals, so cleaning up those vehicles would eliminate a significant portion of Port-related air pollution."⁷⁷

⁷⁷ President's Statements, Final 2006 San Pedro Bay Ports Clean Air Action Plan, Port of Los Angeles, Port of Long Beach, November 20, 2006; complete paragraph on page 5 of this report.

Among the five elements of the Clean Truck Program, portions of three of them called for measures to replace and retrofit those trucks that most often enter the port gates:⁷⁸

- A 5-year program to replace/retrofit to at least the 2007 emission standards for the 16,800 trucks regularly serving the ports
- A program restricting operation of trucks at the ports that do not meet CAAP clean air standards and imposing fees and transportation charges to pay for cleaner trucks. The charges to be imposed on “shippers” not drivers.
- A program to start with infusion of cash from Gateway Cities Program to fund 500 trucks to demonstrate the applicability of new retrofit technologies. The demonstration program is to start in first quarter 2008 with the full 16,800 truck program starting shortly thereafter.

Given these instructions from their commissions, the port staffs drafted a plan to implement the Clean Truck Program. The following are the key elements for cleaning the vehicles:⁷⁹

- Over a 5-year period, concessionaire truck owners will be required to use trucks that meet EPA 2007 or newer standards; or retrofitted trucks manufactured in 1996 or newer; or trucks replaced under the Gateway Cities Truck Modernization Program.
- Concessionaires will scrap and replace the oldest of the 16,800 trucks working in the ports, and retrofit the others with the aid of a port-sponsored grant subsidy. This will occur over a 5-year period, with progressively more recent non-retrofitted trucks barred from the ports until only those meeting the EPA 2007 standard can enter (*Exhibit 16*). During the transition, vehicles not meeting that standard will be required to pay a fee each time they enter the gate.

If the Clean Truck Program is implemented as planned, the ports estimate that it would achieve the following reductions by year #5:⁸⁰

- **Diesel particulate matter** released by port operations would be 184 tons instead of the 966 tons that port growth would have created, a 782 ton reduction or -81%.
- **Oxides of nitrogen** emissions would be 4,041 tons instead of the 41,985 tons the growth would have generated, a 6,228 reduction or -61%.
- **Sulfur oxide** emissions would be seven tons instead of the nine tons that would have come from normal growth trends, a two ton reduction or -22%.

Again, the SCAQMD was thus asked to estimate the economic value of the externalities resulting from eliminating air borne emissions. The estimate ranged from \$4.7 billion to \$5.9 billion largely through the prevention of premature deaths.⁸¹

LMCs Become Concessionaires. In examining the impact of these provisions of the Clean Truck Program, it is assumed that LMCs will be the “concessionaires” held responsible for

⁷⁸ See footnote 6, page 4.

⁷⁹ Explanatory Memorandum, Ports of Los Angeles and Long Beach Proposed Clean Trucks Program, April 2007.

⁸⁰ San Pedro Bay Ports Clean Air Action Plan Technical Report, Tables 6-1, 6-2, 6-3, p. 157.

⁸¹ See discussion, pages 8-9 and Exhibits 3-4.

clean-up of the trucking fleet. For the vehicles moving containers for them, the LMCs are the entities that must:

- Ensure that trucks are replaced or retrofitted to 2007 standards.
- Pay extra fees for trucks entering the port gates that are not up to the 2007 standard during the 5-year transition period.
- Ensure that the trucks are maintained in a manner that keeps them clean once they have been replaced or retrofitted.
- Ensure that devices like RFIDs and AVLS are on the trucks entering the port gates.
- Ensure that all requirements created as part of any grant or loan programs to clean the trucks are fulfilled.

In this section, it assumed that the LMCs will be required to fulfill these obligations whether they own the trucks or not, and whether they employ the people driving them or not. The discussion of requiring LMC ownership of the trucks entering the ports gates and employing their drivers are the changes in the business model that will be examined in Section 6.

Below the five major elements of the Clean Truck Program are described together with commentary on their economic implications.

1. Cleaning Up Heavy Duty Trucks. To initially change the nature of trucking fleet serving the ports, tractors entering the gates will be required to either have engines meeting 2007 on-road standards or trucks with 1996 or newer engines, retrofitted with a California Air Resources Board (CARB) verified level 3 device with at least a 25% NOx reduction.⁸² The ports have specified that the trucks meeting these rules may include:⁸³

- Trucks that meet the U.S. Environmental Protection Agency's (EPA) 2007 and subsequent model year standards for on-road heavy-duty diesel engine emissions.
- Trucks retrofitted with CARB verified diesel emission control strategy (VDECS) devices that achieve 85% or greater DPM reduction and 25% or greater NOx reduction.
- Trucks replaced through the Gateway Cities Truck Modernization Program.

Meanwhile for trucks working outside of the harbor gates, CARB has paralleled the port proposals by proposing regulations to reduce DPM and NOx emissions from heavy-duty trucks transporting cargo to and from the ports and intermodal rail facilities within a 50 mile radius of the harbors. CARB's proposal indicates that in Southern California this radius extends as far inland as Burlington Northern Santa Fe's (BNSF) San Bernardino facility in the Inland Empire. Nearer the ports, it also includes several intermodal facilities. If adopted, these rules would mean that trucks involved with either the ports or the intermodal rail yards would have to meet clean air standards:⁸⁴

⁸² Discussion Draft, Minimum Concession Requirements, San Pedro Bay Ports Clean Air Action Plan, p.1.

⁸³ Briefing Paper, San Pedro Bay Ports Clean Trucks Program, ENVIRON International Corp., July 2007, p. 4.

⁸⁴ Regulation to Control Emissions from In-Use On-Road Diesel-Fueled Heavy-Duty Drayage Trucks, Air Resources Board Draft Regulation Order July 6, 2007.

Together, these rules would mean that IOOs with tractors not corresponding to port or CARB rules would be limited to moving containers that touch neither the ports nor the intermodal rail yards. This would almost eliminate them from most of the international container movement business. The ports would bar LMCs from using these IOOs to enter the port gates. Outside the gates, CARB's rules would bar LMCs from using them on any move involving the region's intermodal rail yards.

To implement the Clean Truck Program, the ports have proposed a detailed phase-in schedule. "Beginning July 1, 2008 the ports will deny access to older trucks according to a 'progressive ban' on trucks of a certain model year, where the model year requirement becomes more stringent with time."⁸⁵ This process will occur over five years ending in 2012. The goal of the program is to clean-up the 16,800 heavy duty trucks which the ports have identified as accessing the gates on a frequent (7,000; over 7 times a week) or semi-frequent (9,800; 3.5-7 times a week) basis. This was from a total of 41,000 trucks found to be entering their facilities in 2005.⁸⁶ The schedule would affect 18% to these vehicles in 2008; 47% by 2009; 67% by 2010; 99% by 2011 and the small balance by 2012 (*Exhibit 21*).

Exhibit 21.-Truck Retrofit or Replacement Schedule Ports of Los Angeles & Long Beach. 2008-2012					
Deadline Date	Truck Model Years	Total Trucks Affected		Share of Trucks Affected	
July 1, 2008	Pre-1989	2,999	2,999	18%	18%
July 1, 2009	1989-1993	4,798	7,797	29%	47%
July 1, 2010	1994-1995	3,372	11,169	20%	67%
July 1, 2011	1996-2003	5,377	16,546	32%	99%
July 1, 2012	2004-2006	254	16,800	2%	100%
TOTAL		16,800		100%	

Source: San Pedro Bay Ports Clean Trucks Program, Briefing Paper, ENVIRON International Corp., 2007

Economic Implications. As indicated, the purpose of the Clean Truck Program is to clean up the 16,800 trucks classified as being used frequently or semi-frequently in port drayage during 2006. During that year, Los Angeles and Long Beach harbors processed a combined 15,760,000 TEUs. Assuming 1.85 TEUs per container, that represented 8,519,000 containers. Of these, 24.1% were handled by on-dock rail or 2,053,000 containers. That left 6,466,000 containers to be moved by truck. The ports have estimated that 80% of these containers were moved by trucks entering the gates frequently or semi-frequently.⁸⁷ They thus handled 5,172,758 containers. Given that 16,800 trucks were identified as most often entering the port gates, their ratio to the volume they handled was one truck per 308 containers (*Exhibit 22*).⁸⁸

⁸⁵ San Pedro Bay Ports Clean Trucks Program, Briefing Paper, ENVIRON International Corp., 2007, p.5.

⁸⁶ see page 15.

⁸⁷ San Pedro Bay Ports Clean Air Action Plan Technical Report, November 2006, page 57.

⁸⁸ The port's estimate of 16,800 trucks to handle 5.2 million containers implies one truck per 308 containers. For 50 weeks a year, 5 days a week, that implies an average of just 1.23 turns per truck per day. That is below the 2.0 median found in the CGR survey of LMCs. However, not every one of the 16,800 trucks will work 250 days a year in port drayage given the fact that IOOs often perform hauls outside of the field, some workers take extra time off

Exhibit 22.-Forecast of Container Volume & Clean Truck Needs, 2006-2012

Year	LA-LB Port TEUs	Containers (1.85 TEU)	On Dock Rail Share	By Rail	By Truck	80% High Frequency	High Frequency Truck Ratio ⁽¹⁾	Clean Trucks Needed
2006	15,760,000	8,519,000	24.1%	2,053,000	6,466,000	5,172,758	308	16,800
2010	19,694,000	10,645,000	25.0%	2,661,000	7,984,000	6,387,243	333	19,165
2012	22,354,000	12,083,000	27.4%	3,311,000	8,772,000	7,017,948	347	20,239
2015	26,344,000	14,240,000	31.0%	4,414,000	9,826,000	7,860,480	368	21,362

(1) Assuming 2% per year efficiency increase

Source: Port of Long Beach Economic Development, Economics & Politics, Inc.

Forecast. Looking forward, the San Pedro Bay port volume forecast is for 19.7 million TEUs in 2010 and 26.3 million TEUs in 2015.⁸⁹ Using a straight line interpolation of these data, the Port of Long Beach's economic staff has estimated the 2012 volume at 22,354,000 TEUs. That is the year the Clean Truck Program is to be in full operation. At 1.85 TEUs per container, it translates into 12,083,000 containers. By 2012, a straight line interpolation of the anticipated growth in containers handled by on-dock rail puts it at 27.4% or 3,311,000 containers.⁹⁰ That leaves 8,772,000 containers to be moved by truck, of which 7,017,948 would be handled by high volume IOOs.

Needed Drivers & Trucks. To forecast the number of frequent or semi-frequent trucks needed to move this higher volume, an assumption is necessary about the change in the ratio of these trucks to that volume. It is required to allow for the gradual increase in the efficiency of port operations. Given that no dramatic increase has occurred in recent years, it is assumed that the ratio will increase at 2% per year.⁹¹ By 2012, that would put it at one frequent or semi-frequent truck to 347 containers. In 2012, the Clean Truck Program would thus need 20,239 drivers and clean trucks to handle 80% of port volume (7,017,948). Rounding to 20,200, that would be 3,400 more than the 16,800 in 2006.

Note: To test the sensitivity of this assumption, a 0% per year gain in efficiency would require 22,800 clean trucks or 2,600 more than the 20,200 needed at 2%. A 4% per year gain in efficiency, would require 18,000 or 2,200 less than the 20,200 needed at 2%.

TWIC & Port Growth.⁹² Here, the difficulties imposed on the ports by the TWIC program must be restated. As estimated, from 15% to 22% of existing IOOs providing frequent or semi-frequent port drayage will either not qualify or not apply for a TWIC card. They will represent a loss of 2,500 to 3,700 of the existing IOOs, leaving 13,100 to 14,300 still serving the harbors.⁹³ By 2012, the Port Clean Truck Program will need the LMC/concessionaires to replace these lost IOOs with new drivers and clean trucks.

and some containers must be handled multiple times. In addition, Exhibit 14 showed that no classification of LMCs works exclusively in the port drayage, with rates running from a low of 25.2% among the large LMCs to 83.1% for the smallest ones. The 1.23 turn ratios implied in the port data is thus not incompatible with 2.0 median.

⁸⁹ San Pedro Bay Long-Term Cargo Forecast, Mercer Management Consulting, July 2001.

⁹⁰ On-dock shares from "San Pedro Bay Ports Rail Study Update", Parsons, Dec. 2006.

⁹¹ Based on reported discussion by five major carriers at University of Denver Masters Degree in Logistics Course.

⁹² The forecast does not extend to the issue of driver turnover. It would compound the challenges discussed here.

⁹³ See Conclusion of Section 4 on page 39.

Adding the estimated 3,400 new drivers and clean trucks needed to handle port growth increases the need to 6,000 to 7,100 to reach the required 2012 level of 20,200:

- For the higher estimate of TWIC losses, there would be 13,100 remaining IOOs and a need for 7,100 new drivers and clean trucks, an increase of 54.5%.
- For the lower estimate of TWIC losses, there would be 14,300 remaining IOOs, and the need for 6,000 new drivers and clean trucks, an increase of 41.5%.

Increases In Driver Pay. At the current rates of pay among port drayage IOOs, these increases in the number of drivers and vehicles are unlikely. In Section 4, it was shown that they are earning a median from **\$11.60** per hour (*CGR*) to **\$12.37** per hour (*Dr. Monaco*). The alternative sources of drivers make much higher rates of pay:

- Non-employee drivers in the Inland Empire, the most likely alternative supply of IOOs, are earning a median of \$18.09 an hour and likely would want **\$20.08** to change to port drayage.
- Those Los Angeles County employee-drivers most likely to shift to port drayage will need \$16.45 per hour and a benefit package that would bring the total to **\$21.31** per hour. In the Inland Empire employee-drivers most likely to shift to port drayage will need \$17.65 per hour and a benefit package that would bring the total to **\$22.71** per hour.
- Convincing construction workers to change to drayage work would cost roughly \$17.33 an hour plus a benefit package that would bring the total to **\$21.97** per hour.⁹⁴ These workers would likely have to acquire commercial driver's licenses and TWIC cards.

Rates will have to go to roughly **\$20 per hour** to lure new drivers and clean trucks into port drayage. By 2012, they will make up a significant share of the industry. As this occurs, the existing IOOs would not work for less than the newer drivers entering the field. The general pay level of all IOOs would thus move up to these higher levels.

LMC Weak Finances & Lack of Pricing Power. The anticipated increase in labor costs, reemphasizes the difficulty faced by the port drayage industry in that most LMCs spend at least 95% of their revenues on operating costs. If their IOO costs nearly double, they must increase their rates or cease to exist. However, the LMCs have shown little ability to raise their prices given the imbalance of market power between themselves and their ocean shipping and national retail customers.

Summary. From these facts, it must be concluded that the port drayage industry is heading for an even more difficult period than described earlier. If the LMCs cannot pay more, they will not be able to go from the 13,100 to 14,300 drivers and trucks left after TWIC to the 20,200 needed to replace those lost to TWIC plus those required to handle port expansion. However, they cannot pay more if they cannot raise their prices, an action that their lack of market power has largely stifled. Here again, the same two general scenarios would appear to apply:

⁹⁴ See Conclusion of Section 4 on page 39.

- **Crisis Path.** Most likely is a slowly building crisis as lack of drivers and trucks means containers are not delivered on time. Beneficial cargo owners (*retailers, wholesalers, manufacturers, exporters and others*) will demand that this occur putting pressure on the ocean lines to pay more to the LMCs to solve the problem. However, since retailers will be unwilling to pay more, the ocean lines will do this very reluctantly allowing the crisis atmosphere to build. Ultimately, the rates paid to LMCs and the IOOs will rise but not without significant ill will and a lot of cargo stacked at the ports. Some shippers will ultimately abandon store-door contracts and switch to using ocean lines for port to port freight movements. They will contract separately with LMC for port truck drayage.
- **Downfield Vision.** Less likely is for the ocean shipping lines, national retailers, and ports to recognize early that lack of supply will be forcing IOO pay and LMC rates to increase. If the major players wish this to occur outside of a crisis atmosphere, a meeting of minds might begin to be formulated with these firms plus leaders among the LMCs. This might allow a path to be developed so that as the shortage of drivers becomes evident, the pay scales to the IOOs and rates to the LMCs can begin to rise without the crisis.

As with the TWIC analysis, when the LMCs are able to raise their prices, the amount will have important implications for port drayage. As stated there, LMCs normally see 70% of their revenues passing through to IOOs and spend another 25% on other non-IOO costs, leaving them net pre-tax profits of 5.0%. The analysis differs from TWIC, as the LMCs are likely to see their overhead workloads increase over time as port volume increases, driving up their non-IOO operating costs. From 2006-2012, the port volume handled by high volume trucks is expected to increase 35.7% from 5.2 to 7.0 million containers. If 80% of this work was absorbed by existing LMCs and new ones handled 20%, the expansion in activity to a typical existing LMC would be 28.5%. It is assumed their non-IOO costs increase that much going forward.

Exhibit 23.-Impact of Price Increase Scenarios on LMC Profitability, Per IOO Per Year						
	Current Ratios		43.6% Price Increase, Truck Replace & Increase IOO Income to \$20/Hour		48.6% Price Increase, Truck Replace, IOO to \$20/Hr, Double LMC Earnings	
To IOOs	\$75,000	70.0%	\$96,000	62.4%	\$96,000	60.3%
Non-IOO Costs	\$26,800	25.0%	\$34,400	22.4%	\$34,400	21.6%
Truck Replacement Charge	\$0	0.0%	\$18,000	11.7%	\$18,000	11.3%
Pre Tax Margin	\$5,400	5.0%	\$5,400	3.5%	\$10,700	6.7%
Total	\$107,100	100.1%	\$153,800	100.0%	\$159,200	100.0%

Source: Economics & Politics Inc. & CGR Management Consultants

There is one additional major consideration. Of the 16,800 trucks that the ports anticipate be brought to clean air standards, they estimate that 10,622 will have to be replaced (63%).⁹⁵ To avoid Transportation Impact Fees, the LMCs will put pressure on their LMCs to replace these trucks as soon as possible. However, it will be difficult if not impossible for many of them to acquire the \$28,500 (20% of truck \$100,000 price plus \$8,500 in sales taxes) in financing they will need to do so (*see TIF-IOOs Pay TIF*

⁹⁵ Scenario 7, Appendix, San Pedro Bay Ports Clean Air Action Plan Technical Report, p. 27

discussion below). The alternative is for the LMCs to try and raise prices to the ocean shipping fleet and/or the beneficial cargo owners to pay for this part of the program. On average, the increase required would be 63.2% of \$28,500 or \$18,000. With that background, two scenarios appear likely (*Exhibit 23*):

- If IOO incomes were to reach \$20 per hour (*50 hours x 50 weeks*) or \$50,000 a year for an equal effort, there would be no increase in their \$46,000 operating costs. They thus would need to receive \$96,000 from their LMCs. At 70%, this would require LMC annual revenues of \$135,800 per truck. With higher LMCs volume, there would be an assumed increase in non-driver costs to \$34,400. That would leave pre-tax profit of \$5,400 per truck. However, the LMCs would need to raise another \$18,000 to help fund their share of replacement trucks. Thus, revenue would have to increase to \$153,800 per IOO. **A price increase of 43.6%** would be needed to increase LMC revenues from \$107,100 to \$158,800 per truck.
- For LMCs to want to stay in port drayage and deal with the extra issues, they might desire to see their thin profit margin double from \$5,400 to \$10,700 per truck working for them (*5% to 7%*). The funds going to an IOO would remain at \$96,000; their non-driver costs would remain at \$34,400. The truck replacement supplement would stay at \$18,000. For this to happen, their total revenue would have to go from \$107,100 to \$159,200 per truck, **a price increase of 48.6%**.

Given the weak profit position of the LMCs, the same logic would appear likely to govern their behavior here as with TWIC case. If they are to gain any market power, a scenario like the second one (**price increase of 48.6%**) would appear to be the minimum acceptable to them. But, it would likely be a tough sell to their customers. However, less would be unacceptable to the LMCs, as it would make them simply conduits for channeling money to their IOOs. According to Moffatt & Nichol data, a 48.6% increase would raise port drayage costs from \$150 to \$223 per container for trips near the ports and \$300 to \$446 to the Inland Empire. This fee is still minor compared to the \$2,575 in costs for other portions of a container's journey. These higher costs would represent just 0.1% to 0.2% of the \$70,000 median value of a container's contents.

Transition. Again, assuming optimistically that LMCs could pass 50% a price increase of this magnitude immediately to their customers in higher prices, but the other 50% only agreed to the increase in equal shares over six months (*8.3% per month*), cash flow difficulties in the transition would impact the LMCs. For an average smaller IOOs, they would have a net cash flow loss of \$247,025 reducing their average owner's equity from \$362,200 to \$115,175. Larger IOOs would have average cash flow losses of \$896,650, reducing their average owner's equity by 50% from \$1.77 million to \$888,900 (*See "Transition" page 72 for calculation's details*).

2. **Tracking Devices.** Another aspect of the proposed Clean Truck Program could have the side effect of helping to increase the efficiency of port operations. There will be a requirement that all tractors entering the port gates under the auspices of LMC-concessionaires be equipped with an RFID transponder. These devices will provide the capability to access information on a remote/central server database with a key number. This might include, but not be limited to:

- The LMC's identification number

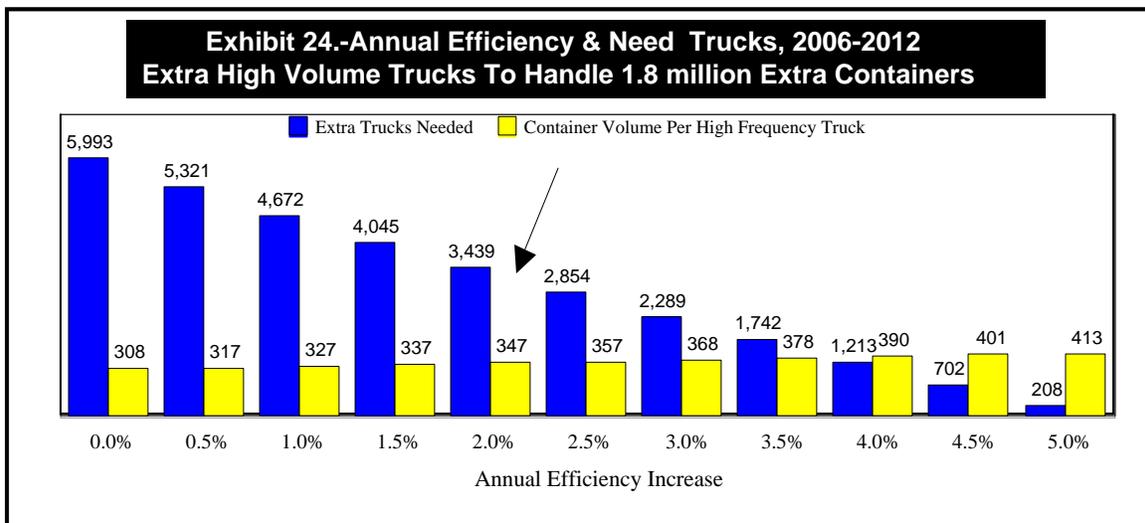
- The truck’s identification number
- The truck’s license plate number
- The driver’s license identification number
- The driver’s TWIC identification number
- The cargo container’s identification number

The RFIDs and the corresponding port database related to them will be used to track a wide variety of information such as if a truck is affiliated with an LMC that has paid the fees to be a concessionaire or due to Truck Impact Fee (*TIF*) requirements, and whether the truck itself has passed its regularly required clean air and maintenance evaluations.

Further, the trucks will be required to have an AVL device. This will allow the ports to know where the trucks are located and help the ports to monitor the geographic provisions of the Fleet Modernization Grant Program (*below*).

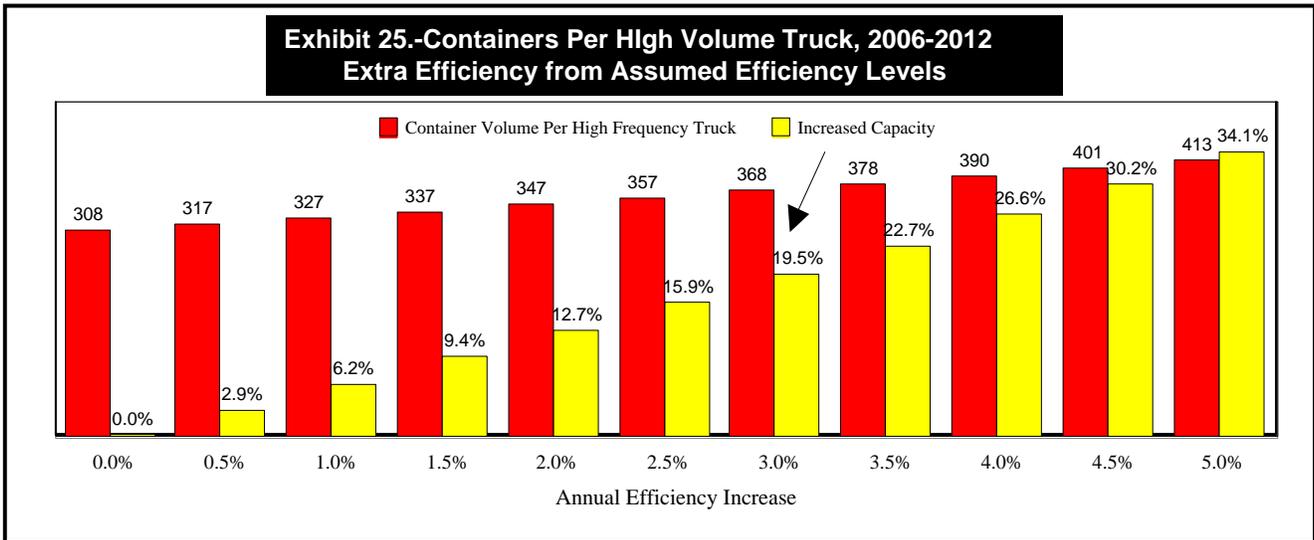
Economic Implications. While the RFID and AVL devices will be required to assist the port in managing and monitoring vehicles under the Clean Truck Program, these devices could have the side effect of helping increase the efficiency of port operations. This could help reduce the price increase necessary to allow IOOs to earn more and LMCs to be more profitable. It could do this by increasing the number of containers that each IOO can move in a day (“*turns*”).

Above, it was shown that in 2006 the ratio of containers handled by high volume trucks (5,172,758) to the number of such vehicles (16,800) was 308 to one. In estimating the number (20,200) needed to handle containers volume in 2012 (7,017,948), efficiency was assumed to increase 2% per year to 347 to one (*Exhibit 24*). The cumulative efficiency gain for the period was 12.7%. Put another way, on average, frequent or semi-frequent trucks could handle 12.7% more work in 2012. Given a split of the extra revenue between IOOs and LMCs, each could earn a little more without a price increase.



If, however, efficiency were to be increased at 3.0% per year from 2006-2012, the ratio would grow to 368 to one, a cumulative 19.5% increase in the volume of containers each high volume truck could handle would occur in the six year period (*Exhibit 25*).

Are such increases in efficiency possible? Yes. A study of the increases in productivity by sector in the U.S. economy found that from 2000-2004, the distribution sector's productivity increased at 3.1% per year.⁹⁶ The possibilities for the ports of Los Angeles and Long Beach are that great given the potential efficiency involved in the use of RFID, AVL devices and other technology that can coordinate the location of containers and the timing of truck arrivals. Dr. Anne Goodchild, Assistant Professor of Transportation at the University of Washington indicates, "port appointment systems can be tied to terminal operating systems and real-time sensors (*RFID or AVL*) to improve terminal operations. For example, during idle periods, RTG crane operators can ready containers to make containers for the next appointments available. Such a system could notify an RTG operator that a truck has arrived at the gate and that he should begin to retrieve the relevant container, reducing truck wait time at the stacks."⁹⁷



Annual efficiency increases in the neighborhood of 3% compounded would likely be sufficient to keep IOO incomes and LMC profits competitive with other trucking sectors, once they have achieved parity with them. However, as discussed, the difficulty remains that the current low incomes of IOOs will require increases in pay approaching 100% to lure drivers from other sectors into port drayage. Given the thin profit margins on which LMCs operate, they will still require sufficient price increases to make that possible.

For the highly competitive port drayage sector, the very aggressive efficiency increases that this technology has created for major package delivery firms, less than a full container load (*LTL*) companies and interstate trucking operations are very unlikely to occur. The problem is the time, training and coordination necessary to create a tightly integrated, relatively error free computer system, given the large number of small LMC/concessionaires, many with limited computer understanding.

⁹⁶ Modeling Aggregate Productivity at a Disaggregate Level; New results for U.S. sectors and industries, Carol Corrado & Paul Lengermann, Federal Reserve Board; Eric J. Bartelsman, Free University, Amsterdam, J. Joseph Beaulieu, Brevan Howard, Inc. Table 5, July 5, 2006, p. 24.

⁹⁷ Estimating the Impact of the Clean Trucks Program on Terminal Operations (draft), Anne Goodchild and Karthik Mohan, University of Washington, 2007.

3. Truck Impact Fees (TIF). Trucks that are not banned from accessing the ports, but do not meet the “clean” trucks standards, will be charged a TIF at the gate for each inbound move or, per the progressive ban, they will be prohibited from entering terminals. The TIF (*including an administrative surcharge*) will be assessed to the LMC with which the truck is affiliated. The current TIF estimate is between \$34 and \$54 per inbound-gate move. Once the five-year fleet turnover period is completely funded, the ports will stop collecting the TIF. The fees would be one source of funds for the Fleet Modernization Grant Program designed to help fund retrofits or replacement trucks (*see #4*).⁹⁸ According to the CAAP announcement statement of the two port board presidents, charges like the TIF were “to be to be imposed on ‘shippers’ not drivers.”⁹⁹

Economic Implications: TIF. In looking at the TIF, it is important to understand that the fees will be substantial. Under the LMC-IOO business model that currently dominates port drayage, TIF fees would be charged to the LMCs while the non-compliant trucks would be owned by IOOs. If such an IOO made 308 trips per year,¹⁰⁰ the annual cost to its LMC would range from \$10,500 to \$16,600. Assuming the TIF is set at \$50 per inbound trip, near the high end of this range, the annual cost would be \$15,400.

As indicated earlier, most LMCs have pre-tax profit margins of 5% or less. Thus, it was estimated that with revenue of \$107,100 per truck, the firm could pay the median gross income to its IOOs of \$75,000, leaving \$26,800 for other expenses and 5% for pre-tax profit of \$5,400 (*Exhibit 23*). However, if the LMC is charged \$15,400 a year for TIF because the truck does not yet meet clean air standards, it would lose \$10,000 on every truck of this type, unless the TIF is passed on to its customers (*Exhibit 26*).

Exhibit 26.-Impact of TIF On Pre-Tax LMC Profit	
	Revenue & Net Current LMC Pay
Total Revenue	\$107,100
Pre-Tax Profit	\$5,400
TIF @ \$50	\$15,400
Post-TIF Profit (Loss)	(\$10,000)

Since the financial viability of the LMCs will not allow them to absorb TIF costs of this magnitude, they will be under enormous pressure to only use IOOs whose vehicles meet clean air standards. Alternatively, the LMCs will to seek to have the ocean shipping lines or beneficial cargo owners pay the fees.

IOOs Pay TIF. In the first case, the LMCs would indicate to those IOOs with trucks that have not yet met the clean air standards that the TIF will be deducted from their normal drayage rates. One result would be for the IOOs to quickly try to access the Fleet Modernization Grant Program:

- **Retrofit.** Those IOOs whose trucks qualify for retrofit will want that done as soon as possible under the Fleet Modernization Grant Program. This would

⁹⁸ Discussion Draft, Minimum Concession Requirements, San Pedro Bay Ports Clean Air Action Plan, p.1.

⁹⁹ San Pedro Bay Ports Clean Air Action Plan Technical Report, Port of Los Angeles, Port of Long Beach, p. 10.

¹⁰⁰ LMC survey found that the average driver handled 308 containers per year. See discussion, p. 24.

require the ports to give them access to it for 100% of the estimated \$20,000 cost of such work.¹⁰¹ Given the anticipated volume of such requests, the question arises as to whether the grant program will be able to fund all such early requests (see discussion under *Fleet Modernization Grant Program* section below).

- **Purchase.** Those IOOs whose trucks need to be replaced will want to quickly do so using the Fleet Modernization Grant Program. Here, the ports must give them access to it for the 80% share of such a purchase or about \$80,000. Again, the IOOs ability to acquire these funds will depend on whether the program has sufficient money to handle the volume of such requests. It will also depend upon whether the IOOs can obtain financing for their share of the truck purchase.¹⁰²

This last issue requires a look at a typical IOO's finances. If one receives an \$80,000 grant for a new truck, it would face no tax liability as the full cost is immediately deductible under IRS Section 179.¹⁰³ However, the IOO would have to borrow \$20,000 for their share of the price plus \$8,500 for Los Angeles County sales taxes unless they can access other sources of funds. For loans of this size, lenders typically want FICO credit scores of at least 660, with a desire for over 700. Nationally, 73% of credit applicants exceed 650 and 58% are above 700.¹⁰⁴ Given the average IOO's modest income, it can be reasonably assumed that most have FICO scores well below these averages. Compounding this difficulty is the likelihood that the ports would place liens against trucks for their 80% stake in them. A lender would thus be in second position for an IOO's 20% share in the event of a repossession. Few would want to do so. Most IOOs would thus not qualify and would likely leave port drayage unless an alternative for funding truck replacement could be found.

***Note:** Discussions with major lenders indicated an interest in pursuing IOO financing via a structure including port guarantees to limit a lender's potential losses. Terms might involve the lender and ports allocating profits and losses from repossessions over the grant program's life. Rates would be about 10%.*

At the moment, it appears unlikely that the Fleet Modernization Grant Program will have early access to the funds necessary to finance the IOO grants needed for the volume of retrofits and truck purchases that will likely occur if the TIF is introduced and this scenario unfolds. In addition, without a guarantee program, there appears to be little chance that lenders will assist those IOOs needing new trucks to purchase them.

Customers Pay TIF. The other option is for the LMCs to raise rates to ocean shipping lines and/or beneficial cargo owners. However, as has been stated, the highly competitive nature of port drayage gives LMCs relatively little bargaining power

¹⁰¹ Paul Lewis, President, Boerner Truck Center of Huntington Park, a big retrofitter, quoted about \$20,000 depending upon which vendor and make and year of tractor. Port of Los Angeles supplied a similar figure, \$19,500.

¹⁰² The \$100,000 tractor price is within the range for 2007 Freightliner Columbia tractors found on-line. It is also the figure used by the ports. There would be an 8.5% sales tax for purchases in Los Angeles County, 7.75% in Orange, Riverside and San Bernardino counties.

¹⁰³ IRS Code Section 179 allows \$112,000 in equipment purchases to be immediately written off.

¹⁰⁴ <http://www.myfico.com>

compared to their large customers. The one scenario under which LMCs can impose higher rates is when their own profitability or the viability of their IOOs begins to cause one or both to stop handling port drayage. That would set off the “crisis path” in which the ocean lines and/or beneficial cargo owners would face the choice of either paying higher rates or seeing their cargo anchored in San Pedro Bay. Given the known financial condition of LMCs and IOOs, plus the fact that TIF will start at a time certain, it could be that ocean lines and/or national retailers will accept the inevitability of such a crisis and move to avoid it by accepting contracts in which the TIF rates can be passed on. In either case, that option was included in the discussion of the price increases needed by LMCs to ensure sufficient capacity to move containers through the ports (*Exhibit 23, page 48*).

Economic Implications: Dray-Offs. Meanwhile, a second potential impact of the TIF would be to change the way in which LMCs organize their operations. As long as they remain under intense cost and profit pressures, LMCs can be expected to seek ways to keep costs down for themselves and possibly their IOOs. One potential method would be to bifurcate their businesses between drayage involving ports and intermodal rail yards and container movements involving neither. This could lead to “dray-offs” whereby in-bound cargo is moved from the ports by an IOO whose tractor is clean air compliant, while outside the gates it is interchanged to one that is not. For out-bound cargo, containers could be transported to near the gates by an IOO with an unapproved tractor and then interchanged to one with an approved vehicle.

Rules could be promulgated to ban such practices but they face enforcement difficulties. Beyond the problem of uncovering the use of this process, there is the fact that it is already common to transfer long distance loads from IOOs with tractors specializing in port drayage and IOOs that make long distance runs. Also, some LMCs already use one group of drivers to move containers from the ports to their yards. Later, another group of drivers takes them to their final Southern California destinations. Further, it is common place for sea-going forty foot containers to be moved to a cross-dock where goods are transferred to a 53 foot landside container which another tractor hauls from there either to an intermodal yard or cross-country. It will be a challenge to sort out when these are normal practices and when they are used to skirt clear air rules.

4. **Fleet Modernization Grant Program.** As stated, the Ports intend to establish a grant program to fund the retrofit and/or replacement of the drayage fleet using funds allocated through the port CAAP, SCAQMD, \$400 million in State Proposition 1B bond funds (*if available*), and the TIF. Below, it is shown that the TIF will likely yield roughly \$160 million less than anticipated. Grant funds from the program would only be available to approved concessionaires, and by extension in this section, to the IOOs working under their auspices. Trucks that qualify for retrofit technology will be awarded grants covering up to 100% of the labor and materials for that installation. In general, an older truck must be turned in and scrapped to qualify for a grant for a new replacement truck. In that case, grants would cover up to 80% of the purchase.¹⁰⁵ The implications of this program for IOOs were outlined above (#3). To maximize their investment in the grant program, the ports are considering requiring those accessing the program to agree to use their vehicles exclusively for port drayage and to make a minimum number of port trips

¹⁰⁵ Briefing Paper, San Pedro Bay Ports, Clean Trucks Program, ENVIRON International Corp., July 2007, p. 5.

per week. This represents a difficulty as the destinations and frequencies of trips are controlled by the shipping lines and beneficial cargo owners not the IOOs and LMCs.

Economic Implications: Insufficient Funds. For the Fleet Modernization Grant Program, the most important economic consideration is whether it will be funded to the extent necessary to complete its mission in a timely manner. The TIF logic explained above concluded that under the LMC-IOO model, there would be a rapid demand for funds to immediately retrofit or replace IOO trucks. This would be exciting from a clean air perspective since the program would be generating demand for clean vehicles much faster than called for by the truck retrofit and replacement schedules. However, this beneficial result could be frustrated by the insufficiency of funds for this to occur. The odd result would be for the grant program's lack of funds to leave IOOs out of compliance, with TIF costs being imposed that would generate the money to clean-up the trucks, only later. In the meantime, LMCs and IOOs would most likely absorb some portion of the TIF, reducing their incomes.

Here, the difficulty stems from the manner in which the Fleet Modernization Grant Program is to be funded. The \$400 million (22% of budget) in Proposition 1B funds have not yet been allocated to it. Meanwhile, the phase-in process for the Clean Truck Program was shown earlier (*Exhibit 21 above*). Using it, the grant program assumes that of the trucks that would be subject to the TIF, there are 5,959 that can ultimately be retrofitted. Of those: 564 would be retrofitted in year one; 3,118 in year two; and 2,274 in year three.¹⁰⁶ Until they are retrofitted, the truck owners are assumed to pay the TIF at \$50 per in-bound move for an average of 308 trips or \$15,400.¹⁰⁷ It is also assumed that these trucks are retrofitted at the end of each year as shown in the grant plan.

Of the \$1.2 billion of revenue in the Fleet Modernization Grant Program, \$209,779,000 or 17.4% is anticipated to come from the \$15,400 per year in TIFs that will be paid by the owners of trucks that can be retrofitted, until the retrofit is completed (*Exhibit 27*). The fees for trucks to be retrofitted by the end of year 1 would pay \$15,400; those at the end of year 2 would pay \$30,800; and those at the end of year 3 would pay \$46,200. This will be done while waiting to receive a grant for a free retrofit.

Exhibit 27.-TIF Revenues From Trucks To Be Retrofitted, \$50 Per Trip					
Period Retrofitted	Vehicles	Year 1	Year 2	Year 3	TIF Before Retrofit
Year 1	564	\$8,685,000	\$0	\$0	\$8,685,000
Year 2	3,118	\$48,017,000	\$48,017,000	\$0	\$96,034,000
Year 3	2,274	\$35,020,000	\$35,020,000	\$35,020,000	\$105,060,000
Total TIF (\$)	5,959	\$91,722,000	\$83,037,000	\$35,020,000	\$209,779,000
Economics of Self Retrofit In Lieu Of TIF					
	TIF Paid	Self Retrofit	Net		
Year 1	\$15,400	\$16,800	-\$1,400		
Year 2	\$30,800	\$16,800	\$14,000		

¹⁰⁶ Technical Appendix to the CAAP, Scenario 7, p 27. The estimates are actually stated for FY 2006/07, 2007/08 and 2008/09. We are treating them as years 1, 2 and 3 of the plan respectively as obviously planned actions will vary from the dates shown in the Appendix.

¹⁰⁷ See footnote 100.

