LAX MASTER PLAN

COMMUNITY BENEFITS AGREEMENT

2013 ANNUAL PROGRESS REPORT

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Los Angeles World Airports

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COMMUNITY BENEFITS AGREEMENT (CBA)

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Prepared by

Los Angeles World Airports

LAX Master Plan CBA 2013 Annual Progress Report

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1.0 Executive Summary

On December 6, 2004, the Los Angeles World Airports' Board of Airport Commissioners (BOAC) approved an agreement with the LAX Coalition for Economic, Environmental and Educational Justice (Coalition).

The Cooperation Agreement and the Community Benefits Agreement included therein call for measures to mitigate noise, pollutant emissions, and traffic impacts of the Master Plan, as well as benefits such as job training and hiring programs for eligible residents of the Project Impact Area (PIA)[1] and the City of Los Angeles. The agreement precludes LAWA from making expenditures or taking actions prohibited by the Federal Aviation Administration (FAA) or any other regulatory authority. The Cooperation Agreement also prohibits the use of Los Angeles City's General Fund or any other City-controlled non-airport source of funds to meet any of LAWA's obligations under the Agreement.

In accordance with Section XVI "Miscellaneous" of the Agreement, LAWA is required to prepare annual reports on the implementation of the Community Benefits Agreement and the progress of the LAX Master Plan Program. LAWA is to provide the annual reports to the Coalition Representatives and make them available for at least one month on the LAWA website. This document is the ninth annual report on the progress of the Agreement. This document has been provided to the Coalition Representative and is available at LAWA website http://www.lawa.org/ourLAX/AnnualReports.aspx?id=8034.

[1] *Project Impact Area includes the communities immediately surrounding the airport and those most impacted by airport operations, and is comprised of South Los Angeles, El Segundo, Hawthorne, Inglewood, and Lennox.*

2.0 Introduction/Background

The "Community Benefits Agreement" is comprised of several documents as follows:

1. **Cooperation Agreement.** The Cooperation Agreement sets out the legal framework of the Agreement, including conditions, commitments, obligations, enforcement, etc.

2. **Community Benefits Agreement (CBA).** The CBA, an attachment to the Cooperation Agreement, details the various proposals of mitigation and benefits. The various proposals include:

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Settlement Agreement with Inglewood Unified School District. This Agreement calls for LAWA to (a) fund certain mitigation measures for the Inglewood Unified School District in an amount not to exceed $118,500,000 for noise abatement, (b) assist the Inglewood Unified School District in the coordination and dissemination of appropriate information related to emergency preparedness and response of local law enforcement agencies, emergency response groups, and the local communities in the event of an airport-related emergency, and (c) work collaboratively with the Inglewood Unified School District to support a variety of community programs, such as job training and academic programs.

Settlement Agreement with Lennox School District. Similarly, this Agreement calls for LAWA to (a) fund certain mitigation measures for the Lennox School District not to exceed $111,000,000 for noise abatement, (b) assist the Lennox School District in the coordination and dissemination of appropriate information related to emergency preparedness and response of local law enforcement agencies, emergency response groups and the local communities in the event of an airport-related emergency, and (c) work collaboratively with the Lennox School District to support a variety of community programs, such as job training and academic programs.

As described in each Agreement, LAWA's obligations are conditioned upon FAA approval of these expenditures and use of airport revenues for these specific purposes. Under no circumstance will any of LAWA's obligations under these Agreements require any expenditure from the City's General Fund or any other City-controlled source of funds.

The primary purpose of this report is to document and report on the status of the current and recently completed commitments set forth in the CBA. This report covers the period January 1, 2013 through December 31, 2013.

3.0 Community Benefits Agreement Progress Update

Section III. Residential Noise Mitigation

Section III.A Funding of Aircraft Noise Mitigation Program (ANMP)

The Agreement states:

"Beginning in fiscal year 2004-2005, LAWA shall fund its Aircraft Noise Mitigation Program (ANMP) at least at the following levels:

- $4.275 million per year for the Inglewood component; and
- $4.275 million per year for the County of Los Angeles component.

These funding levels shall be met by LAWA. LAWA shall use additional revenue, including Airport Improvement Program funds, as appropriate. LAWA expenditure of funds under this Section III.A is contingent on the City of Inglewood and the County of Los Angeles complying with all requirements established in BOAC Resolution Nos. 21481 and 21360, and with FAA regulations."

Status → In Progress:
The County of Los Angeles provided a final grant report for a previously closed grant (Grant Implementation Program #8- GIP 8) in December 2013. Authorization and funding for the 2012 request of $9,225,000 was awarded in December 2013. The delay in funding the 2012 request was due to changes in the scope of the project for the 2012 award year. The County of Los Angeles requested funding for 2013 in the amount of $9,200,000. The County is in compliance with all program requirements.

The City of Inglewood requested new grant funding for 2013. This request for new funding will be considered in 2014 pending completion of past grant reports and other related compliance actions. LAWA continues to work closely with Inglewood to bring all program requirements and reports up to date. In November 2013 under a new Grant Implementation Plan (GIP 11), LAWA reauthorized $5,000,000 that had initially been authorized in 2006, but was never released to the City.

Therefore, the allocation of new/re-issued funds in 2013 is as follows:

Calendar Year 2013

County of Los Angeles (component)		*$9,225,000.00*
Inglewood (component)		*$5,000,000.00*
	Total	*$14,225,000.00*

Section III.B Acceleration of Noise-Mitigation Programs for City

The Agreement states:

"Within eight months of the effective date of this Agreement, LAWA will provide a written schedule and work program to the Coalition Representative that is designed to achieve completion of the ANMP soundproofing program for the City by the end of 2008, and will take all reasonable steps to timely implement that schedule and work program."

Status → Substantially Complete:
Progress on this program is driven by the voluntary participation of impacted residential homeowners in the communities of Playa del Rey, Westchester, and South Los Angeles. LAWA staff completed notification to all eligible property owners of the availability of the program in April 2010. Construction was substantially completed in December 2013. The last construction contract will be closed in 2014. LAWA has spent approximately $155 million to-date on the implementation of this program.

Section III.C Acceleration of Noise-Mitigation of Places of Worship

The Agreement states:

"LAWA shall accelerate the program of soundproofing Places of Worship as part of the ANMP in effect as of the effective date of this Agreement. Within eight months of the effective date of this Agreement, LAWA shall conduct a needs assessment for this program, in consultation with the Coalition Representative. LAWA shall provide annual reports on the progress of the program."