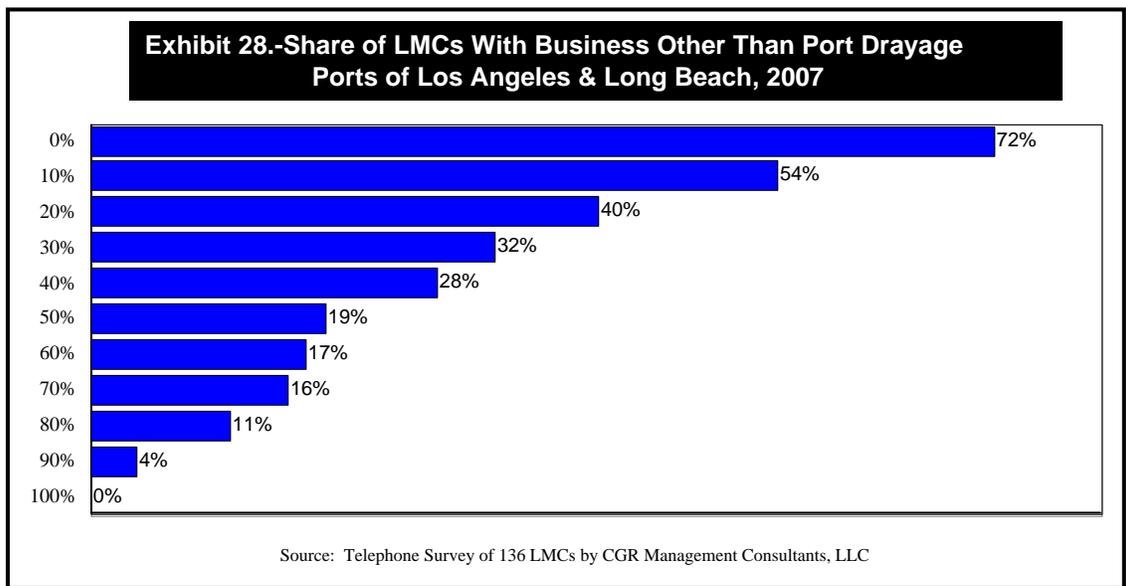
Year 3	\$46,200	\$16,800	\$29,400		
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Source: Scenario 7, Technical Appendix to San Pedro Bay Ports Clean Air Action Plan, CGR Management Consultants, LLC

However, since it is estimated that a truck owner can self-retrofit for \$16,800 by avoiding the cost of port administrative and incentive fees, this would not make sense.¹⁰⁸ True, the truck owner that retrofits by the end of year 1 would end up \$1,400 better off than paying for a self-retrofit. However, those that would be retrofitted by the end of years 2 and 3 would, respectively, be worse off by \$14,000 and \$29,400.

The LMCs or IOOs will seek to avoid these costs for two reasons. First, the TIF is not fixed and may be increased to generate sufficient funding for the program. Second, it is more economical for owners to retrofit their vehicles themselves and avoid the TIF entirely. Thus, any owner with a truck planned for retrofit in years 2 or 3 who can borrow \$16,800 at any interest rate below 74% will gain economically by retrofitting their trucks in year 1. Assuming that at least 80% of the owners of such trucks do so, the Fleet Modernization Grant Program will be reduced by about \$160 million or 8.9% of its estimated budget. Combined with the Proposition 1B funds, this analysis means 31.1% of the program's funding may be in jeopardy.

Economic Implications: Exclusivity. In reviewing the potential economic impact of the exclusivity requirement, it is important to understand the degree to which the LMCs serving the ports are engaged in non-port work. Here, the survey of 136 LMCs conducted for this report is informative. It found that the share of LMCs that had at least some business with non-port related customers was 72%. Importantly, for 19% (*one in five*), non-port business involved 50% or more of their operations (*Exhibit 28*). These figures are not surprising given the need to locally transport goods within Southern California's \$945 billion economy. However, for these firms, flexibility in the use of the IOOs with whom they work is vital to the efficiency of their operations and, thus, their profitability.



¹⁰⁸ Cost details shown in the Appendix to the 2006 San Pedro Bay Ports Clean Air Action Plan Technical Report, p. 27.

If accessing the Fleet Modernization Grant Program requires numerous IOOs to work exclusively in port drayage, it will create practical problems for the multifunctional LMCs that use them. For example, an LMC might normally have an IOO dray a port container to a customer, pick up a non-port related load there and move it elsewhere before coming home. If the IOO could not perform the second haul, it would have to return empty (*bobtail*). Meanwhile, a non-port related IOO would have to bobtail out to the customer to move the second load. Situations like this would be inefficient and costly to the LMCs and eventually their customers. They would also increase the volume of truck trips on Southern California's roads and increase emissions. The exclusive use provision could also be a significant factor for smaller LMCs who lose a major port drayage customer. Since it would be presumably known that the LMC has received a grant with an exclusive use restriction, their options for replacing the lost business would be limited and their rate negotiation ability curtailed.

5. **Clear Air Device Maintenance.** Another aspect of the Clean Truck Program would be the requirement that concessionaire/LMCs have a maintenance program for all trucks operating under their auspices whether their own or belonging to IOOs. The program must ensure that there is adherence to manufacturer's recommended maintenance schedules for vehicles and retrofit devices, and that records are maintained providing evidence of compliance. It also bars tampering in anyway with emission control devices. The program further requires that there be a facility specific maintenance plan.

Economic Implications: Maintenance Oversight. The Clean Truck Program will clearly give the ports a vested interest in ensuring that once vehicles used for port drayage meet clean air standards, they stay that way. The requirement that there be a facility specific maintenance plan seems to imply that they are considering going into the on-site inspection business to ensure that this occurs. This would be a costly undertaking and use funds that might better be applied to other purposes such as helping to clean-up more vehicles. This is particularly true given that the California Highway Patrol is already charged under California law with annually inspecting every terminal in the state in a two-year cycle (*CHP's BIT program*).¹⁰⁹ Those inspections are being undertaken for the sake of truck safety. However, it would appear to be a small step to have the CHP's jurisdiction expanded to include looking at vehicles and inspecting records to ensure that air quality maintenance is also being routinely performed. Here, the difficulty is the fact that the CHP has been underfunded for its BIT responsibilities and is currently only inspecting about one-half of the terminals required. Here, the ports, the CHP and the LMCs might develop a program to ensure that the IOOs working with the port are among those reached each year.

In addition, since all tractors accessing the ports will have RFID devices, it would seem to be relatively inexpensive for the ports to set up stations inside the terminal gates to which tractors could periodically be diverted for a rapid emission check. The fact that a vehicle is to be out of compliance would be entered on the computer record for the vehicle. The next time a vehicle with that RFID entered the gates, it could be rechecked and barred from future entry until it has been brought into compliance.

¹⁰⁹ See footnote 38, page 21.

At its core, the Clean Truck Program is designed to modernize the fleet of heavy duty vehicles involved in port drayage. Given the high cost of retrofitting or replacing the vehicles plus the relatively weak financial condition of most LMCs and IOOs, the program proposes a phase-in period and Fleet Modernization Grant Program to ease the cash flow burden. Ultimately, it is the expressed desire of the ports that “shippers” not drivers pay for the clean-up program. It is assumed here that this means a combination of the ocean shipping lines and/or the beneficial cargo owners (*mostly national retailers*). The program attempts to bring this about through the marketplace. TIF costs are imposed on LMCs vehicles under whose auspices IOOs are bringing trucks that do not meet clean air standards through the port gates. Since neither the LMCs or the IOOs can afford the TIF costs, the LMCs will logically attempt to raise drayage rates to offset both the higher costs they must pay to attract an expanded labor supply and offset the Clean Truck Program’s costs. Given their relative lack of negotiating power vis-à-vis their customers, this will not happen without the threat or actual occurrence of a port drayage crisis. However, given the current economics of the LMCs and IOOs, this would appear to be the path by which the Clean Truck Program will eventually be funded.



6. Clean Truck Program: Truck Ownership/Employee Model

In considering how to carry out the Clean Truck Program, the ports of Los Angeles and Long Beach have proposed major changes in the manner in which Southern California's port drayage industry is organized. Their intent was outlined by the two port commission presidents in their instructions to their staff upon the announcement of the CAAP. They expressed a desire that:

- a. "The Ports undertake a 5-year, focused effort to replace or retrofit the entire fleet of over 16,000 trucks that regularly serve our Ports with trucks that at least meet the 2007 control standards and *that are driven by people who at least earn the prevailing wage.*" [italics added]
- b. "The Ports establish within their respective districts a program that restricts the operation of trucks that do not meet the clean standards established in the Plan. Further, that we impose a system of fees and transportation charges to raise the necessary funds to pay for the cleaner trucks. *These fees would be imposed on "shippers", and not on the drivers.*" [italics added]
- c. "The Ports will invite private enterprise trucking companies to hire the drivers on terms that offer the proper incentives and conditions to achieve the Clean Air Action Plan goals while *resulting in adequately paid drivers.*" [italics added]
- d. "The Ports begin this program with an infusion of cash to the Gateway Cities Program that would fund a 500-truck program that will demonstrate the applicability of new retrofit technologies. This demonstration program will be activated in the 1st quarter of 2007, and the full 16,800-truck program will be rolled out shortly after."¹¹⁰

To carry out these instructions, the ports have proposed to use their tariff authority to require that the LMCs become the concessionaires with the exclusive right to have trucks working under their auspices enter the port terminals. Under the program, LMCs would be required to:

- Obtain port concession licenses, LMCs would pay a one time application fee and annual renewal fees of about \$5,000.
- Meet as yet undefined balance sheet levels and insurance requirements to ensure industry stability.
- Acquire ownership of the trucks operating under their auspices according to a strict 5-year time schedule.
- Have their trucks retrofitted or replaced to 2007 clean air standards according to a strict 5-year time schedule.
- Ensure that all requirements created as part of any grant or loan programs to clean the trucks are fulfilled since the Fleet Modernization Grant Program would only grant funds to retrofit or replace trucks owned by concessionaires.
- Pay fees (*TIF*) for trucks entering the port gates under their auspices that are not up to the 2007 clean air standard during the 5-year transition period.
- Ensure that their trucks are maintained in a manner that keeps them clean once they have been replaced or retrofitted.

¹¹⁰ Overview, Presidents Statements, San Pedro Bay Clean Air Action Plan, Final 2006.

- Maintain detailed records on truck maintenance and safety work as required by the CHP's BIT program and DOT, plus records on inspection and maintenance of clean air equipment.
- Have a facility where their trucks are parked when not in use as well as where they can be maintained and inspected.
- Use only employee-drivers to operate their trucks according to a strict 5-year schedule, with preference given to drivers who have a history of involvement in port drayage.
- Maintain employee records, oversee drivers logs and health examination schedules and ensure that drivers have TWIC and other appropriate licensing.
- Require drivers to not park the LMC's trucks on nearby city streets and to only use defined routes in driving through communities in the port area.
- Install RFIDs and AVLS on their trucks.

Below the major elements of the Clean Truck Program are described together with commentary on their economic implications. For brevity, where the results are the same as the analysis of the Clean Truck Program under the LMC:IOO model in Section 5, reference is made to the appropriate material discussed there.

1. Acquiring Trucking Fleet Ownership & Meeting Clean Air Standards. As indicated, LMC/concessionaires will be required to own the vehicles accessing the ports under their licenses and bring these vehicles up to clean air standards. Since most do not currently have trucking fleets, that aspect of the requirement will represent a fundamental shift in their business model from being service firms with relatively thin balance sheets to being trucking companies with significant investment in vehicle assets.

Vehicle Prices. For purposes of this analysis, it is assumed that \$11,500 is the average price of pre-1996 tractors and \$32,200 is the average for subsequent models. New 2007 tractors are estimated to cost \$100,000.¹¹¹ In both cases, the LMC would have to pay Los Angeles County's 8.5% sales taxes on their purchases. Given these figures, there are a variety of issues associated with the increased capital needs that would result from the requirement for concessionaires to own their tractors:

- **Retrofit.** For an LMC, the least expensive option would be to acquire post-1995 tractors from their IOOs who would then become employees. The vehicles could then be retrofitted to meet clean air standards using the proposed Fleet Modernization Grant Program. Under the most favorable assumption, that program would be fully funded and able to pay 100% of all retrofits. The funds that LMCs would need for this option in the first year would then be the price of acquiring the tractors, the sales taxes, and the first year's income tax liability on the grant funds.¹¹²

¹¹¹ The existing tractor prices are averages developed from the offering prices of Freightliner tractors listed for sale www.commericaltractortrader.com. New truck prices are from several on-line sources and the ports.

¹¹² Grants to acquire or retrofit trucks would likely be considered taxable income to the recipient and subject to state and federal income taxes. Depending on the recipient's taxable status, this would create a need for cash to pay the income taxes in the year when the grant is received. The amount of tax paid will potentially be offset in future years by the depreciation deductions and the eventual recovery of the asset's salvage value. The critical issue is grant

It is assumed that the LMCs will follow this strategy for 50% of their fleets. In fact, only 34% of the port drayage fleet is post-1995 vehicles.¹¹³ Given the lower cost of retrofitting versus buying trucks, 50% is used in the belief that the LMCs will argue strenuously to be allowed to buy other post-1995 tractors in SCAQMD's air basin.

The 50% factor is used to determine the fleet purchases required by LMCs in various size groups. Among small and mid-sized LMCs, these ranged from six trucks for firms in the 1-10 range, to 47 for those in the 26-75 range. Given that LMCs of 76-250 trucks only devote 40.6% of their operations to port drayage, their average fleet size of 137 was reduced to a port fleet requirement of 56 trucks. For LMCs with 251 or trucks, port drayage was 25.2% of their activity. Their average fleet of 517 was reduced to a need for port operations of 130 trucks.

Note: This approach means that the larger LMCs will likely find it in their interest to bifurcate their operations, reserving part of their fleets exclusively for the port drayage work. The balance of their operations could continue using IOOs with their existing trucks, possibly subject to CARB's proposed rules.¹¹⁴

In each LMC size category, it is assumed that the firms will fill 50% of their truck needs by buying and retrofitting post-1995. The number will range from 3 for firms with 1-10 trucks, to 65 for the largest firms (*Exhibit 29*).

Exhibit 29.-Average Trucks To Be Acquired By LMC Size Range		
Size Range	Average Trucks	Purchase & Retrofit
1-10	6	3
11-25	18	9
26-75	47	24
76-250	56	28
251 & Up	130	65

Source: Exhibit 14 as adjusted

- To acquire a used tractor that can be retrofitted, an LMC must pay \$32,200 or \$34,937 with sales tax. The \$20,000 to retrofit the vehicle would be paid by the port grant program. However, an income tax liability would be created. This would be the \$20,000 grant less the first of five years of depreciation at 20%. It would be taken against 80% of the purchase price to allow for salvage value. The tax would thus be 32% of \$14,410 or \$4,611. The total cost in year one would be **\$39,548** (*Exhibit 30*).
- For LMCs in the 1-10 range, the average expenditure (*rounded*) to buy and retrofit trucks would be \$119,000. It would be \$356,000 for firms of 11-25 trucks and \$949,000 for those with 26-75 trucks. Among larger LMCs, those with 76-

recipient's ability to meet the cash flow requirements. Another potential factor is the applicability of IRS code Section 179 that would allow "small businesses" to write off the entire grant under certain circumstances. When applicable it would completely eliminate the federal income tax consequences of the proposed grants.

¹¹³ See Exhibit 21, page 45.

¹¹⁴ Proposed CARB regulations may restrict the use of the existing IOO fleet but would not impact the independent contractor status of IOOs.

250 trucks would need to spend \$1,107,000 for trucks they would use exclusively in port drayage. It would be \$2,571,000 for those with 251 or more.

Exhibit 30.-Cash Flow, LMC Fleet Acquisition & Retrofit		
Cost of Acquiring a Used Tractor		\$32,200
Sales Taxes in Los Angeles County @ 8.5%		\$2,737
Purchase Cost		\$34,937
Retrofit Cost		\$20,000
Fleet Modernization Grant	\$20,000	(\$20,000)
Value of depreciation deduction @ 20% of .80 of price	(\$5,590)	
Taxable Income	\$14,410	
Income tax @ 32% ¹¹⁵	\$4,611	\$4,611
Total Cash Required in Acquisition Year		\$39,548
Total Fleet Size	Avg. Trucks	Cash Required
1-10	3	\$118,645
11-25	9	\$355,934
26-75	24	\$949,157
76-250	28	\$1,107,350
251 & Up	65	\$2,570,635

- **New Trucks.** For LMCs, the more expensive option would be to acquire pre-1996 trucks from their IOOs who would become employees. These vehicles could then be turned in for scrapping in exchange for grants to help buy new trucks under the proposed Fleet Modernization Grant Program. Under the most favorable assumption, that program would be fully funded and able to pay 80% of the purchase price. The cost of this option to the LMCs would be the prices of the old tractors, sales taxes on the \$100,000 for new trucks plus a \$20,000 investment in them, and any income tax liability on the grant funds.¹¹⁶ It is assumed that LMCs will fill their truck needs by using this strategy for 50% of their vehicle needs.
 - To acquire a used tractor to be turned in for scrapping, the price would be \$11,500. The new truck would cost \$100,000 with \$20,000 paid by the LMC plus \$8,500 paid in sales tax. The \$80,000 grant program would create an income tax liability. This would be the grant value less \$17,700 for the first of five years of depreciation at 20%¹¹⁷. It would be calculated against 80% of the \$108,500 purchase price to allow for salvage value. The tax would thus be 32% of \$51,140 or \$16,365. The total cash required in year one would be **\$56,256** (*Exhibit 31*).

¹¹⁵ Assumes the LMC exceeds the limits of the Section 179 deduction as do all of the following examples.

¹¹⁶ Again the tax liability is incurred in the year in which the grant is received and may be offset by other factors, such as operating losses, normal depreciation or Section 179 depreciation. In the subsequent four years, the LMC would have depreciation deductions and no grant income and, hence, lower taxable income.

¹¹⁷ For tax purposes, trucks are depreciated over five years. The depreciable amount is the total purchase price, \$108,500 less an estimated salvage value of \$20,000 or \$17,700 per year. In addition there would be a first year deduction for the cost of acquiring the old truck to be scrapped.

- For LMCs in the 1-10 range, the average expenditures (*rounded*) to buy new trucks would be \$168,000. It would be \$506,000 for firms of 11-25 trucks and \$1,294,000 for those with 26-75 trucks. Among larger LMCs, those with 76-250 trucks would need to spend \$1,575,000 for trucks they would use in port drayage. It would be \$3,656,000 for those with 251 or more.

Exhibit 31.-Cash Flow, LMC Fleet Purchase Of New Trucks		
Cost of Acquiring a Used Tractor to Scrap		\$11,500
Cost of New Tractor		\$20,000
Sales Taxes @ 8.5%		\$8,500
Purchase Cost		\$40,000
Fleet Modernization Grant	\$80,000	
Value of depreciation deduction @ 20%	(\$17,700)	
Scrap Value of Used Tractor	(\$11,500)	
Net Taxable Income	\$50,800	
Income tax at @ 32%	\$16,256	16,256
Total Cost		\$56,256
Total Fleet Size	Avg. Trucks	Cash Required
1-10	3	\$168,768
11-25	9	\$506,304
26-75	23	\$1,293,888
76-250	28	\$1,575,168
251 & Up	65	\$3,656,640

- ***Total Cost of Fleet Creation.*** If the LMCs in the various size ranges are to continue operating at their current capacities, assuming they can fund 50% of a fleet under the retrofit provisions of the Fleet Modernization Grant Program and 50% under its salvage and replacement scenarios, the amount of average capital that must be raised by LMCs would vary by size (*rounded*): \$288,000 for LMCs in the 1-10 range, \$863,000 for firms averaging 11-25 trucks, and \$2,243,000 for those with 26-75 trucks. Among larger LMCs, those with 76-250 trucks would need to spend an average of \$2,683,000 for trucks they would use in port drayage. It would be \$6,227,000 for those with 251 or more (*Exhibit 32*). In each case, the cost per truck would be the average of \$39,548 (*retrofit*) and \$56,256 (*new*) or **\$47,902**.

Exhibit 32.-Average Cash Flow for LMC Fleet Creation		
Total Fleet Size	Avg. Trucks	Cash Required
1-10	6	\$287,413
11-25	18	\$862,238
26-75	47	\$2,243,045
76-250	56	\$2,682,518
251 & Up	130	\$6,227,275

Financing. It will likely be difficult for LMCs to finance these fleet purchases. It was shown earlier that the financial strength of mid-sized port drayage LMCs with average revenues of \$3 million to \$5 million was reflected in data published on Form M balance

sheets for U.S. trucking firms.¹¹⁸ Given the estimated \$107,100 in LMC revenue per IOO,¹¹⁹ these ranges are reflective of firms with 28-50 trucks. LMCs of this size and smaller operate an estimated 71.5% of the capacity of the port drayage industry.¹²⁰

Form M showed that on average U.S. trucking firms with \$3 to \$5 million in revenue had owner's equity of \$362,200. That means that few if any of the mid-sized or smaller LMCs that dominate the San Pedro Bay's port drayage sector have the internal financing to undertake the required truck purchases and retrofits described above. In addition, their low levels of equity plus low returns on equity (5.29%) and capital (2.19%) represent significant hurdles to borrowing or attracting new capital.

For many LMCs, personal owner guarantees would thus be required for any significant new debts or leases. The interest rates would likely be high, given the risk of lending to firms with low capitalization and profitability. For the owners of the weakest LMCs, low FICO credit scores may be an issue in obtaining credit.

Compounding this difficulty would be the fact that the LMCs would have to borrow \$56,256 to finance each new \$100,000 truck, or fund that amount from other sources. However, their equity in the vehicle would only be \$20,000 in the first year. The port grant program would be the primary lien holder on the vehicle to ensure that title did not transfer without their approval. A lender would thus have a secondary position on just \$20,000 of a truck's value for a loan of \$56,256 and be in second position for the balance if there was a default.

Based on these factors and discussions with several large financial organizations, it appears that the most expeditious financing structure would be to have a portion of the ports contribution to the Clean Truck Program be used as a guarantee in a structured financing arrangement that could cover all LMCs in the program. Terms might involve the lender and ports allocating profits and losses from repossessions over the grant program's life with lending rates of about 10%. Lacking such an overall financing framework, it should be expected that *many LMCs will have difficulties arranging financing on a timely basis, a problem that would impede their ability to comply with the Clean Truck Program.* In that case, they would have to attempt to pass the extra cost on to the ocean shipping lines and/or beneficial cargo owners via higher rates.

Risk, Fixed Costs and Peaking. For LMCs, the acquisition of tractors will immediately increase their fixed cost of operations due to licensing fees, insurance and capital carrying costs. The firms would face these costs whether or not the vehicles were in revenue service. This problem will be compounded by the difficulty and cost of trying to balance their employment levels with fluctuations in their volumes (*see #3 Employees Replace IOOs*). The risk of this situation will likely cause LMCs to try to get by with fewer vehicles and drivers and aim for more consistent business levels. This will particularly be an issue for mid-sized and smaller LMCs where idle trucks and employees can quickly cut into profits. As indicated, such firms represent over 70% of port drayage capacity. A

¹¹⁸ See discussion on pages 23-24 and balance sheet data in Exhibit 15.

¹¹⁹ See Exhibit 20, page 41.

¹²⁰ See discussion on page 20 and data in Exhibit 14.

side effect of the higher fixed costs of truck ownership and having employee drivers would thus be to reduced flexibility of LMCs to deal with peak container volumes.

Full Service Leasing. Another possible route to finance LMC trucking fleets could be through a comprehensive port leasing program. One leasing firm indicated that their mass truck purchases would allow them to lease a \$104,139 Freightliner tractor to LMCs for \$1,680 per month (*\$14,000 a year*) plus \$350 a month (*\$4,200 per year*) for maintenance, a total cost of \$2,030 per month (*\$24,360 a year*). This would require the ports to invest \$655 million to buy down the cost of the trucks and cover a loss pool. That would be instead of needing the ports to invest an estimated \$1.8 billion for the Fleet Modernization Grant Program. If the ports were to spend \$823 million further buying down the program's capital cost, while allowing for the loss pool, trucks could be leased to LMCs for \$1,151 per month plus \$350 for maintenance, a total of \$1,501 or \$18,012 per year.

A lease program approach would have the advantage of causing the scarce funds available for the Fleet Modernization Grant Program to go further. It would also provide new vehicles and consistent maintenance. It would also offer a way around the difficulties that LMCs appear to face in being able to finance the acquisition of their fleets. And, it would alleviate LMCs from having to create maintenance organizations.

However, in the long run, a leasing program like this would be more expensive to the LMCs. They would be spending \$14,000 to \$20,000 a year for five years for the trucks or \$69,000 to \$101,000 in five years. That is much more than the one time cost of \$39,548 for acquiring a retrofitted truck or \$56,256 for a new one. It is also far more than IOOs are currently spending for the trucks being used on behalf of the LMCs today.¹²¹ In addition, the LMCs might be able to maintain their vehicles for under the \$4,200 per year. The greatest difficulty with the leasing approach is that it would be in perpetuity, where the Fleet Modernization Grant Program is designed to end in five years.

An important consideration may be the fact that a comprehensive leasing program run through the ports would create cost elements known to the entire harbor community. To the extent that these costs are above those historically faced by the LMCs, this might make it easier for them to verify at least a part of the basis upon which they are demanding higher prices from ocean carriers or beneficial cargo owners.

Transition. The logical conclusion of this analysis is that cash flows in the years when LMCs acquire trucks will be under serious strain. For many, survival will depend on how fast they can improve their cash flows by charging higher rates to the ocean shipping lines or beneficial cargo owners. Three other considerations will impact the speed at which they will need to have this occur. First, from 2008-2012, the Clean Truck Plan sets deadlines by which trucks of varying vintages must be replaced or retrofitted to clean air standards if they are to access the ports.¹²² Despite this phase-in process, LMCs will be under great pressure to make the transition almost immediately due to the requirement that they pay a TIF penalty each time an unclean truck under their auspices accesses the

¹²¹ The February 2007 CGR survey of IOOs found that 20% had truck payments averaging \$879 a month or \$10,548 per year (*maintenance not included*). The other 80% reported owning their tractors outright.

¹²² See Exhibit 21 p. 45.

harbors. Second, the cash flow pressures on LMCs will be amplified by the requirement that they increase their share of employee-drivers to specified thresholds over a 5-year period. Third, there will be the requirement that LMC/concessionaires maintain truck yard facilities where vehicles can be parked, repaired and inspected. After these issues have been discussed, the economic implications of the speed at which LMCs might be able to raise shipping rates will be discussed.

2. **Truck Impact Fees.** Section 5 included a detailed discussion of the fact that during the 5-year transition period, the LMCs will be assessed a TIF estimated at \$34 to \$54 each time a truck under their auspices that has not yet met clean air standards enters a port. Using a \$50 TIF level, the estimated cost was \$15,400 per truck (*assuming 308 trips per year*). It was shown that such a fee would cause an LMCs to annually lose \$10,000 using such a truck as, at 5%, their net pre-tax profit averaged only \$5,400 per truck. Even if they were able to raise prices to double their profit to \$10,800, the loss would still be \$4,700 on each truck. Their financial viability will not allow them to absorb these TIF costs for very long. They will be under great strain to acquire and clean up trucks as fast as possible. The TIF will thus mean that the cash flow pressures discussed above would likely hit most LMCs early in the Clean Truck Program. Similarly, the Fleet Modernization Grant Program would need to be funded much earlier than proposed.

3. **Employees Replace IOOs.** According to the proposed Clean Truck Program, LMC-concessionaires will be required to use progressively larger shares of employee-drivers on a trip weighted basis (*Exhibit 33*). In hiring drivers, they will be required to give preference to people with a past history of providing port drayage services.¹²³

Exhibit 33.-Required Share of Employee Drivers	
Date	Share of Employee Drivers Required
June 30, 2008	20%
June 30, 2009	40%
June 30, 2010	60%
June 30, 2011	80%
June 30, 2012	100%

Employee Payroll Cost. As LMC employees, workers would need to make a basic wage rate that is the same as that needed to attract workers to the industry due to TWIC and the expansion of port operations. That was estimated at \$20 per hour.¹²⁴ It is assumed this is paid for:

- 1,800 hours a year (*40 hours a week, 45 weeks*)
- 80 hours per year of vacation pay (*40 hours, 2 weeks*)
- 80 hours per year for holidays (*10 federal holidays, 8 hours a day*)
- 40 hours per year personal time like sick leave (*40 hours, 1 week*)
- 2,000 hours x \$20.00 = **\$40,000**

¹²³ Discussion Draft, Minimum Concession Requirements, San Pedro Bay Ports Clean Air Action Plan, June 2007

¹²⁴ See discussions, page 39 and page 47.

The other 80 hours of a normal 52 week a year schedule, the driver is assumed to be idle (2 weeks, 40 hours) due to fluctuations in business conditions. In addition, during the 45 weeks when the employee is working, an average of 1.0 hours of overtime or 225 hours is assumed at the California 150% rate for time over eight hours per day:

- $\$20.00 \times 1.5 = \30.00 per hour $\times 225$ hours = **\\$6,750**.
- Total wage compensation would be $\$40,000 + \$6,750 =$ **\\$46,750**.

Employee Benefit Cost. In addition, the LMC must pay a variety of benefits for employees.¹²⁵ California requires state disability insurance at 0.6%:

- $\$46,750 \times 0.6\% =$ **\\$1,683**

The state also requires unemployment insurance and a contribution to the workforce investment board. The combined rate is 3.6% on a maximum of \$7,000 of payroll:

- $\$7,000 \times 3.6\% =$ **\\$252**

In addition, there is California's workers compensation insurance requirement. The 2007 rate assumed here is \$8.63 per \$100 of payroll. That is a modest rate for truckers (*job code 7219*) quoted by Hartford Insurance Co. of the Midwest and picked from a wide array of rates identified by the California Department of Insurance.¹²⁶

- $\$46,750/100 = 467.50 \times \$8.63 =$ **\\$4,035**

Also, drivers are likely to receive some medical insurance. According to the 2007 Health Benefits Survey by Kaiser Family Foundation, 64% of companies with three to 199 employees that provide health insurance do so through Preferred Provider Organization coverage (*PPO*).¹²⁷ In addition, 75% use plans that require an employee to make a contribution.¹²⁸ To cover a single person, the 2007 PPO rate had an average cost of \$4,505 per year with the employees typically paying \$491 (10.7%). The employer cost:

- $\$4,595$ per year - $\$491$ by employee = **\\$4,014**

Under federal law, the employer must also pay a 50% portion of the social security taxes on an employee. The employer's share is 7.65% of the payroll:

- $\$46,750 \times 7.65\% =$ **\\$3,576**

Employee Wage & Benefit Cost. Given the financial pressures operating on LMCs, it is assumed that they do not pay either the family rate for medical insurance nor do they make contributions to an employee retirement plan when they first move into hiring employees instead of using IOOs. Total cost for a typical future LMC employee would be:

- Combined benefit package: **\\$13,560**

¹²⁵ The non-payroll cost factors were discussed thoroughly in Section 4 (*TWIC*) of this report. See page 35.

¹²⁶ California Workers' Compensation Rate Comparison, California Department of Insurance, 2007.

¹²⁷ Among Firms Offering Health Benefits, Percentage of Covered Workers in Firms Offering the Following Plan Types, by Firm Size, 2006, Health Benefits Survey, Kaiser Family Foundation, Exhibit 4-4, p. 53.

¹²⁸ Average Annual Premiums for Covered Workers for Single Coverage, by Plan Type and Firm Size, 2006, Health Benefits Survey, Kaiser Family Foundation, Exhibit 6-4, p. 63.

- Total wage compensation: **\$46,750**
- Total employee cost: **\$60,310** for 2,225 hours (\$27.11/hour)
- Current median IOO net earnings are \$29,000 for 2,426 hours (\$11.95/hour)¹²⁹
- LMC employee would costs \$65,914 to draw sufficient drivers to offset TWIC and port expansion, **2.08 times** IOO current net earnings (\$29,000).¹³⁰

Time Available. Workforce rules and work practices vary between employees and IOOs. Employees are paid for time spent on tasks that IOOs do as part of their businesses. During an average day, IOOs were found to work an average of 10 hours or 600 minutes. Employee-drivers are assumed to work eight straight time hours and one hour overtime, a total of nine hours or 540 minutes. However, they actually only have 430 of those minutes available since several functions absorb 110 minutes of their time:

- 20 minutes required for work breaks under California law¹³¹
- 30 minutes, pre-trip preparation, inspection, fueling
- 30 minutes, for average wait time during the year for minor maintenance
- 30 minutes, post-trip clean-up and log book

The 430 minutes available to employee-drivers would be **28.3%** less than the 600 minutes available to IOOs. Thus, future employee-drivers would cost an LMC some 2.08 times higher than today's IOOs during the time they are working but actually have 28.3% less of that time available. Allowing for that fact, the hourly cost of a future employee-driver is thus **2.67 times higher** than today's IOO driver.

Non-Driver Operating Costs, Slip-Seating, Technology. The LMCs must incur the cost of operating trucks under the employee model. Those costs include:

- Fuel and fuel taxes estimated at 40,000 miles per year, \$3.00 per gallon with tractors averaging 5 miles per gallon: **\$24,000.**¹³²
- Average interest payments on loan payments for truck giving equal weight to retrofit and purchase scenarios: **\$2,511**¹³³
- Tire costs were estimated at \$0.04 per mile for 40,000 miles or **\$5,600.**¹³⁴
- Maintenance was estimated at \$0.10 per mile for 40,000 miles or **\$4,000.**¹³⁴
- Licenses, taxes and permits (*not port concessionaire*) estimated at **\$1,000**

¹²⁹ A Survey Of Drayage Drivers Serving The San Pedro Bay Ports, CGR Management Consultants, p.9.

¹³⁰ LMC hourly rate (\$23.60) to assure labor force would be 2.48 times IOO current average hourly rate (\$11.95).

¹³¹ 45.3 Rest Periods. Enforcement Policies And Interpretations Manual, Division of Labor Standards Enforcement. Section 12 of each of the Orders) provides: (A) Every employer shall authorize and permit all employees to take rest periods ... at the rate of 10 minutes net rest time per 4 hours or major fraction thereof.

¹³² Annual Miles from A Survey Of Drayage Drivers Serving The San Pedro Bay Ports, CGR Management Consultants, p. 13; California cost of diesel per gallon from Energy Information Agency; miles per gallon from CGR.

¹³³ See Cost of LMC Fleet Purchase of New Trucks, Exhibit 30, page 62.

¹³⁴ Estimated cost per mile by TCI Truck Leasing.

- Liability, accident, physical damage, cargo insurance estimated at **\$9,000**¹³⁵
- For each truck, the LMC is spending **\$42,111**

Under the IOO system, the drivers pay these types of costs out of the \$75,000 in gross income payments made to them by LMCs. These costs will be higher under the LMC employee model due to higher insurance coverage, paid maintenance work and larger loans. In addition, most of today's LMCs would incur the extra cost of the staff to handle the management of organizations that own trucks and employ drivers. This would include people: carrying out driver recruitment, background checks and supervision; payroll and benefits compliance; driver safety, TWIC, health, log book and licensing oversight; port security and clean air compliance; office and truck software and hardware functions; yard security and clean-up.

However, these higher costs will be partially or completely offset by two changes in port drayage operating procedures. The first is the fact that slip-seating (*more than one driver per truck*) will be possible for some of the trucks operated by the LMCs. This would most likely apply to the 50% of drayage trips that are within 25 miles of the ports.¹³⁶ It would be less likely to apply to the 50% of trips that go farther away. Where slip-seating is a factor, the fixed costs of the vehicle (*insurance [\$9,000], interest payments [\$2,511], fees & permits [\$1,000]*) are spread across more than one driver, effectively lowering the impact of the LMCs cost differential in operating a truck fleet.

Also, with the Clean Truck Program, there will be the potential of greatly increasing the average number of container "turns" per truck per day for drivers, particularly those with shorter runs, due to the universal adoption of technologies like RFIDs and AVLS. This creates the potential for the real time integration of port terminals, LMC headquarters, warehouses, cross-docks and intermodal facilities, together with on-board truck computers and locator devices. During this project's interview process, this potential was brought up separately by some of the larger LMCs, the ILWU, engineering analyst Anne Goodchild, the Teamsters, terminal operators and major national firms.¹³⁷

Given that the truck operations and non-driver employee costs, on the one hand, and the capabilities of added efficiency via slip-seating and technology, on the other, move in opposite directions, the assumption is made that they will roughly balance. Neither is therefore quantified. In particular, this assumption is made due to the time, training and coordination necessary to create a tightly integrated, relatively error free computer system, given the large number of small LMC/concessionaires, many with limited computer understanding.

¹³⁵ Overdrive Partners in Business Manual, co-written by American Truck Business Services, for a program sponsored by Freightliner Trucks and Castrol, 2006 edition. \$1 million primary liability insurance (\$5,000); \$1 million in non-trucking-use liability insurance (\$450); physical damage insurance (\$2,400); cargo insurance (\$1,000).

¹³⁶ See discussion of median trip distances on page 19.

¹³⁷ Over 50 local LMCs were interviewed one-on-one; ILWU interviewed August 24, 2007; for Dr. Goodchild, see footnote 91, page 46; Teamsters interviewed August 8, 2007; discussions held with Yellow-Roadway on August 28, 2007; UPS part of a group of interviews on July 25, 2007, Schneider National in mid-July 2007.

Total Labor Cost Increase By LMC Size. For the five LMC size categories used in this analysis, it is next necessary to use the wage and benefit information above to identify the change in costs that will take place in moving from using IOOs to hiring employee-drivers (*Exhibit 34*). To summarize, the future average employee-driver will earn \$46,750 per year working 2,000 hours of straight time and 225 hours of overtime. The basic hourly rate of \$20 will be necessary to draw drivers to port drayage. Voluntary and legally mandated benefits will have estimated annual costs of \$13,560 per employee. Total annual cost will thus be \$60,310. To absorb their work load, the average employee-driver will have 28.3% less time than the average IOO. This will create a need for more employee-drivers. Meanwhile, \$29,000 is the net median earnings of today’s IOOs. Finally, the extra non-labor costs facing LMCs, and the change in productivity from activities like slip seating and adopting technology are treated as offsetting one another.

Exhibit 34.-Labor Cost, Employee-Drivers, By LMC Size Group									
	Cost per Job:	\$46,750	\$13,560	\$60,310	28.3%	\$60,310	\$84,590	\$29,000	
Category	Average Size	Annual Wages	Annual Benefits	Annual Labor Cost	Availability Factor	Extra Workers	Total Labor Cost	IOO Model	Increased Labor Cost
0-10	6	\$280,500	\$81,359	\$361,859	\$102,527	2	\$464,386	\$174,000	\$290,386
11-25	18	\$841,500	\$244,078	\$1,085,578	\$307,580	5	\$1,393,159	\$522,000	\$871,159
26-75	47	\$2,197,250	\$637,315	\$2,834,565	\$803,127	13	\$3,637,692	\$1,363,000	\$2,274,692
76-250	56	\$2,618,000	\$759,354	\$3,377,354	\$956,917	16	\$4,334,271	\$1,624,000	\$2,710,271
251 & Up	130	\$6,077,500	\$1,762,787	\$7,840,287	\$2,221,415	37	\$10,061,702	\$3,770,000	\$6,291,702

Sources: Annual wage factor discussion, p.65- 66; annual benefits discussion, p. 66, availability factor discussion, p. 77.

In each case, it will cost LMCs 2.08 times more in wages and benefits for their employee-drivers, but the amount of time available for their workforces will be 28.3% less. Thus, for example, companies in the 26-75 truck range would have an average total wage and benefit bill of \$2.83 million for 47 trucks with one driver each. However, they will need 28.3% more workers to get the work done. That adds \$803,000 in cost or the equivalent of 13 drivers. The total cost to operate the 47 trucks would thus be \$3.64 million. That contrasts with \$1.36 million using IOOs, a \$2.27 million difference. The cost of future employees will be thus be 167% higher than costs of using today’s IOOs.

- 4. Truck Yard Facilities.** Under the Clean Truck Program, LMC/concessionaires “must agree to provide off-street parking for port drayage trucks when not in service,” and they must “prepare a facility *specific maintenance* plan for all trucks under their concession agreement.”¹³⁸ [*italics added*] To identify the potential cost of buying and building yards, data was acquired on the cost per truck of facilities recently built by Penske Truck Leasing in Sacramento California, Lakeland Florida and Springfield Missouri. The facilities included parking, offices and truck repair bays. Two facts are evident. First, California property is much more expensive than property in other states (*Exhibit 35*). Second, less space per truck is used in California, probably for that reason. The key findings from these data are that in Sacramento, there was 581 square feet of space used per truck and the cost per truck was \$15,496.

¹³⁸ Minimum Concession Requirements, Discussion Draft, San Pedro Bay Clean Air Action Plan, June 2007

Exhibit 35.-Cost Of Truck Yard Space, 2007, Various Markets			
	Sacramento, CA	Lakeland, FL	Springfield Mo.
Acres	10	8	7
Square Feet per Acre	43,560	43,560	43,560
Square Feet Per Site	435,600	348,480	304,920
Trucks	750	550	400
Square Feet per Truck	581	634	762
Cost	\$9,000,000	\$6,000,000	\$5,000,000
Cost Per Truck	\$15,496	\$9,470	\$6,559

Source: Penske Truck Leasing

Given those facts, data was used from Grubb & Ellis to determine the relative cost of industrial space per square foot a month between Sacramento and three Southern California locations. This was used as an index of the relative cost that would exist per truck to create such space. It was determined that if cost in Sacramento (*McClellan, I-80*) was \$15,496 per truck, in South Bay near the ports it would be 70.3% higher or \$26,385. The cost in either the Mid-City area north of the ports or in the San Gabriel Valley would be 54.1% more or \$23,872. Inland Empire space in Fontana would cost 11.9% more or \$17,346 (*Exhibit 36*).

Exhibit 36.-Cost Of Truck Yard Space, 2007, California Markets				
County or Area	Site	Cost per Truck	Industrial Space per Square Foot/Mo.	Cost Differences
Sacramento	McClellan/I80	\$15,496	\$0.37	0.0%
Los Angeles	South Bay	\$26,385	\$0.63	70.3%
Los Angeles	MidCity/San Gabriel	\$23,872	\$0.57	54.1%
Inland Empire	Fontana	\$17,346	\$0.41	11.9%

Source: Industrial space from Grubb & Ellis, calculations Economics & Politics, Inc.

Depending upon where an LMC decided to locate its facilities, this leads to a wide range of potential truck yard costs to them. For instance, for LMCs of 26-75 trucks, the average number of trucks is 47 vehicles. The costs would be \$817,243 in Fontana, \$1.12 million in Mid-Cities/San Gabriel Valley, \$1.24 million in the South Bay area and \$1.06 million if they spread 50% inland and 25% in the two Los Angeles County areas (*Exhibit 37*). In fact, many LMCs will find it difficult to locate ample land except in the Inland Empire because industrial space in Los Angeles County is already heavily used. That is reflected in its 1.8% industrial space vacancy rate, the tightest in the U.S. It is thus assumed that 50% of the space is located in the Inland Empire and 25% each in the two Los Angeles County markets. The weighted average cost would thus be **\$21,237 per truck**.

Exhibit 37.-Yard Costs By LMC Size, So. California Areas, 2007					
	Per Truck	\$17,346	\$23,872	\$26,385	\$21,237
LMC Size Category	Avg. Trucks	Fontana	Mid-Cities/S. Gabriel	South Bay	Weighed Avg.
0-10	6	\$104,074	\$143,232	\$158,309	\$127,422
11-25	18	\$312,221	\$429,696	\$474,927	\$382,266
26-75	47	\$815,243	\$1,121,985	\$1,240,088	\$1,059,105

76-250	56	\$971,354	\$1,336,833	\$1,477,552	\$1,261,913
251 & Up	130	\$2,254,928	\$3,103,362	\$3,430,031	\$2,760,812

5. Economic Implications of LMCs Owning Trucks, Hiring Workers, Buying Yards.

If future LMCs become concessionaires and must fulfill the requirements of the Clean Truck Program outlined in this section, the pressure on their cash flows will rise substantially over the current situation. Specifically, they will be required to buy and retrofit or replace trucks, pay a TIF each time an unclean trucks under their auspices enters the ports during the 5-year transition period, find and hire more expensive workers, and obtain yards to park and maintain their vehicles.

The combination of the cash flow needed to pay for these requirements (*rounded*) would average \$879,000 for LMCs of 1-10 trucks, \$2.64 million for those with 11-25 trucks and \$6.89 million if they have 26-75 trucks. Among the largest firms, the costs would average \$8.21 million for firms with 76-250 trucks and \$19.05 million for those with over 250 trucks (*Exhibit 38*). Importantly, these increases assume that the LMCs have access to a fully funded Fleet Modernization Grant Program to purchase and retrofit or replace all of their vehicles. (*Note: Labor cost factor includes pay, benefits and extra workers*)

Exhibit 38.-Extra Cost of Clean Truck Program to LMCs, By Size						
	Truck Clean-Up	Labor Cost	Yard	Total Cost	IOO Model	Difference
Per Truck	\$47,902	\$77,398	\$21,237	\$146,537	\$75,000	\$71,537
0-10	\$287,413	\$464,386	\$127,422	\$879,221	\$450,000	\$429,221
11-25	\$862,238	\$1,393,159	\$382,266	\$2,637,663	\$1,350,000	\$1,287,663
26-75	\$2,251,399	\$3,637,692	\$998,140	\$6,887,231	\$3,525,000	\$3,362,231
76-250	\$2,682,518	\$4,334,271	\$1,189,273	\$8,206,063	\$4,200,000	\$4,006,063
251 & Up	\$6,227,275	\$10,061,702	\$2,760,812	\$19,049,789	\$9,750,000	\$9,299,789

Sources: Exhibit 31 (*buy & retrofit or replace trucks*), Exhibit 33 (*wage, benefits, time*), Exhibit 36 (*yards*)

Using today’s IOOs, the firms in these categories are currently paying an average of \$75,000 for each IOO they are using. Deducting that amount from the costs for the average future LMC in each of the five size categories, shows that for firms in the 0-10 category, the average increased cash outflow (*rounded*) would be \$429,000. It would be \$1.29 million for those with 11-25 trucks and \$3.36 million for those with 26-75 trucks. Among larger firms, the average increased cash outflow would be \$4.01 million for LMCs with 76-250 trucks and \$9.30 million for those with 251 or more.

Again, today’s IOOs are paid a gross income of \$75,000 to handle the equivalent of the labor and truck ownership for LMCs. This requires total LMC revenue per IOO of \$107,100 (*Exhibit 20, page 41 & column 1, Exhibit 39*). To allow the average IOO’s net income to reach the estimated \$20 per hour needed to attract more drivers due to TWIC and expanded port volumes, it was also shown that IOO gross incomes must reach \$96,000 (*Exhibit 23, page 48*). That and other changes meant that their annual revenue per truck would have to rise to \$159,200 from today’s \$107,100, requiring a price increase of 48.6% (*column 2, Exhibit 39*).

To replace what is now supplied by IOOs, most future LMCs would have to buy and retrofit or replace trucks using their share of costs from the Fleet Modernization Grant Program (*average: \$47,902 per truck*). As they would have trouble financing this cost, it

would need to become part of their rate calculation. They would have to hire workers and pay wages and benefits in a tighter labor market plus use more workers for the same volume (\$77,398 per truck), and open a facility to park and maintain trucks (\$21,237 per truck). The combined cost of these functions (rounded) would be \$146,500. If LMC profits stayed the same as the case in which they had doubled to \$10,700, and other costs remained at \$34,400 (non-operating staffing increases are assumed to be offset by efficiency gains), then revenue per truck would have to rise to \$191,700, a level substantially above average for the trucking industry including long haul trucking.

That would require prices to the ocean shipping lines or beneficial cargo owners **to increase 80.0%** compared to today's use of IOOs. It would be 20.4% higher than the price required under the IOO model, to raise IOO net income to \$20 per hour, pay for truck replacement costs not covered by the grant program, and increase the LMCs profit from \$5,400 to \$10,700 per truck (5% to 6%). According to Moffatt & Nichol data, an 80% increase would raise port drayage costs from \$150 to \$270 per container for trips near the ports and \$300 to \$540 to the Inland Empire. These fees are still minor compared to the \$2,575 in costs for other portions of a container's journey. These higher costs would represent just 0.17% to 0.34% of the \$70,000 median value of a container's contents.

Exhibit 39.-Operating Cash Flow Comparisons Per Truck Per Year						
	Using Current IOOs		48.6% Price Increase, Truck Replace, IOO to \$20/Hr, Double LMC Earnings		80.0% Price Increase, Truck Replace, Pay Employees & LMC Earnings	
Labor, Truck, Facility	\$75,000	70.0%	\$96,000	60.3%	\$146,500	76.4%
Other Costs	\$26,800	25.0%	\$34,400	21.6%	\$34,400	17.9%
Truck Replacement Charge	\$0	0.0%	\$18,000	11.3%	\$0	0.0%
Pre Tax Margin	\$5,400	5.0%	\$10,700	6.7%	\$10,700	5.6%
Total Annual Revenue	\$107,100	100.0%	\$159,200	100.0%	\$191,700	99.9%
Price Increase			48.6%		80.0%	

Source: Exhibit 23 (Current IOO & IOO with 100% Pay Gain), medium sized factors from Exhibit 36

Impact of TIF. As discussed, each time a truck not up to clean air standards enters a port gate, it will cost its LMC a TIF. Assuming a fee of \$50 and a median of 308 trips a year, the annual cost would be \$15,400 per truck. It was shown earlier, that LMC's average pre-tax profit margin is 5% or \$5,400. If they must pay \$15,400 a year in TIF because a truck is not yet up to clean air standards, their annual loss on the vehicle would be \$10,000. Even with the 53.2% price increase postulated to help the LMC greatly increase the pay of their drivers, help finance replacement trucks and double their own profits to \$10,800, the \$15,400 TIF would leave them with an annual loss of \$4,600. The typical LMC will realize that it cannot survive if it is paying the TIF and will seek to acquire and retrofit or replace trucks as fast as possible. Here, the difficulties with the Fleet Modernization Grant Program will come into play in that 31% of its funding is questionable given attempts to avoid the TIF and whether Proposition 1B funds will be forthcoming.

Transition. Given this analysis, there appears to be two paths along which the Clean Truck Program might take the port drayage industry. The key in both cases is the fact that there is not enough money in the combination of the LMCs and IOOs to fund the clean-up effort as well as the labor supply changes implied by TWIC, port growth and the associated change to employee-

drivers. The Fleet Modernization Grant Program and the truck and employee phase-in processes will help, but the mathematics of the TIF and the resources available to the grant program will likely mean that LMCs will be forced to try and clean up their vehicles and thus move to an employee model faster than funds will be available to lower their costs of doing so.

At its core, this means that a full scale Clean Truck Program will depend upon the speed with which the LMCs can alleviate their cash flow problems by increasing prices to the ocean shipping lines and/or the beneficial cargo carriers. As indicated, the increase must be on the order of the 80% discussed above. Here, they will meet stiff resistance. Again, the two potential paths cited earlier come into play:

- ***Crisis Path.*** Ocean shipping lines will have difficulty finding LMCs to move their cargo and delivery deadlines will rapidly slip. Beneficial cargo owners will demand on-time delivery putting pressure on the shipping lines to pay more to the LMCs to solve the problem. However, since retailers will be unwilling to pay more, the shipping lines will do so very reluctantly allowing the crisis to build. Ultimately, the rates paid to LMCs and the IOOs will rise under the employee/truck ownership model but not before there has been serious disruption in the supply chain and the potential reallocation of trucks and drivers to non-port business. Some beneficial cargo owners will abandon store-door contracts and switch to only using ocean lines to transport cargo to the ports. They will have to contract separately with the LMCs to move their containers to their facilities.
- ***Downfield Vision.*** Less likely is for the ocean shipping lines, terminal operators, beneficial cargo owners and ports to recognize early that the pending driver shortage and the Clean Truck Program are about to put the LMCs under severe cash flow pressures. If the major players wish this to forestall a crisis, a meeting of minds might be formulated whereby increases in rates are negotiated between the players and leaders among the LMCs. This might allow the financial crunch to be solved without the crisis.

However, even under favorable circumstances, it is likely that the transition period will be one in which a good deal of the capacity of the port drayage industry will be financially unable to continue operating. An example using relatively optimistic assumptions shows the reason for this:

At the moment when LMCs feel they must raise prices because of the pending increases in pressure on their cash flows, it is assumed that ocean shipping lines and beneficial cargo owners representing 50% of their revenues agree to the new rates in advance. In those cases, the LMCs can raise their new prices to reflect the increases in their cash needs as soon as the costs are incurred.

Assume that the remaining 50% of LMC customers only agree to the new rates in equal proportions over the ensuing six months. At the end of that period, the LMCs current prices and revenues will represent full recovery of all of their new costs, and their profits will be back to their pre-transition level. By that time, however, the LMCs will have accumulated substantial losses during the “catch up” period. Customers following this path will likely be those that have contractual rate agreements that allow them to resist price increases based on those contracts terms. Most, but not all, store-door contracts reference the ocean carrier’s tariffs including the local drayage cost with the tariffs generally changeable on 30 days notice.

In particular, shippers will resist the LMC price increases due to their size (80%) and the fact that LMCs will be asking for them based on projected, not historical costs, and that a calculation of this nature is often subject to error. For a shipper of 200 containers a week (10,400 a year), an 80% cost increase would raise the cost of an average dray of \$300 per container to \$540. Their total cost would go from \$3.1 million to \$5.6 million a year, up \$2.5 million. Any corporation would delay such an increase as long as possible and explore other options, even if the resulting increase in the cost for a single item at the retail level would be insignificant. The LMC's price increase would only be acceptable to such an organization if no clear, lower cost alternative is available. Corporations will take time to satisfy themselves that this is the case.

For purposes of the analysis, seasonality is ignored and it is assumed that LMCs will earn their revenues evenly over the six month period in which the second half of its customers are gradually agreeing to price increases. The resulting impact of delays varies according to the size of the LMCs. Two are considered. One has Form M¹³⁹ revenue of \$3 to \$5 million a year (average of \$4.1 million). The other has Form M revenue of \$14.6 million a year. These are larger firms that include container hauling as one of their three primary lines of business.

Exhibit 40.-Impact Of Delays In Price Increases		
Metric	Firm Revenue Base \$3 mi to \$5 million	Firm Revenue Base \$14 million
Owner's equity pre-transition	\$362,200	\$1,768,600
Accumulated loss at breakeven	(\$410,000)	(\$1,460,000)
Owner's equity at the end of the transition loss period	(\$47,800)	\$308,600

Despite the fact that 50% of an LMC's clients (ocean shipping lines, beneficial cargo owners) are assumed to be willing to immediately accept a substantial price increase, and the balance agree to do so equally over a six month period, the analysis shows both the smaller and the larger LMCs ending the transition period in serious financial difficulty:

- The smaller firm had owner's equity before the transition period of \$362,200. During the transition, the firm has cumulative losses of \$410,000. The owner's equity is wiped out, falling to a *negative* \$47,800. The firm is bankrupt.
- The larger firm had owner's equity before the transition period of \$1,768,600. During the transition, the firm has cumulative losses of \$1,460,000. Here, the owner's equity has fallen by 82.6% to \$308,600.

In effect, even under relatively optimistic assumptions about the ability of an LMC to raise prices, the transition period will pose very significant financial risk. To the average LMC considering making what amounts to a transition from its current role as a service firm arranging container deliveries, to a new role as an asset-based trucking operation, this analysis has real world implications. It indicates that for both small and large LMCs, there is the risk of the destruction of their firms and possibly bankruptcy. For those that survive, the question arises as to how they would recoup the accumulated loss created during the transition period.

¹³⁹ U.S. Department of Transportation requires trucking firms with annual revenues over \$3 million to file a Form M comprehensive annual financial report. See page 23.

Economic Implications of the Transition Period. The pressures on the cash flows of the LMCs, and the impact of not having the ability to instantaneously gain acceptance of price increases to deal with them, leads to several conclusions:

- The Clean Truck Plan strategy appears to be relying upon pressure on the cash flows of LMCs to ultimately force the ocean shipping lines and beneficial cargo carriers to participate in helping to reduce emissions at the ports by paying higher prices that would be used to clean up the trucking fleet. However, the data strongly suggest that the weak financial strength of the LMCs will not allow most of them to survive the transition period to higher prices, even under relatively favorable conditions.
- The existence of this financial risk, or even the perception of it, will undoubtedly cause some LMCs to shift from port drayage to other trucking or logistics activities. Some may elect to withdraw from port drayage or even trucking. Already, among the over 50 LMCs that participated in one-one-one and group interviews, several indicated that they are currently planning or are in the process of re-directing their businesses to non-port drayage activities. Some indicated that they would dispose of their businesses, rather than risk transition to an employee-based concessionaire model.
- Recognizing their lack of financial staying power, and given their historic inability to quickly adjust their prices, LMCs will logically attempt to minimize the higher costs from the concessionaire's employee requirements. One identified strategy would be to split their companies into two entities. One would become the concessionaire and essentially act as a container shuttle service with a yard as close to the ports as possible. The second would be responsible for moving containers from there to their final destinations using IOOs with their existing tractors. This strategy would most likely be followed by larger LMCs with significant non-port business. The survey of 136 LMCs revealed that 26% had less than 60% of their business concentrated in drayage.

This strategy would effectively reduce the number of tractors involved in drayage by concentrating "pure" drayage operations into a smaller number of tractors and employee-drivers. It would reduce the number of IOOs who would have to become employees and keep a number of tractors in service that are now anticipated to be replaced or retrofitted. Those tractors, however, could be expected to spend less time close to the ports and more time hauling containers to final customer destinations.

- A result of the truck retrofitting and replacement program, as well as the employee-driver mandate, IOOs would be divided into two categories. Those with tractors that can be retrofitted would be favored as employees since the only cost of doing so would be the purchase price since the grant program would retrofit them.¹⁴⁰ Those IOOs with tractors that must be replaced would likely be avoided as employees since the concessionaire would have to buy their tractor, pay another \$20,000 for a replacement tractor and likely incur an income tax liability on the replacement grant.¹⁴¹ Some of these workers will have to leave the port drayage sector.

¹⁴⁰ In addition, there may be income tax liability on the Ports' contribution for the retrofit device.

¹⁴¹ This continues to assume new tractors with 2007 engines cost \$100,000 and the Clean Truck Program pays for 80%.

Dilemma. At the end of each chain of logic in this report, there has been the same dilemma. Regardless of the challenges (*TWIC, port growth, looming driver shortages, cleaner trucks*) or the strategies for addressing them (*higher pay, LMC:IOO, employee drivers, LMC truck ownership*), neither the LMCs nor the IOOs ultimately have the internal financial strength to solve the riddles facing the port drayage sector. Simultaneously, they lack the ability to raise their prices to force their customers to do so. Where financial institutions have a role to play, such as assisting in fleet investments, most IOOs and LMCs do not have the balance sheets or return on investment or sales to make them candidates for obtaining equity partners or loans, without **some form of port sponsored guarantees**. While the Clean Truck Program's phase-in period and the Fleet Modernization Grant Program could provide some relief, neither appears sufficient to overcome the fundamental lack of financial power in the port drayage sector. It appears that the Fleet **Modernization Grant Program's funding will need to be front loaded** due to the TIF pressures for IOOs or LMCs to quickly retrofit or purchase replacement trucks.

It is this financial weakness and the desire for survival that stands at the root of the way that the LMCs can be expected to react to the Clean Truck Program's various features. As each aspect of the program threatens to add to their cash flow pressures, it brings an immediate attempt to seek ways to minimize it. Hence, reactions occur such as pursuing non-port lines of business, dividing fleets, finding ways to continue relying on IOOs, or favoring drivers with newer vehicles.

At its core, the problem for the port drayage industry is one of negotiating power. The LMCs cannot raise their prices in a timely fashion because they do not have the power to do so. Any strategy that needs them to be able to do so will fail. The contrast between the LMCs and their customers is stark. The LMCs are very small highly entrepreneurial firms with little financial power, who daily face survival under a system of brutal competition in a highly disorganized sector. They face shipping lines and beneficial cargo owners that are large corporations with strong financial statements, who face limited numbers of competitors and operate within well organized industries. This difficulty even extends to the technology that could be a route to greater success for the port drayage firms. Thus, the information systems that have allowed major trucking operations like UPS to become highly efficient and cost effective rely upon the universal adoption and installation of compatible hardware and software systems operated by people trained in the use of common protocols.



7. Changes In Market Structure

Together, TWIC, the imminent growth of the ports, the need to reduce port related emissions, and the Clean Truck Program appear very likely to cause the port drayage industry to undergo two important changes. The first is the increase in pay per hour that will be required to lure drivers from other trucking sectors into port drayage. This change will be market driven and stem from the need to both fill the driver positions lost due to enhanced port security as well as those gained because of port growth. This adjustment will arrive at a time when the aging of the trucking industry's labor force and the rates of driver turnover are already putting upward pressures on driver incomes nationally.

A second change will be the increase in fixed costs, operating costs and cash flows that LMCs will face as they become concessionaires and respond to the Clean Truck Program. Together, these adjustments will make it difficult for new, poorly financed LMCs to be formed. They will also probably cause a share of the existing port drayage LMCs to be unable to continue in the business.

As firms react to these changes in the cost of running their operations, the result will likely be reduced competition within the port drayage sector. The result will be an increase in the price negotiating power of the LMCs that remain. Also, these changes should increase the interest that national trucking firms are already showing in entering the business.

Pay Scales. It has been estimated that LMCs will have to pay **\$46,750** in annual driver income (*IOOs or employees*) if they are to lure new people into Southern California's port drayage sector. As indicated, this higher rate will be necessary due to TWIC and port volume. One impact will be to narrow the gap between the pay of port drayage drivers and those drivers working for national trucking companies, whether they are unionized and not. To cite five examples:

- Schneider National indicates that its drivers now earn a median of **\$54,500** based upon those with three or more years of experience earning \$40,000 to \$60,000, plus the firm's decision to boost pay another \$4,500 due to the driver shortage¹⁴²
- Yellow Transportation pays its drivers \$22.21 per hour. Straight time, that represents \$46,200 per year.¹⁴³ With an average of one hour a day of overtime, the rate would be **\$54,526**.
- UPS pays its drivers \$27.34 per hour.¹⁴⁴ Straight time, that represents **\$56,900** per year. With an average of one hour a day of overtime, the rate would be **\$67,100**.
- JB Hunt pays an average of **\$50,000**.
- FedEx Ground pays \$40,000 to \$70,000, with most drivers earning **\$50,000-\$55,000**.¹⁴⁵

¹⁴² Schneider National boosts driver pay, The Business Journal of Milwaukee, August 13, 2007

¹⁴³ My Yellow.com, Drivers Wanted, <http://www.myyellow.com/>

¹⁴⁴ Fact Sheet, Driving Success: Why the UPS Model For Managing 103,500 Drivers Is A Competitive Advantage, UPS <http://pressroom.ups.com/mediakits/factsheet/>

¹⁴⁵ Data from the websites for these firms.

The narrowing of the pay gap between major trucking firms and those that are working in port drayage will increase the probability that national firms will choose to compete in the sector since their higher pay scales have been a main reason why they are not currently doing so.

Barriers To Entry & Competitiveness. Many of the LMCs interviewed in the process of this study indicated that the lack of minimum financial or regulatory barriers to starting an LMC has led to intense competition that has left them with little or no ability to exert control over their prices. The result has financially weakened nearly every firm in the business. Simultaneously, the ferocious competition and lack of pricing power that have characterized port drayage is cited by major trucking companies as another reason they are not currently in the market. In such an atmosphere, they cannot make money.

Though the fundamental intent of the Clean Truck Program is to reduce air emissions at the San Pedro Bay ports, one of its unintended effects may be to significantly reduce competition in the port drayage sector. This is the case as the program directly and indirectly creates financial thresholds over which firms must climb to enter or stay in the business. These may come in several forms depending upon final decisions about the structure of the program:

- **Annual Concession fee.** It was shown above that the average LMC is making \$5,400 in pre-tax profit per truck. One suggestion has been a flat fee of \$5,000 per LMC. For a 10 truck firm, that would amount to \$500 per truck or 9.3% of pre-tax profit.¹⁴⁶ It would be 4.6% of pre-tax profit. Another is for an annual fee of \$150 per truck. For all firms that would amount to 2.8% of pre-tax profit.
- **Transportation Impact Fees.** The level of TIFs could represent a significant barrier to the continued operation of smaller LMCs that cannot immediately bring tractors under their auspices up to clean truck standards. Calculations at a \$50 TIF showed it would annually cost a firm an average of \$15,400 for each truck that has not been retrofitted or replaced. That would be sufficient to wipe out the equivalent of three times the firm's pre-tax profit for any affected vehicle.¹⁴⁷
- **TWIC.** The need for LMCs to pay higher incomes to lure truckers into becoming IOOs in the port drayage industry due to the losses because of TWIC will put significant cash flow pressures on the existing smaller LMCs. The firms will need a 24.6% increase in prices to handle increasing the pay of IOOs to \$20 per hour. If they cannot raise their prices in a timely manner to pay the extra amounts, the financial difficulties imposed by the transition process will come into play.¹⁴⁸
- **TWIC and Port Expansion & IOO Help on Clean Truck Financing.** The need for LMCs to pay higher incomes to lure truckers into becoming IOOs in the port drayage industry will put significant cash flow pressures on the existing smaller LMCs. The firms will need a 48.6% increase in prices to handle increasing the pay of IOOs to \$20 per hour plus assist them to raise funds to retrofit their trucks. Again, if they cannot raise their

¹⁴⁶ See LMC requirements page 59 and Briefing Paper, San Pedro Bay Clean Truck Program, ENVIRON International Corp., p. 6.

¹⁴⁷ See Exhibit 26, page 52.

¹⁴⁸ See Exhibit 20, page 41.

prices in a timely manner to pay the extra amounts, the difficulties imposed by the transition process will come into play or more so.¹⁴⁹

- **TWIC, Port Expansion, Employee Requirement & Clean Truck Financing.** The possibility that LMCs will be required to both pay higher incomes to lure truckers into the port drayage industry plus pay benefits and buy and retrofit or replace trucks on top of that would put even greater strain on them. The firms will need an 80% increase in prices to handle this combination of increases in their costs.¹⁵⁰ If they cannot raise their prices in a timely manner to pay the extra amounts, the extreme difficulties imposed by the transition process will come into play.¹⁵¹

These various scenarios would have three impacts that would benefit the long term competitiveness of the stronger LMCs as well as the willingness of large national firms to enter Southern California's port drayage business:

- The concessionaire fee, and in particular the TIF level, would tend to make it difficult for smaller LMCs to enter the market and would likely cause some to have to leave it.
- The increased pay scales needed to lure drivers into becoming either IOOs or employees would increase the cost of conducting business as an LMC. If the firms cannot rapidly pass these extra costs on to their customers via higher prices, many will be forced to leave the sector. Simultaneously, as shown, these pay increases would eliminate part or all of the labor cost disadvantage that national companies would be under in entering the sector. It would be partial if the LMC:IOO structure is retained, as benefits would not be part of the package. It would be total under the LMC:employee-driver structure with benefits included.
- The need to raise prices to assist IOOs in buying new trucks or to help LMCs in buying and retrofitting or replacing trucks would put pressure on the cash flows of the LMCs. If they cannot rapidly raise prices to generate this cash, many will be forced to leave the sector with the smaller firms being the most vulnerable. Also, to the extent that price increases do occur, the result would be to further eliminate the competitive disadvantages that national firms would face in entering port drayage.

In creating the rules under which the Clean Truck Program will be implemented, the ports must ensure that the program does not so devastate the LMCs that significant shares of port drayage capacity are lost. However, given the weakened state of the sector, it seems almost impossible for the rules to be set in way that none of the players will be hurt. The result will thus be to reduce the competition faced by those LMCs that survive the transition. That, in turn, will increase their bargaining power vis-à-vis the ocean shipping lines and beneficial cargo owners. At the same time, since the cost of cleaning-up the trucking fleet will increase the prices paid for drayage, the Clean Truck Program will probably encourage national trucking firms to enter the market.

¹⁴⁹ See Exhibit 23, page 48.

¹⁵⁰ See Exhibit 39, page 73

¹⁵¹ See Exhibit 40, page 75

Powerful Market. The difficulties facing the port drayage sector raise the question as to why either the stronger LMCs or national trucking corporations would want to remain in it. The reason begins with a single fact. The increase in the volume of trade moving through the ports of Los Angeles and Long Beach, and, for that matter, through most other major American ports, is a direct reflection of the increasing competitiveness and growth of the world economy. As such, involvement in the port drayage business represents a tie into one of the most aggressively growing segments of the U.S. economy in both the long and short terms. This is particularly true with regards to Asia where trade increased 16-fold from 1990-2005 and 2.5 times from 2000-2005 (*Exhibit 41*). The compound growth of two-way Asian trade from 2000-2005 was 6.29%, despite the national recession in 2001.

Exhibit 41.-U.S.-Asian Trade, Price Adjusted, 1990-2005					
	1990	2000	2005	Multiple: 1990- 2005	Multiple 2000-2005
China	\$15,237	\$100,018	\$245,462	16.1	2.5
Japan	\$89,684	\$146,479	\$138,091	1.5	0.9
Korea	\$18,485	\$40,308	\$43,780	2.4	1.1
Taiwan	\$22,666	\$40,503	\$34,838	1.5	0.9
Malaysia	\$5,272	\$25,568	\$33,703	6.4	1.3
Thailand	\$5,289	\$16,385	\$19,892	3.8	1.2
India	\$3,197	\$10,687	\$18,808	5.9	1.8
Singapore	\$9,801	\$19,178	\$15,118	1.5	0.8
Indonesia	\$3,341	\$10,367	\$12,017	3.6	1.2
Philippines	\$3,884	\$13,935	\$9,248	2.4	0.7
Other	\$7,477	\$17,846	\$27,600	3.7	1.5
Asia	\$184,332	\$441,274	\$598,557	16.1	2.5
2000-2005			6.29%		
1990-2005			8.17%		

Source: U.S. Census Bureau, U.S. Trade in Goods, Imports & Exports

Involvement at the ports of Los Angeles and Long Beach is particularly enticing since it is the complex most directly tied to Asian trade, and because they are, by far, the largest such complex in the U.S. In 2006, they handled 37.8% of U.S.'s two way trade, nearly triple the volume of New York and well above the combined share of the 114 other ports starting with Oakland, the seventh largest (*Exhibit 42*).

Exhibit 42.-Two Way Container Volume, By Port, 2006 (TEUs)		
Port	TEUs	Share of U.S.
Los Angeles, CA	5,633,666	20.5%
Long Beach, CA	4,756,609	17.3%
New York, NY	3,628,747	13.2%
Savannah, GA	1,580,925	5.8%
Charleston, SC	1,493,285	5.4%
Norfolk, VA	1,409,733	5.1%
Other 114 U.S. Ports	8,970,461	32.7%
Total	27,473,426	100.0%

Source: Port Import Export Reporting Service (PIERS), collected from Vessel

For the LMCs that are able to stay in the business, and any national firms that choose to join them, the fact remains that they will be operating in conjunction with the key facilities in one of America's strongest sector.

National Firms. As they are potentially key players in Southern California's port drayage sector, it is necessary to understand the point of view of national trucking firms. During the interview process, direct contact was made with YRC Logistics (*Yellow Worldwide affiliate*), Schneider National and UPS. There was also an indirect contact from BNSF Logistics, the railroad company's trucking arm. In each case, the firms indicated an interest in doing business at the ports of Los Angeles and Long Beach. However, each also expressed reservations due to the impossibility of succeeding in the market as long as the lack of barriers to entry means that no drayage firm will have the market power to negotiate favorable prices with the ocean shipping lines and beneficial cargo owners.

Financial Strength. A look at financial information on three national trucking firms that were interviewed shows that they have substantial economic strength (*Exhibit 43*):

- Yellow Worldwide is a trucking corporation that had \$9.9 billion in revenue in 2006. The full company has a total of 60,000 employees. Historically, the company has been known as an LTL carrier. In Southern California, its two major cross-docks are in the Inland Empire. YRC Transportation President Michael Smid has clearly indicated his firm's interest in becoming involved in port drayage in Southern California to supplement their international supply chain operations. In 2006, Yellow Worldwide's return on equity was 12% that year and it has a market capitalization of \$1.7 billion.
- Schneider National had 2006 revenue of \$3.5 billion and a total of 22,300 employees. Since it is the country's largest privately held trucking firm, its return on equity is unknown. The firm recently acquired cross-dock and deconsolidation center operator American Port Services in 2005 in order to "enhance door-to-door import service." American Port Services had a leased facility nine miles from the ports of Los Angeles and Long Beach to deal with Asian imported trade.¹⁵²

Exhibit 43.-Financial Condition, Some Major National Trucking Firms, 2006					
Company	2006 Revenue (000)	Drivers	After Tax Net Margin (5 yr Avg.)	ROE 5 yr Avg.	Market (\$billion) Capitalization
Schneider National	\$3,500,000	22,300	NA	NA	NA
UPS	\$47,547,000	87,033	9.22%	24.1%	\$52.5
JB Hunt	\$3,328,000	17,150	4.94%	19.2%	\$4.1
Yellow Transportation	\$9,919,000	9,809	2.21%	12.0%	\$1.7

(1) 2003 Form M figure adjusted by CPI to 2007

Sources: Standard & Poor's Reports, Company Annual Reports, Forbes Top 1,000 Privately Held Firms, DOT Form M

- UPS is primarily in the package delivery business. However, they now also have an arm specializing in logistics. In Southern California, that portion of the business is centered next to their Western Regional Headquarters in Ontario. The firm clearly is making a commitment to being involved in port activities given their claim that "UPS Supply Chain Solutions offers a full array of global ocean freight and transportation services. We can handle almost any size shipment, from less-than-container loads to full containers,

¹⁵² Schneider Logistics to Acquire American Port Services, Logistics Today, June 27, 2005

special equipment, and oversized cargo.”¹⁵³ The parent company had 2006 revenue of \$47.5 billion and employs 428,000 people. Its return on equity was 20.4% in 2004 and its market capitalization is \$52.5 billion.

Should such firms decide to become players in the port drayage industry, they certainly have the financial power to invest in and maintain the types of trucks required by the Clean Truck Program. However, to date, the lack of pricing power in the port drayage sector has kept them out of the sector. However, if that changes, they will likely become competitors in it.

Technology. As has been discussed, one of the difficulties faced by today’s highly competitive but unorganized port drayage sector is its inability to gain the efficiency and cost benefits of the information systems that have been developed for the trucking industry. This is the case due to the inability of the weaker LMCs to install the necessary hardware and software systems on the trucks working with them, and most importantly, to have their staffs trained to consistently and accurately use them. This technology is being adopted by large national trucking firms and is significantly increasing the efficiency of their supply chains and lowering the cost of their operations. The technology comes in five forms:¹⁵⁴

- **Gateway Facilitation.** This is the technology most frequently discussed at the ports. Devices such as RFIDs allow driver identification and verification, non-intrusive inspections, compliance facilitation, weigh-in-motion, and electronic toll payments.
- **Intelligent Freight Technologies Asset Tracking.** This technology allows a trucking company to track tractors, trucks, chassis, trailers, containers and shipments/cargo as well as to monitor driver adherence to routes.
- **On-Board Status Monitoring.** This technology allows drivers to monitor vehicle operating parameters, cargo and freight condition, as well as detect intrusion or tampering, plus it permits remote locking and unlocking, automated hazmat placarding, and provides driver emergency call buttons.
- **Network Status Information.** This technology allows for congestion alerts and avoidance, carrier scheduling and support and first responder to support in cases of safety, homeland security, and traditional law enforcement incidents.
- **Freight Status Information.** These systems include web-based freight portals for intermodal data exchange, establishing data standards, hosting web based services, and the standardized transfer of electronic freight information.

Some of this technology is inexpensive but requires training and standardized uses of it to be effective. Other systems are more expensive and can only be afforded by companies able to make a serious commitment to them. Meanwhile, the more comprehensive and interrelated the uses of these systems, the greater companies will benefit from the efficiency and cost reductions they can supply. Today, the ferocity of competition and unorganized condition of the port drayage industry reduces the ability of the most advanced systems to be used. For that reason, if

¹⁵³Keep Your Business Sailing Worldwide, UPS Supply Chain Solutions, http://www.ups-scs.com/transportation/ocean_freight.html

¹⁵⁴ The Reach of Intelligent Freight Technologies, Freight Management & Operations, Federal Highway Administration, http://ops.fhwa.dot.gov/freight/intermodal/freight_tech_story/

the level of competition in the port drayage industry is moderated, it is probable that the remaining LMCs and any national firms in the market can be organized to use these technologies more intensively.

Economic Implication of The Increased Use of Technology. There will be several side effects if it becomes common place for port drayage firms to have systems of the kind described:

- It will allow the significant gains in the efficiency of cargo throughput that have been so intensely desired by the myriad of companies dependent upon the ports.
- Greater numbers of “turns” would increase the profits of the remaining LMCs.
- Since large trucking firms are generally already adept at using these systems, their knowledge and experience would represent a competitive advantage. It would also increase the likelihood of their entering the port drayage sector.
- It will provide the technological framework to assist with the enhancing of port security for the cargo and the people accessing them.

Transition. As has been discussed, it appears that the LMCs will soon face a variety of cost increases, some driven by the marketplace with others dependent upon the form that the Clean Truck Program eventually takes. These will include:

- Fees for concession applications and renewals as well as for TIFs under the Clean Truck Program.
- Wage increases due to the need to lure drivers into port drayage because of TWIC and port growth. There may also be the need to add workers due to the reduced time available to each driver in the event of an employee-driver mandate.
- If employee-drivers are required, labor costs would rise due to the need to pay employee benefit costs.
- Costs that will be incurred to retrofit or replace trucks. These will be higher or lower depending on whether or not the Fleet Modernization Grant Program is fully funded. They will also vary depending upon whether LMC owned trucks are mandated.

Combined, these factors will make it very difficult for new, marginally financed LMCs to be formed. Also, some of the weaker LMCs currently in the port drayage market will probably not be able to continue in the business. This will expand the negotiating power of those LMCs that are left when they approach their customers with adjustments in their rates.

Simultaneously, it is likely that the national trucking companies will begin to make a serious effort to penetrate the San Pedro Bay port drayage sector. This is particularly true, given the need and desire by the trucking industry to increase their footprint within international supply chain management. Southern California’s port drayage activities are of particular importance to them due to huge size and rapid growth of the ports of Los Angeles and Long Beach, the role that they play with regards to Asia trade, and the experience that firms will gain as they work to expand their port drayage activities nationally.

A national viewpoint is necessary to understand how this penetration would probably unfold. Of late, Wall Street investment firms have become very aggressive in seeking situations where mergers and acquisitions can allow corporate value to be created in a sector. This occurs as the breadth of control by firms with strong management teams expands, operations reach the critical

mass required for technologies that raise efficiency and lower costs, and increased market share provides firms with greater negotiating power over prices.

Generally, the strategy that equity firms have followed is to partner with an established corporation that is noted for its strong management. The financial players will fund the mergers or acquisitions within a targeted sector in return for just over or under 50% of the deal. Their funds will be used to acquire targeted firms and the corporation will manage the larger venture that results. Over four or five years, if the process is successful, the stronger resulting operation will create greater value and be reflected in higher stock prices. At that point, the equity partners will cash out and move on to other situations.

There are, of course, variations on this theme. A corporation with strong net worth or borrowing power may undertake this process on its own. Or, an equity firm may attempt to form new corporate entities by creating management teams from scratch. However, the essential results for a targeted sector will be the same. There will be larger entities, more power in the hands of the selected management teams, a greater use of information and other technologies, fewer competitors, greater negotiating power for the remaining firms and fewer workers, and a narrower market for the sector's suppliers and service providers.

In the case of Southern California's port drayage industry, this process will be somewhat different than the norm. First, it will be regarded in financial circles as the test case for undertaking this process nationally. This is the case since the very rapid increase in volumes at the ports of Los Angeles and Long Beach are the precursor to what will eventually occur throughout the country. Second, the firms to be acquired or combined are much smaller than is typical of mergers and acquisition deals. This is the true, because until now, large corporations have generally not been involved in port drayage.

Since national players are not known entities in Southern California's port drayage business, any firms attempting to enter the industry will start by seeking to acquire a few local LMCs. This will give them access to knowledgeable staffs with institutional understanding about the operation of the sector. It will also give them access to the contractual arrangements these LMCs have with ocean shipping lines and/or beneficial cargo owners. Gradually, those firms (*and their IOOs*) who qualify and choose to make the transition will be integrated into the operations of the parent company.

Such a process will not start until the point at which national trucking firms have a degree of confidence that changes in the marketplace are making it impossible for new small competitors to get started by using their willingness to undercut prices. It may also depend upon the extent to which increases in costs, for the reasons cited earlier, cause some of the existing LMCs to exit the market. In both cases, the key for the entry of national firms will be changes in the port drayage business that will allow the remaining competitors to begin to exert some control over their prices in negotiation with ocean shipping lines and beneficial cargo owners.

Economic Implications. There will be both positive and negative implications of the anticipated changes in the structure of Southern California's port drayage sector:

- **Pricing.** As the transition occurs, the firms remaining in the market, both local and national, will have greater negotiating power. This will give them a stronger ability to have their prices more quickly reflect their costs and desired profit levels. From the standpoint of the ports, the prices paid by ocean shipping lines and beneficial cargo owners will more completely reflect the cost of dealing with externalities, such as

increased congestion and emissions, that have resulted from the rise of international supply chain management. The port communities will benefit as these changes will eventually mean that the trucking fleet will be brought up to clean air standards.

However, some of the customers of the port drayage industry will see the increased cost of port drayage in Southern California as detrimental to their operations. The ports of Los Angeles and Long Beach will thus experience cargo diversion as the elasticity of cargo pricing causes shipping lines and beneficial cargo owners to transfer their shipments to other facilities. That will remain an issue until the conditions that have first appeared in Southern California spread to other ports across the nation.

- **Consolidation.** Ultimately, the marketplace, possibly abetted by the Clean Truck Program, will make it difficult for new small LMCs to enter the port drayage sector and encourage some LMCs to leave. Those local LMCs and national corporations that remain will likely have the strongest balance sheets and better management. Both will gain from having greater control over the market conditions impacting businesses. The ports will benefit as they will be working with an industry that is better organized, has greater financial flexibility and is more able to implement technological systems that will allow for greater port throughput. The remaining firms will also have the financial wherewithal to upgrade their trucks on a regular basis and assist in security oversight of freight and people accessing the harbors. Their larger size will mean that programs such as the CHP's BIT program will be more likely to provide safety record audits, driver records review, maintenance checks and, possibly, adherence to clean air standards.

For four groups, however, there will be downsides to this process:

- Consolidation will mean that some of the LMCs will either be forced out of port drayage or out of business altogether. Some of the owners of these firms will end up working in management for the remaining drayage firms. Some will work as LMCs outside of port drayage. Others will need alternative jobs or ventures. This last situation will primarily apply to those who own the smaller LMCs.
- Among IOOs, those that are able to bring their trucks up to clean air standards will maintain their relationships with their existing LMCs, or if those fail, they will end with the surviving companies. In the short term, they will remain entrepreneurs. Depending upon the form that the Clean Truck Program takes, over time, some will become employee-drivers, some may be able to remain IOOs in port drayage, and others will be forced to work as IOOs outside of port drayage.

Those IOOs that cannot clean-up their trucks will either be forced to become employee-drivers or to work as IOOs outside of the sector. Whether they can become port drayage employee-drivers will depend upon their ability to qualify under TWIC and meet the hiring standards of the remaining firms. Given the shortage of trucks drivers, it is doubtful that they will end up unemployed.