Status → In Progress:
Coordination with the Coalition on this provision is ongoing.

Section III.D End of Block Soundproofing

The Agreement states:

"Within one year of the completion of the current ANMP for participating jurisdictions, LAWA shall commence an end-of-block soundproofing program, under which, if any residence on a particular city-block falls within the applicable noise contour for that block, then each residence on that block will be eligible for noise mitigation as described in this Section III.D. Offers of soundproofing shall be made to the owner of each residence, whether or not the owner of that residence chose to participate in previous soundproofing programs. Soundproofing under this program shall reduce interior noise at participating residences to an interior CNEL of 45 decibels or less, within habitable rooms."

Status → Ongoing:
Progress on this program is driven by voluntary participation. Within the City of Los Angeles, all end-of-block eligible property owners have been notified (via certified mail) of their eligibility in the program. Approximately 1,200 dwelling units were added under the block rounding program that utilizes Passenger

Facility Charge (PFC) funding approved by the FAA. The estimated construction completion date for the City of Los Angeles' program is 2014. The County of Los Angeles and the City of El Segundo continue to work on end-of-block eligible properties. The City of Inglewood, submitted an end of block proposal to the FAA in 2012. The FAA asked the City to edit their End-Of-Block proposal with only the FAA-approved Alternative D 65 dBA CNEL noise contour. The City of Inglewood will be meeting with the FAA to review their new proposal for end-of-block eligibility in 2014.

LAWA fully supports these efforts, and will provide supplemental funding to the jurisdictions to mitigate those properties. All eligible properties are prioritized according to the program requirements, including generally mitigating the most highly impacted areas first.

Section III.E Suspension of Avigation Easement

The Agreement states:

1. Present Avigation Easement Requirements. All homeowners receiving LAWA provided or funded noise insulation measures within the 65 dBA CNEL noise contour presently must execute express, full avigation easements (as set out in Exhibit A). In return for LAWA's providing these noise insulation benefits, each homeowner presently must sign a full, express avigation easement (as set out in Exhibit A), expressly waiving his or her ability to sue LAWA with respect to the impacts (listed in the avigation easements) that are created by aircraft operations at LAX on the affected residences.

2. Proposed Modified Easement Requirements. In order to promote the cooperation between LAWA and the Coalition that is envisioned by this Agreement, and as long as this Agreement remains in effect, LAWA agrees to suspend its requirement that express, full avigation easements (as set out in Exhibit A) be executed by homeowners receiving LAWA provided or funded noise insulation benefits for particular residences located within the 65 dBA CNEL noise contour in the City of Los Angeles, City of Inglewood, and Los Angeles County communities of Lennox and West Athens, and only under the following circumstances:

    a. Caltrans approves LAWA' compromise position as described in this Agreement during the effective term of this Agreement. This approval is necessary because Caltrans currently requires avigation easements as part of LAWA's ongoing noise variance within its permit from Caltrans to operate LAX;

    b. In lieu of requiring full, express avigation easements (as set out in Exhibit A), the homeowners will execute the Noise Easement attached as Exhibit B. The homeowners will provide, among other things, a written acknowledgment, accompanying the homeowner's authorization to proceed with the installation that the homeowner is aware of the proposed level of noise reduction that the installation is intended to provide. After the installation, the homeowner will execute an

acknowledgement that the improvements have been installed and have attenuated the noise.

LAWA promises to make all reasonable efforts to obtain Caltrans' expedited approval of suspension of the requirement for full, express avigation easements (as set out in Exhibit A) and use of the Noise Easement (as set out in Exhibit B) in its place."

Status → Completed:
The dedication of avigation or any other easements in return for funding of, or participation in, the residential soundproofing program has been eliminated pursuant to the terms of a separate, independent agreement, the LAX Master Plan Stipulated Settlement Agreement, except under very limited circumstances as required by California Airport Noise Standards. Under these limited criteria, a modified noise easement similar to the one proposed by the CBA is being used.

Section III.F Compatibility with Local Building Codes

The Agreement states:

"LAWA shall not require property owners participating in the ANMP to satisfy regulations or standards related to property conditions where these regulations or standards are more stringent than those actually enforced by the local government jurisdiction possessing code enforcement authority over the property in question."

Status → Completed:
No action is required on this provision as LAWA does not impose regulations or standards related to property conditions that are more stringent than those enforced by the local government jurisdiction as these requirements are not part of LAWA's noise mitigation programs.

Section III.G Limitations on Nighttime Departures

The Agreement states in part:

"LAWA and the Coalition agree that restrictions on departures between the hours of midnight and 6:30 a.m. over the communities to the east of LAX would be desirable, when LAX is operating under normal weather conditions (when LAX is either in Over-Ocean Operations or remains in Westerly Operations and excluding times when LAX operates in Easterly Operations). This is known as the "LAX Proposed Restriction".

1. Part 161 Study. By April of 2005, LAWA shall have completed a Contract Award Process for a study on the feasibility of implementing the LAX Proposed Restriction (the "Part 161 Study"). Within 90 days of the contract award, the contract will have commenced. LAWA shall require that the Part 161 Study meet the relevant requirements of 14 C.F.R. Part 161, and that the entity performing the Study provide annual reports to LAWA on study progress and findings"...

2. Record of Eastbound Departures. LAWA shall maintain a record of all nighttime eastbound departures during Over-Ocean Operations and Westerly Operations. This record shall be made available to the public on the LAWA website and shall be updated monthly.

3. Community Response Program. LAWA shall operate a community response program through which the public may report nighttime flights in the areas east of LAX. LAWA shall maintain a record of all individual reports, and shall prepare annual reports documenting individual reports, including records of airline, flight, date, and time of each reported flight, where possible. All records of reports, excluding the reporting individual's name and address, shall be maintained as public records and posted on the LAWA website."

Status → In Progress:
The Part 161 Study process encompasses three general elements including: (1) data collection and analysis to justify the LAX Proposed Restriction; (2) evaluation and explanation of the legal, environmental, and economic impacts of the proposed restriction; and (3) preparation and submittal to the FAA of the required reports and application materials. LAWA began the Part 161 Study in June 2005.

The LAX Part 161 Study was completed in September 2012. The Part 161 draft application was released on November 1, 2012 for public review, and the public comment review ended December 17, 2012. The study indicates that the LAX Proposed Restriction complies with the six statutory conditions of the Airport Noise and Capacity Act of 1990 and the Part 161 regulations. The baseline and projected fleet mix forecasts were revised to reflect the new 2013 implementation and 2018 forecast years, and received FAA approval. LAWA conducted the Public Outreach Program: a public workshop was held on November 13, 2012, and the LAX Noise Roundtable and the LAX Area Advisory Committee were briefed during their November meetings.