- Among the non-driving staffs of the LMCs, those working for firms that survive the port drayage consolidation will maintain their current positions and likely will be joined by others as the LMC expands. Those that work for firms that leave port drayage but continue acting as LMCs should also retain their jobs. The difficulty will be those who work for firms that go out of business. These will

primarily be the smallest LMCs. Some will find work with national firms entering the sector. Others will need alternative employment.

- Today’s port drayage industry is serviced by a host of small firms that provide supplies, maintenance service and office functions. They include vendors such as fuel stations, tire shops, truck parts suppliers and used truck sales. Small shops provide safety checks, engine and transmission repair, brakes alignment and replacement, tire repair, reconditioning of pneumatic air systems, welding and electrical work. Service firms often act as outside accountants, bookkeepers, insurance representatives or lawyers.

As the port drayage industry consolidates, many of the functions performed by these small businesses will be performed in-house by the remaining LMCs and national trucking firms. Some of the owners of these firms will be able to continue in their existing roles. Others will be hired on to the staffs of the expanded firms remaining in the industry. However, some will be forced to look for other work.¹⁵⁵

The magnitude of the loss of work by LMC owners forced out of business, the back office personnel who lose jobs, and entrepreneurs who lose businesses, at best, can be *very roughly* quantified. This is done under a worst case scenario:

- Based upon the LMC survey, the number in each size range was estimated (1).
- The share of LMCs that would end up with the owner ultimately needing alternative work was very roughly estimated with the share varying by size (2). The resulting number was estimated at 376 (3).
- The LMC survey allowed an estimate of the average number of back office staff working within LMCs in each size range (4).
- That permitted an estimate of the total number of back office staff at 4,273 (5).
- The shares of back office workers who might lose their jobs and not find alternative work in the growing portions of the port drayage sector were roughly estimated at 50% of those in LMCs that end-up with difficulties (6). This yielded a back office staff loss of 751 jobs (7).

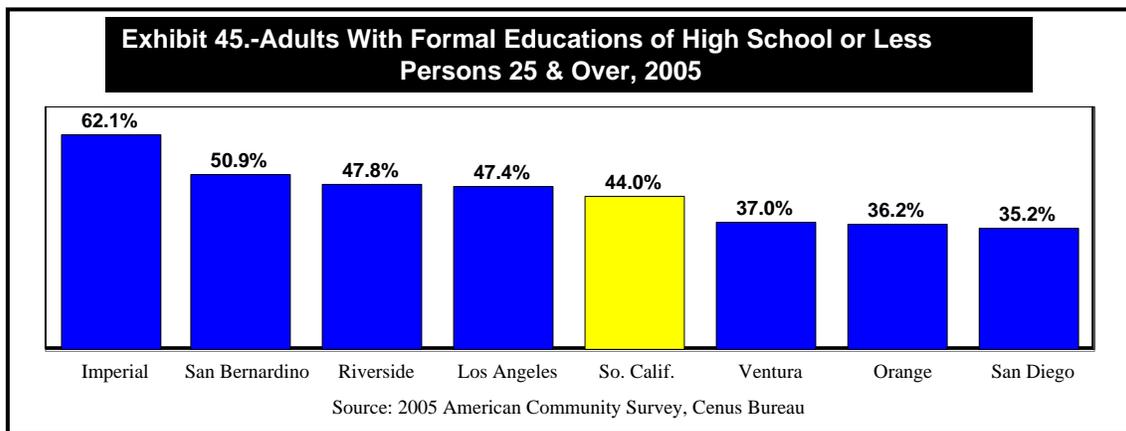
Exhibit 44.-Estimated Lost Jobs or Ownership With Consolidation									
	1	2	3	4	5	6	7	8	9
	LMCs	Owners Lost		Back Office per Firm		Back Office Loss		Other Loss	Total
0-10	246	50.0%	123	3.5	861	25.0%	215	123	461
11-25	403	45.0%	181	4.0	1,612	22.5%	363	181	725
26-75	258	25.0%	64	4.6	1,184	12.5%	148	64	277
76-250	77	10.0%	8	6.6	510	5.0%	26	8	41
251 & Up	16	0.0%	0	6.6	105	0.0%	0	0	0
Total	1,000		376		4,273		751	376	1,504

¹⁵⁵ Discussion Draft, Minimum Concession Requirements, San Pedro Bay Clean Air Action Plan, p. 2.

- It was very roughly estimated that for every LMC to go out of business, one other small firm in the community would as well, with the owner needing alternative employment, yielding 376 (8).
- The total job loss due to consolidation was thus very roughly estimated at 1,504 (9). This estimate is, of course, dependent upon the three rough factors used in the calculation. However, it probably gives a reasonable *order of magnitude* as to the job losses that the community will feel due to consolidation.

Note: The LMC owners who go out of the business and the back office personnel who lose jobs are the reason that one component of the Clean Truck Program requires concessionaires to participate in a referral program for filling employee vacancies via a workforce development program consistent with existing city efforts. Currently, this program has not been conceived as providing an outlet for small business owners impacted by any consolidation process.

Beyond numbers, the consolidation process will have one other ramification. Today, Southern California faces a very difficult issue in that 44.0% of its adult population has not had a single class beyond high school (*Exhibit 45*). The share is 47.8% in Los Angeles County.



These data strongly imply that the region’s economy has a need for jobs that provide upward economic mobility for a significant share of the region’s workforce. The port drayage sector has been one industry in which a large number of people in this category have found work, be it as IOOs, owners of LMCs, back office personnel or owners of small businesses supporting the industry. Here, consolidation will have two impacts. First, it will close off the ability of small entrepreneurs to enter this field and reduce the number already in it. Second, it will eliminate some of the jobs currently in the sector.

Summary

At its core, the Clean Truck Program is design to reduce air emission in a timely fashion yielding an economic benefit to the community of \$4.7 to \$5.9 billion due to a reduction in premature deaths, loss of work and fewer medical problems. Some 95% of this benefit will come from 230-1,450 people not dying. With the program in place, the ports will be in a position to get their infrastructure plans approved with reduced health risk to the community. This will allow them to expand to their 42.5 million TEU capacity by the period 2020-2030. The result will be

the ability of the ports to support 300,000 to 600,000 new jobs and global trade capacity that would be lost if that infrastructure cannot be built.

Unfortunately, there is a cost of attaining these goals. That will be the closure of some LMCs and the loss of some of the non-driving jobs and small businesses involved with them, as well as the closing off of port drayage as a route to upward mobility for some workers. It is the type of choice that has led to the expression, “there is no such thing as a free lunch.” It is the reason that economics is often referred to as “the dismal science.”

Appendix A

Driver Survey Methodology and Results

As part of this analysis, 409 port drayage truck drivers were surveyed. The survey was conducted inside both Ports while drivers were waiting outside terminal gates or were at lunch trucks parked outside the terminal gates. The survey locations, days of the week and general times of day are shown below.

<u>Location – Port and Terminal</u>	<u>Day of the Week</u>	<u>Time of Day – (N)oon or Beginning of (E)vening shift</u>	<u>Number of completed surveys</u>	<u>%</u>
Port of Los Angeles				
Evergreen Terminal	Thursday	N	46	11.2
Evergreen Terminal	Thursday	E	36	8.8
Evergreen Terminal	Tuesday	N	19	4.6
Evergreen Terminal	Tuesday	E	57	13.9
Evergreen Terminal			158	38.6%
China Shipping Terminal	Tuesday	N	39	9.5
China Shipping Terminal	Tuesday	E	24	5.9
China Shipping Terminal			63	15.4%
Total Port of Los Angeles			221	54.0%
Port of Long Beach				
California United Terminals	Thursday	N	55	13.4
California United Terminals	Thursday	E	40	9.8
California United Terminals	Wednesday	N	29	7.1
California United Terminals			124	30.3%
Long Beach Container Terminal	Tuesday	E	44	10.8
Long Beach Container Terminal	Wednesday	N	17	4.2
Long Beach Container Terminal	Friday	N	3	.7
Long Beach Container Terminal			64	15.6%
Total Port of Long Beach			188	46.0%

The survey was conducted by on-site by bi-lingual interviewers as drivers became available in their trucks or at the lunch wagon. We attempted to interview drivers based on their sequence of arrival at the terminal waiting line. This was not practical, however, for those drivers interviewed at the lunch wagon. Approximately 20% of the surveys were conducted at the lunch wagon. A \$10 participation incentive was paid for all drivers who participated. A copy of the survey questionnaire used by the interviewers is reproduced at the end of this Appendix.

The frequency at which individual drivers arrive at the terminals is a function of the nature of their hauls. As an example, drivers who are involved in hauling containers from the Ports to the Intermodal rail yards, a distance of some 6 miles have much shorter driving times as compared to drivers delivering containers to Riverside County. These drivers can be expected to be in the line to enter a terminal more frequently compared to the “longer” haul drivers.

As a result, the drivers available to participate in the survey were reflective of the frequency of which they visit the Ports and the results are proportionate to the calling frequency of the drivers. However, the survey was not a true random survey, as it can be assumed that not all drayage

drivers were working at the terminals where the survey was conducted and hence there was not an equal probability of all drivers being selected. Also we did not conduct surveys at all Port terminals. We do not, however, consider these practical limitation to be material.

The key results of the survey are shown below along with the number of respondents to the various questions in parenthesis.

Driver Demographics

Statistic	Average	Median
Driver Age (409)	41	42
Years of Experience (409)	8.6	7

Survey Responses

	Number	Percent of Responses
Employment Status (409)		
IOOs	349	85.3%
Employee	60	14.7%
TWIC Application – IOOs Respondents only (349)		
Will Apply	201	57.6%
Will Not Apply	76	21.8%
May/May Not Apply	72	20.6%
TWIC Application – Respondents Currently Employed (60)		
Will Apply	33	55.0%
Will Not Apply	14	23.3%
May/May Not Apply	13	21.7%
IOOs Respondents Willing To Become An Employee (349)		
Yes	68	19.5%
No	110	31.5%
May/May Not	169	48.4%
Other Responses	2	0.6%
IOO Respondents Willing to Sell Tractor if Employed (334)		
Yes	205	61.4%
No	129	38.6%
Expected Hourly Compensation of IOO Respondents to Become Employees (345)		
\$15 to \$20	48	13.9%
\$21 to \$25	68	19.7%
\$26 to \$35	119	34.5%
\$36 to \$50	98	28.4%
Over \$50	12	3.5%
Average IOO Salary Expectation (345)	\$33	NA
Median IOO Salary Expectation (345)	NA	\$30

Notes 1. Percentage may not add to 100.0% due to rounding.

2. In cases where respondents answered in annual compensation expectations, we converted the expected annual compensation to an hourly rate by dividing by 2,080. Otherwise hourly responses were used.

To allow for uncertainty in driver responses, Yes, No and Maybe answers were permitted for the questions about applying for the TWIC credential (*referred to as a card for survey purposes – see the interviewer questionnaire at the end of this appendix*) and their willingness to become an employee. To estimate the number who can likely be expected to either apply or not apply for TWIC and become or not become employees, the ratio of yes and no answers can be used to allocate the “maybe” answers. For IOOs there were 201 Yes responses (72.6%) to the intent to apply for TWIC and 76 No’s (21.8%). Allocating the 72 “maybe” responses on those percentages results in total estimated Yes response of 253 or 72.5% and 96 No’s or 27.5%. It is interesting to note that the percentage of drivers who indicated they would not apply for TWIC is slightly higher for employees (23.3%) than it is for IOOs (21.8%).

Based on 16,800 frequent and semi-frequent port drayage drivers, the survey data equates to an estimated loss of 27.9% or 4,687 drivers when the requirement to have a TWIC credential to enter the Ports without an escort becomes effective.

To further estimate the impact of TWIC in conjunction with the potential requirement to have the IOOs become employees, we analyzed the combined response of the IOOs who responded that they would definitely apply for TWIC and would definitely be willing to become employees, i.e. they answered Yes to applying for TWIC and Yes to becoming an employee. 53 of 349 IOOs, or 15.2%, answered yes to those two questions.

Driver Survey

An Oral Survey. This survey is anonymous. Do not record any personal information.

How old are you? ____ Years. How many years have you been hauling port containers? ____ Years

1. Are you an independent owner operator who owns your own tractor? ____ OR are you an employee of trucking company (licensed motor carrier) and drive a company tractor ____ (Please indicate by checking one).
2. If you own your own tractor, what year is it? _____(enter the model **YEAR** of the tractor)
3. What is the zip code (or city) where you normally park your truck at night or when it is no being used? _____ What is the zip code (or city) where you live? _____
4. The federal government department of Homeland Security will soon require a Transportation Worker Identification Certificate "TWIC" Card for everyone who enters a port. This card will be required to enter a port and pick up or drop off a container. To receive a TWIC card, you must be either a US citizen, or have a green card, or a legal work permit, and pass a security test **AND** you must not have any felony (serious crime) convictions within 7 years or prison time within 5 years. Given these conditions to obtain the TWIC card, how likely are you to apply for one? (Mark with an **X** what is the driver's answer)

____ YES, I will definitely apply ____ MAYBE I will apply ____ NO, I definitely will not apply

5. There is a proposal to have all owner operators who serve the Ports become employees of Port licensed trucking concessions. As an employee, in addition to your pay, you would receive fringe benefits such as overtime, health insurance, paid vacations, paid holidays, and paid sick time, pension retirement, etc. Also as an employee the company would provide a company tractor and would not need to own or supply a tractor.

- a. Are you willing to become an employee of a trucking company? (Mark with an x what you prefer about the possibility of becoming an employee.)

____ YES ____ MAYBE Depends on what I could earn ____ Definitely NO ____ Other response:

-
- b. Would you be willing to sell your tractor after you became an employee? ____ YES ____ NO
 6. For me to become an employee, I would expect to be paid a base wage of \$_____ per hour (fill in the hourly wage rate you expect), and/or annual wages of \$_____ per year

Appendix B

Licensed Motor Carrier (LMC) Survey

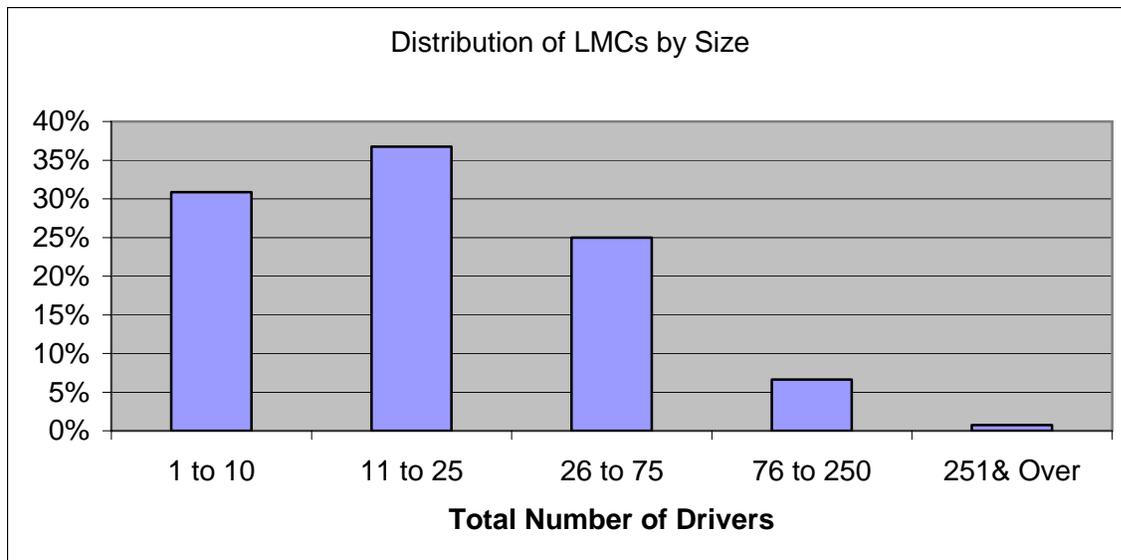
As part of this analysis, a survey of 136 port drayage LMCs was conducted. Based on an estimated population of 1,000 LMCs, this represents a 13.6% sample. Companies were selected from those in the eModal database.¹⁵⁶ Companies were selected as potential survey respondents using a systematic random selection method. eModal is an open system that allows anyone to register. It is also designed to support operations at various ports. As a result, it includes numerous entries from entities outside the Southern California area and can include multiple entries for the same LMC.

Based on a random start, every tenth name entry on the eModal list of 4,000 companies was selected. If the listing was based out of state another candidate was selected and called, using a specific “next company” methodology. If company indicated it did not provide port container drayage services it was excluded from the survey and the method described above was used to select a replacement. Respondents at the individual LMCs were limited to owners, executives and dispatchers. A copy of the survey instrument is provided at the end of this appendix.

Survey Results

LMC Size

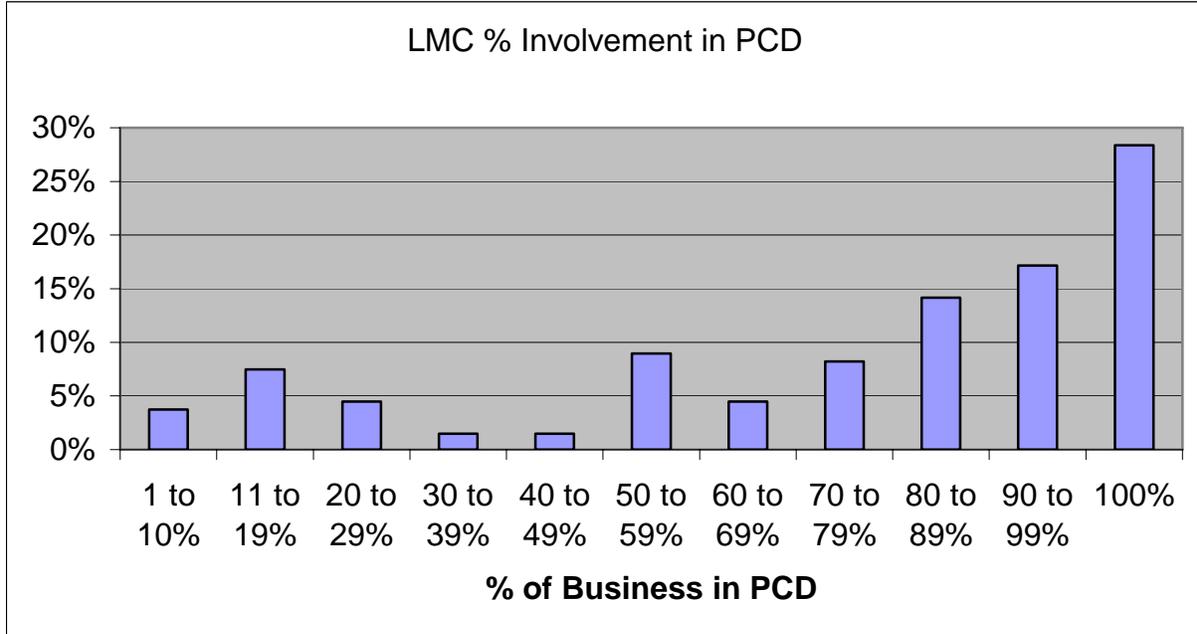
LMC was measured by the total number of drivers used. As defined total drivers includes any combination of IOOs and employee drivers. The average number of total drivers in the sample was 30.2 with a median of 15. The size distribution is shown below:



¹⁵⁶ eModal, is an information link for a “Port Community System,” www.emodal.com.

Involvement in Port Container Drayage

The survey ask respondents to estimate the percentage of work or business that is port container drayage. Other questions ask the percentage of work or business from other activities to assure that the total estimated percentage of the various lines of business totaled to 100%. The distribution of the estimated percentage of business from port container drayage (PCD) is shown below.



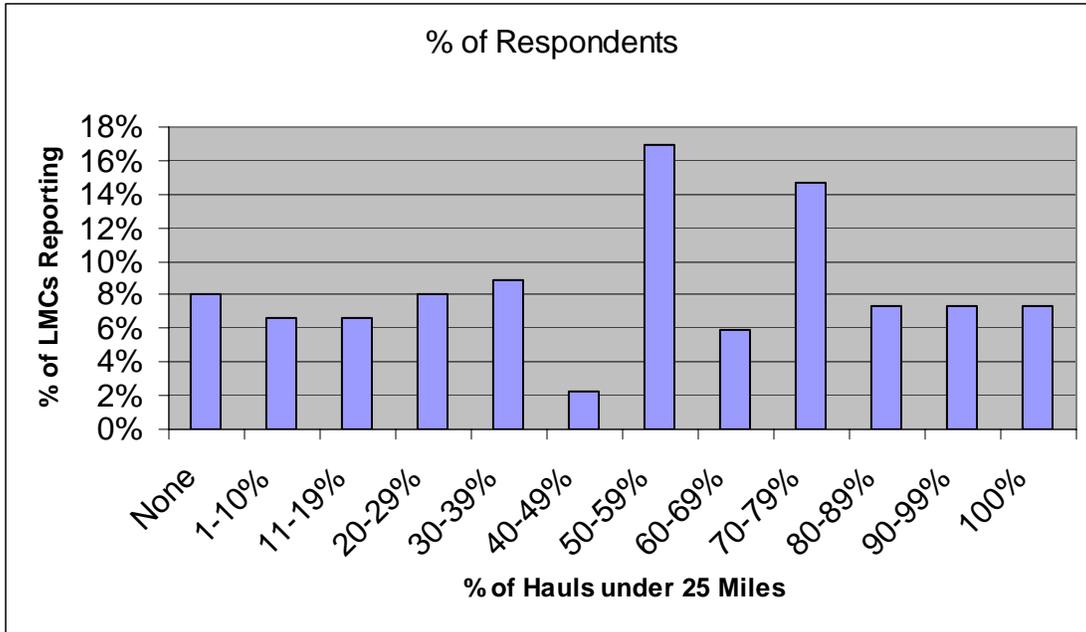
The average LMC surveyed reported 72% of the their business was port container drayage related. The median percentage reported was 80%.

As you can see by the chart, there is a significant number of LMC serving the ports that derive the majority of their business from non-port sources. Only 49% of the respondents indicated they conducted 80% or more of their business in port drayage activities. Pure (100%) port drayage companies constitute only 28% of the respondents.

Haul Distance

The extent to which LMCs conduct their operations in close proximity to the port is an important consideration. To explore this parameter of LMC operations, respondents were ask to estimate the percentage of container hauls that were to destinations within 25 miles of the ports.

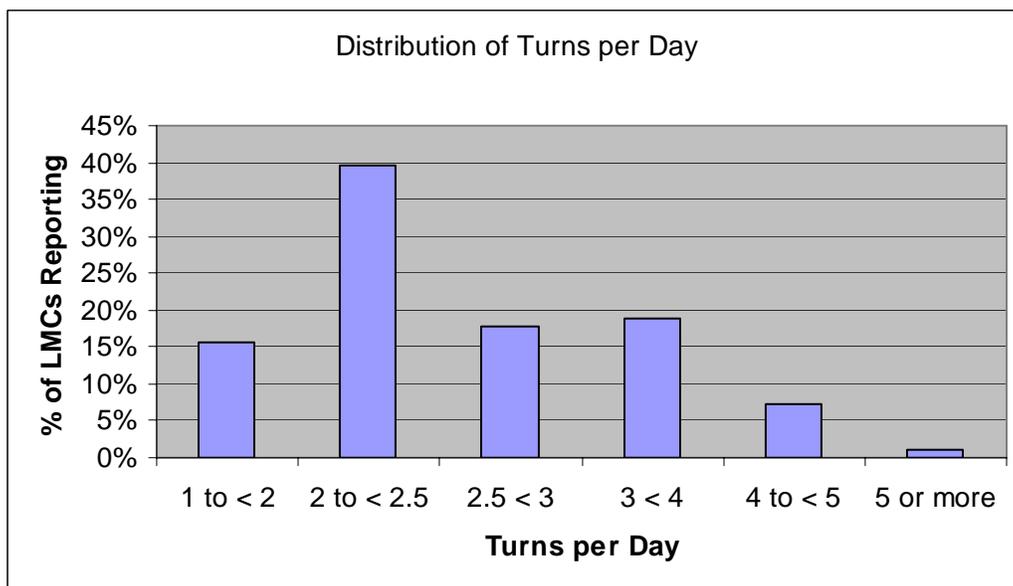
The responds indicate that an average of 49% of the port containers are delivered to destinations that are with in a 25 mille radius of the Ports. The distribution of the percentages reported is show below.



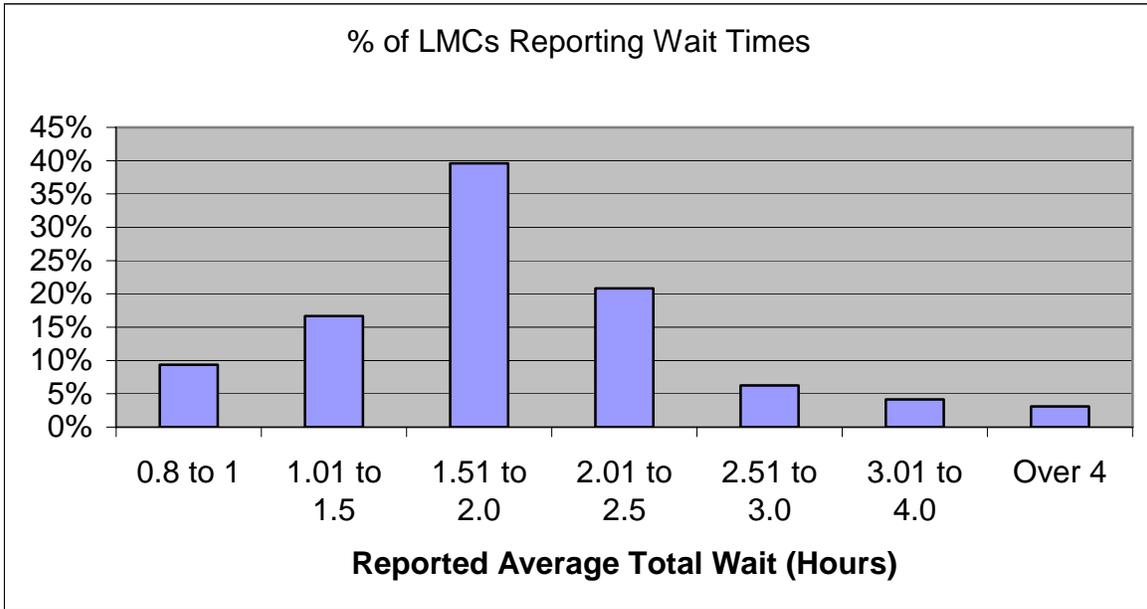
As shown only some 21% of LMCs operate 80% or more of their business within 25 miles of the ports. For 22% of the LMCs, having a haul less than 25 miles is a reasonably rare event occurring on 19% of the time or less.

Round Trips Per Day

The number of round trips per day, or “turns” a driver can make affects his productivity, which in the case of an IOO directly effects his compensation. In the case of an employee driver, it affects the LMC’s labor costs. LMC respondents were asked to estimate the number of turns per day their port container drivers average. The average number of turns reported was 2.6 with a median of 2.0. The lower median value is congruent with the fact that many of the smaller LMCs are known to dominate the very short haul segment of the drayage business (port to rail yards, etc.) and the distribution of LMCs by size. The distribution of responses is shown below:



LMC were ask to estimate the total average waiting time experienced by their drivers. There were 96 responses that averaged 2.2 hours and had a median of 2.0 hours. The distribution of reported total waiting time is shown below.



LMC Telephone Survey

1. Date: _____ Interviewer initials: _____ eModal list sequence number _____

2. Does your company provide port container hauling services? (circle one): **YES NO**

If the answer to question 2 is NO, thank the person and select the next carrier in accordance with the instructions provided. This does not count as a completed survey.

If answer to question 2 is YES, continue with survey.

3. What % of your company's work or business is port container drayage? _____%

4. What % of your company's business is other transportation work that is not port container drayage _____%

5. What % of your company's business is other work besides transportation?
_____%

(for example: Warehousing)

(Note to interviewer: The answers to Questions 3, 4, and 5 should total to 100%)

6. What % of your container hauls are less than 25 miles one way, gate to destination?
_____ %

7. What is the range of the # of port drayage Independent Owner Operators you use?

(low-high)

What is the # of employee drivers you have? _____

Total range # of port drivers? _____

8. How many "turns" or round trips does each of your port drayage container drivers average per day? _____

9. What average total waiting time in line and inside the gate per container pickup and/or delivery do your port container drivers experience? _____

10. How many tractors does your company own? _____ tractors

11. Are there other companies in your ownership "family" **YES NO**

If _____ yes, _____ how _____ many? _____

How many total port drayage drivers does your entire company family use? _____

Names of companies in "family" of companies:

a. _____

d. _____

b. _____

e. _____

c. _____

f. _____

Attachment C

Pearson Declaration

San Pedro Bay Ports Clean Air Action Plan

Clean Truck Program Option Assessment

Proposed Clean Truck Program

DRAFT



December 16, 2007

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Clean Truck Program Option Assessment

As part of the decision making process for the Clean Truck Program, the Port of Los Angeles and the Los Angeles Mayor's Office have requested an analysis of the implications of three variations in how the implementation process for the program might take place. These different approaches are referred to below as Option A, Option B and Option C. They present different ways in which the trucks, drivers and grant funds could be organized in attempting to meet the goals of the program.

This report is organized into the following sections:

1. **Goals.** Lays out the purposes of the Clean Truck Program.
2. **Policy Criteria.** Enumerates the criteria on which the three options will be evaluated to assessing the implications of the way they would go about achieving the program's goals.
3. **Implementation Issues.** Discusses the evaluation issues that will be covered in discussing how each of the three options deals with each of several policy criteria.
4. **Options: Common Elements.** Describes the common factors needed in each of the three options if they are to meet the goals of the Clean Truck Program.
5. **Options: Differing Elements.** Lays out the elements on which the three options fundamentally differ.
6. **Assessment.** Evaluates the implications of the three options with respect to each policy criteria in light of the issues that must be addressed to reach the Clean Truck Program's goals.

Note: This analysis is not intended to reach a final conclusion. Rather, it is intended as a tool to assist policy makers in reaching their own final judgments about how the Clean Truck Program should be implemented.

1. Goal

On November 20, 2006, the San Pedro Bay Ports Clean Air Action Plan (CAAP) was unanimously adopted by the Los Angeles Board of Harbor Commissioners and the Long Beach Board of Harbor Commissioners. In doing so, the commissioners acknowledged the fact that the Ports "ability to accommodate the projected growth in trade will depend upon their ability to address adverse environmental impacts (*and, in particular, air quality impacts*) that result from such trade. The CAAP is designed to develop mitigation measures and incentive programs necessary to reduce air emissions and health risks while allowing port development to continue."¹

Among the major elements of the CAAP are strategies designed to significantly reduce the emissions from the Heavy Duty Vehicles that move containers in and out of the ports. This effort, known as the Clean Truck Program, has two intertwined objectives:

- Conversion or retrofitting of the truck drayage fleet to cleaner technologies.
- Ensuring that the fleet is kept at a level to maintain air quality.

¹ San Pedro Bay Ports Clean Air Action Plan, Overview, P. 13.

In designing a program to achieve these clean air objectives, the ports further addressed three other concerns:²

- The fear that the documented shortage of U.S. truck drivers will ultimately lead to an insufficient number of drivers to haul the growing volume of port containers.
- Related is the issue of driver compensation since, on average, port truckers appear to be among the lowest paid workers in the supply chain.
- Additionally, there is concern that trucking operations be conducted in a way that enhances port security.

A corollary to these issues are concerns than the Transportation Worker Identification Credential (TWIC) program as well as the transition to the Clean Truck Program might cause drivers to leave port drayage, causing a disruption of cargo flows and interfering with the import and export supply chains. Such a disruption could adversely impact Southern California's economy.

From these statements, the goals of the Clean Truck Program can be summarized as:

1. **Throughput.** Allowing port growth to continue without disruption given the significant economic impact it has on Southern California and the nation.
2. **Truck Clean-Up.** Cleaning up the adverse environmental impacts caused by heavy duty trucks moving goods to and from the ports and keeping those trucks clean.
3. **Driver Supply and Pay.** Ensuring that the pay of port drivers is high enough to attract a sufficient number of truck drivers to move port cargo.
4. **Security.** Providing for the security of the ports in conjunction with the TWIC program.

2. Policy Criteria

To assess the implications of how the Clean Truck Program would be implemented under Options A, B and C below, four major criteria are used. These can be thought of as questions, the answers to which show the extent that each option is able to address one of the five major goals of the program:

1. **Throughput.** To what extent will each option ensure that the ports are able to maintain and grow the volume of containers moving through them without any short term disruptions?

In 2006, the ports handled 44% of U.S. imported goods and 24% of U.S. exports.³ It has been repeatedly stated by the port staff, the harbor commissioners and city leaders that they see it as their obligation to ensure that the ports are able to continue being this key link in U.S. and Southern California international trade.

2. **Clean Trucks.** To what extent will each option lead to meeting the clean truck requirements and deadlines passed by the two Boards of Harbor Commissioners?

If the Clean Truck Program is implemented as planned, *by its fifth year*, it is anticipated that diesel particulates from port truck operations would be 184 tons instead of the 966 tons that port growth would have created, down 782 tons (-81%). Oxides of nitrogen emissions would

² Statements of the Presidents of the Los Angeles & Long Beach Boards of Harbor Commissioners, San Pedro Bay Clean Air Action Plan, Overview, Introduction.

³ Port Import Export Reporting Service (PIERS), collected from Vessel Manifests and Bills of Lading, as reported by U.S. Department of Trade Maritime Administration.

be 4,041 tons not the 10,269 tons anticipated, a 6,228 ton cut (-61%). Sulfur oxide emissions would be seven tons not nine tons, down two tons (-22%).⁴ The port staff, the harbor commissioners and city leaders have repeatedly indicated that achieving these reductions is the primary reason for the Clean Truck Program.

Note: Earlier implementation could have significant air quality benefits for the various port communities. If the program were to be completed by the end of 2009, for instance, diesel particulates would be down 782 tons that year instead of 442 tons; oxides of nitrogen emissions would be down 6,228 tons instead of 3,329 tons.

3. **Driver Supply.** To what extent will each option impact the supply of port drayage drivers?

Pay scales are one consideration that will impact the supply of drayage drivers. There are also other issues such as the desire of some drivers to be employees and others to remain Independent Owner Operators (*IOO*); the desire for some drivers to be union members and others not; the desire for some drivers to have benefits and others to retain their tax status as self-employed; and the potential need to convince non-drayage drivers to work in the congested port environment.

4. **Driver Pay.** To what extent will each option assist port drayage drivers to receive compensation on a par with other truck drivers in Southern California to enable sufficient driver supply for the sake of port cargo throughput?

It is generally acknowledged that the U.S. faces a shortage of truck drivers that will increase in the coming years.⁵ Further, it has been estimated that the federal TWIC security process will remove from 15% to 22% of the drayage drivers currently serving the San Pedro Bay ports.⁶ In addition, the expansion of the ports will increase the need for drayage drivers. Also, there will be driver losses due to turnover and retirements. Combined, these factors underscore why the port staff is concerned that drivers receive sufficient pay to ensure a supply of drivers to handle port throughput.

5. **Security (TWIC) & Driver Oversight.** To what extent will each option result in maximum compliance with national security requirements and ensure that truck drivers are meeting legal requirements to be driving their vehicles?

For reasons of safety and security, the ports would like to ensure that drivers involved in drayage are qualified to drive heavy duty trucks under DMV and DOT regulations. It will thus be a requirement of the port permits that LMCs maintain oversight and records of the qualifications of their drivers, be they employees or IOOs.

Meanwhile, in December 2007, the Transportation Security Administration (*TSA*) and U.S. Coast Guard are scheduled to begin registration for the TWIC program. An applicant "must complete a TSA security threat assessment and will be disqualified from obtaining a TWIC if he or she has been convicted or incarcerated for certain crimes within prescribed time peri-

⁴ San Pedro Bay Ports Clean Air Action Plan Technical Report, Tables 6-1, 6-2, 6-3, p. 157.

⁵ "There is already a shortage of long-haul heavy-duty truck drivers equal to perhaps 1.5% of the over-the-road driver workforce, or about 20,000 drivers. In the absence of substantial market adjustments, this driver shortfall – projected demand less projected supply – would rise to 111,000 in 2014." The U.S. Truck Driver Shortage, Analysis and Forecasts, Global Insight, Inc., 2004, Executive Summary.

⁶ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 28.

ods, lacks legal presence and/or authorization to work in the United States, has a connection to terrorist activity, or has been determined to lack mental capacity.”⁷

As the Licensed Motor Carriers (*LMCs*), under whose auspices drivers work as employees or IOOs, have the greatest understanding of their drivers, the port staff, harbor commissioners and city officials want to see that knowledge efficiently harnessed in the initial implementation of the TWIC process.

In assessing the implications of how the Clean Truck Program would be implemented under Options A, B and C below, there are several additional criteria that will be used. Again, these can be thought of as questions, the answers to which show the extent that each option is able to address an important aspect of the Clean Truck Program.

6. **Maintenance of Clean Truck Devices.** To what extent will each option ensure that clean truck emission control equipment and technology is maintained according to manufacturer’s specifications?

As indicated in the discussion of the goals of the Clean Truck Program, it is not sufficient to simply clean-up the trucking fleet.⁸ For the program to be a success, the emission equipment on the new trucks must be properly maintained over time so that the full benefit of the cleaner vehicles is realized.

7. **Required Truck Safety and Maintenance Check-Ups and Repairs.** To what extent will each option ensure that truck owners have their vehicles undergo regular check-ups and safety inspections plus have necessary repair work completed?

Already, port drayage firms are subject to audits of their driver logs, truck insurance, safety and maintenance records by the U.S. Department of Transportation (*DOT*). However, the agency only has the staff to oversee 2% of carriers, nationally.⁹ In addition, every 25 months, the California Highway Patrol (*CHP*) through its Biannual Inspection Program (*BIT*)¹⁰ is supposed to review the records of 90-day truck safety and maintenance check-ups by every state trucking firm as well as their driver’s logs. CHP is also supposed to physically check a sample of their trucks.¹¹ However, CHP only has staffing for about half this work.¹²

Given the intensity of truck operations near the ports, the port staff, harbor commissioners and city leaders would like to see stronger oversight of truck maintenance and safety. One potential side effect of the Clean Truck Program could be to assist DOT and CHP in being able to do so.

⁷ Transportation Worker Identification Credential (TWIC) Implementation in the Maritime Sector; Department Of Homeland Security, Transportation Security Administration, United States Coast Guard, 2006, p. 18.

⁸ See bottom of p. 1.

⁹ Motor Carrier Safety: the FMCSA’s Oversight of High-Risk Carriers, Opening Statement, Hon. Peter DeFazio’s, House Transportation & Infrastructure Committee, Subcommittee on Highways and Transit Hearing, July 11, 2007.

¹⁰ California Vehicle Code Section 34501.12 requires any person or organization directing the operation of certain trucks or trailers to participate in an inspection program conducted by the California Highway Patrol (CHP). The law requires the CHP to inspect California truck terminals every two years.

¹¹ California Vehicle Code 34505.5(a) a truck operator must have vehicle safety inspections every 90-day conducted by qualified inspectors. California Vehicle Code Section 34505.5(c) requires that inspection records be maintained for two years.

¹² Analysis of the 2007-08 Budget Bill: Transportation, California Highway Patrol (2720), California Legislative Analysts Office.

8. **Technology Installation and Training.** To what extent will each option ensure that the trucking fleet has installed required technology and that drivers are trained in a manner that will allow the Clean Truck Program to be administered while assisting the ports with future efforts to increase efficiency and throughput ?

To administer the Clean Truck Program, it will be necessary for trucks be equipped with Radio Frequency Identification Devices (*RFID*) and Automatic Vehicle Locators (*AVL*). In addition, these and other technologies could be needed on trucks as part of a future technology program designed to increase the speed of port cargo throughput. This would be in the interest of the ports. It would also be in the interest of LMC and drivers as increased throughput directly impacts driver compensation.

9. **Parking and Parking Facilities.** To what extent will each option enhance compliance with local trucks parking ordinances and result in LMCs providing parking?

Local communities have expressed repeated concern over heavy duty trucks being parked illegally in their neighborhoods. There is considerable interest by the ports, the harbor commissioners, city officials that firms provide parking facilities for their trucks.

10. **Geographic Use of Trucks.** To what extent will each option ensure that the trucks financed via the Clean Truck Grant Program meet minimum usage requirements in port drayage?

The purpose of the Clean Truck Grant Program is to assist the drayage industry in overcoming its lack of capital in replacing trucks. It is thus reasonable for the ports to insist that trucks financed with their assistance meet minimum mileage percentage requirements for work in port drayage. The issue is the extent to which different options will result in more effective oversight on these issues.

11. **Insurance.** To what extent will each option ensure that the ports are being adequately covered for the liability arising from their role in the oversight of who can enter the ports and who can help acquire trucks that might be involved in an accident? What level of collision insurance should be carried on trucks funded by the Clean Truck Grant Program?

Most of the trucks acquired via the Clean Truck Grant Program could not have been bought by their registered owners without the assistance of the ports. Given recent horrific accidents, the ports have an interest in being protected from liability arising from their participation in the process. Meanwhile, the ports have an obvious interest in seeing collision insurance on the trucks that they have helped finance.

3. Implementation Issues

There are Clean Truck Program implementation issues that will be discussed in evaluating the performance of Options A, B and C with respect to each of the 11 policy criteria. Again, these can be thought of as questions:

1. **Success.** In broad terms, will the option succeed on a given criteria?
2. **Timeliness.** Will there be relative differences in the length of time it will take each of the three options to show meaningful results under each of the policy criteria?
3. **Effectiveness.** Will there be differences in the relative effectiveness of each of the three options in achieving the intent of each of the policy criteria?
4. **LMC Costs.** With regards to each of the policy criteria, will there be differences in the extent that each of the three options will impact the fixed or variable costs of drayage firms?

5. **Average LMC Size.** With regards to each of the policy criteria, will there be differences in the impact that each of the three options will have on the number of trucks working under the auspices of the average LMC?
6. **LMC Participation.** Will there be differences in the classification of firms willing to participate in the market under each of the three options, in light of each of the policy criteria?
7. **Program Management.** Will there be differences in the ability of the policy criteria to be straightforwardly implemented and enforced under each of the three options?
8. **Maximize Return.** Under each of the three options, will there be differences in the return on investment of publicly raised funds, measured in terms of reaching the program's goals?
9. **Cooperation.** Under the various policy criteria, will there be differences among the three options in the willingness of major market participants to cooperate in achieving the program's goals?

4. Common Elements: All Three Options

Under all three forms of organization, there are common elements which the Clean Truck Program will require. That said, there may be differences in the effectiveness and side effects of the way in which they are met under Options A, B and C. Those elements include:

1. **Company Standards.** To receive a permit to operate at the ports, a firm must be a Licensed Motor Carrier (*LMC*) in good standing and in compliance with the requirements of a valid license/permit under a California (*CA*) Motor Carrier Permit issued by the CA Department of Motor Vehicles and/or a Federal Motor Carrier License (*U.S. DOT Number*) and Operating Authority (*MC Number*).
2. **Clean Truck Deadlines.** By January 1, 2012, all trucks operating under the auspices of a company must meet the Clean Truck Program standards as defined in the CAAP:
 - Trucks that meet the CA Air Resources Board's (*CARB*) 2007 and subsequent model year on-road Heavy-Duty Diesel Engine emissions standards.
 - Trucks manufactured in 1995/1996 or later retrofitted with *CARB* Verified Diesel Emission Control Strategy (*VDECS*) that achieve 85% or greater PM reduction (*Level 3*) or greater NOx reduction.
 - Liquefied natural gas (*LNG*)-fueled trucks.
 - Trucks that have been replaced via the Gateway Cities Truck Modernization Program.

To be allowed on to a port terminal's property, the trucks working under a company's auspices must either be retrofitted or replaced to meet the Clean Truck Program standards in accordance with the following progressive schedule:

- October 1, 2008, no drayage truck of model year 1988 or older can enter the ports.
- January 1, 2010, trucks must be powered by a 1994–2003 model year engine certified to CA or U.S. emission standards, and a level 3 *VDECS* which achieves a minimum 85% reduction in PM emissions and a minimum 25% reduction in NOx emissions, or a 2004 or newer model year engine certified to CA or U.S. emission standards.
- On January 1, 2012, trucks must be equipped with an engine that meets or exceeds 2007 model year CA or U.S. heavy-duty Diesel-Fueled On-Road emission standards.

Note: These are the outside deadlines. There is nothing barring the program from attaining the deadlines earlier than these dates and there are significant air quality benefits to the local communities from doing so.

3. **Truck Technology Equipment.** By October 1, 2008, the LMCs will be financially and programmatically responsible for the installation of RFIDs or port approved alternatives as well as AVLs on trucks operating under their auspices. If driver training is required as part of the technology plan, LMCs will be responsible for seeing that its drivers receive such instruction. If the ports later require additional technology and/or training as part of a port throughput technology plan, the LMCs will also be responsible for the costs and deadlines of the plan.
4. **Truck Lists.** Upon receiving a permit, an LMC must provide the ports with a comprehensive list of every heavy duty truck operating under its auspices, whether company or IOO owned, and certify that these trucks meet the Clean Truck Program model year requirements and keep records verifying these facts that are subject to inspection. The truck list is to be updated quarterly.
5. **Clean Air Maintenance.** Upon receiving a permit, an LMC will be responsible that emissions equipment on company trucks or IOO trucks (*if IOOs are allowed to operate under an LMC's auspices*) are maintained in conformance with manufacturer's specifications and keep records verifying this fact. The records would have to be available for inspection.
6. **Safety Maintenance & Inspections.** Upon receiving a permit, an LMC will be responsible for heavy duty truck maintenance and safety inspections and record keeping for them, as well as coordinating random truck inspections in conformance with the CHP BIT and DOT programs. Originals or copies of all records must be on file with the LMC. This applies to company trucks and IOO trucks (*if IOOs are allowed to operate under an LMC's auspices*).
7. **Parking.** Upon receiving a permit, an LMC must ensure that trucks operating under its auspices are parked in conformance with the ordinances of the cities and counties where they operate. It must also have available a yard where these trucks can be parked, maintained, inspected and repaired and submit the location to the ports. This applies to company trucks and IOO trucks (*if IOOs are allowed to operate under an LMC's auspices*).
8. **Drivers.** Upon receiving a permit, an LMC must provide the name, address and other identification information of any employee or IOO driving trucks under its auspices and update the list quarterly. The drivers must be fully qualified to operate the vehicles specified above and possess a valid California Drivers License for the appropriate class of vehicle. If an LMC chooses or is required to use employees, it must give a hiring preference to drivers with at least two years experience providing drayage to the ports.
9. **Driver Oversight.** LMCs will be responsible for ensuring that their employee drivers and/or IOOs have current licenses, physical examinations and have maintained their driving time logs. They must maintain records to this effect on their premises.
10. **TWIC.** LMC will be responsible for preliminary background checks on their drivers and ensure that their employee drivers and/or IOOs have qualified under DMV, DOT and TWIC requirements and maintain records verifying their eligibility on their premises.
11. **Workforce Development.** Upon receiving a permit, an LMC's must agree to work with Los Angeles and Long Beach based Workforce Development Programs to assist in the identification, training, and placement of workers affected by changes in the drayage sector.

12. Clean Truck Grant Program: Third Party Institution. The ports will contract with a third party institution that will be given responsibility for receiving and disbursing Clean Truck Grant Program funds, taking financial ownership of the trucks and administering grant program requirements. The ports will agree to assist the third party institution in enforcing the terms of its agreements with LMCs and registered truck owners whether company owned or IOO owned. The third party institution, such as Cascade Sierra, will be responsible for:

- Monitoring whether an LMC is conforming to agreed upon terms to allow either it, or IOOs operating under its auspices, to receive Clean Truck Grant funds. This will be reported to the LMC and the ports.
- Negotiate terms with the LMC that will allow its IOOs to be eligible for grant funds, if IOOs are allowed. This could include, but not be limited to liability protection for themselves and the ports, as well as terms that will help guarantee IOO income growth since that will be the source of loan repayments. Conformance to these terms will be reported to the LMC and the ports.
- Monitoring whether an LMC and/or IOOs operating under its auspices are current on payments for their share of financing for replacement trucks bought through the Clean Truck Grant Program. This will be reported to the LMC and the ports.
- Monitoring that company and/or IOO owned trucks replaced via financing from the Clean Truck Grant Program are used in port drayage in the Southern California Air Quality Management District (SCAQMD) for an agreed upon minimum percentage of their annual mileage. This will be reported to the LMC and the ports.
- Monitoring that a truck financed via the Clean Truck Grant Program is being maintained, inspected and repaired as required below (#14) or being used within the SCAQMD area the required percentage of miles (#17) or is violating parking requirements (#7). This will be reported to the LMCs and the ports.
- **Clean Truck Grant Program: Eligibility.** Monies will only be available to replace existing trucks. There will be no financing available to retrofit trucks as the technology does not perform as well as new trucks. To be eligible for assistance, a heavy duty “legacy” truck must be turned-in for replacement.

Note: Legacy trucks are those in port drayage at the time the Clean Truck Program starts whether owned by an LMC or by an IOO working under the auspices of one or more LMCs.

Exception: if fewer trucks than allotted are available for replacement from a model year at *three months* before the deadline for their retirement, non-legacy trucks of that model year historically used in the SCAQMD, may be retired instead.

- **Clean Truck Grant Program: Maintenance.** All required maintenance on emission control devices and all required safety and truck maintenance work on trucks funded via the Clean Truck Program must be performed by vendors or LMC employees certified by the third party institution to perform the work. Reports on this work shall be electronically uploaded by the vendors or LMCs to the third party institution. It will share these reports with the LMC under whose auspices the truck is working. The LMC will be ultimately responsible for ensuring that this work is completed and maintaining such records whether for its own trucks, or if allowed, IOOs working under its auspices. Failure to perform required maintenance would be a reason to bar a truck from the ports.

13. **Clean Truck Grant Program: Liability Insurance.** LMC will be responsible for maintaining liability insurance on vehicles operating under its auspices financed via the Clean Truck Grant Program funds whether company, or if allowed, IOO owned. A policy limit of \$5 million shall apply with the ports and third party institution or agents named as additional insureds.
14. **Clean Truck Grant Program: Collision Insurance.** The registered owners of trucks financed under the Clean Truck Grant Program shall have insurance in an amount equal to the value of the truck.
15. **Clean Truck Grant Program: Usage.** LMC will be responsible for having trucks financed under the Clean Truck Grant Program, whether company or if allowed, IOO owned, used in port drayage in SCAQMD for an agreed upon minimum percentage of their annual mileage.
16. **Clean Truck Grant Program: Enforcement.** Should the various terms of the Clean Truck Grant Program not be met, the following actions would occur:
 - If the registered owner of a truck financed by the Clean Truck Grant Program falls too far in arrears, the ports could bar its access of the truck through the gates and the third party institution could repossess the truck.
 - If required maintenance on emission control devices and all required safety and truck maintenance work on a truck financed by the Clean Truck Grant Program is not being done, the ports could bar a truck from entry through the gates until it has been done.
 - If a truck financed by the Clean Truck Grant Program is not being used in port drayage in the Southern California Air Quality Management District (*SCAQMD*) for an agreed upon minimum percentage of their annual mileage, the ports could bar its access through the gates and the third party institution would repossess the truck.
 - If IOOs are allowed, any LMC that has agreed to terms with the third party institution that make it possible for IOOs working under its auspices to be eligible for Clean Truck Grant Program that subsequently violates those terms, could have its access permit suspended by the ports. Note: To access the ports, the IOOs that own the trucks could work under the auspices of another LMC's permit.

5. Three Options

Option A

The following are the additional qualifications for Option A:

1. **Trucks.** An LMC must own, operate and control all heavy duty trucks used under its auspices by January 1, 2012. Until all trucks are company owned, LMC will be responsible for assisting the CHP and DOT in random checks on heavy duty trucks of IOOs operating under its auspices, including arranging appointments and providing a location for inspections.
2. **Drivers.** Drivers of the trucks operating under an LMC's auspices must be company employees by January 1, 2012.
3. **Grant Program.** Only eligible LMC owned trucks can be turned-in for replacement and receive assistance via the Clean Truck Grant Program. An LMC is responsible for staying current on payments for its share of truck replacement costs. An LMC will be responsible for maintaining collision insurance on company owned vehicles financed in part with Clean Truck Grant Program funds with an initial policy limit equal to the value of the truck.

Option B

The following are the additional qualifications for Option B:

1. **Trucks.** LMC may own, operate and control the heavy duty trucks it uses in port drayage or it may have contractual relationships with IOOs who own and operate trucks used in port drayage under its auspices. LMC will be responsible for assisting the CHP and DOT in random checks on heavy duty trucks of IOOs operating under its auspices, including arranging appointments and providing a location for inspections. *For ease of comparison, only the IOO owned truck option will be considered.*
2. **Drivers.** Drivers of the trucks operating under an LMC's auspices can be company employees or IOOs or any combination thereof. *For ease of comparison, only the IOO option will be considered.*
3. **Grant Program.** Eligible LMC owned trucks as well as IOO owned trucks operating under its auspices can be turned in for replacement and get assistance via the Clean Truck Grant Program. LMC must stay current on payments for its share of truck replacement costs for company owned trucks. IOOs must stay current on their truck payments with both being monitored by the third party institution. *Again, for ease of comparison, only the IOO option will be considered.*
4. **Revenue Split.** As a result of its agreement with the LMCs, the third party institution has an interest in seeing incomes of IOOs are sufficient to ensure repayment of any loans or leases. For the IOOs operating under its auspices to be eligible for Clean Truck Grant Program assistance, an LMC could be required to provide records to the third party institution indicating the historic share of revenue from drayage work that payments to its IOO group have comprised. It could then be required to certify that any percentage increase in those revenues will lead to a commensurate percentage increase in the payments to its IOO group with adjustment allowed for extraordinary expenditures required by the Clean Truck Program. Any such contractual agreement would be subject to the enforcement provisions of the contract between the third party institution and the ports.

Option C

The following are the additional qualifications for Option C:

1. **Trucks.** LMC may own, operate and control the heavy duty trucks it uses in port drayage or it may have contractual relationships allowing trucks owned by IOOs, *listed as involved in port drayage at the start of the Clean Truck Program*, to operate under its auspices. Until all trucks are company owned, the LMC will help DOT or CHP in arranging time and place for IOO's operating under its auspices to have truck inspections.
2. **Drivers.** Drivers of the trucks operating under an LMC's auspices can be company employees or IOO drivers that are on any LMC's original list of driver or any combination thereof. If a company wishes to expand and no IOO drivers from the original lists from all LMCs are available, it must hire new drivers as employees and own their trucks.
3. **Grant Program.** Same terms as Option B.
4. **Revenue Split.** Same terms as Option B.

6A. Assessment (5 Major Issues)

1. **Throughput.** To what extent will each option ensure that the ports are able to maintain and grow the volume of containers moving through them without any short term disruption?

Description & Analysis

The issue of throughput is essentially one of the availability of truck capacity. The San Pedro Bay harbors have classified drayage truck operators based upon their frequency of port entry.¹³ Of a total of 41,000 trucks doing so in 2005:¹⁴

- Frequent: More than 7.0 times a week - 7,000 trucks
- Semi-frequent: 3.5 but less than 7.0 times a week – 9,800 trucks
- Infrequent: Less than 3.5 times a week 24,200 trucks

The first two of these categories, or 16,800 trucks, handled roughly 80% of the port's truck borne throughput in 2005. That is roughly the number of trucks that must be kept in port drayage in the immediate future if throughput is to be uninterrupted.¹⁵ It is the ability of Options A, B and C to meet this truck capacity issue that must be assessed:

Option A. This approach would have all trucks owned by the LMCs and driven by employees. Today, few LMCs are organized in this manner. To have sufficient trucks, the LMCs must:

- **Acquire legacy trucks from IOOs and turn them in for replacement vehicles**

A list of all trucks operating frequently and semi-frequently at the ports will be supplied to the ports at the beginning of the program. For purposes of this analysis, it is assumed that \$11,500 is the average price of pre-1996 tractors and \$32,200 is the average for subsequent models.¹⁶ If pre-1996 trucks are assumed at \$11,500 and 1996-2006 trucks at \$32,200, the weighted average is \$18,539. For the 16,800 trucks, the LMCs would have to raise \$311 million over the course of the Clean Truck Program to buy them. This would be over and above the cost of replacement trucks.

- **Hire drivers to run the trucks**

Here, the issue that arises is the willingness of IOOs to become employees. A November 1, 2007 survey of 140 IOOs, randomly selected at the port gates at noon and 5 p.m., was conducted by the port's economic consultants using female interviewers.

¹³ There is no "drayage industry" per se. LMCs have customers who may or may not need goods moved to or from the ports (*drays*). The LMCs may use employee drivers or IOOs to make these moves. IOOs have the option of refusing any potential work assignment from an LMC. Thus the frequency at which any IOO appears at the ports is a function of the customers of their LMCs and their willingness to accept that type of haul. The same is true of employee-drivers with the clear exception that they cannot refuse assigned hauls. It is not possible for an IOO or employee-driver to choose to go into port drayage. They can associate themselves with an LMC (*or in the case of IOOs with one or more LMCs*) and generally accept the type of moves needed by its customers. They end up being a frequent, semi-frequent or infrequent IOO to the degree that is the type of work assigned by their LMC.

¹⁴ San Pedro Bay Ports Clean Air Action Plan Technical Report, November 2006, p. 57.

¹⁵ A calculation of the number of frequent and semi-frequent trucks needed to maintain 2007 throughput concluded that the number of container moves at peak requirements was 37,000 per day. This would require 21,150 trucks. It would be 16,914 trucks at 1.75 turns each, if 20% of the cargo was moved by infrequent trucks.

¹⁶ The existing tractor prices are averages developed from the offering prices of Freightliner tractors listed for sale www.commericaltractortrader.com.

The IOOs reported a median of 12.0 port visits a week, with only three in the “less than 3.5 times a week” or infrequent group. In summary, IOOs representing 52.2% of truck cargo throughput said “No” with 93% indicating they had an alternative employment strategy should that be required. Since each IOO represents one truck, a look at this survey is in order (*see Appendix A*):

Question: If you were paid an hourly rate of \$20 per hour and drove either a company truck or had your truck’s expenses completely covered, and were given employee benefits such as health insurance for yourself (*not your family*), paid vacations, sick leave, workers compensation insurance and state disability insurance? If this were the case, would you be willing to become an employee (that means giving up your status as an IOO):

<u>Raw Data</u>	<u>Uncertain Responses Allocated by Yes/No</u>
45 (32.1%) Yes	39.1% Yes
70 (50.0%) No	60.9% No
<u>25 (17.9%) Maybe/Uncertain</u>	
140 (100.0%) Total responses	

Weighting Driver Responses by Frequency of Port Calls (throughput impact)

<u>Raw Data</u>	<u>Uncertain Responses Allocated by Yes/No</u>
28.4% Yes	35.3% Yes
52.2% No	64.7% No
19.4% Maybe/Uncertain	

Question. The 70 “No” respondents were also asked, “Drivers who are not employees would not be allowed into the Ports. So my question is what else do you think you would do if you could not enter the port? Possibilities include:”

- 17% Become an “over the road” or “long haul” driver
- 19% Seek work from local LMCs who offer non-port drayage work. LMC Name?
- 30% Move to another location to drive there. Where?
- 27% Leave trucking for another occupation. Specifically? 6 identified firms, 13 didn’t
- 7% Don’t know

Since the completion of this survey, questions were raised about its accuracy. Change To Win recommended that Greenberg Quinlan Rosner conduct further research. In talks with that firm, it was found that they had surveyed a sample from 6,000 drivers who had indicated to Change To Win an interest in being employees. While the results of that sample have not been made available, Greenberg Quinlan Rosner indicated orally that they were similar to those cited above. California Cartage, the largest port drayage firm, also reported conducting a survey of their IOOs with the interviewer told to ask whether they would stay with the company if required to be employees. They indicated a similar result to those above.

The issue then arose as to the extent IOOs saying “No” fully understood their economic situation and how being employees would change it. Another random survey possibly using the e-Modal list is thus being negotiated with Greenberg Quinlan Ros-

ner in which IOO flexibility or inflexibility will be tested by giving them more information about being employees and seeing if their answers change.

Note: If the new survey shows an “education” program could change some IOOs attitudes to being employee-drivers, it must be implemented almost immediately since 2,100 IOO trucks will be banned on October 1, 2008. Loss of a major share of these drivers would compound the shortage from TWIC and the fact that even an extensive “education” program will not convince all skeptical IOOs to become employees.

This additional work will also seek to identify the extent to which large national firms would be willing to enter the local short-haul trucking market (*which is what the bulk of the drayage market is*) if a deficit of drivers appears. It will additionally test the conditions under which drivers working for an LMCs not essentially in port drayage would be willing to sever their current IOO or employee relationship and associate with a national LMC whose customers require more “drays” to and from the ports.

- **Overcome the potential loss of drivers due to TWIC**

A related throughput issue is the concern that 15% to 22% of existing frequent or semi-frequent IOOs will be removed from port drayage due to the TWIC process. This would occur for three reasons: non-status to work in the U.S.; felony convictions; unwillingness to apply. Of the 16,800 drivers in question, this would represent 2,520 to 3,696.¹⁷ Here, the willingness of either TWIC eligible IOOs or employees driving for LMCs, that are not heavily involved in port drayage, to become employee-drivers with LMCs that are heavily involved in drayage is relevant.

Fundamentally, this would likely be an earnings issue with drayage LMCs competing with non-drayage LMCs to acquire the services of drivers willing to be employees and have a higher portion of their work involve moves to/from the ports.¹⁸ It is part of the mechanism that should raise earnings in drayage (*see Appendix B*) The willingness of TWIC eligible infrequent IOOs and non-port workers to become frequent or semi-frequent employee-drivers is an issue that Greenberg Quinlan Rosner will be tasked to address.

Note: the LMC would still have to acquire legacy trucks to turn in to obtain the equipment for these employee-drivers. Here, the provision that a shortage of legacy trucks can be made up by other trucks that have been operating in the SCAQMD is relevant.

- **Drivers and trucks to accommodate port growth**

Assuming the forecasted increase in port activity from 2005-2012, as well as a rise in the share of throughput handled by on-dock rail, plus a 2% rise in trucking productivity, it was estimated that 20,200 trucks would be needed by 2012, an increase of 3,400 beyond those needed to replace TWIC losses.¹⁹ To accommodate this growth, the LMCs would likely have to find this capacity from drivers working for LMCs largely outside of port drayage. Under this option, they would face two problems:

¹⁷ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 29-32.

¹⁸ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 34-40.

¹⁹ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 45-46.

- There would be the earnings competition between drayage LMCs competing with non-drayage LMCs to acquire the services of workers willing to become frequent or semi-frequent employee-drivers.
- There would be the need to acquire trucks for these drivers to run without port assistance. At an average cost of \$50,000 for used 2007 vehicles, which would likely decline over time, they would need to fund \$170 million (*or less*) in vehicles without port assistance.
- **LMC's with infrequent drivers**

Another factor is the impact of the employee mandate on out-of-state firms who provide drayage services as well as Southern California firms that infrequently send trucks to pick up a load. There has been essentially no discussion or definition of how and to what extent this mandate would be a requirement for them. While there are an estimate 16,800 trucks that call on the ports more than 3.5 times a week, there is an estimated 24,000 additional trucks that call less than 3.5 times a week. If they are to be included, most would likely resort to "dray-offs" whereby their trucks would bring cargo near the ports and transfer it to LMCs that have permits to bring containers through the gates.

Option B. An LMC may own heavy duty trucks or it may have contractual relationships with IOOs who own and operate the trucks used in port drayage under its auspices. Today, almost all LMCs use IOOs. To have sufficient trucks:

- **Legacy trucks must be turned in for replacement vehicles**

A list of all trucks operating frequently and semi-frequently at the ports will be supplied to the ports at the beginning of the program. The LMC would not have to acquire legacy trucks for the IOOs in port drayage. This is the case since in this model, the IOOs themselves will be turning in the trucks for replacement under the Clean Truck Grant Program. There is thus no added cost for legacy truck acquisition.

- **Find drivers to run the trucks**

Since LMCs fundamentally use IOOs, the drivers come with their trucks.

- **Overcome the potential loss of IOOs due to TWIC**

As indicated, a related throughput issue is the concern that 15% to 22% of existing frequent or semi-frequent IOOs will be removed from port drayage due to the TWIC process, or 2,520 to 3,696. Here, the important issue is the willingness of TWIC eligible IOOs working for LMCs not heavily involved in port drayage to contract with firms that are. Fundamentally, this would be an earnings issue with drayage LMCs competing with non-drayage LMCs to acquire the services of these IOOs. It is part of the mechanism that should raise earnings in drayage (*Appendix B*). Here again, the provision allowing a shortage of legacy trucks to be made up by IOOs bringing other trucks that have been operating in the SCAQMD is relevant.

- **Drivers and trucks to accommodate port growth**

To accommodate port growth, it was calculated that there would be a need for 3,400 additional IOOs beyond those needed to replace TWIC losses. Under option B, the LMCs would face two problems:

- There would be the earnings competition between drayage LMCs competing with non-drayage LMCs to acquire the services of IOOs willing to work for them as frequent or semi-frequent IOOs.
- The new IOOs entering port service would need to be able to acquire at least used 2007 vehicles at an average cost of \$50,000 nearer to 2007 with the price declining over time. They would not have port assistance.
- **LMC's with infrequent drivers**

These firms could retain their existing form of organization.

Option C. An LMC may own its heavy duty trucks or have contractual relationships allowing trucks owned by IOOs, *listed as involved in port drayage at the start of the Clean Truck Program*, to operate under its auspices. As indicated, today almost all LMCs are organized using IOOs. To have sufficient trucks under Option C:

- **Legacy trucks must be turned in for replacement vehicles due to TWIC losses**

A list of all trucks operating frequently and semi-frequently at the ports will be supplied to the ports at the beginning of the program. The LMC would not have to acquire legacy trucks for the IOOs in port drayage regardless of whether those IOOs have historically worked for them or have previously worked through another LMC. This is the case since in this model, the IOOs themselves will be turning in the trucks for replacement under the Clean Truck Grant Program. There is no added cost for legacy truck acquisition with one exception.

As indicated, TWIC will likely result in the loss of 2,520 to 3,696 frequent or semi-frequent port drayage IOOs. To replace them, drayage LMCs in Option C would have to either convince TWIC eligible IOOs working for LMCs not heavily engaged in drayage to contract with them, or hire employee-drivers not currently working for LMCs involved in port drayage. In the second case, the LMCs would have to acquire legacy trucks that have been operating in the SCAQMD for the new employee-drivers to run. No cost estimate is possible as there is no way to estimate to what extent the IOO deficit can be made up with TWIC eligible infrequent IOOs. However, it is unlikely to be zero.

- **Find drivers to run the trucks**

As just stated, to replace the 2,520 to 3,696 frequent or semi-frequent IOOs lost to TWIC, drayage LMCs in Option C would have to either convince TWIC eligible IOOs working for LMCs not heavily engaged in drayage to contract with them, or hire employee-drivers not currently working for LMCs involved in port drayage.

- **Drivers and trucks to accommodate port growth**

To accommodate port growth, it was calculated that there would be a need for 3,400 additional drivers and trucks beyond those needed to replace TWIC losses. Under Option C, the LMCs would face two problems:

- There would be the earnings competition as drayage LMCs compete with non-drayage LMCs to acquire the services of workers willing to become frequent or semi-frequent employee-drivers. This is the case as expansion and TWIC are

unlikely to both be accommodated by infrequent IOOs switching to becoming frequent or semi-frequent IOOs.

- There would be the need to acquire trucks for these drivers to run without port assistance. They would need to fund \$170 million (*or less*) in used 2007 vehicles without port assistance.

- **LMC's with infrequent drivers**

The infrequent LMCs would have some IOOs on the list of those allowed to remain as IOOs. However, they would also have drivers who are not. At the point where they could not find IOOs on the list, they would be put in the position of having employee drivers, *if that provision is to apply to them*. Eventually, this would most likely resort to “dray-offs” whereby their trucks would bring cargo near the ports and transfer it to LMCs that have permits to go through the gates.

Implementation

1. **Success.** Will throughput continue uninterrupted under each option?

- **Option A.** The attitudes of IOOs toward becoming employees raise questions about the possibility that throughput will be maintained and the ability of drayage firms to handle TWIC or port expansion. The key will be the degree that behavior of IOOs deviates from their expressed opinions. There is also the difficulties raised by the need of LMCs to raise the added \$311 million for truck acquisition without port assistance as well as the difficulty created by the need to raise \$170 million (*or less*) for used trucks to accommodate port growth. Further, there is the question of the status of LMCs that infrequently send trucks to the ports. If they are covered by the employee mandate, a high volume of “dray-offs” would result.
- **Option B.** The ability to handle TWIC appears to be an earnings issue with port drayage LMCs competing for IOOs with LMCs not fundamentally in port drayage. The ability to accommodate port growth will be inhibited by the need of IOOs to have at least used 2007 trucks costing \$50,000 nearer 2007 (*and less later*) with no financial assistance available from the ports.
- **Option C.** As long as there are sufficient IOOs to accommodate existing volume, TWIC and port growth, this is the existing system. However, it is unlikely that there will be IOOs to make up for both TWIC losses and port growth. To the extent that is true, the reluctance of IOOs to be employees will be a throughput issue. So also will be the need for an unknown amount to be raised for trucks to be acquired for employee-drivers under TWIC. There is also the difficulty created by the \$170 million (*or less*) the LMCs must raise for used 2007 trucks to accommodate port growth. Again, there is the question of the status of LMCs that infrequently send trucks to the ports. If they are covered by the employee mandate, eventually, a high volume of “dray-offs” would result.

2. **Timeliness.** Will throughput be impacted by delays in implementing an option?

- **Option A.** The need by LMCs to find drivers willing to be employee-drivers to replace IOOs leaving the sector as well as those lost by TWIC and needed for port expansion appears likely to significantly slow down this option's ability to accommodate growth. There might also be delays due to the need of LMCs to raise the extra

capital to buy trucks to be turned in for replacement with their prospect of doing so unknown. In particular, if the results of the driver surveys to date prove even 50% predictive of actual behavior, the ports face a driver loss of 3,500 to 4,000 IOOs not willing to be employee-drivers.

- **Option B.** LMCs will be able to keep IOOs that qualify under TWIC. There will be some delay while driver earnings increase to allow LMCs to recruit IOOs to replace those lost under TWIC and to accommodate port growth.
- **Option C.** LMCs will be able to keep IOOs that qualify under TWIC. There will be some delay as LMCs seek to find drivers willing to be employee-drivers to replace those lost by TWIC that are not filled by infrequent IOOs. There will also be a delay as LMCs seek to find IOOs or others willing to be employee-drivers to accommodate port growth.

3. **Effectiveness.** How well will throughput be managed under each option?

- **Option A.** An industry organized in this fashion is capable of accommodating port throughput. By 2012, given company control over their trucks and drivers, it could lead to larger local firms and the willingness of national carriers to acquire them and enter drayage. Effectiveness could be hampered by “dray offs” if LMCs that infrequently have trucks visiting the ports are included in the employee mandate.
- **Option B.** An industry organized in this fashion will accommodate port throughput. By 2012, the extra cost of operation will likely lead to larger local firms but the competitive environment may or may not be sufficiently attractive to induce national carriers to enter the local short haul market.
- **Option C.** An industry organized in this fashion will accommodate port throughput. By some time after 2012, given ultimate company control over their trucks and drivers, it could lead to larger local firms and the willingness of national carriers to acquire them and enter drayage. Effectiveness could be hampered by “dray offs” if LMCs that infrequently have trucks visiting the ports must have employee-drivers.

4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?

- **Option A.** LMCs must raise \$311 million to acquire trucks from their IOOs. LMCs would be required to pay state mandated benefits and would have less driver time available for driving from each employee due to mandated work breaks, pre-trip preparation, post trip clean-up and waiting time for minor maintenance during a given pay period. The difference over IOOs is a 59.5% increase in labor costs to accomplish the same work at the same underlying base pay (*see discussion page 31*).²⁰
- **Option B.** LMCs would not have to raise funds to acquire trucks from their IOOs. The difference of using IOOs compared to employee-drivers would be 59.5% less in labor costs to accomplish the same work (*see discussion page 31*).
- **Option C.** LMCs would have to raise unknown amount of funds to acquire trucks to the extent that they cannot find IOOs from the initial list to accommodate TWIC. For that share of their workforce that would be employee-drivers, there would be a 59.5% increase in labor costs over using IOOs (*see also discussion page 31*).

²⁰ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 66-70.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** The higher LMC costs incurred in this option due to the need to raise capital to buy trucks, the higher competitive rates to acquire drivers and the comparatively higher of labor costs of employees versus IOOs would result in industry consolidation by 2012 and larger remaining firms.
- **Option B.** The higher LMC costs incurred in this option due to the need to pay competitive rates to acquire IOOs, due to both TWIC and port growth, would result in some industry consolidation and larger firms. It would be less than in the other options as firms would have the lower labor cost compared to having employees and would not have to raise capital to acquire trucks to turn in for replacement vehicles.
- **Option C.** The higher LMC costs incurred by the requirement to acquire more trucks and have some employee-drivers in this option would result in some industry consolidation though over a longer period of time than with Option A.

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?

- **Option A.** One on one interviews with over 50 LMCs conducted in the July and August 2007 found literally no desire to be in an industry with employees among the major existing LMCs. The smaller LMCs indicated that having employees along with increased insurance, required truck-borne technology and maintaining yards would likely force them out of business. Interviews with national LMCs found some interest in being in a market with employees. That willingness was conditioned upon market conditions that may exist by 2012 under this option, but not much sooner.
- **Option B.** The LMCs interviewed indicated a strong interest in remaining in the industry and using IOOs. Some smaller LMCs indicated that increased insurance, required truck-borne technology and maintaining yards might force them out of business. The willingness of national LMCs to consider the market was less strong under this condition as it would not yield the concentration they feel is needed by 2012.
- **Option C.** To the extent that this option requires employees and has the extra costs of providing trucks for them, it would not be the preference of existing LMCs. It would increase market concentration somewhat by 2012 but probably not enough to fill the needs of national companies.

7. **Program Management.** Will an option make it easier or harder to administer the program?

- **Option A.** Reducing the number of market participants and having companies own their trucks and employ their workers would ultimately make program management easier.
- **Option B.** A reduction among smaller market participants would ultimately make program management easier than today. However, the firms would have less control over their IOOs than they would if they owned trucks and had employee-drivers.
- **Option C.** This would be the most difficult option to administer given the likely confusion and difficulty of tracking at what point firms must change from IOOs to employees. Some reduction in market participants would alleviate part of that problem. However, the firms would still have IOOs over which they would have less control than in the part of the operations involving owned trucks and employees.

8. **Maximize Return.** To what extent will an option maximize the port's financial effort?
- **Option A.** If it can be implemented, there will be clean trucks under this option.
 - **Option B.** If it can be implemented, there will be clean trucks under this option.
 - **Option C.** If it can be implemented, there will be clean trucks under this option.
9. **Cooperation.** To what extent will groups be willing to cooperate in implementing the Clean Truck Program in light of the throughput issue?
- **Option A.** Environmental & labor groups have indicated that with the employee mandate, they will support the Clean Truck Program and encourage its implementation. The LMCs have concluded that it is not in their interest to assist the ports in implementing the Clean Truck Program if it includes the employee mandate and will seek to delay or stop it. As it is the LMCs which must manage throughput, their opposition is a difficulty.
 - **Option B.** Existing LMCs have concluded that it is in their interest to assist the ports in implementing the Clean Truck Program if there is no employee mandate. If this option is chosen, they will likely work closely with the ports to see that the program moves ahead. The environmental & labor groups have indicated that without the employee requirement, they will be opposed to the program and not support its implementation. As it is the LMCs that must manage throughput, their support is an advantage.
 - **Option C.** This option neither gives environmental and labor groups the employee mandate they seek nor does it avoid the employee mandate opposed by the LMCs. In that respect, it gives neither group what it seeks. On balance, it is likely to be viewed more favorably by the environmental and labor groups as ultimately there would be an employee mandate. For that reason, it would likely be opposed by the LMCs who would fight its implementation, though perhaps less vigorously.

2. **Clean Trucks.** To what extent will each option lead to meeting the clean truck requirements and deadlines passed by the two Boards of Harbor Commissioners?

Description & Analysis

Essentially, the issue of clean trucks is whether port drayage firms, using the funds to be made available by the ports via a third party institution, can obtain clean trucks in a timely manner. At the outside, this means that by January 1, 2012, all heavy duty trucks operating under an LMC's auspices must be 2007 or subsequent model years, or LNG fueled, or replaced by Gateway Cities Truck Modernization Program, or manufactured in 1995/1996-2006 and retrofitted with CARB VDECS. Ports funds will only be available for 2007 or new trucks but truck owners could retrofit 1995/1996-2006 trucks on their own. It is the ability of Options A, B and C to meet this clean truck deadline that must be assessed:

Option A. This approach would have all trucks owned by the LMCs. To have sufficient trucks, the LMCs must:

- **Acquire legacy trucks from IOOs and turn them in for replacement vehicles**

As indicated earlier, a list of all trucks operating frequently and semi-frequently at the ports will be supplied to the ports at the beginning of the program. For purposes of

this analysis, it is again assumed that \$11,500 is the average price of pre-1996 tractors and \$32,200 is the average for subsequent models. For the 16,800 trucks, the LMCs would have to raise \$311 million to buy the legacy trucks to be turned in for replacement vehicles. This would be in addition to the cost of the new replacement trucks.²¹

- **Overcome the potential loss of trucks due to TWIC**

A related throughput issue is the concern that 15% to 22% of trucks used frequently or semi-frequently will be removed from port drayage if IOOs leave the sector due to the TWIC process. The LMC would have to make up for the shortage of legacy trucks by buying other trucks that have been operating in the SCAQMD and turning them in for replacement vehicles.

- **Staying current on truck payments**

LMCs must stay current on their truck payments to the third party institution. The institution's use of port grants, its non-profit status, its fleet purchasing power and negotiating strength with financial institutions, as well as depreciation allowances, will allow it to develop lease-to-own programs with reasonable payment levels. Note, the earlier analysis showed that with the higher fixed costs associated with this option, thinly capitalized LMCs would need immediate rate increases to provide the cash flow to stay in business. To the extent rate increases were delayed, it should be expected that many of the current LMCs would be forced out of business.²²

- **Trucks to accommodate port growth**

To accommodate port growth, it was estimated that by 2012, the LMC would have to increase their fleet of port trucks by another 3,400 vehicles. At an average cost of \$50,000 for used 2007 vehicles, which would likely decline over time, they would need to fund \$170 million (*or less*) in vehicles without port assistance.

Option B. This approach would allow trucks to be owned by the LMCs or their IOOs. To have sufficient trucks, the LMCs must:

- **Acquire legacy trucks from IOOs and turn them in for replacement vehicles**

A list of all trucks operating frequently and semi-frequently at the ports will be supplied to the ports at the beginning of the program. The LMC would not have to acquire legacy trucks for the IOOs in port drayage since the IOOs will be turning in the trucks for replacement under the Clean Truck Grant Program. There is thus no added cost for legacy truck acquisition.

- **Overcome the potential loss of trucks due to TWIC**

LMCs would make up for losses by contracting with infrequent IOOs or non-port IOOs that have been operating in the SCAQMD to enter port drayage. As trucks would come with these drivers, there would be still be no additional expenditure to acquire legacy trucks to be turned in for new replacement vehicles.

- **Stay current on truck payments**

²¹ See p. 11

²² San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 76-77.

IOOs must stay current on their truck payments to the third party institution. As indicated, that institution has a variety of devices to develop lease-to-own programs with reasonable payment levels.

- **Trucks to accommodate port growth**

To accommodate port growth, it was estimated that by 2012, the LMC would have to add sufficient IOOs to increase their capacity by 3,400 trucks. The new IOOs would have to buy trucks without port assistance that would cost them an average of \$50,000 for used 2007 vehicles, with that figure declining over time.

Option C. An LMC may own its heavy duty trucks or have contractual relationships allowing trucks owned by IOOs, *listed as involved in port drayage at the start of the Clean Truck Program*, to operate under its auspices. To have sufficient trucks under Option C:

- **Acquire legacy trucks from IOOs and turn them in for replacement vehicles**

A list of all trucks operating frequently and semi-frequently at the ports will be supplied to the ports at the beginning of the program. As long as sufficient IOOs exist, the LMC would not have to acquire legacy trucks for the IOOs in port drayage since the IOOs will be turning in the trucks for replacement under the Clean Truck Grant Program. There is thus no added cost for legacy truck acquisition.

- **Overcome the potential loss of trucks due to TWIC**

LMCs would make up for TWIC losses by paying infrequent IOOs or non-port IOOs that have been operating in the SCAQMD to enter port drayage. To the extent there were sufficient infrequent IOOs available, the trucks would come with these drivers and there would be no additional expenditure to acquire legacy trucks. However, if there are not, the LMC would have to make up for the shortage of legacy trucks by buying other trucks that have been operating in the SCAQMD and turning them in for replacement vehicles to be driven by employee-drivers.

- **Stay current on truck payments**

IOOs and LMCs must stay current on their truck payments to the third party institution. As indicated, that institution has a variety of devices to develop lease-to-own programs with reasonable payment levels.

- **Trucks to accommodate port growth**

To accommodate port growth, it was estimated that by 2012, the LMC would have to add sufficient trucks to increase their capacity by 3,400 trucks. At an average cost of \$50,000 for used 2007 vehicles, which would likely decline over time, they would need to fund \$170 million (*or less*) in vehicles without port assistance.

Implementation

1. **Success.** Will trucks be cleaned up under each option?

- **Option A.** There is a difficulty due to the need by LMCs to raise an added \$311 million for legacy truck acquisition without port assistance to maintain throughput and TWIC replacement plus the need of \$170 million (*or less*) for trucks to accommodate port growth.

- **Option B.** There is no need to acquire legacy trucks as the IOOs will be turning in their existing trucks for replacements with or without TWIC. The ability to accommodate port growth will be inhibited by the need of IOOs to have at least used 2007 trucks at a cost of \$50,000 closer to 2007 and less closer to 2012.
- **Option C.** As long as there are “grandfathered” IOOs to accommodate existing volume and TWIC, there is no need for additional funds to acquire legacy trucks. However, it is possible that there will not be enough qualified IOOs to make up for TWIC losses. If that is true, the LMCs will need to raise an unknown amount for legacy trucks to be acquired to get replacement trucks for TWIC replacement employee-drivers. Also, there is the need to raise \$170 million (*or less*) for trucks to accommodate port growth.

2. **Timeliness.** Will clean trucks be acquired according to port deadlines under each option?