The application was submitted to the FAA on January 29, 2013. FAA notified LAWA by letters March 1 and March 15, 2013 that the application was incomplete, and provided some specifics related to what additional information was needed to complete the application. LAWA responded in a letter to the FAA on March 28, 2013 informing the FAA that LAWA will revise and resubmit the application. LAWA completed the Application Supplement and submitted it to the FAA for review on July 2, 2013. On August 2, 2013 the FAA informed LAWA by letter that the Application Supplement was still incomplete, and provided far more specificity related to what a complete application would include. LAWA responded in a letter to the FAA on August 20, 2013 informing them that LAWA will revise and resubmit the application. LAWA plans to resubmit the full application to the FAA in 2014.

The Record of Eastbound Departures and nonconforming East Departures Annual Complaint Reports are posted on LAWA's website at http://www.lawa.org/LAXNoiseEDR.aspx.

LAWA maintains a community response program where the public can report flights at any time of the day and related to any location. LAWA maintains records flights at any time of the day and related to any location. LAWA maintains records of all individual reports, prepares monthly and annual summary reports, and all reports are available on the LAWA website.

Section IV. Job Training

The Agreement states in part:

"Job Training Program. Beginning in fiscal year 2005-2006, LAWA shall provide $3 million per year for five years, not to exceed $15 million over five years, to fund job training for Airport Jobs and Aviation-Related Jobs, and for Pre-apprenticeship Programs. Any funds unspent in a particular year shall be rolled over to the subsequent year. At the conclusion of the five-year period, any unused funds shall revert to the job training funds described in Section XV…"

Status → In Progress:

Job Training Program

Although the FAA has not approved a job training program (JTP) for LAWA, and therefore no LAWA funds may be used for job training, LAWA leverages its relationships with various agencies funded to provide job training.

By leveraging relationships with over 16 JTP partners, LAWA, through its Business and Job Resources Division (BJRD), initiated its JTP in January 2007. LAWA was successfully able to work with agencies funded through other means to provide job training opportunities to residents in the Project Impact Area (PIA). Currently, LAWA is working with agencies that provide an array of training, including computer skills, customer service, time management, bilingual skills, leadership skills, and other classes.

Many local residents have completed training in customer service, retail sales, auto mechanics and other disciplines through the LAWA partnerships. The Mayor's Office has initiated discussions with area Work Source Centers, the Los Angeles Community College District and surrounding LAWA businesses to conduct Hospitality Training for local residents. Plans are underway to create training modules that will result in career paths for residents within the hospitality industry. Upon the completion of training, these candidates will be well-positioned to compete for job opportunities at the hotels or with various Airport employers.

JTP Referrals:	*2013:*	*75*	*Program-to-Date:*	*769*
Completed Training:	*2013:*	*48*	*Program-to-Date:*	*444*

Contact information for the Business Jobs Resource Center (BJRC) is posted at http://www.lawa.org/bjrc/About.aspx?id=1968.

Section V. First Source Hiring Program

The Agreement states in part:

"First Source Hiring Program for Airport Jobs. The First Source Hiring Program shall provide early access to targeted applicants for available Airport Jobs, and employers will receive prompt, cost-free referrals of qualified and trained applicants. Except where City's Worker Retention Policy requires retention of particular workers, LAWA shall require participation in the First Source Hiring Program with regard to all Airport Jobs by any:

- New Airport Contractor, Airport Lessee, and/or Airport Licensee resulting from the approved LAX Master Plan Program;

- Airport Contractor that enters into or receives a new, amended, or renewed Airport Contract, or receives a voluntary extension of an existing Airport Contract;

- Airport Lessee that enters into or receives a new, amended, or renewed lease of any property owned by LAWA, or receives a voluntary extension of an existing lease; and

- Airport Licensee that agrees, receives, or is subject to a new, amended, extended, or revised licensing or permitting agreement or set of requirements.

As of July 1, 2005, LAWA shall ensure that the First Source Hiring Program, attached as Exhibit C, is a material term of all Airport Contracts, lease agreements, and licensing or permitting agreements or sets of requirements that are new, extended, amended, renewed, or revised. Under these Airport Contracts, agreements, or requirements, employer participation in the First Source Hiring Program shall commence on the effective date of the Airport Contract agreement, or requirement in question, or on July 1, 2005, whichever is later…."

Status → Ongoing:
The First Source Hiring Program (FSHP) is designed to provide residents from the communities immediately surrounding the airport and those most impacted by airport operations access to airport jobs. Those communities are a part of the Project Impact Area (PIA) and are comprised of South Los Angeles, El Segundo, Hawthorne, Inglewood and Lennox.

The FSHP is now automated with an Applicant Tracking System (ATS) to quickly assist those LAWA employers in need of prescreened and qualified individuals for employment consideration. Over 18,000 have registered and posted their resumes on LAWA's ATS.

The Business and Jobs Resources Center (BJRC) works closely with area Work Source and One-Stop Centers, community and faith-based organizations that serve the airport area and beyond, to register potential candidates on the ATS for positions with LAWA employers. FSHP is training the job developers at these organizations to prescreen and qualify their clients to be eligible for opportunities at LAWA as they arise. Their clients are able to post their resumes and apply for positions and those applications are reviewed by hiring managers in the terminals.

The BJRC also participates in the Mayor's monthly roundtable with the Port of Los Angeles and the Los Angeles Department of Water and Power to discuss and work through workforce development initiatives and on the Mayor's South Los Angeles Initiative. The purpose of this initiative is to ensure job opportunities for those residents that experience disproportionate levels of poverty and unemployment compared to the general population, many of whom live in the designated Project Impact Area.

As new concessions contracts are being awarded, BJRC will work with the prime contractors to coordinate Targeted Recruitment Events and bring prescreened candidates for interview consideration. The opening of the New Tom Bradley International Terminal (TBIT) in September 2013 and the Post-Screen Retail and Food Service Pavilion managed by Westfield brought significant new employment opportunities to LAWA.