- **Option A.** The port environmental container fees will raise sufficient funds to clean up trucks *sooner rather than later*. The need by LMCs to raise the extra \$311 million to buy legacy trucks to be turned in for replacements, plus raise the \$170 million (*or less*) for port growth, may cause implementation to stay on the existing schedule or possibly slower.
- **Option B.** Port environmental container fees will raise sufficient funds to clean up trucks *sooner rather than later*. Existing IOOs can turn in legacy trucks for replacements in advance of the port schedule. The need for new IOOs to come with trucks costing \$50,000 (*or less*) to accommodate port growth will cause the program to have more difficulty closer to 2012.
- **Option C.** Port environmental container fees will raise sufficient funds to clean up trucks sooner rather than later. Existing IOOs can turn in legacy trucks for replacements in advance of the port schedule. The need by LMCs to raise an unknown amount for legacy trucks to be acquired to get replacement trucks for TWIC replacement employee-drivers, plus the need to raise \$170 million or less for trucks to accommodate port growth, may cause implementation to move on the existing schedule or possibly slower.

3. **Effectiveness.** How well will clean truck acquisition be managed under each option?

- **Option A.** In the near term, provided companies can find the funds for legacy trucks, the port deadlines will be met. Nearer to 2012, to the extent that national firms find an interest in entering a market organized in this manner, it may be easier for the \$170 million (*or less*) to be raised to accommodate port growth.
- **Option B.** In the near term, the port deadlines may well be exceeded as there is no barrier to IOOs acquiring new trucks early. To accommodate growth, it will be more difficult to get IOOs later in the program as they will need at least used 2007 trucks with costs of \$50,000 nearer to 2007 cost, less later. Also, the LMCs will not be able to directly influence whether IOOs stay current on their payments.
- **Option C.** In the near term, the port deadlines may well be exceeded as there is no barrier to IOOs acquiring new trucks early. However, LMCs will need to find funds for legacy trucks to provide replacement vehicles for some TWIC replacement employee-drivers. Later in the program, they will need \$170 million or less for used

2007 trucks for employee-drivers. This model will be unlikely to have national firms interested in the market by 2012.

4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?

- **Option A.** LMCs must raise \$311 million to acquire trucks from their IOOs. Nearer to 2012, it might be easier to raise the \$170 million (*or less*) needed for port growth as national firms may be interested in the market. They will also need 59.5% more funds for employee-drivers than IOOs for the same workload (*discussion page 31*).
- **Option B.** LMCs would not have to raise funds to acquire trucks from their IOOs. Nearer to 2012, they would have difficulty finding IOOs with used 2007 trucks costing \$50,000 (*or less*) to accommodate port growth.
- **Option C.** LMCs would have to raise unknown amount of funds to acquire trucks to the extent that they cannot find IOOs from the initial list to accommodate TWIC losses. Nearer to 2012, they must raise the \$170 million (*or less*) needed for port growth with national firms not yet interested in the market.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** The higher LMC costs incurred in this option, due to the need to raise capital to buy trucks, would encourage industry consolidation by 2012. It might also encourage national firms to enter the market.
- **Option B.** Since IOOs own the trucks under option B, the clean truck acquisition portion of the Clean Truck Program would do little to raise costs among LMCs and by itself would not impact industry consolidation and increased size.
- **Option C.** The higher LMC costs incurred by the requirement to acquire more trucks for their employee-drivers in this option would result in some industry consolidation, particularly closer to 2012, but much less than in Option A.

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?

- **Option A.** See comments in Throughput #7. LMCs strongly prefer to avoid the employee model. National firms might be induced to enter the market closer to 2012. There is a short term risk of LMCs deciding to abandon port drayage.
- **Option B.** Same comments in Throughput #7. LMCs strongly prefer the IOO model but smaller IOOs would not likely survive.
- **Option C.** Same comments in Throughput #7. LMCs strongly prefer to avoid the employee model. National firms would not be induced to enter the market by 2012.

7. **Program Management.** Will an option make it easier or harder to administer the program?

- **Option A.** Reducing the number of market participants and having companies buying trucks to own would ultimately make program management easier.
- **Option B.** A reduction among smaller market participants would ultimately make program management easier than today. However, the firms would have less control over the ability of their IOOs to acquire trucks and stay current on them than if they owned the trucks themselves.

- **Option C.** This would be the most difficult option to administer given the likely confusion and difficulty of tracking when firms are required to change from IOOs to buying trucks for themselves. Some reduction in market participants would alleviate some of that problem. However, the firms would still have less control over the ability of their many IOOs to acquire trucks than buying trucks for themselves.

8. **Maximize Return.** To what extent will an option maximize the port's financial effort?

- **Option A.** There will be clean trucks under this option.
- **Option B.** There will be clean trucks under this option.
- **Option C.** There will be clean trucks under this option.

9. **Cooperation.** To what extent will groups be willing to cooperate in implementing the Clean Truck Program in light of the clean truck acquisition issue?

- **Option A.** See comments in Throughput #10. Environmental & labor groups favor this option. LMCs oppose it. As it is the LMCs that must buy the trucks, their opposition is a difficulty.
- **Option B.** See comments in Throughput #10. Environmental & labor groups oppose this option. LMCs favor it. As it is the LMCs that must work with their IOOs that are acquiring the trucks, their support is an advantage.
- **Option C.** See comments in Throughput #10. Neither environmental and labor groups nor LMCs get what they want, but this moves closer to the environmental and labor position. As the LMCs must both buy trucks and work with their IOOs that are acquiring them under this option, their opposition is a difficulty.

3. **Driver Supply.** To what extent will each option impact the port drayage driver supply?

Description & Analysis

Port throughput capacity is, in part, dependent upon the ability of LMCs working in port drayage to keep their own drivers and obtain other drivers from LMCs not essentially working with in port drayage. In part, this is a pay issue. However, it is also an issue of other factors influencing the supply and demand for port drayage drivers:

- There is a growing shortage of heavy truck drivers in the U.S. This could well lead to more of the drivers leaving LMCs specializing in port drayage to work with firms doing other forms of trucking.
- It has been estimated that TWIC will remove 2,500 to 3,700 of the drayage drivers currently working with LMCs serving the San Pedro Bay ports. Port expansion will require these firms to have an additional 3,400 drayage drivers. Together, that means 5,900 to 7,100 of the 20,200 drivers who will have to work for LMCs handling frequent and semi-frequent drayage moves with the ports by 2012 are not currently doing so. That represents 29% to 35% of the 2012 workforce that will have to be recruited from LMCs whose customers are primarily outside of port drayage.²³

²³ See p. 13.

- An added difficulty will be the need to replace any drivers who leave port drayage LMCs due to natural turnover in the sector. That turnover is roughly 11% per year.²⁴
- Depending upon the option, there may also be the need to replace some share of IOOs who choose to leave LMCs specializing in port drayage because they do not wish to be employees.

The effect of Options A, B and C on the supply and demand of drivers working for LMCs specializing in drayage must be examined:

Option A. This approach would have all drivers become employees of LMCs and drive trucks owned by the LMCs. The issues this form of organization raises include:

- **Hire employee-drivers to move cargo**

As indicated earlier, the issue that arises for Option A is the willingness of IOOs to become employees with 50% of IOOs representing 52.2% of truck cargo throughput indicating “No” (*without allocating unknowns*) with 93% indicating they had an alternative employment strategy should that be required (*see Appendix A*). That general finding has apparently been reinforced by work done for Change To Win by Greenberg Quinlan Rosner and internally by California Cartage.

Two questions remain. One is the believability that 8,400 of the IOOs would leave port drayage LMCs if forced to become employees. Related is the question of how flexible or inflexible IOOs would be on the employee issue once presented with additional information that would allow them to better judge their own economic situations. Further polling is underway by Greenberg Quinlan Rosner to look at this issue. If their work shows a radical shift in opinion with more information, part of Option A must be a port sponsored information strategy designed to rapidly change this predisposition of the IOOs to not remain with port drayage firms if required to do so as employees.

The immediate issue faced by the ports is that 2,100 pre-1989 trucks owned largely by IOO drivers are to be banned October 1, 2008. Loss of any significant number of these drivers compounds the short-term issue of driver supply. If they are to be converted to employees, it requires: (1) a campaign to convince them, (2) negotiations with each to acquire their legacy trucks, (3) acquisition of financing by the LMCs to buy the trucks and (4) certification of their eligibility for a new truck grant. To avoid losses, these tasks must be accomplished by August or September if they are to have a replacement truck by October. If these drivers leave their port drayage LMCs and join non-port LMCs, it would be unlikely that they would return to a port drayage LMC in the future. Their loss would require port drayage LMCs to compete for drivers who are currently working with non-drayage LMC. That would appear to be primarily a pay issue.

In any case, the loss of even one-third the drivers predisposed to not become employees (2,800) would represent a 16.5% reduction in capacity that would have to be made up by people willing to leave LMCs not fundamentally involved in port drayage to become employee-drivers of LMCs that are. This would largely be an earnings issue with drayage LMCs competing with non-drayage LMCs to acquire the services of

²⁴ A Survey Of Drayage Drivers Serving The San Pedro Bay Ports, CGR Management for Gateway Cities Council of Governments, 2007

these workers. It is part of the mechanism that should raise earnings in drayage (*see Appendix B*).

- **Overcome the potential loss of drivers due to TWIC**

If 2,520 to 3,696 frequent and semi-frequent port drivers working for port drayage LMCs are lost due to TWIC, this may compound their need to obtain employee-drivers from non-drayage LMCs. This would not be true if those lost because of TWIC are the same people who have already indicated they would leave port drayage LMCs rather than become employee-drivers. It would be the case if the drivers lost due to TWIC are IOOs that indicated a willingness to be employees. Greenberg Quinlan Rosner is being asked to determine the extent to which TWIC will compound the need for drivers to be hired away from non-drayage LMCs.

- **Drivers to accommodate port growth**

If the forecasted increase in port activity from 2005-2012 leads to the need for an additional 3,400 employee-drivers, this will add further to the need for port drayage LMCs to compete to recruit people willing to become employee-drivers from non-drayage firms.

Meanwhile, the LMCs would face the need to supply these additional drivers with at least used 2007 clean trucks. These will cost about \$50,000 near 2007 and less later and cannot be financed with port assistance.

Option B. An LMC may use employees or have contractual relationships with IOOs who own and operate the trucks used in port drayage under its auspices. Today, almost all port drayage LMCs use IOOs. The issues this form of organization raises include:

- **Contract with IOOs to move cargo**

Almost all port drayage LMCs use IOOs to move freight for them. This relationship would not change. There is thus no need for the LMCs to replace them.

- **Overcome the potential loss of IOOs due to TWIC**

The loss of 2,520 to 3,696 IOOs providing frequent or semi-frequent drayage moves for port drayage LMCs would require their replacement by IOOs working for LMCs not fundamentally in port drayage. Essentially, this would be an earnings issue with drayage LMCs competing with non-drayage LMCs to acquire the services of these IOOs. This would be part of the market mechanism that should raise earnings in port drayage (*Appendix B*).

- **Drivers and trucks to accommodate port growth**

Port drayage LMCs will need to add 3,400 IOOs to accommodate port growth by 2012. Again, they will need to acquire the services of IOOs that have been working for LMCs not fundamentally in port drayage. This would largely be an earnings issue with drayage LMCs competing with non-drayage LMCs to acquire the services of these IOOs. This would also be part of the market mechanism that should raise earnings in port drayage.

The growth issue will be compounded by the need to find IOOs with clean trucks. Used 2007 trucks would cost about \$50,000 closer to 2007 and less closer to 2012.

these workers. It is part of the mechanism that should raise earnings in drayage (*see Appendix B*).

- **Overcome the potential loss of drivers due to TWIC**

If 2,520 to 3,696 frequent and semi-frequent port drivers working for port drayage LMCs are lost due to TWIC, this may compound their need to obtain employee-drivers from non-drayage LMCs. This would not be true if those lost because of TWIC are the same people who have already indicated they would leave port drayage LMCs rather than become employee-drivers. It would be the case if the drivers lost due to TWIC are IOOs that indicated a willingness to be employees. Greenberg Quinlan Rosner is being asked to determine the extent to which TWIC will compound the need for drivers to be hired away from non-drayage LMCs.

- **Drivers to accommodate port growth**

If the forecasted increase in port activity from 2005-2012 leads to the need for an additional 3,400 employee-drivers, this will add further to the need for port drayage LMCs to compete to recruit people willing to become employee-drivers from non-drayage firms.

Meanwhile, the LMCs would face the need to supply these additional drivers with at least used 2007 clean trucks. These will cost about \$50,000 near 2007 and less later and cannot be financed with port assistance.

Option B. An LMC may use employees or have contractual relationships with IOOs who own and operate the trucks used in port drayage under its auspices. Today, almost all port drayage LMCs use IOOs. The issues this form of organization raises include:

- **Contract with IOOs to move cargo**

Almost all port drayage LMCs use IOOs to move freight for them. This relationship would not change. There is thus no need for the LMCs to replace them.

- **Overcome the potential loss of IOOs due to TWIC**

The loss of 2,520 to 3,696 IOOs providing frequent or semi-frequent drayage moves for port drayage LMCs would require their replacement by IOOs working for LMCs not fundamentally in port drayage. Essentially, this would be an earnings issue with drayage LMCs competing with non-drayage LMCs to acquire the services of these IOOs. This would be part of the market mechanism that should raise earnings in port drayage (*Appendix B*).

- **Drivers and trucks to accommodate port growth**

Port drayage LMCs will need to add 3,400 IOOs to accommodate port growth by 2012. Again, they will need to acquire the services of IOOs that have been working for LMCs not fundamentally in port drayage. This would largely be an earnings issue with drayage LMCs competing with non-drayage LMCs to acquire the services of these IOOs. This would also be part of the market mechanism that should raise earnings in port drayage.

The growth issue will be compounded by the need to find IOOs with clean trucks. Used 2007 trucks would cost about \$50,000 closer to 2007 and less closer to 2012.

port drayage LMCs. Port growth would have the same result. However, in the last case, the IOOs must have used 2007 trucks at a cost of \$50,000 closer to 2007 and less closer to 2012.

- **Option C.** As long as there are sufficient IOOs to accommodate existing volume, TWIC and port growth, this is the existing system. However, it is unlikely that port drayage LMCs will find enough IOOs on the initial list to make up for both the TWIC losses and port growth. To the extent that is true, the potential reluctance of IOOs working with non-port drayage LMCs to become port employee-drivers would be a throughput issue. So also will be the unknown needed for trucks to be acquired for use by employee-drivers under TWIC. There is also the difficulty created by the \$170 million (*or less*) that port drayage LMCs must raise to provide trucks to their drivers to accommodate port growth.

2. **Timeliness.** Will throughput be impacted by delays in implementing an option?

- **Option A.** The need by port drayage LMCs to get drivers from non-drayage LMCs is heaviest under this option including the immediate need to replace some fraction of the 2,100 IOOs who have pre-1989 trucks to be banned on October 1st. They must get drivers willing to be employees to replace IOOs who refuse to do so. They must get employee-drivers to replace those lost due to TWIC, and they must find employee-drivers to handle port expansion. This burden will likely slow down this option's ability to accommodate throughput. There may also be delays due to the need of LMCs to raise the extra capital to buy trucks to turn-in for replacement. An important consideration is the apparent willingness of large existing LMCs to give up their port drayage business rather than have employees.
- **Option B.** Port drayage LMCs will be able to keep their existing IOOs until TWIC requires them to compete with non-port drayage LMCs for more drivers. There will be some delay while port driver earnings increase to allow this to occur. Port drayage LMCs must also compete for IOOs from non-port drayage LMCs to accommodate port growth. That means time will also be needed for incomes to adjust to make this possible.
- **Option C.** Port drayage LMCs will be able to keep their existing IOOs until TWIC requires them to compete for more drivers with LMCs not fundamentally involved in drayage. To the extent these are IOOs on the initial port list, they will not have to become employees. However, TWIC will likely cause a need to hire some employee-drivers. Finding them, as well as employee-drivers to accommodate port growth will likely slow down the LMCs ability to operate. There may also be delays due to the need of LMCs to raise the extra capital to buy trucks to turn-in for replacement.

3. **Effectiveness.** How well will throughput be managed under each option?

- **Option A.** An industry organized in this fashion will accommodate port throughput. By 2012, given company control over their drivers, it could lead to larger local firms and the willingness of national carriers to acquire them and enter drayage. However, the short term loss of some port drayage LMCs would represent a serious loss of institutional knowledge and capacity and would likely disrupt the pace of truck cargo flows.

- **Option B.** An industry organized in this fashion will accommodate port throughput. By 2012, the extra cost of operation will likely lead to larger local firms but not sufficiently large to induce national carriers to acquire them to enter drayage.
 - **Option C.** An industry organized in this fashion will accommodate port throughput. By some time after 2012, given ultimate company control over their drivers, it could lead to larger local firms and the willingness of national carriers to acquire them and enter drayage.
4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?
- **Option A.** Port drayage LMCs will have to pay enough to convince existing IOOs to convert to employee-drivers as well as convince drivers working for non-port drayage LMCs to do so. They need to overcome IOO resistance to being employees. The LMCs will see their costs rise due to the 59.5% extra cost of employee-drivers (*see discussion, page 31*). They will also have to purchase trucks to be turned in as replacement vehicles.
 - **Option B.** Port drayage LMCs could keep their existing IOOs. They would have to compete for the IOOs of non-drayage LMCs to deal with the issues of TWIC and port growth. This would raise their labor costs. However, they would not have to overcome resistance to a basic shift in their relationship to their IOOs.
 - **Option C.** Port drayage LMCs could keep their existing IOOs. They would have to compete for the IOOs of LMCs not fundamentally in drayage to deal with TWIC. If not enough IOOs from the initial list can be recruited, the port drayage LMCs would have to recruit drivers from non-drayage LMCs to become employees. Certainly, they would have to recruit drivers from non-drayage LMCs to become employees to handle port growth. Driver resistance to being employees would likely raise labor costs in the last two cases.
5. **Average LMC Size.** What will happen to the size of LMCs under each option?
- **Option A.** The higher port drayage LMC costs incurred in convincing IOOs to become employee-drivers, as well as the need to buy trucks to turn in as replacements, would likely lead to more industry consolidation by 2012 and larger remaining firms.
 - **Option B.** The higher port drayage LMC costs incurred in this option due to the need to pay competitive rates to acquire IOOs from non-drayage LMCs because of TWIC and port growth would result in some industry consolidation and larger firms. However, this would be less than in the other options.
 - **Option C.** The higher LMC costs incurred by the requirement to recruit some employee-drivers to deal with TWIC as well as employee-drivers to deal with port growth would result in some industry consolidation but less than in Option A.
6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?
- **Option A.** See comments in Throughput #7. LMCs strongly prefer to avoid the employee model. National firms might be induced to enter the market closer to 2012.
 - **Option B.** Same comments in Throughput #7. LMCs strongly prefer the IOO model but smaller IOOs would not likely survive.

- **Option C.** Same comments in Throughput #7. LMCs strongly prefer to avoid the employee model. National firms would not be induced to enter the market by 2012.

7. **Program Management.** Will an option make it easier or harder to administer the program?

- **Option A.** Reducing the number of market participants and having companies employing their workers would ultimately make program management easier. However, the short term loss of some of the largest port drayage LMCs would represent a serious loss of institutional knowledge and ability to manage the program.
- **Option B.** A reduction among smaller market participants would ultimately make program management easier than today. However, the firms would have less control over the IOOs than employees.
- **Option C.** This would be the most difficult option to administer given the likely confusion and difficulty of tracking when firms are required to change from using IOOs to hiring employee-drivers. Some reduction in market participants would alleviate part of that problem. However, LMCs would reach 2012 not being either IOO or employee-driver companies.

8. **Maximize Return.** To what extent will an option maximize the port's financial effort?

- **Option A.** There will be clean trucks under this option. However, the short term loss of some of the largest port drayage LMCs would represent a serious loss of institutional knowledge and likely slow port throughput despite the expenditure of funds.
- **Option B.** There will be clean trucks under this option.
- **Option C.** There will be clean trucks under this option.

9. **Cooperation.** To what extent will groups be willing to cooperate in implementing the Clean Truck Program in light of the driver supply issue?

- **Option A.** See comments in Throughput #10. Environmental & labor groups favor this option. LMCs oppose it. As it is the LMCs that must hire workers, their opposition is a difficulty.
- **Option B.** See comments in Throughput #10. Environmental & labor groups oppose this option. LMCs favor it. As it is the LMCs that must arrange for IOOs, their support is an advantage.
- **Option C.** See comments in Throughput #10. Neither environmental and labor groups nor LMCs get what they want, but this moves closer to the environmental and labor position. As the LMCs must both hire workers and arrange for IOOs, their opposition is a difficulty.

4. **Driver Pay.** To what extent will each option assist port drayage drivers to receive compensation on a par with other truck drivers in Southern California to enable sufficient driver supply for the sake of port cargo throughput?

Description & Analysis

Today, port drayage drivers are estimated to earn less income on an hourly basis than other segments of Southern California's heavy duty trucking industry. IOO hourly median earnings in 2007 were estimated at roughly \$12.00 per hour. The Census Bureau 2005 data, updated to 2007, indicated that IOO rate was \$18.09 in the Inland Empire and \$16.26 in Southern Califor-

nia's counties exclusive of Los Angeles. It was \$13.83 in Los Angeles County, likely held down by port drayage drivers. Meanwhile, 2007 median hourly rates for employed drivers varied from \$17.72 in Los Angeles County to \$19.33 in the Inland Empire.²⁵

The gap between the hourly earnings of port drayage and other heavy duty truck drivers, be they IOOs or employees, is one that would threaten port throughput if it continued. This is true due to the difficulties cited in the Section 3:

- A U.S. shortage of heavy truck drivers and competition for drivers that could lead to more drivers leaving firms with customers who require port drayage.
- The need to replace 2,500 to 3,700 of the drivers working for port drayage firms who will be lost due to TWIC.
- The need to add 3,400 drivers to port drayage firms due to port growth.
- The need to replace drivers who leave port drayage firms due to the 11% natural turnover.
- The need to replace some share of IOOs that choose to leave LMCs providing port drayage because they do not wish to be employees.

Since the IOOs and employee-drivers working in firms whose customers are primarily outside of port drayage earn more than those with firms specializing more heavily in port drayage, the competition for drivers should raise the drayage incomes.

The effect of Options A, B and C in narrowing the earnings gap of drivers working for firms specializing and not specializing in drayage must be examined due to its impact on maintaining port throughput:

Option A. This approach would have all drivers become employees of LMCs and drive trucks owned by the LMCs. This option will impact driver incomes as follows:

- **Employee-drivers and benefits**

When a driver becomes an employee, the LMCs is required to pay state mandated benefits and comply with state work rules. If a worker averaged the same hourly rate as an IOO, the combination of state disability and unemployment insurance, mandated workers compensation insurance, employer paid social security taxes and a voluntary driver's health insurance policy, represents a 24.3% benefit package.

Also, if employee-drivers are paid hourly, they would receive time and half for overtime and be paid for undertaking tasks IOOs perform for free including: state mandated work breaks, pre-trip preparation, post trip clean-up and waiting time for minor maintenance during a given pay period. That accounts for 28.3% of their time. If they are paid by the load, they would not be covered by these rules.

Turning the logic around, LMCs would pay 24.3% more for benefits plus need an additional 28.3% more workers to accomplish the same amount of cargo movement. Together, LMC's would have a 59.5% increase in labor costs.²⁶

²⁵ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 32-34.

²⁶ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 76-77.

- **Employee-drivers and earnings**

Hourly pay to drivers working for LMCs specializing in port drayage will go up as they are forced to compete for the drivers of LMCs that do not fundamentally work in port drayage. Whether it is Option A, B or C, the LMCs must deal with competition for their drivers as well as the need for drivers to replace those lost due to TWIC, as well as those needed due to port growth and the natural turnover of drivers. The unique challenge for option A will be the need to also deal with the loss of IOOs who do not wish to be employees and any reluctance of IOOs working for non-drayage firms to become employee-drivers. That added condition would mean that the LMCs would likely have to pay more per hour to obtain the same number of workers.

If employee-drivers are paid by the load, they could increase their pay by handling more cargo trips. If paid in that way, the degree to which their LMCs would have to pay more to convince them to leave non-drayage LMCs would likely be reduced.

- **Organized labor and increased incomes**

The fact that an LMC's drivers become employees does not mean they will be successfully organized. It does, however, open up that possibility. If it occurs, there is the likelihood that unionization would raise wages and/or benefits beyond those established by market forces. Here, an important consideration is that LMCs as a group are thinly financed and cannot fund increased labor costs without an immediate increase in their revenues to pay for them. As indicated earlier, even small delays in obtaining increased rates would logically result in many LMCs failing.²⁷

On the other hand, during interviews, a significant share of the larger LMCs indicated an unwillingness to stay in port drayage if there was any prospect of having their companies organized.

Option B. An LMC may use employees or have contractual relationships with IOOs who own and operate the trucks used in port drayage under its auspices. Today, almost all LMCs use IOOs. This option will impact driver incomes as follows:

- **Employee-drivers and benefits**

As drivers would remain IOOs, they would continue their status as independent contractors. Their pay level would not include state mandated benefits or work rules. They would exchange these benefits for the ability to use Form C of the federal income tax which allows numerous deductions unavailable to employees. They also would retain the ability to refuse loads, determine their own working hours, and decide when and how long to take time off.

- **Employee-drivers and earnings**

Earnings of IOOs working for LMCs specializing in port drayage will go up as their LMCs are forced to compete for the IOOs of LMCs that do not fundamentally work in port drayage. Under Option B, that competition will occur as port drayage LMCs face the need for IOOs to replace those lost due to TWIC, plus add IOOs due to port growth, and find IOOs to replace their natural turnover. They would not have to overcome the unwillingness of some IOOs to become employees. The ability of

²⁷ See bottom of page 20

LMCs to acquire drivers would thus be done at a somewhat lower equivalent hourly cost. IOOs would retain the opportunity they currently have to increase their earnings by handling more cargo trips.

- **Organized labor & increased incomes**

As IOOs are independent contractors, they are not eligible for union organization. To ensure that IOOs are able to make truck payments under the Clean Truck Grant Program, the third party institution could negotiate an agreement with the IOOs that any percentage increase in their revenues would lead to a commensurate percentage increase in the share of revenues going to their IOOs. Discussions with industry representatives indicated a willingness to do so.

Option C. LMCs may use employee-drivers or have contractual relationships allowing trucks owned by IOOs, *listed as involved in port drayage at the start of the Clean Truck Program*, to operate under its auspices. This option will impact driver incomes as follows:

- **Employee-drivers and benefits**

As long as LMCs can find IOOs from the initial list, their drivers would continue their status as independent contractors. Their pay level would not include state mandated benefits or work rules. They would exchange these benefits for the ability to use Form C of the federal income tax which allows numerous deductions unavailable to employees. They would also retain the ability to refuse loads, determine their own working hours, and when and how long to take time off.

As the need to find additional drivers grows, the LMCs would ultimately be required to hire employee-drivers. For this part of their capacity, mandated state benefits equivalent to 28.3% of labor costs would apply. If the employee-drivers work by the hour, so also would mandated work rules covering overtime and time off. If they instead work by the load, fewer work rules would apply but they would have access to greater income from handling more loads.

- **Employee-drivers and earnings**

Earnings of IOOs working for port drayage LMCs will go up as their LMCs are forced to compete for the IOOs of LMCs that do not fundamentally work in port drayage. Under option C, that competition would occur as port drayage LMCs face the need for IOOs to replace those lost due to TWIC, plus the need to add IOOs due to port growth, and find IOOs to replace their natural turnover.

LMC would not have to overcome the unwillingness of some IOOs to become employees until they could no longer find IOOs on the initial list of those eligible to work in the sector. At that point, the LMCs would face the challenge discussed in option A of the need to deal with the possible reluctance of some IOOs working for non-drayage firms to become employee-drivers. That added condition would mean that the LMCs would likely have to pay more per hour to obtain the same number of workers.

- **Organized labor**

By 2012, it is unlikely that the LMCs would have a sufficient number of employee-drivers for them to be organized. After that date, this would become more of a possibility as the ability of LMCs to fill their needs with “grandfathered” IOOs is reduced.

At that point, union organization would be a possibility with the likelihood it would raise wages and/or benefits beyond those established by market forces. Here, again, it is important to note that a large share of the LMCs have indicated an unwillingness to stay in port drayage if there was the prospect of having their companies organized.

Implementation

1. **Success.** To what extent will each option assist port drayage drivers to receive compensation on a par with other short truck drivers in Southern California to enable sufficient driver supply for the sake of port cargo throughput?

- **Option A.** Competition for drivers, between LMCs specializing in port drayage and those that do not, will force up pay. Employee-drivers will receive state mandated benefits amounting to 24.3% of their hourly rate. If they are paid hourly, they will be under overtime and state mandated work rules. If they are paid by the load, they can increase their incomes by handling more loads. Due to the reluctance of some IOOs to become employee-drivers, LMCs will likely have to pay more to get drivers. A limit may be their ability to pass along added payroll costs to their customers.
- **Option B.** IOOs would fundamentally be paid as they are today except that TWIC, port growth and driver turnover will force port drayage LMCs to compete with non-drayage LMCs for IOOs. As incomes paid by the non-drayage LMCs are higher, this will cause earnings to increase. Also, potentially raising IOO incomes is the possibility of an agreement between the LMCs and the third party institution to match any percentage increases in their revenues with a percentage increase in the combined amount going to all of their IOOs. If that did not occur, any earnings gains would be up to market forces. Note: some IOOs make much more than what would be available to employee drivers. These drivers are unlikely candidates to become employees.
- **Option C.** Initially, IOOs would fundamentally be paid as they are today except that TWIC, port growth and driver turnover will force port drayage LMCs to compete with non-drayage LMCs for IOOs. As incomes paid by the non-drayage LMCs are higher, this will cause earnings to increase. As port drayage LMCs can no longer find IOOs on the initial list, they would be required to convince drivers from non-drayage LMCs to join them as employee-drivers. The port drayage LMCs would likely have to pay somewhat more to overcome resistance to that relationship.

2. **Timeliness.** Will throughput be impacted by delays in implementing an option?

- **Option A.** The possibility that larger LMCs would leave port drayage in the short term rather than risk an employee-driver mandate and unionization would represent a significant time barrier to implementing this option. When that difficulty is overcome, port drayage LMCs and the ports would face the hurdle of convincing IOOs to become employee-drivers. As that will not be 100% successful, it lengthens the time in which employee-drivers must be recruited from people working for non-drayage LMCs. This option also faces the challenge of the 2,100 drivers of the pre-1989 trucks due to be banned October 1, 2008. Here, an important consideration would be the possibility that larger port drayage LMCs would leave the business rather than risk an employee-driver mandate and unionization.
- **Option B.** The IOOs working for existing port drayage LMCs would retain their existing status, so throughput would continue uninterrupted. There would be the time

needed to raise earnings to recruit IOOs from non-drayage LMCs to deal with TWIC and port growth.

- **Option C.** The IOOs working for existing port drayage LMCs would retain their existing status, so throughput would continue uninterrupted. There would be the time needed to raise earnings to recruit IOOs from LMCs not fundamentally involved in drayage to deal with TWIC. To the extent that there are insufficient IOOs on the port list from that source, the port drayage LMCs would have to compete with non-drayage LMCs to acquire employee-drivers. Here, an important consideration would be the medium term possibility that larger port drayage LMCs would leave the business rather than risk an ultimate employee-driver mandate and unionization.

3. **Effectiveness.** How well will throughput be managed under each option?

- **Option A.** An industry organized in this fashion could accommodate port throughput. However, the short term loss of some of the largest port drayage LMC would represent a serious loss of institutional knowledge and likely disrupt the pace of truck cargo flows. By 2012, given company control over their drivers, this option could lead to larger local firms and the willingness of national carriers to acquire them and enter drayage. Again, there is the potential loss of some of the largest port drayage LMCs and the negative impact that would have on port truck cargo flows.
- **Option B.** An industry organized in this fashion will accommodate port throughput. By 2012, the extra earnings of IOOs will likely lead to larger local firms but not sufficiently large to induce national carriers to acquire them to enter drayage. A key will be the relationship of the ports to the third party institution on issues ranging from IOOs in arrears on their payments, to trucks not being properly maintained, to LMCs not following through on contract provisions to have their share of funds going to IOOs go up equal at the same percentage rate as increases in their revenues.
- **Option C.** An industry organized in this fashion will accommodate port throughput. By some time after 2012, given ultimate company control over their trucks and drivers, it could lead to larger local firms and the willingness of national carriers to acquire them and enter drayage. However, there is the potential medium term loss of some of the largest port drayage LMCs and the negative impact that would have on port truck cargo flows.

4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?

- **Option A.** LMCs would be required to pay state mandated benefits and would have less driver time available from each employee due to mandated work breaks, pre-trip preparation, post trip clean-up and waiting time for minor maintenance during a given pay period. The difference over IOOs is a 59.5% increase in labor costs to accomplish the same work at the same underlying base pay. There would also be the cost of acquiring trucks to be turned in for replacements under this option.
- **Option B.** The difference of using IOOs compared to employee-drivers would be 59.5% lower labor costs to accomplish the same work. LMCs will also not have to raise the funds to acquire trucks from their IOOs to be turned in for replacements.
- **Option C.** The difference of using IOOs compared to employee-drivers would be 59.5% lower labor costs to accomplish the same work. LMCs will also not have to raise the funds to acquire trucks from their IOOs to be turned in for replacements.

These situations would prevail as long as there are IOOs from the initial list that can be used. Once that source is exhausted, the LMCs would have to hire employee-drivers. For that share of their operations, there would be a 59.5% increase in labor costs over using IOOs.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** The higher labor costs and company infrastructure to support an employee-driver workforce would reduce the number of competitors and increase the size of remaining firms. Closer to 2012, national LMCs may be willing to acquire some of these firms and enter the market.
- **Option B.** The higher LMC costs incurred to pay competitive rates to acquire IOOs due to TWIC and port growth would result in some industry consolidation and larger firms. It would be less than in the other options as firms would have the lower labor cost compared to having employee-drivers.
- **Option C.** The higher LMC costs incurred by the requirement to acquire more trucks and have some employee-drivers in this option would result in some industry consolidation but less than in Option A. National LMCs may consider acquisitions and entering the market under this option, but that would occur sometime after 2012.

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?

- **Option A.** LMCs have expressed a willingness to leave port drayage rather than risk the employee-driver model and unionization. National firms might be induced to enter the market closer to 2012.
- **Option B.** Same comments in Throughput #7. LMCs strongly prefer the IOO model but smaller IOOs would not likely survive.
- **Option C.** Same comments in Throughput #7. LMCs strongly prefer to avoid the employee model. National firms would not be induced to enter the market by 2012.

7. **Program Management.** Will an option make it easier or harder to administer the program?

- **Option A.** The loss of institutional knowledge from larger LMCs abandoning port drayage would make it difficult to administer the program. That said, LMCs with employee-drivers have more control than LMCs with IOOs.
- **Option B.** A reduction among smaller market participants would ultimately make program management easier than today. That said, LMCs with IOOs have less control than LMCs with employee-drivers.
- **Option C.** This would be the most difficult option to administer given the likely confusion and difficulty of tracking when firms are required to change from IOOs to employee-drivers. Some reduction in market participants would alleviate some of that problem. Still, LMCs with many IOOs have less control than LMCs with all employee-drivers. In addition, there could be the medium term loss of larger LMCs not wishing to risk unionization.

8. **Maximize Return.** To what extent will an option maximize the port's financial effort?

- **Option A.** If this option leads to a loss of larger LMCs, the expenditure of funds by the ports would not gain maximum efficient use.

- **Option B.** There will be clean trucks under this option and continued availability of the existing infrastructure to continue throughput.
 - **Option C.** There will be clean trucks under this option.
9. **Cooperate.** To what extent will groups be willing to cooperate in implementing the Clean Truck Program in light of the driver pay issue?
- **Option A.** See comments in Throughput #10. Environmental & labor groups favor this option. LMCs oppose it. As it is the LMCs that must hire workers, their opposition is a difficulty.
 - **Option B.** See comments in Throughput #10. Environmental & labor groups oppose this option. LMCs favor it. As it is the LMCs that must arrange for IOOs, their support is an advantage.
 - **Option C.** See comments in Throughput #10. Neither environmental and labor groups nor LMCs get what they want, but this moves closer to the environmental and labor position. As the LMCs must both hire workers and arrange for IOOs, their opposition is a difficulty.
5. **Security (TWIC) & Driver Oversight.** To what extent will each option result in maximum compliance with national security requirements and ensure that truck drivers are meeting legal requirements to be driving their vehicles?

Description & Analysis

In December 2007, registration for the TWIC program is set to begin. All IOOs and employee-drivers will be required to complete a TSA security threat assessment and will be disqualified from obtaining a TWIC if the agencies find they have been convicted or incarcerated for certain crimes in a given time periods, lack legal presence and/or authorization to work in the United States, has a connection to terrorist activity, or has been determined to lack mental capacity.

It has taken the Department of Homeland Security a very long time to put together the TWIC process. There will be qualification rules that need explaining including topics like convictions, incarcerations and immigration status. There will be fees to be paid, forms to fill-out and documents to be assembled. Drivers will have to give fingerprints or other forms of physical identification. When the TWIC cards are issued, the rules for their use must be understood including the card-reading technology that will be installed and used by the drivers. The complexity of this process will require explanation, training of the drivers and efforts to minimize the loss of workers simply scared by the complexity of the process.

Meanwhile, there is a more general concern that there may be drivers working in port drayage who may not be meeting DMV and DOT licensing, physical examination and log book reporting requirements. Under the terms of their permits, LMCs would be required to provide oversight of these driver qualifications. Also, there is the worry that the Clean Truck Program may adversely affect some workers in the drayage industry. There is thus a desire to have the LMCs participate in efforts to ensure workers have access to workforce programs to retrain and place them.

Here, the issue is the extent to which there are differences in the ability of firms organized according to options A, B and C to assist in making the TWIC and driver oversight processes.

Option A. This approach would have all drivers become employees of LMCs. Under this option, the personnel and TWIC processes would be approached as follows:

- **Personnel Function**

Companies with employee-drivers will need personnel specialists. One of their functions would be to ensure that drivers are qualified under DMV and DOT rules to run the trucks owned by the LMCs. They will thus ensure that company employee-drivers have up-to-date licenses, physical examinations and log books, plus maintain documentation of these facts. Further, the personnel people must ensure that employee-drivers regularly update their qualifications. And, they would be responsible for the need of preliminary background checks on new drivers to ensure that they are qualified under DMV, DOT and TWIC rules. Another personnel function would be to refer workers who have lost their positions due to the Clean Truck Program to Workforce Investment Board efforts in Los Angeles or Long Beach.

- **TWIC Program Explanation to Drivers**

When TWIC first begins, the personnel people can be utilized to explain the TWIC program to the drivers so that they understand who is eligible and who is not under that program's complex rules. The personnel specialists can also teach the drivers about the process they will be going through so that those who do qualify are less apprehensive about how it works. That is particularly important given the large share of immigrants involved in port trucking.

- **TWIC Program Sign-up**

When the TWIC sign up process begins, the personnel people can work with their employee-drivers to help arrange for fees, filling-out of forms, compilation of documentation and fingerprinting or other physical identification.

- **TWIC Program Operation**

Once the program goes into effect and cards are issued, the personnel departments can help ensure cards reach the drivers and that they understand the rules on how they are to be used. In addition, the personnel departments can keep copies of documentation in case future questions arise about the eligibility of their drivers.

Option B. This approach would have most drivers remain as IOOs working under the auspices of an LMC. Under this option, the personnel and TWIC processes would occur as follows:

- **Personnel Function**

The requirements of the port permit will come into play for LMCs, even though they do not have employees. First, they will be responsible for ensuring that IOOs associated with them are maintaining their qualifications to drive heavy duty trucks under DMV and DOT rules. This means that the LMCs must know that their IOOs have current licenses, physical examinations and have maintained their driving time logs. The LMCs will be required to maintain documentation of these facts. Effectively, this requirements will mean that the LMCs, even those without employees, must have personnel specialist(s).

Second, the LMCs will be responsible for preliminary background checks on new IOOs to ensure that they meet DMV, DOT and TWIC requirements. This would be an additional function for their personnel specialist(s). Third, the LMCs will be made responsible for referring workers who might lose their positions due to the Clean

Truck Program to Workforce Investment Board programs run by Los Angeles or Long Beach.

- **TWIC Program Explanation to Drivers**

One function of personnel person(s) would be to explain the TWIC program to the IOOs working under the auspices of an LMC so that drivers understand who is eligible and who is not under the complex rules. They could also be used to teach the drivers about the process they will be going through so that those who do qualify are less apprehensive about how it will work. Again, this is important given the large share of immigrants involved in port trucking.

- **TWIC Program Sign-up**

When the sign up process begins, the personnel people working for an LMC can work with their IOOs to help arrange for fees, filling-out if forms, compilation of documentation and fingerprinting or other physical identification.

- **TWIC Program Operation**

Once the TWIC program goes into effect and cards are issued, the personnel people at the LMCs can help ensure cards reach their IOOs and can help their IOOs understand the rules of how they are to be used. In addition, the records departments of the LMCs can keep copies of TWIC documentation in case future questions arise about the eligibility of their drivers.

Option C. During the TWIC inauguration period, this approach would also have most drivers remain as IOOs working under the auspices of an LMC. Again, the same requirements of the port permit will come into play for LMCs, even though they will not yet have employees. As a result, they must have oversight of the IOOs eligibility to be driving heavy duty trucks under DMV, DOT and TWIC rules while maintaining records to these effects.

- **Program Explanation**

Same as in Option B.

- **Program Sign-up**

Same as in Option B.

- **Program Operation**

Same as in Option B.

Implementation

1. **Success.** To what extent will each option assist in the success of driver oversight and TWIC?

- **Option A.** The LMCs will be working with the administrators of the TWIC program while also maintaining personnel oversight of their own employee-drives with regards to DMV and DOT rules. For this reason, they should be able to exert a great deal of control over the success of driver oversight and the implementation of TWIC.
- **Option B.** While the LMC will have people designated to work with IOO oversight and record creation and maintenance, they will still be working with independent contractors and thus will not have as much direct control over the qualifications of their drivers under DMV and DOT rules or the success of the TWIC process.

- **Option C.** While the LMC will have people designated to work with IOO oversight and record creation and maintenance, they will still be working with independent contractors and thus will not have as much direct control over the qualifications of their drivers under DMV and DOT rules or the success of the TWIC process. Later, as they have employee-drivers, this situation will more closely resemble option A.
2. **Timeliness.** Will throughput be impacted by delays in implementing an option?
- **Option A.** As the LMCs will be overseeing the DMV and DOT qualifications of their own drivers as well as working with the TWIC program to sign-up their own employees, they should be able to exert a good deal of control over the speed at which these process are undertaken.
 - **Option B.** While the LMC will have people designated to work with IOO oversight and record maintenance, they will still be working with independent contractors and thus have less control over the willingness of the drivers to conform to requirements and time lines. However, there is significant individual motivation for IOOs to maintain their eligibility under DMV and DOT rules and to complete the TWIC process since without licenses, their earning ability will be limited.
 - **Option C.** See option B. As the LMCs acquire more employee-drivers, the situation will more appropriately resemble option A.
3. **Effectiveness.** How well will throughput be managed under each option's handling of employee qualifications and TWIC?
- **Option A.** As LMCs will be working with the qualifications of their own employee-drivers under DMV, DOT and TWIC requirements, they should be able to exert a great deal of control over the efficiency of the process.
 - **Option B.** While the LMCs will have personnel people designated to oversee the DMV, DOT and TWIC qualifications of their IOOs, they will still be working with independent contractors and thus have less control over the efficiency of driver conformance to requirements and time lines.
 - **Option C.** See option B. As the LMCs acquire more employee-drivers, the situation will more appropriately resemble option A.
4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?
- **Option A.** The LMC will need to hire personnel people to work with their employees to fulfill the requirement that their drivers are qualified to work under DMV, DOT and TWIC regulations. This will increase their costs of operation.
 - **Option B.** The port permits will require LMCs, including those using IOOs, to have oversight of the qualifications of their drivers under DMV and DOT rules as well as to help them fulfill TWIC qualifications. There would thus be an increase in cost to undertake these requirements.
 - **Option C.** The port permits will require LMCs, including those using IOOs, to have oversight of the qualifications of their drivers under DMV and DOT rules as well as to help them fulfill TWIC qualifications. There would thus be an increase in cost to undertake these requirements.
5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** The addition of one or a small number of people to perform the IOO oversight and record keeping functions will increase costs. Along with several other smaller functions, this will likely lead to some industry consolidation.
 - **Option B.** There will be the addition of one or a small number of people to perform the IOO oversight and record keeping functions. Along with several other smaller functions, this will likely lead to some industry consolidation.
 - **Option C.** See options A and B.
6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?
- **Option A.** No change, except added costs may force some LMCs to leave drayage.
 - **Option B.** Same as option A.
 - **Option C.** Same as option A.
7. **Program Management.** Will an option make it easier or harder to administer the program?
- **Option A.** As the LMCs will have personnel people working with employee drivers to ensure that they are qualified under DMV, DOT and TWIC rules, it should be straightforward for managers of the TWIC process to work with them in coordinating the sign-up and qualification process.
 - **Option B.** As the LMCs will have personnel people working with IOOs to ensure that they are qualified under DMV, DOT and TWIC rules, it should be efficient for managers of the TWIC process to work with them in coordinating the sign-up and qualification process. However, because the IOOs are independent, coordination with them will not be as straightforward.
 - **Option C.** As the LMCs will have personnel people working with IOOs to ensure that they are qualified under DMV, DOT and TWIC rules, it should be efficient for managers of the TWIC process to work with them in coordinating the sign-up and qualification process. However, because the IOOs are independent, coordination with them will not be as straightforward. Later, as more drivers become employees, the situation will be easier.
8. **Maximize Return.** To what extent will an option maximize the port's financial effort?
- **Option A.** There should be an efficient relationship.
 - **Option B.** There should be a close relationship but not as efficient due to the independent nature of the IOOs.
 - **Option C.** There should be a close relationship but not as efficient due to the independent nature of the IOOs.
9. **Cooperate.** To what extent will groups be willing to cooperate on the Clean Truck Program in light of the TWIC issue?
- **Option A.** 100%.
 - **Option B.** 100%.
 - **Option C.** 100%.

6B. Assessment (Other Issues)

6. Maintenance of Clean Truck Devices. To what extent will each option ensure that clean truck emissions control equipment is maintained according to manufacturer's specifications?

Description & Analysis

As indicated in the discussion of the goals of the Clean Truck Program, it is not sufficient to simply clean-up the trucking fleet. For the program to succeed, the emissions equipment on the new trucks must be properly maintained over time so that the full benefit of the cleaner vehicles is realized. Here, the issue is the extent to which there are differences in the ability of firms organized according to options A, B and C to ensure that this occurs.

Option A. This approach would have all trucks owned directly by the LMCs. The following would be the manner in which the issue of emissions equipment maintenance would take place:

- **Control of Trucks**

Under this option, the trucking fleets would be directly controlled by the LMCs. They would be in a position to directly undertake clean air device maintenance for their fleets.

- **Clean Air Maintenance**

As the LMCs control the trucks, they will be able to directly ensure that either their staff or independent mechanics maintain clean air devices according to manufacturer's specifications.

- **Clean Air Maintenance Reporting**

The third party institution overseeing the Clean Truck Grant Program would certify the technical competence of the LMC or independent mechanics handling clean air device maintenance. Those individuals would be required to upload maintenance reports to the third party institution. It would be in a position to report to the LMCs and the ports that the devices are or are not being properly maintained.

- **Enforcement**

If the clean air devices are not being properly maintained, the ports could bar a vehicle from entry through the gates until it is.

Option B. This approach would have most trucks owned by IOOs working under the auspices of LMCs. The following would be the manner in which the issue of emissions equipment maintenance would take place:

- **Control of Trucks**

Under this option, the IOOs would directly control their trucks. Under their agreements with the third party institution, they would be required to keep emissions equipment maintained according to manufacturer's specifications. In addition, the permits under which LMCs operate would require them to ensure that their IOOs are fulfilling this maintenance obligation.

- **Clean Air Maintenance**

With IOOs owning the trucks, they will have to use either independent mechanics or mechanics employed by the LMCs under whose auspices they are operating to maintain the emissions equipment on their trucks.

- **Clean Air Maintenance Reporting**

The third party institution overseeing the Clean Truck Grant Program would certify the technical competence of the independent mechanics or LMC mechanics handling clean air device maintenance. Those individuals would be required to upload maintenance reports to the third party institution. It would then report to the LMCs and ports whether the devices are or are not being properly maintained properly.

- **Enforcement**

If the clean air devices are not being properly maintained, the ports could bar vehicles from entry through their gates until they are. This fact would strengthen the resolve and the power of the LMCs to ensure that their IOOs are properly maintaining the emissions control equipment on their trucks.

Option C. Under this option, most trucks would be under the control of IOOs “grandfathered” into the Clean Truck Program. To the extent LMCs cannot find IOOs on the initial list, the trucks driven by employee-drivers would have to be owned by the LMC. The following would be the manner in which the issue of emissions equipment maintenance would take place:

- **Control of Trucks**

Under this option, the IOOs would directly control most of the trucks. Under their agreements with the third party institution, they would be required to keep emissions equipment maintained according to manufacturer’s specifications. In addition, the permits allowing LMCs to operate within the ports would require them to ensure that their IOOs are fulfilling this obligation. For the smaller number of company owned trucks, the LMCs would have direct control and responsibility for clean air device maintenance.

- **Clean Air Maintenance**

The IOOs owning their trucks will have to use either independent mechanics or mechanics employed by their LMCs to maintain the emission equipments on their trucks. For company owned trucks, the same choices are available.

- **Clean Air Maintenance Reporting**

The third party institution overseeing the Clean Truck Grant Program would certify the technical competence of the independent mechanics or LMC staff mechanics handling clean air device maintenance. Those individuals would be required to upload maintenance reports to the third party institution. It would then send status reports to the LMCs and ports as to whether the devices are or are not being properly maintained.

- **Enforcement**

If the clean air devices are not be properly maintained, the ports could bar a vehicle from entry through the gates until they are. This fact would strengthen the resolve and the power of the LMCs to ensure that their IOOs are properly maintaining the emissions control equipment on their trucks.

Implementation

1. **Success.** To what extent will each option assist in ensuring that emissions devices are being maintained in conformance with manufacturer's specifications?
 - **Option A.** As the LMC own the trucks, they can directly ensure that proper clean air device maintenance occurs. The third party institution will re-enforce the situation through its certification of the staff or independent mechanics handling the maintenance and the requirement that maintenance records be uploaded to them. The ports can assist by barring trucks that are not being properly maintained from entry through their gates until they are.
 - **Option B.** The fact IOOs own the trucks, puts the LMCs one step removed from directly ensuring that proper clean air device maintenance occurs. Their obligation to ensure that this takes place and the fact that the third party institution is certifying staff or independent mechanics handling the maintenance would strengthen the ability of the LMCs to do so. So would the fact that maintenance records must be uploaded by the mechanics to the third party institution which will share the records with the LMCs. The ports would strengthen the LMCs resolve by barring trucks that are not being properly maintained from entry until they are.
 - **Option C.** Most trucks will be owned by the IOOs, also putting the LMCs one step removed from directly ensuring that proper clean air device maintenance occurs. On these vehicles, the situation is the same as option B. On company-owned trucks, the control of emissions maintenance is direct and the situation is the same as option A.
2. **Timeliness.** Will there be delays in implementing emissions control maintenance that might slowdown the Clean Truck Program?
 - **Option A.** There is no reason throughput would be adversely impacted by a system that has the LMCs properly maintaining the emissions devices on their own trucks, with oversight by the third party institution and enforcement by the ports.
 - **Option B.** There is no reason throughput would be adversely impacted by a system that has the third party institution and the LMCs overseeing that the IOOs properly maintain the emissions devices on IOO owned trucks. The system is strengthened because information on emissions control maintenance must be uploaded by the mechanics to the third party institution which will share it with the LMCs and the ports.
 - **Option C.** For IOO trucks, there is no reason throughput would be adversely impacted by a system that has the third party institution and the LMCs overseeing that the IOOs properly maintain the emissions devices on IOO owned trucks. For these trucks, the situation is similar to option B. For company owned trucks, it is similar to option A.
3. **Effectiveness.** How well will emissions device maintenance be managed under each option?
 - **Option A.** LMC can directly manage the maintenance of emission devices on their trucks. Their need to do so is strengthened by the certification of mechanics and uploading of maintenance records to the third party institution. Enforcement by the ports in barring trucks not being correctly maintained is also important.
 - **Option B.** LMCs must work through their IOOs on the maintenance of emission devices. Their ability to do so is aided by the certification of mechanics and uploading

of maintenance records to the third party institution, with that information shared with the LMCs. Enforcement by the ports in barring trucks not being correctly maintained strengthens the resolve and ability of the LMCs to ensure that the IOOs are fulfilling this obligation.

- **Option C.** LMCs must work through their IOOs on the maintenance of emission devices. They can handle the issue directly on their own trucks. Their ability to oversee their LMCs is strengthened by the certification of mechanics and uploading of maintenance records to the third party institution, with that information shared with the LMCs. Enforcement by the ports in barring trucks not being correctly maintained is also important.

4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?

- **Option A.** There will be an increase in the cost of operation as mechanics specializing in maintaining emissions devices are either hired on staff or independent mechanics are paid.
- **Option B.** There will be some increase in the cost of operation as people are hired to oversee that IOOs are using mechanics specializing in maintaining emissions devices as required. Also, LMCs may elect to pay mechanics to provide this service to their IOOs.
- **Option C.** There will be some increase in the cost of operation as people are hired to oversee that IOOs are using mechanics specializing in maintaining emissions devices as required. Also, LMCs may elect to pay mechanics to provide this service to company owned trucks and could make that service available to their IOOs.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** Hiring one or more mechanics to ensure that emission control devices are being properly maintained or retaining independent mechanics to provide this service would cause some increase in costs and bring about some consolidation in the drayage business.
- **Option B.** Hiring one or more people to ensure that IOOs are having their emission control devices properly maintained, as well as possibly employing mechanics to provide this function, would cause some increase in costs and bring about some consolidation in the drayage business.
- **Option C.** Hiring one or more people to ensure that IOOs are having their emission control devices being properly maintained would cause some increase in costs and bring about some consolidation in the drayage business. The costs would be increased to the extent one or more mechanics were hired to ensure that that emission control devices are being properly maintained on company trucks, or independent mechanics are engaged to provide this service. The increase in costs would bring about some consolidation in the drayage business..

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?

- **Option A.** The increase in costs will likely eliminate some LMCs from drayage.
- **Option B.** The smaller increase in costs would still likely eliminate some LMCs from drayage.

- **Option C.** The increase in costs will likely eliminate some LMCs from drayage.

7. **Program Management.** Will an option make it easier or harder to administer the program?

- **Option A.** It will be possible for the third party institution to ensure that mechanics working with emission control devices on their trucks are qualified, and accept uploads of maintenance reports from them. It will thus be a straightforward issue for them to oversee that LMCs are maintaining these devices. The ports also will receive this information and the RFIDs on the trucks can be used to identify and bar entry to trucks in violation of emissions control device maintenance obligations.
- **Option B.** It will be possible for the third party institution to ensure that mechanics working with emission devices on IOO owned trucks are qualified, and accept uploads of maintenance reports from them. This will be reported to the LMCs whose permits require them to ensure that their IOOs are having this work done. This makes management of process one step less direct. The LMCs role will be strengthened by the fact that the ports will also receive this information and the RFIDs on the trucks can be used to identify and bar entry to vehicles in violation of emissions control device maintenance obligations.
- **Option C.** On IOO owned trucks, the situation is the same as option B. On company owned trucks, it is the same as option A.

8. **Maximize Return.** To what extent will an option maximize the port's financial effort?

- **Option A.** The system can act efficiently.
- **Option B.** The system can act slightly less efficiently but still accomplish the task.
- **Option C.** The system can act slightly less efficiently but still accomplish the task.

9. **Cooperate.** To what extent will groups be willing to the cooperate on the Clean Truck Program in light of the emission equipment maintenance issue?

- **Option A.** 100%.
- **Option B.** 100%.
- **Option C.** 100%.

7. **Required Truck Safety and Maintenance Check-Ups and Repairs.** To what extent will each option ensure that truck owners have their vehicles undergo regular check-ups and safety inspections plus have necessary repair work completed?

Description & Analysis

Given the intensity of truck operations near the harbors, port leaders have an interest in the safety of trucks used in the area. DOT is supposed to subject LMCs to audits of driver logs, insurance, safety and maintenance records. It only has the staff to cover 2% of U.S. carriers. CHP through its BIT program is supposed to review 90-day truck safety and maintenance check-up records of every IOO and LMC with trucks in a 25 month cycle. They are also supposed to physically check a sample of trucks. They only have staffing for half this work.

Given the holes in the oversight system, the ports will require that all safety and truck maintenance work on trucks funded via the Clean Truck Program must be performed by independent or LMC mechanics certified by the third party institution to perform the work.

These individuals will be required to electronically upload records of their maintenance work to the third party institution. It will share these reports with the LMCs under whose auspices the trucks are working. The LMCs will be responsible for ensuring that this work is completed and maintaining records for its own trucks, or any IOOs working under their auspices. Failure of the required safety and maintenance check-ups as well as repair work to be performed would be a reason to bar a truck from the ports until it is done.

These conditions should make the LMCs the point of contact for the CHP in its BIT work, rather than having the agency have to go to each IOO. That should increase the CHP's oversight range and efficiency.

Option A. This approach would have all trucks owned directly by the LMCs. The following would be the manner in which the issue of safety and maintenance check-ups and repairs would take place:

- **Control of Trucks**

Under this option, the trucking fleets would end up directly controlled by the LMCs. They would be in a position to directly undertake safety and maintenance check-ups and repairs on their fleets.

- **Clean Air Maintenance**

As the LMCs control the trucks, they will be able to directly ensure that either their staff mechanics or independent mechanics perform required inspections and repairs.

- **Clean Air Maintenance Reporting**

The third party institution overseeing the Clean Truck Grant Program would certify the technical competence of the LMC or independent mechanics handling the truck safety and maintenance check-ups and repairs. Those individuals would be required to upload maintenance reports of their work to the third party institution. It would be in a position to report to the LMCs and ports whether a truck is or is not being properly maintained.

- **Enforcement**

If trucks are not being properly subjected to safety and maintenance inspections and repairs, the ports could bar a vehicle from entry through the gates until it has.

Option B. This approach would have most trucks owned by IOOs working under the auspices of LMCs. The following would be the manner in which the issue of truck safety and maintenance inspections and repairs would take place:

- **Control of Trucks**

Under this option, the IOOs would directly control their trucks. Under their agreements with the third party institution, they would be required to have truck safety and maintenance inspections and repairs undertaken. In addition, the permits that LMCs have to operate at the ports would require them to ensure that their IOOs are fulfilling this obligation.

- **Clean Air Maintenance**

With IOOs owning the trucks, they will have to use either independent mechanics or mechanics employed by the LMC under whose auspices they are operating to undertake truck safety and maintenance inspections and repairs on their trucks.

- **Clean Air Maintenance Reporting**

The third party institution overseeing the Clean Truck Grant Program would certify the technical competence of the independent mechanics or LMC mechanics handling the truck safety and maintenance inspections and repairs. Those individuals would be required to upload maintenance reports to the third party institution. It would then be in a position to report to the LMCs and the ports whether truck safety and maintenance inspections and repairs are or are not being undertaken.

- **Enforcement**

If the truck safety and maintenance inspections and repairs are not being properly maintained, the ports could bar a vehicle from entry through the gates until it has.

Option C. Under this option, most trucks would be under the control of IOOs “grandfathered” into the Clean Truck Program. To the extent LMCs cannot find IOOs on the initial list, the trucks driven by employee-drivers would have to be owned by the LMCs. The following would be the manner that safety and maintenance check-ups and repairs would take place:

- **Control of Trucks**

Under this option, the IOOs would directly control most of the trucks. Under their agreements with the third party institution, they would be required to have truck safety and maintenance inspections and repairs undertaken. In addition, the port permits of the LMCs would require them to ensure that their IOOs are fulfilling this obligation. For the smaller number of company owned trucks, the LMCs would have direct responsibility for having safety and maintenance check-ups and repairs occur.

- **Clean Air Maintenance**

The IOOs will have to use either independent mechanics or mechanics employed by their LMCs to undertake safety and maintenance check-ups and repairs on their trucks. For company owned trucks, the same choices would be available.

- **Clean Air Maintenance Reporting**

The third party institution overseeing the Clean Truck Grant Program would certify the technical competence of the independent mechanics or LMC staff mechanics handling safety and maintenance check-ups and repairs. Those individuals would be required to upload maintenance reports to the third party institution. It would be in a position to report to the LMCs and ports whether safety and maintenance check-ups and repairs are or are not occurring.

- **Enforcement**

If the safety and maintenance check-ups and repairs are not being undertaken, the ports could bar a vehicle from entry through the gates until it has.

Implementation

1. **Success.** To what extent will each option ensure that truck safety and maintenance check-ups and repairs are being performed?

- **Option A.** As the LMCs own the trucks, they can directly ensure that truck safety and maintenance check-ups and repairs occur. The third party institution will re-enforce the situation through its certification of the staff or independent mechanics handling the maintenance and the fact that maintenance records must be uploaded to the institution. The ports would assist by barring trucks that are not being properly maintained from entry until this work has been performed.
 - **Option B.** The fact IOOs own the trucks, puts the LMCs one step removed from directly ensuring that truck safety and maintenance check-ups and repairs occur. Their obligation to ensure that this takes place and the fact that the third party institution is certifying staff or independent mechanics handling the maintenance would strengthen the ability of the LMCs to do so. So would the fact that maintenance records must be uploaded by the mechanics to the third party institution which will share the records with the LMCs. The LMCs resolve and ability to oversee the IOOs would be enhanced by the fact that the ports would bar entry of trucks that are not being properly maintained until this has been done.
 - **Option C.** Most trucks will be owned by the IOOs, also putting the LMCs one stepped removed from directly ensuring that proper clean air device maintenance occurs. For these vehicles, the situation is the same as option B. On company owned trucks, the situation is the same as in option A.
2. **Timeliness.** Will there be delays in implementing truck safety and maintenance check-ups and repairs that might slow down the Clean Truck Program?
- **Option A.** There is no reason throughput would be seriously impacted by a system in which the LMCs must have their truck subjected to regular safety and maintenance check-ups and repairs, with oversight by the third party institution and enforcement by the ports.
 - **Option B.** There is no reason throughput would be seriously impacted by a system that has the third party institution and the LMCs overseeing that the IOOs regularly have their trucks subjected to safety and maintenance check-ups and repairs. It is helpful that information must be uploaded by the mechanics to the third party institution which will share it with the LMCs and the ports. It is also helpful that all parties understand that the ports will bar entry to trucks that have not been properly checked and repaired.
 - **Option C.** For IOO owned trucks, the situation is the same as option B. For the few company owned trucks, it is the same as option A.
3. **Effectiveness.** How well will safety and maintenance check-ups and repairs be managed under each option?
- **Option A.** LMC can directly manage the safety and maintenance check-ups and repairs on their trucks. Their need to do so is strengthened by the certification of mechanics and uploading of maintenance records to the third party institution. Enforcement by the ports in barring trucks not being correctly maintained will ensure that this is done.
 - **Option B.** LMCs must work through their IOOs to ensure that safety and maintenance check-ups and repairs are occurring on IOO owned trucks. Their ability to do so is strengthened by the certification of mechanics and uploading of maintenance re-

records to the third party institution, with that information shared with the LMCs. Enforcement by the ports in barring trucks not being correctly maintained provides the necessary incentives for the IOOs and LMCs to make the system work.

- **Option C.** LMCs must work through their IOOs to ensure safety and maintenance check-ups and repairs are occurring. They can handle the issue directly on their own trucks. In the first case, the situation is the same as option B. In the second, it is the same as option A.

4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?

- **Option A.** There will be some increase in the cost of operation as mechanics specializing in safety and maintenance check-ups and repairs are either hired on staff or independent mechanics are paid. For most LMCs, this would be a new function since they would now own trucks.
- **Option B.** There will be some increase in the cost of operation as people are hired to oversee that IOOs are using certified mechanics to undertake safety and maintenance check-ups and repairs as required. Also, LMCs may elect to hire a mechanic to provide these services to their IOOs.
- **Option C.** There will be some increase in the cost of operation as people are hired to oversee that IOOs are using certified mechanics for safety and maintenance check-ups and repairs as required. Also, LMCs would have to hire a mechanic to provide this service to company owned trucks and might possibly make that service available to their IOOs.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** Hiring one or more mechanics to ensure that safety and maintenance check-ups and repairs are being properly conducted, or retaining independent mechanics to provide this service, would cause some increase in costs and bring about some consolidation in the drayage business.
- **Option B.** Hiring one or more people to ensure that IOOs are having their safety and maintenance check-ups and repairs undertaken, would cause some small increase in costs and bring about some consolidation in the drayage business.
- **Option C.** Hiring one or more people to ensure that IOOs are having their safety and maintenance check-ups and repairs undertaken, would cause some increase in costs and bring about some consolidation in the drayage business. The costs would be increased to the extent one or more mechanics were hired to ensure that that emission control devices are being properly maintained on company trucks, or independent mechanics are engaged to provide this service. The increase in costs would bring about some consolidation in the drayage business.

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?

- **Option A.** The increase in costs will likely eliminate some LMCs from drayage.
- **Option B.** The smaller increase in costs would still likely eliminate some LMCs from drayage.
- **Option C.** The increase in costs will likely eliminate some LMCs from drayage.

7. **Program Management.** Will an option make it easier or harder to administer the program?
- **Option A.** It would be possible for the third party institution to ensure that mechanics overseeing safety and maintenance check-ups and repairs on their trucks are qualified, and accept uploads of maintenance reports from them. This will make it straightforward for them to oversee that LMCs are maintaining these devices. The ports also will receive this information and have the power to bar trucks from their gates. The trucks would be identifiable through their RFIDs.
 - **Option B.** It would be possible for the third party institution to ensure that mechanics overseeing safety and maintenance check-ups and repairs on IOO owned trucks are qualified, and accept uploads of maintenance reports from them. This will be reported to the LMCs whose permits require them to ensure that their IOOs are having this work done. This makes the management of process one step less direct. The LMCs role will be strengthened by the fact that the ports will also receive this information and have the power to bar trucks from their gates and can readily identify them through their RFIDs.
 - **Option C.** On IOO owned trucks, the situation is the same as option B. On company owned trucks, it is the same as option A.
8. **Maximize Return.** To what extent will an option maximize the port's financial effort?
- **Option A.** The system can act efficiently.
 - **Option B.** The system can act slightly less efficiently but still accomplish the task.
 - **Option C.** The system can act slightly less efficiently but still accomplish the task.
9. **Cooperate.** To what extent will groups be willing to cooperate on the Clean Truck Program in light of the emission equipment maintenance issue?
- **Option A.** 100%.
 - **Option B.** 100%.
 - **Option C.** 100%.

8. **Technology Installation and Training.** To what extent will each option ensure that the trucking fleet has installed required technology and that drivers are trained in a manner that will allow the Clean Truck Program to be administered while assisting the ports with future efforts to increase efficiency and throughput?

Description & Analysis

To administer the Clean Truck Program, the trucks entering the port gates must be equipped with RFID and AVL devices. In addition, these and other technologies could be needed on port drayage trucks as part of a future port technology program designed to increase the speed and volume of port cargo throughput. It would be in the interest of the ports as well as LMCs and drivers to increase throughput since it will allow the ports to expand while also increasing the profits of the LMCs and the compensation of the drivers.

As part of the permit process for LMCs, if driver training is required as part of the technology plan, the LMCs will be responsible for seeing that drivers under its auspices receive such instruction. Training is important as the use of common software systems is often the key to the effectiveness of modern supply chain systems.

Option A. This approach would have all trucks owned directly by the LMCs. The following would be the way in which the truck borne technology training would be implemented:

- **Driver Training**

As the drivers would be employed by the LMCs, the firms would have direct control over any training the drivers are required to receive.

- **Enforcement**

Trucks will be required to have the technical devices on board to be allowed to enter the port gates. If, under a technology plan, the drivers working for an LMC are poorly trained, the ports could elect to refuse to allow them future entry into the harbors since they have been disruptive to throughput efficiency.

Option B. This approach would have most trucks owned by IOOs working under the auspices of LMCs. The following would be the manner in which a truck borne technology training would be implemented:

- **Driver Training**

The LMCs would be responsible for ensuring that IOOs operating under their auspices are trained in the use of any technology required by the ports as part of the Clean Truck Program or any port throughput plan.

- **Enforcement**

Trucks will be required to have the technical devices on board to be allowed to enter the port gates. If, under a technology plan, the drivers working for an LMC are poorly trained, the ports could elect to refuse to allow them future entry into the harbors since they have been disruptive to throughput efficiency.

Option C. Under this option, most trucks would be under the control of IOOs “grandfathered” into the Clean Truck Program. To the extent LMCs cannot find IOOs on the initial list, the trucks driven by employee-drivers would have to be owned by the LMCs. The following would be the manner in which truck borne technology training would be implemented:

- **Driver Training**

The LMCs would be responsible for ensuring that IOOs operating under their auspices are trained in the use of any technology required by the ports as part of the Clean Truck Program or any port throughput plan. The same would apply to their company drivers.

- **Enforcement**

Trucks will be required to have the technical devices on board to be allowed to enter the port gates. If, under a technology plan, the drivers working for an LMC are poorly trained, the ports could elect to refuse to allow them future entry into the harbors since they have been disruptive to throughput efficiency.

Implementation

1. **Success.** To what extent will each option ensure that the truck borne technology plan of the ports is implemented?

- **Option A.** As the LMCs own the trucks, they ensure the required devices are installed on their vehicles. If they are not installed, or not functioning, or their drivers are poorly trained and disruptive to throughput, the ports can bar their entry through the gates.
 - **Option B.** Though the IOOs own the trucks, the LMCs under whose auspices they are moving cargo would still be responsible for ensuring the required devices are on the trucks of their IOOs. The LMCs control over training would be less strong with IOOs than it would be with employees. For IOOs, the incentive for being well trained would come from the fact that the ports could bar a driver's entry through the gates if their lack of training was being disruptive to port throughput efficiency.
 - **Option C.** To the extent that the LMCs continue to use IOOs, their situation would be the same as option B. To the extent drivers from the initial list are not available and they must hire employee-drivers and own the trucks, it would be the same as in option A.
2. **Timeliness.** Will there be delays in implementing the truck borne technology plan of the ports that might slow down the Clean Truck Program?
- **Option A.** There is no reason throughput would be seriously impacted by a system in which the LMCs own their trucks and hire the drivers. They would be directly responsible for RFIDs and AVLs being on the trucks and the training of the drivers.
 - **Option B.** The IOOs owning the trucks, but the LMCs would responsible for ensuring RFIDs and AVLs are on the trucks. The requirement that the LMCs train independent drivers could make the training process less efficient and less thorough.
 - **Option C.** As most trucks will be IOO owned, the situation will be similar to option B. For the few company owned trucks, it would be the same as option A.
3. **Effectiveness.** How well will the truck borne technology plan of the ports be managed under each option?
- **Option A.** With LMCs owning the trucks and training their employee-drivers, the process should be very efficient and effective. They can ensure that the RFIDs and AVLs are on their vehicles. They would undertake the training of their drivers. The power of the ports to bar trucks would enforce discipline on the process.
 - **Option B.** Though the IOOs own the trucks and the LMCs are responsible ensuring RFIDs and AVLs are on them. Training should be effective, given the desire of the IOOs to continue entering the ports, and the need of the LMCs to have them able to do so.
 - **Option C.** Though in most cases, the IOOs would own the trucks, and the LMCs would be responsible ensuring RFIDs and AVLs are on them, the desire of the IOOs to continue entering the ports, and the need of the LMCs to have them able to do so, should ensure that the training process is effective. For the few company owned trucks and employee-drivers, the process would be straightforward.
4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?
- **Option A.** There will be some increase in the cost of operation as devices are purchased and installed on the trucks. Also, as the LMCs have employees, they would

have to have personnel departments. One of their functions would be to design and implement technology training.

- **Option B.** Even though the LMCs do not have employees, they would likely have to have someone overseeing IOOs from the standpoint of a wide variety of permit requirements, including the training required here.
- **Option C.** There will be some increase in the cost of operation as devices are purchased and installed on company trucks. Initially, even though the LMCs do not have employees, they would likely have to have someone overseeing IOOs from the standpoint of a wide variety of permit requirements, including the training required here. As the LMCs would increasingly be required to have employee-drivers, they would ultimately need personnel specialists who would undertake this function.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** There would be little impact on the costs of operation and thus on industry consolidation and LMC size.
- **Option B.** Same as option A.
- **Option C.** Same as option A.

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?

- **Option A.** Little if any.
- **Option B.** . Little if any.
- **Option C.** . Little if any.

7. **Program Management.** Will an option make it easier or harder to administer the program?

- **Option A.** The fact that LMCs directly own the trucks and are responsible for the training of their employees would make it clear who was responsible for a truck and the performance of a driver. That would make administration of the program quite direct.
- **Option B.** The fact that IOOs own the trucks but LMCs are responsible for the training of the drivers could make it a little less clear who was responsible for the performance of a driver. That would make administration of the program a little more difficult. The fact some IOOs drive for more than one LMC would compound the difficulty.
- **Option C.** The fact that IOOs own most of the trucks, but LMCs are responsible for the training of those drivers, could make it a little less clear who was responsible for the performance of a driver. That would make administration of the program somewhat more difficult. For company owned vehicles and employee-drivers, the situation would be more straightforward. However, the fact that LMCs would have both would likely add to confusion.

8. **Maximize Return.** To what extent will an option maximize the port's financial effort?

- **Option A.** The system can act efficiently.
- **Option B.** The system can act slightly less efficiently but still accomplish the task.

- **Option C.** The system can act slightly less efficiently but still accomplish the task.
9. **Cooperate.** To what extent will groups be willing to the cooperate on the Clean Truck Program in light of truck borne technology requirements?
- **Option A.** 100%.
 - **Option B.** 100%.
 - **Option C.** 100%.
9. **Parking and Parking Facilities.** To what extent will each option enhance compliance with local trucks parking ordinances and result in LMCs providing parking?

Description & Analysis

Local communities have expressed repeated concern over heavy duty trucks being parked illegally in their neighborhoods. There is considerable interest among port and other local officials that firms provide parking facilities for their trucks. As a result, upon receiving a permit, LMCs would be required to ensure that trucks operating under their auspices are parked in conformance with the ordinances of the cities and counties where they operate. The LMCs must also have a yard available where these trucks can be parked, maintained, inspected and repaired. The location must be submitted to the ports. This applies to company trucks and any IOO trucks allowed to operate under the auspices of the LMCs.

For those LMCs that currently have such facilities, the issue is relatively straightforward. For those that do not, the issue is one of cost. If they were to buy land near the ports, it was estimated that the one time purchase cost would be: \$26,385 per truck (*South Bay*); \$23,872 (*Mid-Cities/San Gabriel Valley*); \$17,346 (*Fontana*).²⁸ If they were to lease the site, using a 9% capitalization rate, the annual cost would be: \$2,375 per truck (*South Bay*); \$2,148 (*Mid-Cities/San Gabriel Valley*); \$1,561 (*Fontana*). Depending upon the size of the firm, these costs could be a difficult financial barrier for them:

Exhibit 9-1Yard Annual Lease Cost by Firm Size & Location				
Lease @ 9%		\$2,375	\$2,148	\$1,561
Firms Size	Average Trucks	South Bay	MidCity/San Gabriel	Fontana
0-10.	6	\$14,248	\$12,891	\$9,367
11-25	18	\$42,743	\$38,673	\$28,100
26-75	47	\$111,608	\$100,979	\$73,372
76-250	56	\$132,980	\$120,315	\$87,422
251 & Up	130	\$308,703	\$279,303	\$202,944

Enforcement would require creation of a system whereby jurisdictions would be able to report parking tickets to the third party institution handling the Clean Truck Program. It would, in turn, inform the ports of the need to enforce penalties using RFID numbers of offending vehicles.

Option A. This approach would have all truck owned directly by the LMCs. The following would be the manner in which truck parking requirements would be implemented:

- **Available yard for parking**

²⁸ San Pedro Bay Ports Clean Air Action Plan, Economic Analysis Proposed Clean Truck Program, p. 71.

Since the LMCs would directly own their trucks, they would be responsible for providing a location where their trucks could be parked in off-hours. For those that currently have such facilities, the issue is relatively straightforward. For those that do not, the issue would be the one-time purchase cost or annual lease costs.

- **Drivers conform to local parking ordinances**

Since the LMCs hire the drivers, they would be in a position to directly exert control over where they parked their vehicles during off-hours.

- **Enforcement**

It would be clear whether an LMC had a yard where their trucks can be parked in off-hours. An LMC whose drivers regularly receive parking tickets, as reported by jurisdictions to the third party institution, would be subject to sanctions by the ports up to and including barring their trucks from entering the ports.

Option B. This approach would have most trucks owned by IOOs working under the auspices of LMCs. The following would be the manner in which truck parking requirements would be implemented:

- **Available yard for parking**

While the IOOs own the trucks, the LMCs would be required to provide a location where they could be parked in off-hours. For LMCs that currently have such facilities, the issue is relatively straightforward. For those that do not, the issue would be the one-time purchase cost or annual lease costs.

- **Drivers conform to local parking ordinances**

Since the LMCs contract with IOOs to move containers for them, their influence over the drivers is indirect. Their ability to exert control over where the IOOs park their vehicles during off-hours would be the subject of agreements between the LMCs and the IOOs. They would have a facility available for them. However, many IOOs take their vehicles home with them.

- **Enforcement**

It would be clear whether an LMC had a yard where their IOOs could park their trucks in off-hours. However, as many take their trucks home with them, enforcement would be a matter of jurisdictions reporting illegal parking to the third party institution handling the Clean Truck Program. It would report this difficulty to the LMC and the ports using the RFID number. An IOO that regularly gets parking tickets could lose its ability to handle port drayage through its LMC. The ports could also bar a frequent offender from passing through the port gates.

Option C. Under this option, most trucks would be under the control of IOOs “grandfathered” into the Clean Truck Program. To the extent LMCs cannot find IOOs on the initial list, the trucks driven by employee-drivers would have to be owned by the LMCs. The following would be the manner in which truck parking requirements would be implemented:

- **Available yard for parking**

While most trucks would be owned by IOOs, some would be company-owned. In either case, the LMCs would be required to provide a location where these trucks could be parked in off-hours. For those that currently have such facilities, the issue is relatively straightforward. For those that do not, the issue would be the one-time purchase cost or annual lease costs.

- **Drivers conform to local parking ordinances**

For the large share of trucks that are IOO owned, the situation would be similar to option B with the LMCs exerting indirect control over their drivers. For the smaller share of trucks that are company owned, it would be similar to option A, with the LMCs exerting direct control over their drivers.

- **Enforcement**

For the large share of trucks that are IOO owned, the situation would be similar to option B, with the LMCs responding to reports from the third party institution that IOOs are regularly receiving parking tickets. The LMCs would be forced to take action to conform to their permits. The ports would also be in a position to bar the IOOs from entry. For the smaller share of trucks that are company owned, it would be similar to option A, with the ports relying on information from the third party institution and barring vehicles that are being regularly ticketed from entering the gates.

Implementation

1. **Success.** To what extent will each option ensure that the truck parking requirements would be implemented?

- **Option A.** It will be straightforward to check that an LMC has a parking yard. As the LMCs own the trucks, it should be relatively easy for them to enforce parking requirements on their drivers. The ports can set up a system whereby parking tickets are reported to them by the third party institution and they could undertake appropriate sanctions against LMCs that have frequent violations.
- **Option B.** It will be straightforward to check that an LMC has a parking yard. As the IOOs own the trucks, the LMCs would have to rely on reports from the third party institution that IOOs are regularly receiving parking tickets. To defend their permits, they would be required to potentially suspend doing business with an offending IOO. The ports would be receiving the same information and could bar an IOO from entry.
- **Option C.** To the extent that the LMCs continue to use IOOs, their situation would be the same as option B. To the extent drivers from the initial list are not available and they must hire employee-drivers and own the trucks, it would be the same as in option A.

2. **Timeliness.** Will there be delays in implementing truck parking requirements that might slow down the Clean Truck Program?

- **Option A.** Four issues may arise. The first is the potential difficulty some LMCs will have in finding parking sites, given the intensity of industrial development near the ports. The second is the ability of some LMCs to afford to buy or lease yards. The third is the need to set up a reporting system between the third party institution and the jurisdictions potentially impacted by illegal truck parking. The fourth is the

time need to set up a smooth system via which that institution would parking tickets to the LMCs and the ports so they could take action against repeat offenders.

- **Option B.** See Option A.
- **Option C.** See Option A.

3. **Effectiveness.** How well will the truck parking requirements of the ports be managed under each option?

- **Option A.** With LMCs owning the trucks and hiring their employee-drivers, the process should be very effective. The power of the ports to bar trucks and penalize LMCs whose drivers repeatedly receive parking tickets would force discipline on the process.
- **Option B.** Though the IOOs own the trucks, and the LMCs are responsible for enforcing parking requirements on them, the process should be effective given the desire of the IOOs to continue entering the ports, the need of the LMCs to cease using offending IOOs to protect their permits, and the ability of the ports to bar offending IOOs from entry. This will likely be a more difficult job than with company owned trucks, since IOOs may work for more than one firm.
- **Option C.** To the extent that the LMCs continue to use IOOs, their situation would be the same as option B. To the extent drivers from the initial list are not available and they must hire employee-drivers and own the trucks, it would be the same as in option A. In either case, the system would be effective in enforcing parking requirements.

4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?

- **Option A.** There may be an increase in the cost of operations as parking yards are purchased or leased. Also, as the LMCs have employees, they would have to have personnel departments whose functions, among others, would include disciplining drivers repeatedly receiving parking tickets.
- **Option B.** There may be an increase in the cost of operations as parking yards are purchased or leased for IOO parking. Also, even though the LMCs do not have employees, they would likely need someone overseeing IOOs from the standpoint of a wide variety of permit requirements including this one.
- **Option C.** There may be an increase in the cost of operations as parking yards are purchased or leased for IOO parking. Also, even though the LMCs have few employees, they would likely need someone overseeing IOOs from the standpoint of a wide variety of permit requirements, including this one. Ultimately, the LMCs would need personnel departments as their number of employee-drivers grows.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** There will be a reduction in the number of LMCs as some will not be able to afford the extra cost of buying or leasing a parking yard. The extra cost of having personnel people would have some impact on LMC costs and consolidation as well.
- **Option B.** Same as option A.
- **Option C.** Same as option A.