During 2013, LAWA hosted targeted recruitment events for the following companies at BJRC Offices:

- *HMS Host Targeted Recruitment Job Fair – April 6*
- *Duty Free Shops (DFS) Targeted Recruitment Job Fair – May 6*
- *Sodexo Job Restaurant Employee Fair (Hilton Garden Inn - El Segundo) – May 23 & 24*
- *HMS Host Targeted Recruitment Job Fair – July 20*
- *HMS Host Targeted Recruitment Job Fair – July 27*
- *Duty Free Shops (DFS) Career Fair Event (Hilton - San Gabriel) – July 30*
- *Duty Free Shops (DFS) Beauty Career Fair – August 16*

FSHP Referrals:	*2013: 2,549*	*Program-to-Date: 11,622*
FSHP Hires:	*2013: 141*	*Program-to-Date: 1,137*
FSHP Hires Living in PIA:	*2013: 50*	

For more information on the First Source Hiring Program, please visit the program website at http://www.lawa.org/bjrc/Employment.aspx?id=2058.

Gateways Internship Program

The Gateways Internship Program provides college and high school students with exposure to career opportunities in the aviation industry and other airport-related jobs. The Gateways Program gives students on-the-job practical experience in various airport jobs through education, training, and mentoring activities to better prepare them to enter the workforce.

The Gateways Internship Program has worked with various colleges such as UCLA, USC, Cal State University of Long Beach, Cal State University of Los Angeles, Loyola Marymount, West Los Angeles College, Cal State Fullerton, CSUN, Cal State University Dominquez Hills, Chapman-Brandman University, Cerritos College, Santa Monica College, East Los Angeles Community College, Trade Technical College, Southwest College, and Cerro Coso College.

LAWA also works with Watts Labor Community Action Committee (WLCAC), and Los Angeles Job Corps to place students into its internship program. Since its inception, the Gateways Program has placed more than 1100 students in a wide range of internship

positions including: Accounting, Administrative, Airfield Operations, Airports Development, City Attorney Office, Commercial Development Group, IMTG, Engineering and Facilities Management, Environmental Management, Landside, Noise Management, Community Relations, Public Relations, and FAA-related.

LAWA's Gateways Program is comprised of three internship programs:

- *Gateways College Student Professional Worker Program*
- *Gateways Volunteer Internship Program*
- *Gateways International Student Professional Worker Program*

In 2013, the BJRC placed 53 students through its three programs within various internships in LAWA Divisions. This is an increase over the 2012 placements. The 2013 level of placements was accomplished primarily through assistance from funding partners including community and faith based organizations and colleges.

The BJRC conducted extensive outreach to students by attending Career Day events at colleges, posting internship job descriptions to the college career sites, and connecting with various college career centers and advisors. BJRC also disseminated internship information at 29 community job fairs. Additionally, the BJRC continued its relationship with Cerritos College to place Information Technology students with LAWA. The BJRC also continued to work with the City of Los Angeles Public Works High School Internship Program and the Brotherhood Crusade.

In addition to students from local and out-of-state schools, the BJRD also attracts international students who wish to volunteer at LAX. BJRC has hosted international students from China, Germany, Korea, Japan and France.

For more information on The Gateways Internship Program, please visit the program website at http://www.lawa.org/bjrc/Education.aspx?id=2950.

Section VI. Living Wage, Worker Retention, and Contractor Responsibility

The Agreement states:

"LAWA shall apply to all Airport Contractors, Airport Lessees, and Airport Licensees the City's Living Wage Ordinance, as set forth in Los Angeles Administrative Code Section 10.37; the City Worker Retention Policy, as set forth in Los Angeles Administrative Code Section 10.36; and the Contractor Responsibility Program set forth in BOAC Resolution No. 21601, in accordance with City policy."

Status → Completed:
This provision currently applies to all LAWA contracts as set forth in Board Resolution No. 21601.

Section VII. Air Quality Study

The Agreement states in part:

"Air Quality Study. LAWA shall fund a study by an Independent Expert of toxic air contaminants and criteria air pollutant emissions from jet engine exhaust and other emission sources ("Air Quality Study"). In addition to other contaminant and pollutant emissions, the Air Quality Study shall measure jet engine exhaust emissions and provide chemical composition data from a representative sample of engine types and ages under a variety of conditions that reflect actual operations, and shall include this data and all other relevant study results as part of the final study provided to LAWA."

Status → Completed:
The LAX Air Quality and Source Apportionment Study (AQSAS) was completed in 2013, and presented to LAWA's Board of Airport Commissioners on June 18, 2013.

The Final Report was posted on the project website, and hard copies of the report were available for public review at the District Office of Councilmember Bill Rosendahl and his successor, Mike Bonin, located at 7166 W Manchester Avenue, Los Angeles, 90045 and at the following public libraries:

- *Westchester-Loyola Village Branch Library, 7114 West Manchester Avenue, Los Angeles, CA 90045*
- *Inglewood Library, 101 West Manchester Boulevard, Inglewood, CA 90301*
- *El Segundo Library, 111 West Mariposa Avenue, El Segundo, CA 90245*

LAX AQSAS Community East monitoring station measuring air pollutants

LAX AQSAS Public Symposium

A Public Symposium was held on Saturday, September 28, 2013 at The Proud Bird Restaurant in Los Angeles to discuss the LAX Air Quality and Source Apportionment Study (AQSAS). Key technical team members presented the study's findings, followed by an hour-long, facilitated question and answer period. Informational materials regarding the study were also provided. The study and informational materials can be found on the web page titled, Final Report and Materials, at http://www.lawa.org/AirQualityStudy.aspx?id=7716.

Several options were offered for submitting written input on the Study, including at the public symposium, or online at http://www.lawa.org/airqualitystudy, or by e-mail to airqualitystudy@lawa.org; or by mail to: Los Angeles World Airports, Environmental Services Division, Attention: LAX AQSAS, 7301 World Way West, 3rd Floor, Los Angeles, CA 90045-5803. The original public input period was from June 16, 2013 to October 11, 2013, but was later extended to November 7, 2013 at the request of The

Neighborhood Council of Westchester/Playa. The report with public feedback appended was anticipated to be posted on the project website in 2014.

In 2013, LAWA's LAX Air Quality and Source Apportionment Study was selected as the Airports Council International-North America (ACI-NA) runner-up for the Environmental Management Award in the Outreach, Education and Community Involvement category.

The completion of this study fulfills the CBA commitment to conduct an air quality source apportionment study.