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?
- **Option A.** Cost will force some LMCs out of the sector.
 - **Option B.** Cost will force some LMCs out of the sector.
 - **Option C.** Cost will force some LMCs out of the sector.
7. **Program Management.** Will an option make it easier or harder to administer the program?
- **Option A.** The ability to check whether a yard exists would be straightforward and could be made a responsibility of the third party institution. The fact that LMCs directly own the trucks and are responsible for the behavior of their employees would make it clear that they are responsible if drivers repeatedly receive parking tickets as reported by the third party institution. RFID numbers could be used to bar an LMCs trucks from entry.
 - **Option B.** The ability to check whether a yard exists would be straightforward and could be made a responsibility of the third party institution. The fact that IOOs own the trucks, but LMCs are responsible for whether IOOs operating under their auspices are repeatedly receiving tickets, makes that situation more complex for the third party institution. It would have to report violations to both the LMC and the ports. To defend its permit, the LMC would have to hold its IOOs responsible for repeated infractions including potentially ceasing to use them. The ports could use RFID numbers to bar an offending IOO from entry.
 - **Option C.** The situation is more confused in that the LMC would have a large number of IOOs for which it is responsible but a growing number of company-owned trucks and employee-drivers. To the extent there IOOs repeatedly receiving parking tickets, action would have to come from a combination of the LMCs and the ports. To the extent the parking violations are by company-drivers, the ports that would have to undertake enforcement against the LMC.
8. **Maximize Return.** To what extent will an option maximize the port's financial effort?
- **Option A.** The system can act efficiently.
 - **Option B.** The system can act slightly less efficiently but still accomplish the task.
 - **Option C.** The system can act slightly less efficiently but still accomplish the task.
9. **Cooperate.** To what extent will groups be willing to cooperate on the Clean Truck Program in light of the parking issue?
- **Option A.** 100%.
 - **Option B.** 100%.
 - **Option C.** 100%.
10. **Geographic Use of Trucks.** To what extent will each option ensure that the trucks financed via the Clean Truck Grant Program meet minimum usage requirements in port drayage?

Description & Analysis

The purpose of the Clean Truck Grant Program is to assist the drayage industry in overcoming its lack of capital in acquiring clean trucks. It is thus reasonable for the ports to insist that trucks financed with their assistance meet minimum mileage percentage requirements for work in port drayage. The issue is the extent to which different options will result in more effective compliance on this issue.

Specifically, LMC will be responsible for having trucks financed under the Clean Truck Grant Program, whether company or IOO owned, used in port drayage in the SCAQMD for a minimum percentage of their annual mileage. The measurement of conformance with this requirement will be established using such parameters as total miles driven, geographic range of trips, and frequency of trips to the ports. The third party institution undertaking the Clean Truck Grant Program would be required to monitor this measure for each truck it finances. Information from the vehicles would have to be taken from the AVLS and RFIDs and uploaded to institution. It would report lack of compliance to the LMCs and the ports. Ultimately, the third party institution could be asked by the ports to repossess a truck.

Option A. This approach would have all trucks owned directly by the LMCs. Under it, the minimum port drayage usage by trucks financed through the Clean Truck Grant Program would be enforced as follows:

- **Usage Reporting**

Under the terms of their grants, the LMCs would be required to upload to the third party institution the total mileage, geographic range of use, frequency of port entry and other pertinent data of trucks financed via the Clean Truck Grant Program.

- **Enforcement**

Based upon the data received from LMCs, the third party institution would determine whether the trucks financed by the Clean Truck Grant Program are being used in port drayage the required share of the time. If not, this fact would be reported to the LMC and the ports. The third party institution could eventually determine that a truck is so far in violation that it needs to be repossessed.

Option B. This approach would have the trucks owned by IOOs working under the auspices of LMCs. Under it, the minimum port drayage usage by trucks financed through the Clean Truck Grant Program would be enforced as follows:

- **Usage Reporting**

In this model, the IOOs own the trucks. Their agreements with their LMCs would allow the downloading of usage data from the RFIDs and AVLS on their vehicles. For those IOO trucks financed via the Clean Truck Grant Program, the LMCs would need staff people capable of downloading total mileage, geographic range of use, frequency of port entry and other pertinent data from these trucks and uploading it to the third party institution.

- **Enforcement**

Based upon the data received from LMCs, the third party institution would determine whether the IOO owned trucks financed by the Clean Truck Grant Program are being used in port drayage for the required share of the time. If not, this would be reported

to the IOOs, the LMCs and the ports. The third party institution could eventually determine that an IOO's truck is so far in violation that it needs to be repossessed.

Option C. Under this option, most trucks would be under the control of IOOs "grandfathered" into the Clean Truck Program. To the extent LMCs cannot find IOOs on the initial list, the trucks driven by employee-drivers would have to be owned by the LMCs. Under this approach, the minimum port drayage usage by trucks financed through the Clean Truck Grant Program would be enforced as follows:

- **Usage Reporting**

To the extent, the IOOs own trucks financed by the Clean Truck Grant Program, their agreements with their LMCs would allow the downloading of usage data from the RFIDs and AVLs on their vehicles. The LMCs would need staff people capable of downloading total mileage, geographic range of use, frequency of port entry and other pertinent data from these trucks and uploading it to the third party institution. To the extent the LMC owns the trucks, it would upload the usage data on its own trucks to the third party institution.

- **Enforcement**

To the extent the third party institution receives data on the usage of IOO trucks financed via the Clean Truck Grant Program, the same enforcement mechanisms in option B would apply. To the extent data is about company owned trucks, the enforcement processes in option A apply. In either case, the third party institution would send appropriate warnings and could eventually decide that a truck that is so far out of compliance that it should be repossessed.

Implementation

1. **Success.** To what extent will each option ensure that the truck drayage use requirements would be implemented?

- **Option A.** As the LMCs own the trucks, they can directly download data on truck usage from their vehicles and upload it to the third party institution. They will need staff able to do so. The third party institution would have rules to determine if a truck financed by the Clean Truck Grant Program is out of compliance. It could warn the LMC if this is occurring. The LMC would be under pressure to comply as it needs the use of the truck.
- **Option B.** As the IOOs own the trucks, their agreement with the LMC would allow the company to regularly download the information needed to determine if they are complying with the Clean Truck Grant Program. The LMC will need staff able to do this as well as to upload the information to the third party institution. The third party institution would have rules to determine if an IOO truck financed by the Clean Truck Grant Program is out of compliance. It could warn the LMC if an IOO's vehicle is not in compliance. The IOO would be under pressure to comply as it needs the use of the truck.
- **Option C.** To the extent that the LMCs use IOOs, the system is designed to ensure that IOOs comply with the port usage requirements as in option B. To the extent drivers from the initial list are not available and the LMCs must hire employee-

drivers and own the trucks, it is the LMCs that need to comply. In either case, the LMCs and/or IOOs would be under pressure to comply or lose their vehicles.

2. **Timeliness.** Will there be delays in implementing truck usage requirements that might slow down the Clean Truck Program?

- **Option A.** There should be no delay in implementing the program once usage parameters are set, the reporting systems between the LMCs and the third party institution are created and the LMCs have staff able to handle the software systems.
- **Option B.** There should be no delay in implementing the program once the usage parameters are determined, the reporting systems between the IOOs and the LMCs are designed as well as the reporting systems between the LMCs and the third party institution. Also, the LMCs must have staff able to manage the software systems, and the IOOs must agree to regularly allow the LMCs to download data from their trucks.
- **Option C.** To the extent the firm continues to use IOOs, option B would apply. To the extent the firm must own its own trucks and have employee-drivers, option A would apply. In both cases, the vehicle's usage would be reported to the third party institution and the truck's registered owner and the LMCs would be under pressure to ensure they are complying with port drayage use requirements.

3. **Effectiveness.** How well will the truck usage requirements be managed under each option?

- **Option A.** With LMCs owning the trucks, the process of downloading usage data and sending it on to the third party institution should be very efficient. The ability of the third party institution to warn an LMC about a vehicle being out of compliance, and its power to ultimately repossess a truck, provide enforcement discipline.
- **Option B.** With IOOs owning the trucks, the ability of the LMCs to download usage data and send it on to the third party institution should be relatively efficient. The extra step required is for IOOs to cooperate in having this done as per their agreements with the LMC under whose auspices they are working. Meanwhile, the ability of the third party institution to warn an LMC that an IOOs vehicle is moving out of compliance, and the institution's power to ultimately repossess a truck, should provide enforcement discipline on the LMC and the IOO.
- **Option C.** To the extent that the LMCs continue to use IOOs, their situation would be the same as option B. To the extent drivers from the initial list are not available and they must hire employee-drivers and own the trucks, it would be the same as in option A. In either case, the system would should be effective in enforcing truck usage requirements.

4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?

- **Option A.** The LMCs will need to have staff members who can handle the downloading of data from their trucks and the uploading of it to the third policy institution. If a truck is moving out of compliance, these people will also need to coordinate with schedulers to ensure that trucks are kept in compliance.
- **Option B.** The LMCs will need to have staff members who can handle the downloading of data from the trucks of their IOOs and the uploading of these data to the third policy institution. If an IOO's truck is moving out of compliance, the staff members will need to coordinate with schedulers to ensure that trucks are being kept

in compliance. This will likely be a more difficult and costly job than with company-owned trucks, since IOOs may or may not want to take specific loads and they can work for more than one firm.

- **Option C.** To the extent that the LMCs continue to use IOOs, their situation would be the same as option B. To the extent drivers from the initial list are not available and they must hire employee-drivers and own the trucks, it would be the same as in option A. In either case, the system would likely be more difficult and thus costly in enforcing drayage usage requirements for IOOs than for their company owned trucks.

5. **Average LMC Size.** What will happen to the size of LMCs under each option?

- **Option A.** There will likely be the need for extra staff to handle the data systems for monitoring truck usage and for coordinating truck usage with schedulers to ensure compliance. This will increase the cost of operations for the LMCs. Combined with other similar small increases in costs, this could cause some industry consolidation.
- **Option B.** Same as option A except the costs will likely be greater due to the difficulty of coordinating truck usage among IOOs that may not always wish to undertake some loads and may work with more than one LMC. That would add to the pressures for consolidation.
- **Option C.** Same as option B.

6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?

- **Option A.** Cost will force some LMCs out of the sector.
- **Option B.** Cost may force more LMCs out of the sector.
- **Option C.** Cost will force more LMCs out of the sector.

7. **Program Management.** Will an option make it easier or harder to administer the program?

- **Option A.** The fact that LMCs directly own the trucks makes it relatively easy to obtain the data needed to track truck usage and report it to the third party institution. The third party institution would be dealing with a limited number of LMCs to inform them that trucks are moving out of compliance.
- **Option B.** The fact that IOOs own the trucks makes it one step more complicated to obtain the data needed to track truck usage since the LMCs must get it from the IOOs before reporting it to the third party institution. The third party institution would be working through a limited number of LMCs and using them to inform their IOOs that their trucks are moving out of compliance. However, it would have to deal with a large number of IOOs should it need to repossess vehicles. Meanwhile, the LMCs face a more difficult task in administering the program since they must track IOO trucks owned by drivers who can refuse loads and work with more than one firm.
- **Option C.** The difficulties are similar to option B for IOO owned trucks. The management issue for LMCs would be somewhat easier as part of their fleet would be company owned.

8. **Maximize Return.** To what extent will an option maximize the port's financial effort?

- **Option A.** The system can act efficiently.
- **Option B.** The system can act slightly less efficiently but still accomplish the task.

- **Option C.** The system can act slightly less efficiently but still accomplish the task.
9. **Cooperate.** To what extent will groups be willing to cooperate on the Clean Truck Program in light of truck usage requirements?
- **Option A.** 100%.
 - **Option B.** 100%.
 - **Option C.** 100%.

11. **Insurance.** To what extent will each option ensure that the ports are being adequately covered for any liability arising from their role in the oversight of what trucks can enter the ports and who can get help in acquiring? What level of collision insurance should be carried on trucks funded by the Clean Truck Grant Program?

Description & Analysis

Most of the trucks acquired via the Clean Truck Grant Program could not have been bought by their registered owners without the assistance of the ports. Given recent horrific accidents, the ports have an interest in being protected from liability arising from their participation in the process, as does the third party institution overseeing the program. A policy limit of \$5 million has been suggested as part of the Clean Truck Grant Program.²⁹ The contracts would require that the ports and third party institution be named as additional insureds. Meanwhile, another condition of the Clean Truck Grant Program would be for the borrowers to have collision insurance equal to the value of the trucks financed for them by the program.³⁰

Option A. This approach would have all trucks owned directly by the LMCs. Under it, the insurance provisions on trucks financed through the Clean Truck Grant Program would be enforced as follows:

- **Insurance Requirements**

Under the terms of their Clean Truck Grant Program contracts, the LMCs would be required to have \$5 million in liability insurance with the ports and the third party institution named as additional insured. They would also be required to have collision insurance equal to the value of the vehicles acquired via the grants.

- **Enforcement**

If the LMCs failed to maintain this insurance, it would be a violation of their contracts for the trucks and the third party institution could repossess them.

Option B. For the IOOs operating under the auspices of an LMC to be eligible for Clean Truck Grant Program funds, the LMC must first agree to contract provisions with the third party institution. The third party institution's contract with the ports to administer the program has a provision under which the ports agree to assist it in enforcing its contracts for the program:

- **Insurance Requirements**

²⁹ The extra cost per truck for \$5 million policy as opposed to a \$1 million policy would be between \$1,800 and \$2,000 per tractor. The smaller the fleet, the more cost. For example, an LMC with 40 tractors probably will pay \$2,000 extra per truck or \$80,000 more per year for the larger policy. A fleet with 100 tractors would likely pay an extra \$1,800 per truck or \$180,000 more per year.

³⁰ Collision insurance runs at 2 1/2 % of the value subject to a \$1,000 deductible. For a year, physical damage insurance on a \$100,000 tractor would be \$2500. It would go down each year as the value of the tractor fell.

Under the terms of their Clean Truck Grant Program contracts with the third party institution, the LMCs would be required to have \$5 million in liability insurance to cover trucks financed by the program and driven by IOOs under their auspices. The ports and the third party institution would be named as additional insured. In addition, the IOOs would be required to have collision insurance equal to the value of the trucks acquired via the grants.

- **Enforcement**

If the LMCs failed to maintain this insurance, it would be a violation of their contracts with the third party institution. It could request that the ports help enforce this provision by barring IOO trucks that were to be covered by the LMC's policy from entry into the ports. The IOOs could still operate under the auspices of a different LMC that agreed to offer their liability coverage.

If the IOOs are not current on their collision insurance, the third party institution could repossess their vehicles.

Option C. Under this option, most trucks would be controlled by IOOs "grandfathered" into the Clean Truck Program. To the extent LMCs cannot find IOOs on the initial list, the trucks driven by employee-drivers would have to be owned by the LMCs. Under this approach, the insurance provisions on trucks financed through the Clean Truck Grant Program would be as follows:

- **Insurance Requirements**

Under the terms of their Clean Truck Grant Program contracts with the third party institution, the LMCs would be required to have \$5 million in liability insurance to cover trucks financed by the program and driven by IOOs under their auspices. They would be required to have the same insurance on any company trucks acquired via the program. The ports and the third party institution would be named as additional insured. In addition, the IOOs would be required to have collision insurance equal to the value of the trucks acquired via the grants. The LMCs would be required to have this insurance on vehicles it acquired under the program.

- **Enforcement**

If the LMCs failed to maintain this insurance, it would be a violation of their contracts with the third party institution. It could request that the ports help enforce this provision by barring trucks that were to be covered by the policies from entry into the ports. The IOOs could still operate under the auspices of a different LMC that agreed to offer their liability coverage. If this provision was violated for LMC owned trucks, the third party institution could repossess their trucks.

If the IOOs or the LMC are not current on their collision insurance, the third party institution could repossess their vehicles.

Implementation

1. **Success.** To what extent will each option ensure truck insurance requirements are met?

- **Option A.** As the LMC would be the registered owner of the trucks being insured, it would be a straightforward policy transaction to fill the provisions of the agreement with the third party institution that is administering the Clean Truck Grant Program.

- **Option B.** In this case, the IOOs own the trucks and would need to have collision insurance to cover the value of the vehicles acquired under the Clean Truck Grant Program. The liability issue is more complex. Under the terms of the LMCs contract with the third party institution, it would be required to maintain liability policies covering IOO trucks operating under its auspices. If it failed to do so, the agreement between the third party institution and the ports would come into play with the ports having agreed to bar gate access to trucks in violation of Clean Truck Grant Program provisions negotiated by the third party institution. The IOOs could still operate under the auspices of a different LMC that agreed to offer their liability coverage.
 - **Option C.** Same as option B for IOO owned trucks. Same as option A for company owned trucks.
2. **Timeliness.** Will there be delays in implementing truck insurance requirements that might slow down the Clean Truck Program?
- **Option A.** There should be no delay in implementing the Clean Truck Program as the insurance provisions are directly between the third policy institution administering the grant program and the LMCs that are the registered owners of the trucks.
 - **Option B.** There may be some delay in implementing the Clean Truck Program as the insurance provisions involve contracts between the port and the third party institution administering the grant program as well as contracts between that institution and the LMCs under whose auspices IOOs are acquiring trucks.
 - **Option C.** To the extent the firm continues to use IOOs, option B would apply. To the extent the firm must own its own trucks and have employee-drivers, option A would apply.
3. **Effectiveness.** How well will truck insurance requirements be managed under each option?
- **Option A.** There should be no loss of effectiveness in implementing the Clean Truck Program as the insurance provisions are directly between the third policy institution administering the grant program and the LMCs that are the registered owners of the trucks.
 - **Option B.** There may be a loss of effectiveness in implementing the Clean Truck Program due to the insurance provisions involving both contracts between the ports and the third party institution administering the grant program as well as contracts between that institution and the LMCs under whose auspices IOOs are acquiring trucks.
 - **Option C.** To the extent the firm continues to use IOOs, option B would apply. To the extent the firm must own its own trucks and have employee-drivers, option A would apply.
4. **LMC Costs.** What will happen to the cost of operation of LMCs under each option?
- **Option A.** The insurance provisions will cause extra costs to LMCs for their collision and liability insurance.³¹
 - **Option B.** The insurance provisions will cause extra costs to LMCs for their liability insurance.

³¹ See footnote 29, page 65

- **Option C.** The insurance provisions will cause extra costs to LMCs for their liability insurance. If the LMCs are required to have company trucks, their costs would be higher due to their need to carry collision insurance.
5. **Average LMC Size.** What will happen to the size of LMCs under each option?
- **Option A.** The insurance provisions will likely cause some consolidation in the drayage sector due to the extra costs to LMCs of their required collision and liability insurance coverage.³²
 - **Option B.** The insurance provisions will likely cause some consolidation in the drayage sector due to the extra costs to LMCs of their required liability insurance coverage.
 - **Option C.** The insurance provisions will likely cause some consolidation in the drayage sector due to the extra costs to LMCs of their required liability insurance coverage. If the LMCs are required to have company trucks, their costs would be higher due to their need to carry collision insurance.
6. **LMC Participation.** What will be the willingness of LMCs to stay in drayage?
- **Option A.** Extra liability and collision insurance costs will force some LMCs out of the sector.
 - **Option B.** Extra liability costs may force some LMCs out of the sector.
 - **Option C.** Extra liability costs will force some LMCs out of the sector. If company trucks are required, extra collision insurance costs may add to the difficulty.
7. **Program Management.** Will an option make it easier or harder to administer the program?
- **Option A.** The fact that LMCs directly own the trucks would make it straightforward for the third party institution to administer its insurance requirements under the contracts for the Clean Truck Grant Program.
 - **Option B.** The third party institution would have straightforward oversight of collision insurance contract provisions agreed to by IOOs that have acquired trucks via the Clean Truck Program Grant. Administration of liability insurance provisions would be more complex since they involve the two stage contract relationship between, first, the third party institution and the LMCs under whose auspices trucks have been acquired, and second, the contract with the third party institution and the ports. That agreement would have the ports bar gate access to trucks in violation of Clean Truck Grant Program provisions. The IOOs could still operate under the auspices of a different LMC that agreed to offer their liability coverage.
 - **Option C.** The insurance difficulties for LMCs would be similar to option B for IOO owned trucks. They would be the same as option A for trucks that the LMCs have acquired as company owned.
8. **Maximize Return.** To what extent will an option maximize the port's financial effort?
- **Option A.** The system can act efficiently.
 - **Option B.** The system would be somewhat cumbersome to administer.

³² See footnote 30, page 65

- **Option C.** The system would be somewhat cumbersome to administer.
9. **Cooperate.** To what extent will groups be willing to cooperate on the Clean Truck Program in light of the truck insurance issue?
- **Option A.** 100%.
 - **Option B.** 100%.
 - **Option C.** 100%.

APPENDIX A

Results of the Driver Preference Survey Conducted October 25 – November 1, 2007

Summary

At the request of the two ports, a second random survey of 140 drivers was undertaken to more deeply probe the question of the willingness of IOOs to become employees. The data were gathered at the port gates during lunch time or at 5 PM. The results have very important implications for port throughput. This is the case due to the significant number of IOO drivers who indicate that they are unwilling to become employees and have specific ideas of what they would do if forced to make the change.

The raw (*unweighted*) results show 50% of the IOOs are not willing to become employees under the stated conditions. When the Maybe/Uncertain responses are allocated to yes and no, the raw responses indicate that 60% of the IOOs will not become employees

Significant is the result when the responses are weighted by the calling frequency reported in the survey. The weighted response indicates that 52.2% would not become employees and this grows to a 65% no; 35% yes split when the Maybe answers are allocated.

Respondents were also asked about their view of requiring employee drivers. 46% thought it was a bad or very bad idea.

Survey Methodology

This survey followed the protocols of the prior survey. Arrangements were made with terminal operators to be at the gates either during lunchtime or at 5 PM. Due to time constraints, the surveys were conducted at the Evergreen and CUT terminals only. Drivers were solicited to participate in the survey either in their trucks or at the lunch wagons. A \$10 incentive was offered for their participation. Bilingual (in Spanish) interviewers conducted the survey. The \$10 incentive was paid at the conclusion of the survey. **The survey participants were limited to Independent Owner Operators (IOOs);** no employee drivers were interviewed. The questionnaire that was used by the interviewers is at the end of the analysis of the results.

Survey Results

1. Port Calling Frequency

The average respondent indicated they called at the ports 14.4 times a week with a median response of 12 times per week. Only three respondents (*including one that did not answer this question*) called less than 3.5 times per week.

2. Willingness to Become an Employee

The unweighted (raw) responses to the question regarding willingness to become employees at a wage rate of \$20/hour plus the benefits as described were:

45 (32.1%) Yes
70 (50.0%) No
25 (17.9%) Maybe/Uncertain
140 (100.0%) Total responses

Allocating the Maybe/Uncertain responses in proportion to the yes/no responses yields the following:

39.1% Yes

60.9% No

The calling frequency from Question 1 allows the responses to be weighted to reflect the relative importance of each respondent to the ports' drayage. Thus a driver calling at the ports say 20 times per week would be weighted at 20, while one calling 3 times a week would be weighted at 3. This reflects that the more frequent caller's response is 20/3 or 6.67 times more important than the less frequent caller. Using weighted responses, the distribution of answers is:

28.4% Yes

52.2% No

19.4% Maybe/Uncertain

Again allocating the Maybe/Uncertain responses in proportion to the yes/nos yields the following:

35.3% Yes

64.7% No

For the 70 no respondents, i.e. unwilling to become an employee, interviewers ask "What would you do if you were unable to enter the ports?" Responses were semi-structured with an "Other" answer possible. The results were:

- 12 (17%) Become an over the road IOO
- 13 (19%) Seek non-drayage local driving work
- 21 (30%) Relocate, some identifying specific locations, e.g. TX, AZ
- 19 (27%) Leave trucking for another type of job
 - 6 identifying specific occupations or companies
 - 13 not identifying alternative
- 5 (7%) Don't Know or made no specific response.

3. Truck Retention

The distribution of responses to the question of the respondent's willingness to sell their truck at its fair market value if they were employees was:

64 (46.4%) Yes

40 (29.0%) No

34 (24.6%) Maybe/Uncertain

138 Total responses

29 of the 34 Maybe/Uncertain respondents indicated they would need to know a specific price before deciding.

4. Overall Reaction to Employee Concept

Reaction to the idea that port truckers might have to become employees was measured on a five-point scale. The possible responses to question "How do you feel about the idea that port truck drivers might have to be employees to drive into the ports?" were: "This is a very good idea, this is a good/OK idea, I don't know about this idea or other neutral responses, this is a bad idea and this is a very bad idea." Respondents were read the entire list of potential responses and asked to select one. There were 137 responses to this question as follows:

- 20 (14.6%) This is a very good idea
- 21 (15.3%) This is a good idea
- 33 (24.1%) I don't know/no opinion/neutral
- 30 (21.9%) This is a bad idea
- 33 (24.1%) This is a very bad idea

Adding the sub-categories together:

- 29.9% Total "good idea"
- 24.1% Neutral
- 46.0% Total "bad idea"

Survey Instrument

Are you an Independent Owner Operator who owns or leases your truck? _____

If NO, discontinue interview.

1. On average how many times per week do you come to either the POLA or POLB?
(Total including both ports together) _____
2. What location do you go to most often? (location of container delivery from the Port or pick up to go to the Port) (geographical location, city) _____
Locations vary. No "most common" destination _____
3. There are a lot of changes going on at the Ports. One of the options being considered is to restrict access to the Ports to drivers who are employees of a LMC (i.e. no IOOs would be allowed into the Ports).

IF you were paid an hourly rate of \$20 per hour and drove either a company truck or had your truck's expenses completely covered, and were given employee benefits such as health insurance for yourself (not your family), paid vacations, sick leave, workers compensation insurance and state disability insurance? If this were the case, would you be willing to become an employee (that means giving up your status as an IOO)

Yes No Maybe/ Uncertain

IF NO to Q3.

Under this option, drivers who are not employees would not be allowed into the Ports. So my question is what else do you think you would do if you could not enter the port? Possibilities include:

_____ Become an "over the road" or "long haul" driver

Appendix B

Market Factors In Obtaining Needed Port Drayage Drivers

Driver Need. There are several reasons why LMCs heavily involved in port drayage will likely need to augment their supply of drivers from firms not primarily involved in the drayage business. Of their 16,800 drivers, these include estimated losses due to TWIC (*average of 2,500-3,700 range = 3,100*), the need for drivers to accommodate port growth (*3,400*), a year's worth of driver losses due to 11% normal turnover (*1,850*). The number of drivers that port drayage LMCs would have to attract from LMCs not heavily involved in port drayage would thus be 8,350.

Potential Sources of Supply. Largely, the drayage LMCs would look for drivers from two groups. First, there are employee drivers working in Southern California. In 2007, EDD estimated that number at 73,090 (*Exhibit A below*). Second, there are IOOs working in Southern California outside of port drayage companies. In 2005, the U.S. Census Bureau used U.S. Internal Revenue Service data to estimate that number at 37,194. However, this would have included the 16,800 in port drayage. Deducting them, the number of IOOs not at the ports would be 20,394 (*Exhibit B below*). Combined with the estimate of all drivers, the total supply of drivers not involved as IOOs with port drayage firms can be estimated at 93,484.

In effect, the port drayage LMCs would be looking to entice 8,350 drivers out of 93,484 working either as employees or IOOs of non-port drayage firms. **That would represent 8.9% of all drivers outside of port drayage or one of every 11.2 drivers.**

Historically, a third source of drivers has been available to the LMCs. This has been the large number of immigrants, largely from Mexico and Central America, who have entered the sector. However, that group has become problematic. In the past, they could become port drayage IOOs with an aging for about \$12,000 truck. Under the Clean Truck Program, they will be required to come with at least a used 2007 truck costing about \$50,000. That will represent a significant barrier for them. In addition, there is the intensive U.S. debates about restricting immigration, reducing illegal immigration and national security (*TWIC*).

Exhibit A.-Median Employee Pay, Six So. California Counties Truck Drivers, Heavy or Tractor Trailer, 1st Qtr. 2007				
County	Median Income	Hourly Rate	Employee Drivers	Driver Share
Los Angeles	\$36,858	\$17.72	31,800	43.5%
Orange	\$39,021	\$18.76	8,450	11.6%
Ventura	\$37,752	\$18.15	3,000	4.1%
San Diego	\$40,830	\$19.63	6,750	9.2%
Inland Empire	\$40,206	\$19.33	23,090	31.6%
So. Calif. (6-Counties)	\$38,569	\$18.54	73,090	100.0%
IOOs - Dr. Monaco ¹	\$37,098	\$12.37		
IOOs - CGR ¹	\$29,000	\$11.60		

(1) IOO data for Monaco was for 2006. It was increased 1.5% for 2007 estimates.

Source: CA Employment Development Department Occupation Employment Survey, 2007; CGR Management Consultants; Kristen Monaco, Ph.D. CSU Long Beach

Port Drayage IOO Pay. When port drayage IOOs go to the market to acquire drayage drivers, they will encounter a problem. Currently, work at the ports, based upon the earnings and hours

of service attributable to IOOs, has IOOs earning from \$11.60 to \$12.37 per hour. These figures were calculated as follows:

- Dr. Kristen Monaco of California State University Long Beach surveyed drivers as they entered the port gates and found that 2006 median net pay was \$36,550.³³ She also found that pay had risen 1.5% per annum from 2003-2006. Applying that rate to her 2006 pay levels yielded a 2007 estimated median of \$37,098. Using that figure, and the fact that Dr. Monaco found that the IOOs she interviewed worked an average of 60 hours per week, 50 weeks a year, the median hourly pay was calculated at **\$12.37**.³⁴ As entrepreneurs, these drivers do not have paid vacation, employer paid social security, employer paid workers compensation insurance or health insurance.
- CGR Management Consultants interviewed drivers in early 2007 and partially verified their data with tax returns. They found a 2007 median income of \$29,000. The lower annual pay levels appear to be explained by the fact that the drivers cited an average workweek of 50 hours versus 60 hours for Dr. Monaco.³⁵ This difference may be accounted for by the fact that they were interviewed at LMC locations and may have been short haul drivers waiting to be sent for loads. Using the 50 hour workweek, CGR found the IOOs median hourly earnings of \$11.60. Again, as self-employed workers, they do not have paid vacation, employer paid social security, workers compensation or health insurance. Note: For drivers recording 35,000 or more miles, the CGR work found that 14.1% earned \$40,000 to \$75,000. For these IOOs, average compensation is \$16 to \$30 per hour.

When the port drayage LMCs that have been employing these IOOs go to the market for more drivers, they will have to compete with LMCs paying more than this. The burden will be a strong one, given that they will need to capture *one of every 11.2 such drivers*.

Southern California Employee-Driver Pay. As indicated, the largest number of heavy duty truck drivers (73,090) are working as employees. The best available data on their pay scales is from the California Employment Development Department (EDD) through its Occupational Employment Survey (OES). The relevant category is OES 533032: Truck Drivers Heavy or Tractor Trailer.

As a group, the median pay of heavy truck drivers in Southern California (*one-half above/one-half below*) was \$38,569 based upon a 40 hour workweek, 52 weeks a year (*Exhibit A*). By county, Los Angeles had the largest number of drivers (31,800; 43.5%) and the lowest median (\$36,858; \$17.72 per hour) pay. The Inland Empire had the second largest number of drivers (23,090; 31.6%) and the second highest median (\$40,206; \$19.33 per hour) pay, just under San Diego County (\$40,830; \$19.63 per hour).

Non-Port Drayage IOO Pay. A smaller potential source for new port drayage drivers would be IOOs located in Southern California that are not currently working with port drayage LMCs (20,394). Here, non-employer firms in NAICS code 484 (*truck transportation*) are the relevant companies (*IOOs*). Primarily, they were identified by the U.S. Census Bureau using Schedule

³³ Incentivizing Truck Retrofitting in Port Drayage: A Study of Drivers at the Ports of Los Angeles and Long Beach, Kristen Monaco, Ph.D., Department of Economics, California State University Long Beach, January 2007, p. 23.

³⁴ Monaco, p. 19.

³⁵ A Survey of Drayage Drivers Serving the San Pedro Ports, CGR Management Consultants LLC, March 26, 2007. Available at <http://www.gatewaycog.org/publications>, p. 24 at <http://www.gatewaycog.org/publications>.

“C” tax filings with the U.S. Internal Revenue Service.³⁶ According to the Census Bureau, there were 37,194 such IOOs in Southern California during 2005 (*Exhibit 19*).³⁷ Taking out the 16,800 working in port drayage, the net would be 20,394. Other than Los Angeles County, where most IOOs are likely involved in port drayage, the largest supply was the 11,174 IOOs in the Inland Empire (30.0%).

**Exhibit B.-Estimated Hourly Rates, 2005 to 1st Qtr. 2007
Non-Employer Trucking Firms, Southern California**

Market	Firms	Total Revenue	Average Gross Revenue	Estimated Net Revenue	Estimate Hourly Rate 2005	Estimated Hourly Rate 1Q2007	2003-2005 Rate
Los Angeles County	22,897	\$1,857,664,000	\$81,131	\$31,409	\$12.56	\$13.83	8.00%
Orange County	2,497	\$228,418,000	\$91,477	\$35,414	\$14.17	\$15.27	6.17%
San Diego County	2,256	\$210,470,000	\$93,293	\$36,117	\$14.45	\$15.92	8.08%
Ventura County	626	\$59,727,000	\$95,411	\$36,937	\$14.77	\$16.25	7.91%
Inland Empire	11,174	\$1,194,530,000	\$106,903	\$41,386	\$16.55	\$18.09	7.37%
Southern California	37,194	\$3,340,339,000	\$89,809	\$34,768	\$13.91	\$15.32	8.07%
Port Drayage IOOs	16,800						
Non-Drayage IOOs	20,394						

Source: Non-employer Statistics, 2005 Transportation & Warehousing, NAICS 484 Truck Transportation, U.S. Census Bureau

The 2005 gross revenues for these IOOs averaged \$89,809. Using the 38.7% ratio of median gross income to median gross revenues for IOOs found by CGR in their 2007 study,³⁸ it is estimated that these IOOs had net revenues of \$34,768 in 2005. Assuming 50 hours per week for 50 weeks of work, the estimated hourly rate was \$13.91 in 2005. Based upon the rate of increase found in revenues found by the Census Bureau of 8.07%, the first quarter 2007 rate is an estimated \$15.32. Note, the rate in Los Angeles County (*\$13.83 in 2007*) was consistent with the findings of Monaco (*\$12.37 in 2006*). Also, note that the rate in the Inland Empire, where the second largest share of these IOOs was located, was estimated at \$18.09.

Competition To Acquire Port Drayage Drivers. For port drayage LMCs, to obtain an 8.2% share of non-port drayage drivers to make up for their losses, they will have to compete in the open market with non-drayage LMCs that are already paying more than they are. One source would be the Inland Empire. Here, they could try and convince IOOs to work with them. For instance, port drayage LMCs might offer to pay Inland Empire IOOs a net of \$5,000 more to work with them than their current LMC. That would seem like a sufficient incentive to overcome some of the resistance to commuting daily to the ports. Such a boost would require an average 2007 net income increase of 11% from \$45,233 (*50 hours a week, 50 weeks a year at \$15.32*) to \$50,208. This would represent an hourly net of **\$20.08**.

³⁶ Non-employer Statistics data originate from administrative records of the Internal Revenue Service (IRS). Data are primarily comprised of sole proprietorship businesses filing IRS Form 1040, Schedule C, although some of the data is derived from filers of partnership and corporation tax returns that report no paid employees. These data undergo complex processing, editing, and analytical review at the Census Bureau to distinguish non-employers from employers, correct and complete data item.

³⁷ Non-employer Statistics, 2005 transportation and warehousing Census Bureau, for Southern California's counties. <http://www.census.gov/epcd/nonemployer/>

³⁸ A Survey of Drayage Drivers Serving the San Pedro Ports, CGR Management Consultants LLC, March 26, 2007. Available at <http://www.gatewaycog.org/publications>, p. 24.

Another opportunity might be for port drayage LMCs to convince some of the employee-drivers in the Inland Empire to work for them. Here, they would be trying to tap a potential pool of some 23,090 drivers, many likely working for long haul trucking firms. Their current hourly compensation can be derived as follows:

- With the median at \$40,206, the hourly rate being paid to these drivers was \$19.33 per hour based upon the 40 hours a week, 52 weeks a year used by EDD (2080 hours). If a 2,000 hours of work a year is assumed (40 hours x 50 weeks) with 80 hours of paid vacation (40 hours x 2 weeks), vacation pay is worth \$0.74 per hour.
- In 2007, the employer paid social security tax at 7.65% represents \$1.48 per hour based upon the median pay of \$19.33.
- The employer must pay California SDI at 0.6%. For the median rate of \$19.33 per hour, that amounts to \$0.12 per hour. The combined unemployment insurance and WIB rate is 3.6% to a maximum of \$7,000 or an average of \$0.12 per hour for 2,080 hours a year.
- Using the same workers compensation insurance rate of \$8.63 per \$100 of payroll cited earlier, the benefit is worth \$1.67 per hour based upon the \$19.33 median pay.
- Allowing for the same medical insurance benefit discussed earlier with the employer paying \$4,014 for 89.1% of the cost of a PPO plan, the benefit would be worth \$1.93 per hour at 2,080 hours per year.

Combining the \$19.33 median hourly rate with vacation pay, employer's social security contribution, SDI, unemployment & WIB, workers compensation insurance and health benefits would mean that the average heavy duty employee truck driver in the Inland Empire is effectively earning median pay of **\$24.64** an hour. However, not all drivers earn the median. According to EDD, the bottom 25% of the Inland Empire's heavy truck drivers (5,773) earned an average of \$15.96 per hour. That would put the bottom 37.5% (8,656) earning an estimated \$17.65 per hour or less. Using calculations similar to those above, that rate would be worth **\$22.67** per hour to a worker including \$5.03 in benefits. That combined package should be sufficient to lure some of the 8,656 workers making *less than* that into port drayage from the inland region's general trucking industry with the pay equal to \$47,163 per year.

A third source might be Los Angeles County's 31,800 heavy truck employee-drivers. As indicated, by comparison to drivers in other Southern California counties, they make less money probably because many are already working in short haul trucking. Their hourly compensation can be derived as follows:

- With the median at \$36,858, the hourly rate being paid to these drivers was \$17.72 per hour based upon the 40 hours a week, 52 weeks a year used by EDD's in its calculations (2080 hours). This can be assumed to be 2000 hours of work (40 hours x 50 weeks) and 80 hours of paid vacation (40 hours x 2 weeks). Vacation pay is thus worth \$0.68 per hour.
- In 2007, employers must pay half of the social security tax for their employees or 7.65% on income up to \$92,000. That represents \$1.36 per hour based upon the median pay of \$17.72.
- Employers must pay California state disability insurance (SDI) and unemployment insurance including a workforce investment board rate. The SDI rate is 0.6%. For the

median rate of \$17.72 per hour, that amounts to \$0.11 per hour. The combined unemployment insurance and WIB rate is 3.6% to a maximum of \$7,000 or an average of \$0.12 per hour for 2,080 hours a year.

- Employers must also pay workers compensation insurance. The 2007 rate assumed here is \$8.63 per \$100 of payroll. That is a modest rate for truckers (*job code 7219*) quoted by Hartford Insurance Co. of the Midwest and picked from a wide array of rates identified by the California Department of Insurance.³⁹ That rate represents \$1.53 per hour based upon the \$17.72 median pay.
- Also, drivers are likely to receive some medical insurance. According to the 2007 Health Benefits Survey by Kaiser Family Foundation, 64% of companies with three to 199 employees that provide health insurance do so through Preferred Provider Organization coverage (*PPO*).⁴⁰ In addition, 75% use plans that require an employee to make a contribution.⁴¹ To cover a single person, the 2007 PPO rate had an average cost of \$4,505 per year with the employees typically paying \$491 (10.97%) and employer paying \$4,014 (89.1%). This benefit would be worth \$1.93 per hour based on 2,080 hours per year.

Combining the \$17.72 median hourly rate with vacation pay, employer's social security contribution, SDI, unemployment & WIB, workers compensation insurance and health benefits would mean that the average heavy duty truck driver in Los Angeles County is effectively earning median pay of **\$22.76** an hour. Again, however, not all workers earn the median income. According to EDD, the bottom 25% of the Los Angeles County's heavy truck drivers (7,900) earn \$15.17 per hour or less. That would put the bottom 37.5% (11,925) earning an estimated \$16.45 per hour or less. Using calculations similar to those above, that rate would be worth **\$21.27** per hour to a worker including \$4.83 in benefits. That amount of hourly pay should be sufficient to lure some of the 11,925 employee drivers workers making *less than* that to become IOOs with port drayage LMCs. The full package would be \$44,246 in salary and benefits.

Challenge. The market challenge facing port drayage LMCs will thus be to compete with non-port drayage LMCs for their IOOs and employee drivers. They will need to move 8.9% of these drivers (8,350 of 93,484) if they are to replace their own IOOs lost due to TWIC and natural turnover, plus add the drivers need for port growth. That would represent a huge market shift and it cannot be done without competing for drivers on a basis of pay.

To move IOOs from the Inland Empire, the primary alternative source, they will have to pay the equivalent of \$20.08 per hour. To capture employee drivers from the Inland Empire, they will have to pay the equivalent of \$22.67 an hour. To capture employee drivers from Los Angeles County, they will have to pay the equivalent of \$21.27 per hour.

Like it or not, the customers of the port drayage LMCs will be forced to compensate them sufficiently to acquire these drivers. Otherwise, they will not be able to move their cargo.

Note: If the employee model goes into effect and just 33% of 8,200 IOOs who have stated a preference to leave drayage LMCs rather than be employees, actually do so, the port drayage

³⁹ California Workers' Compensation Rate Comparison, California Department of Insurance, 2007.

⁴⁰ Among Firms Offering Health Benefits, Percentage of Covered Workers in Firms Offering the Following Plan Types, by Firm Size, 2006, Health Benefits Survey, Kaiser Family Foundation, Exhibit 4-4, p. 53.

⁴¹ Average Annual Premiums for Covered Workers for Single Coverage, by Plan Type and Firm Size, 2006, Health Benefits Survey, Kaiser Family Foundation, Exhibit 6-4, p. 63.

LMCs will need another 2,800 drivers. In that case, the total need for drivers would be 11,150. That would represent 11.9% of all heavy duty truck drivers not working for port drayage LMCs or one of every 8.4.