Section VIII. Health Study

The Agreement states in part:

"Health Study. LAWA shall fund a study to measure and investigate upper respiratory system and hearing loss impacts of LAX operations due to the LAX Master Plan Program. LAWA, in consultation with the Coalition Representative, shall develop a scope of work and objectives for the Health study…"

Status → In Progress:
The funding and implementation of the CBA health study is subject to LAWA's ability to use airport revenue to the extent permissible under federal law and policies, or to develop other state or federal funding sources. On December 3, 2013, LAWA requested that the FAA make a determination on whether airport revenues may be used to provide funding for CBA Section VIII. Health Study. LAWA had not received FAA's formal response during the 2013 reporting period.

Section IX. Community-Based Research Studies as Part of LAWA's Future LAX Master Plan Program Project-Level Analysis

The Agreement states in part:

"Inclusion in Project-Level Environmental Analysis. LAWA acknowledges that, pursuant to CEQA, it will perform additional environmental review on the various LAX Master Plan Program project components as they are processed for future approval. In undertaking this additional environmental review, LAWA shall require the general contractor preparing the environmental documents for these future project-level analysis to subcontract with an Independent Expert to coordinate community-based research studies as described in Section IX.B (the "Community-Based Studies"), that are designed to become a part of the environmental analysis. LAWA shall expend no less than $300,000 on the Community-Based Studies. As future project-level environmental documents are prepared for LAX Master Plan Program projects, LAWA is not required to utilize the Community-Based Studies as part of each project-level environmental review, and shall have discretion to determine whether a particular project-level analysis would be appropriate for including the Community-Based Studies…"

Status → Not applicable at this time:
LAWA determined that none of the project-level environmental analyses conducted in 2013 were appropriate for including the Community-Based Studies.

Section X. Air Quality

The Agreement states in part:

Section X.A. Electrification of Passenger Gates

"1. Passenger Gate Electrification Schedule. LAWA shall ensure that all Passenger Gates are equipped and able to provide electricity sufficient for aircraft needs under the following schedule:

a. All Passenger Gates for which new construction (excluding maintenance) is completed after the effective date of this Agreement shall be equipped and able to provide electricity to parked aircraft from date of initial operation and at all time thereafter.

b. Three years from the effective date of this Agreement, and at all times thereafter, at least fifty percent of Passenger Gates at LAX shall be equipped and able to provide electricity to parked aircraft.

c. Five years from the effective date of this Agreement, and at all times thereafter, one hundred percent of Passenger Gates at LAX shall be quipped and able to provide electricity to parked aircraft.

2. Aircraft Use of Gate-Provided Electricity. LAWA shall ensure that gate-provided electricity is provided to all aircraft parked at Equipped Passenger Gates and, except for the exemptions identified in this section, that all aircraft use the gate-provided electricity in lieu of engine operation of aircraft or mobile/ground auxiliary power units…

3. Assessment of Electrification of Passenger Loading Areas. LAWA shall conduct an assessment of operations at Passenger Loading Areas for the purpose of determining whether electrification of Passenger Loading Areas is Operationally Infeasible. The assessment shall include, but not limited to, inventory utilization, operations, technological trends, and capital and maintenance costs…

4. Commuter Flight Loading and Unloading. By the conclusion of the LAX Master Plan Program, loading and unloading of passengers of commercial aircraft shall be performed only through Passenger Gates."

Status → Completed:
All passenger gates, i.e., terminal and regional boarding ramp gates are electrified with 400 hertz ground power.

Section X.B. Electrification of Cargo Operations Areas

"1. Cargo Operations Areas Electrification Schedule. LAWA shall ensure that all, unless determined under procedures described below to be Operationally Infeasible and/or Technically Infeasible, all Cargo Operations Areas are equipped and able to provide electricity sufficient for aircraft needs as following:

a. All Cargo Operations Areas for which new construction, not maintenance, is completed after the effective date of this Agreement shall be equipped and able to provide electricity to parked aircraft from date of initial operation of the Cargo Operations Area at LAX and at all time thereafter.

b. Three years from the effective date of this Agreement, and at all times thereafter, at least fifty percent of Cargo Operations Areas at LAX shall be equipped and able to provide electricity to parked aircraft.

c. Five years from the effective date of this Agreement, and at all times thereafter, one hundred percent of Cargo Operations Areas at LAX shall be equipped and able to provide electricity to parked aircraft.

2. Aircraft in Cargo Operations Areas Use of LAX-Provided Electricity if Available. LAWA shall ensure that electricity sufficient for aircraft needs is provided to all aircraft parked at Equipped Cargo Operations Areas and that all these aircraft use LAX-provided electricity as power in lieu of engine operation of aircraft or ground/mobile auxiliary power units…

3. Assessment of Electrification of Cargo Operation Areas and Feasibility Evaluation. LAWA shall conduct an assessment of Cargo Operations Areas for the purpose of evaluating whether electrification of a particular Cargo Operations Areas is Operationally Infeasible and/or Technically Infeasible. The assessment shall include, but not limited to, inventory utilization, operations, technological trends, and capital and maintenance costs…"

Status → In Progress:
In 2013, LAWA's Environmental Services Division completed the comprehensive feasibility assessment study for the electrification project for the LAX cargo operations. LAWA's Capital Planning and Programming and Commercial Development Groups are currently defining the details of this project, and will then send it to the Airports Development Group for implementation.

Section X.C. Electrification of LAX Hangars

"LAWA shall conduct an assessment of operations at LAX Hangars for the purpose of determining whether electrification of LAX Hangars to provide electricity sufficient for aircraft needs at LAX Hangars is Operationally Infeasible and/or Technically Infeasible. The assessment shall include, but not be limited to, inventory utilization, operations, technological trends, and capital and maintenance costs…"

Status → In Progress:
In 2013, LAWA's Environmental Services Division completed the comprehensive feasibility assessment study for the electrification project for the LAX hangars. LAWA's Capital Planning and Programming and Commercial Development Groups are currently defining the details of this project, and will then send it to the Airports Development Group for implementation.

Section X.D. FAA Prohibition

"If an FAA Determination, as defined in and pursuant to the procedures set out in the Cooperative Agreement, or any other regulatory authority prohibits LAWA from taking actions required by Subsections A through C of this Section X, or threatens to withhold federal funding if LAWA takes actions required by Subsections A through C of this Section, then LAWA shall set aside $1.7 million to the air quality fund described in Section XV."

Status → Not applicable at this time:
Action is required only if the FAA prohibits LAWA from implementing this section.

Section X.E. Reporting

"LAWA shall report in writing to the Coalition Representative on the progress of electrification of Passenger Gates, Cargo Operations Areas, and LAX Hangars semiannually. Reports shall include, but not be limited to, the number and types of facilities and areas electrified, operational guidelines issued, a summary of exemptions granted, reports of violations of usage requirements, and actions taken by LAWA to enforce usage requirements."

Status → In Progress:
LAWA has provided a status of the electrification program in each of the annual CBA reports.

Section X.F. Construction Equipment

Best Available Emission Control Devices Required. LAWA shall require that all diesel equipment used for construction related to the LAX Master Plan Program be outfitted with the best available emission control devices primarily to reduce diesel emissions of PM, including fine PM, and secondarily, to reduce emissions of NOx. This requirement shall apply to diesel-powered off-road equipment (such as construction machinery), on-road equipment (such as trucks) and stationary diesel engines (such as generators).

Status → In Progress:
As stipulated in Section X.F.8 of the Community Benefits Agreement (CBA), an Independent Third Party Monitor was retained by LAWA to monitor compliance with the requirements of Section X.F. The role of the Independent Third Party Monitor is to monitor, document, and report on a semi-annual basis to LAWA and the Coalition on compliance with all elements of Section X.F, including but not limited to the use of verified diesel emission control systems (VDECS) on LAX Master Plan Program construction-related diesel equipment, a summary of exemptions granted, and any reports of violations or noncompliance with the requirements of CBA Section X.F.

The following is an update of activities and findings reported by the Independent Third Party Monitor as it relates to diesel construction equipment utilized on the Tom Bradley International Terminal and the Taxilane T construction projects:

Section X.F.1 – Best Available Emissions Control Devices Required
All diesel equipment used for construction related to the LAX Master Plan Program is required to be outfitted with best available emission control devices, primarily to reduce diesel particulate matter emissions, including fine particulate, and secondarily to reduce emissions of oxides of nitrogen (NOx). This requirement applies to diesel-powered off-road equipment, on-road equipment, and stationary diesel engines. The emission control devices utilized for the equipment at the LAX Master Plan Program construction shall be verified or certified by the California Air Resources Board (CARB) or Environmental Protection Agency (EPA) for use on on-road or off-road vehicles or engines.

Status → In Progress:
The Independent Third Party Monitor reviewed the documentation submitted by the Contractors for each piece of diesel equipment utilized or planned for possible utilization on the Tom Bradley International Terminal and Taxilane T projects relative to compatibility with Best Available Emissions Control Devices. To date, and in project total, approximately 373 pieces of diesel equipment have been assessed to determine compatibility with a CARB-verified or EPA-certified diesel emission control device.

To assist in performance of this Section, the Independent Third Party Monitor developed and implemented a monitoring process to track each piece of diesel equipment and document each construction firm's compliance as it related to outfitting their diesel construction equipment with the best available emissions control devices.

The findings for this Section are as follows:

- *Major construction work continues on the Tom Bradley International Terminal Project, with Central Core and South Concourse construction completed in May 2013 and Bradley East Gate construction scheduled for completion in 2015. To date, the Third Party Monitor has independently reviewed 284 pieces of equipment. Eight (8) pieces of diesel construction equipment are equipped with a Level 3 diesel particulate filter. Seven (7) additional pieces of diesel off-road construction equipment were identified as being compatible with a Level 3 particulate filter; LAWA project management directed the construction company to retrofit these vehicles prior to deployment on the airfield.*
- *The Taxilane T Project commenced in August 2013, with Phase I scheduled for completion in the summer of 2014. Eighty nine (89) pieces of construction equipment were submitted for independent review. Approximately 63 pieces of equipment have been documented as equipped with a Level 3 VDECS. The remaining equipment was independently documented to ensure the equipment had been granted an exemption in accordance with Section X.F.4. It should be noted that not all construction equipment submitted for independent review operates on the airfield at any given time. However, all construction equipment granted access to the airfield has been previously independently reviewed and approved by LAWA.*

Section X.F.2 - Demonstration Projects

Notwithstanding the verification or certification requirement set forth in Section X.F.1, LAWA may allow diesel equipment used for construction related to the LAX Master Plan Program to be outfitted with a new emission control device designated by LAWA as a "Demonstration Project", even if the device has not yet been verified or certified by CARB or EPA for use in on-road or off-road vehicle or engine applications. These devices shall, at a minimum, meet all pollution reduction requirements specified in Section X.F.3.

Status → Not applicable at this time:
Not required at this time. The Independent Third Party Monitor is available to assist LAWA and the LAX Coalition in identifying potential opportunities to conduct a Demonstration Project in accordance with Section X.F.2. No Demonstration Projects were initiated during 2013.

Section X.F.3 - Emission Reduction Standards

Emission control devices used pursuant to Section X.F.1 shall achieve emission reductions no less than what would be achieved by a Level 2 (50 percent particulate matter reduction) diesel emission control strategy for a similar sized engine as defined by CARB regulations. Under no circumstances shall an emission reduction device or strategy used on the LAX Master Plan Program construction site increase the emission of any pollutant above that which is the standard for that engine.

Status → In Progress:
The Independent Third Party Monitor assessed each piece of diesel construction equipment equipped with a VDECS pursuant to Section X.F.1 and documented its compliance as it related to meeting or exceeding Level 2 diesel emission reductions.

Tier 4i Construction Equipment Utilized on Taxilane T

Findings for this Section are as follows:

- *With respect to the Tom Bradley International Terminal and Taxilane T construction activities during 2013, seventy-one- (71) diesel construction equipment were equipped with VDECS verified at Level 3 (greater than 85 percent particulate matter reduction). No Level 1 or Level 2 VDECS were identified for equipment assessed pursuant to Section X.F.1.*
- *The Third Party Monitor verified with CARB that the Level 3 device utilized on the Taxilane T and the Tom Bradley International Terminal projects did not result in an increase of any pollutant above which is standard for that equipment's engine.*

Section X.F.4 – Exemptions

The requirements of Sections X.F.1 through X.F.3 do not apply to a piece of construction related diesel equipment for which the operator provides a written finding, based upon appropriate market research and approved by LAWA, that the best available emission control device for reducing the emissions of pollutants as requires by Sections X.F.1 through X.F.3 is unavailable for that equipment, in which case the contractor shall use whatever technology for reducing exhaust emissions is available and appropriate for that vehicle or engine, if any. In addition, Sections X.F.1 through X.F.3 do not apply to a piece of construction related diesel equipment that is used on LAX Master Plan Program construction sites for fewer than twenty (20) calendar days per calendar year.

Status → In Progress:
The Third Party Monitor reviewed each piece of diesel construction equipment proposed for use on the Taxilane T and Bradley International Terminal Project as it pertained to the requirements of Sections X.F.1 and X.F.3 and independently determined if a CARB verified or EPA certified diesel emission control system was compatible. These findings were documented and compared with exemptions granted by LAWA. Findings for this Section are as follows:

- *Equipment whose engine is compatible with a CARB verified or EPA certified diesel emission control system, but whose use on the Taxilane T or Bradley International Terminal would not exceed twenty (20) calendar days per calendar year was granted a "20-day" exemption by LAWA. The Third Party Monitor maintained an independent database of all equipment operating under the 20-day exemption rule, including the date the equipment was moved onsite and the date the equipment was required to be removed from the airfield;*
- *The Third Party Monitor reviewed and documented cases where it was determined that the VDECS would impair the equipment operator's field of vision. These vehicles were granted a safety exemption by LAWA. Specific classes of diesel equipment, including motor graders, received an exemption from LAWA on the basis of safety. The Independent Third Party Monitor reviewed and documented each piece of diesel construction equipment that received a safety exemption;*
- *Exemptions were also granted by LAWA for diesel equipment equipped with small displacement engines and horsepower (hp) ratings less than 50 hp; this included light towers and air compressors. In addition, on-road vehicles licensed under the Department of Motor Vehicles were granted an on-road vehicle exemption.*
- *The Third Party Monitor also independently assessed and documented diesel equipment for which no CARB verified or EPA certified diesel emission control system was available. This equipment was granted an exemption by LAWA on the basis of unavailability.*

Section X.F.5 - Ultra-Low Sulfur Diesel and Other Fuels

All diesel equipment used for construction related to the LAX Master Plan Program shall use only Ultra-Low Sulfur Diesel Fuel (ULSD) with a sulfur content of fifteen (15) parts per million or lower. If adequate supplies of ULSD are not available in the Southern California area, other fuels may be used, provided that the other fuels do not result in

greater emissions of fine particulate matter or oxides of nitrogen that which would be produced by the use of ULSD.

Status → In Progress:
The Third Party Monitor independently reviewed and documented fuel purchase records for diesel fuel used on the Taxilane T and Bradley International Terminal Project. Findings for this Section are as follows:

- *South Coast AQMD Rule 431.2, which took effect on June 1, 2006, requires diesel fuel refined and sold for on-road and off-road use within the jurisdiction of the AQMD to contain no more than 15 parts per million (ppm) sulfur by weight. This requirement was subsequently adopted on a statewide basis by the California Air Resources Board, effective September 1, 2006. Thus, ULSD is the only diesel fuel legally available for purchase within California;*

- *No shortage of ULSD was experienced within Southern California during TaxilaneT or the Bradley International Terminal construction activities in 2013. No substitution of any fuel in lieu of 15 ppm ULSD occurred during any LAX Master Plan construction project;*

- *The Third Party Monitor reviewed fuel purchase records as provided by LAWA on behalf of the construction firms. No exceptions to the requirements of Section X.F.5 were documented;*

- *The Independent Third Party did not monitor on-road vehicles operating on the Taxilane T or Bradley International Terminal projects that were fueled off-site. Fuel purchase records were only provided for vehicles that were fueled on the airfield using mobile refueling trucks.*

Section X.F.6 - Operational Requirements

Operational Requirements pertaining to excessive vehicle idling and required engine maintenance intervals shall be issued by LAWA and enforced.

Status → In Progress:
The Third Party Monitor monitored excessive vehicle idling enforcement and compliance with engine maintenance intervals based on independent observation, review of enforcement action documentation, and review of construction firm engine maintenance procedures and records.

Findings as it relates to this Section are as follows:

- *No written violations pertaining to excessive equipment idling were cited by LAWA on any construction firm. On infrequent occasions, vehicles deemed to be idling beyond the period of time stipulated in CARB regulations were instructed to turn off their engines. Formal enforcement actions were not deemed necessary by LAWA;*
- *Each construction firm proposing a piece of diesel equipment was required to submit in writing the scheduled maintenance procedures for that piece of*

equipment. The Third Party Monitor has reviewed each maintenance plan submitted to LAWA.

Section X.F.7 – Enforcement by LAWA

Compliance with all requirements delineated in Sections X.F. is required of all Airport Contractors, Airport Lessees, and Airport Licensees. LAWA shall enforce the findings and determinations of the Independent Third Party Monitor.

Status → In Progress:
No formal enforcement actions were taken by LAWA in 2013 as it pertains to Taxilane T or Bradley International Terminal construction activities.

Section X.F.8 – Independent Third Party Monitor

Compliance with requirements of Section X.F. is required to be monitored, documented, and reported by an Independent Third Party Monitor.

Status → In Progress:
LAWA retained an Independent Third Party Monitor. The findings of the Independent Third Party Monitor are reported in this document and in Appendix B.

Section X.F.9 – Reassessments of Emission Control Devices

"LAWA shall designate the best available emission control devices annually or more frequently, in consultation with the Coalition Representative and the Independent Third Party Monitor. LAWA, in consultation with the Coalition Representative, shall establish processes to revise these designations and incorporate the requirement to use the emission control devices newly designated as best available into construction bid documents to take into account advances in emission control devices prior to bidding of new construction phases of the LAX Master Plan Program. The process of emission control technology review shall include any new relevant requirements promulgated by CARB or EPA. Results from the reassessments shall not be applied retroactively."

Status → In Progress:
The Independent Third Party Monitor reviewed each piece of diesel construction equipment proposed for use on the Taxilane T and Bradley International Terminal for compatibility with newly verified Level 2 and 3 VDECS. While it was understood that the requirement to utilize new VDECS could not be applied retroactively for equipment operating on the Taxilane T, and Bradley Terminal, the reassessment process and findings will be used to designate best available control emission devices for subsequent LAX Master Plan Program construction projects.

Section X. G. Ground Service Equipment Diesel Emissions Reduction Incentive Program

"GSE Incentive Program. LAWA shall create a program providing incentives for the reduction of GSE diesel emissions ("GSE Incentive Program"). LAWA shall expend at least $500,000 on the GSE Incentive Program. Participation by GSE operators in the GSE Incentive Program shall be voluntary. Funding for the program shall commence in fiscal year 2005-06."

Status → In Progress:
LAWA updated the 2007 LAX GSE inventory by completing a comprehensive e-GSE feasibility study in 2013. The updated feasibility study is being used in 2014 to develop specific guidance for the GSE incentive program.

Section X.H. Ground Service Equipment Inventory

"1. Scope of GSE Inventory. LAWA shall prepare a study ("GSE Inventory") detailing all GSE operated On-Site. The GSE Inventory shall include, but not be limited to, an inventory of the number, type, sizes, model year, usage history, and identify of operator for all GSE operated On-Site at the time of the GSE Inventory…

2. Determination of 1997 GSE Fleet for Nonparticipating GSE Operators. The GSE Inventory shall include a determination of the number and types of On-Site GSE that were operated On-Site in 1997 by each Nonparticipating GSE Operator…"

Status → Completed:
The study was completed and the results were issued to the Coalition in May of 2007. In 2012, LAWA began the process to update the LAX GSE inventory and conduct a comprehensive e-GSE feasibility study in 2013. The updated comprehensive feasibility study was completed and presented to the Coalition at the January 28, 2014 CBA meeting.

Section X.I. Requirements for Emissions Reductions by Nonparticipating GSE

"In order to achieve emission reductions from GSE operated at LAX by Nonparticipating GSE Operators, LAWA shall issue requirements leading to the use of less-polluting GSE by Nonparticipating GSE Operators, as described in this Section X.I. New, amended, renewed, or extended Airport Contracts, lease agreements, and any relevant LAX licensing or permitting requirements for Nonparticipating GSE Operators shall include language requiring compliance with requirements of this Section X.I. and allowing assessment of liquidated damages as described in this Section X.I against any entity responsible for a violation…"

Status → In Progress:
LAWA updated the 2007 LAX GSE inventory by completing a comprehensive e-GSE feasibility study in 2013. Based on the updated feasibility study, LAWA reviewed and analyzed strategies and options to achieve GSE emission reductions. These options are being reviewed and analyzed in consultation with airlines. LAWA's GSE strategies are aligned with the California Air Resources Board's current approach to achieving GSE emission reductions.

Current LAX GSE inventory includes emission-saving electric forklift

Current LAX GSE inventory includes emission-saving SmarteCarte electric baggage cart retriever

Section X.J. Emission Reductions from On-Road Trucks, Buses, and Shuttles

"1. Inventory of On-Road Heavy-Duty Vehicle Traffic and Study of Feasible Mitigation

a. Heavy-Duty Vehicle Study. LAWA shall fund a study of on-road Heavy-Duty Vehicle traffic related to LAX Operations. This study shall begin no later than one year from the effective date of this Agreement. The study shall be completed within twelve months of its initiation. The Study shall be conducted by an Independent Expert, selected through a Contract Award Process…"

Status → In Progress:
A draft scope for this study was submitted to the Coalition in July 2005.

"2. Conversion of Truck, Shuttles, Passengers, Vans and Buses to Alternative Fuel

a. Covered Vehicles. Requirements established under this Section X.J.2 shall apply to all on-road vehicles, including trucks, shuttles, passenger vans, and buses, that are 8,500 lbs gross vehicle weight rating or more and are used in operations related to LAX ("Covered Vehicles"). Diesel equipment for construction related to the LAX Master Plan Program that is subject to Section X.F. of this Agreement shall be exempt from requirements established pursuant to this Section X.J.2.

b. Conversion Schedule. LAWA shall ensure that by five years from the effective date of this Agreement, 50 percent of the Covered Vehicles operated by any Airport Contractor, Airport Lessee, and Airport Licensee (collectively "Operators") are Alternative-Fuel Vehicles or Optional Low NOx Standard Vehicles. LAWA shall ensure that by ten years from the date of execution of this Agreement, 100 percent of the Covered Vehicles operated by each Operator are Alternative-Fuel Vehicles or Optional Low NOx Standard Vehicles.

c. Least-Polluting Available Vehicles. In cases where Operators cannot comply with requirements established pursuant to Section X.J.2.b because neither Alternative-Fuel Vehicles nor Optional Low NOx Standard Vehicles are commercially available for performance of particular tasks, LAWA shall instead require Operators to use Least-Polluting Available Vehicles for such tasks. An Independent Third Party Monitor shall determine on an annual basis whether Alternative-Fuel Vehicles or Optional Low NOx Standard Vehicles are commercially available to perform particular tasks, and, in cases where Alternative-Fuel Vehicles or Optional Low Standard Vehicles are not commercially available for performance of a particular task, shall identify the Least Polluting Available Vehicles for performance of that task."

Status → In Progress:
LAWA has an Alternative Fuel Vehicle Requirement Program that applies to all on-road vehicles with a gross vehicle weight rating of 8,500 pounds or greater. This program is currently in effect and requires the conversion of rental car shuttles, trucks, and other large vehicles in use at LAX.

LAWA has taken a leadership role to meet this commitment and has met the mid-way milestone for LAWA's LAX vehicles over 8,500 pounds. The entire LAX fleet is 59

percent alternative fuel. One hundred percent (100%) of the LAX courtesy shuttles are alternative fuel, as are the Americans with Disability Act (ADA) shuttles.

LAWA also continued to work with the operators of the Covered Vehicles to meet this commitment. Environmental Services Division (ESD) staff conducted meetings to inform the contract managers of improvements to the reporting process and to provide information to aid the operators to reach compliance with this commitment.

LAWA is working towards completing a revised LAX Alternative Fuel Vehicle Semi-Annual Reporting Form and database. The semi-annual reporting form is being converted to an on-line, user-friendly reporting form which will streamline the process and reduce data entry error. Fleet vehicle data is automatically populated into the database to track and determine compliance status. LAWA continues to work towards achieving compliance with the requirement.

Section X.K. Particulate Matter (PM 2.5)

"1. Assessment of PM 2.5. LAWA shall assess and mitigate impacts of PM 2.5 in compliance with all applicable provisions of state and federal law. LAWA's obligation to mitigate PM 2.5 impacts within the context of the CEQA may be limited by feasibility, overriding considerations or other requirements articulated in applicable state and federal laws.

2. Determination of PM 2.5 Significance Thresholds. The assessment and mitigation of PM 2.5 impacts shall comply with the requirements for both attainment of PM 2.5 ambient air quality standards and the mitigation of significant project-related and cumulative impacts under CEQA.

3. Conferring with Applicable Agencies. LAWA shall confer with applicable agencies, including SCAQMD, CARB, and the EPA, to assure compliance with state and federal PM 2.5 ambient air quality standards after guidance for measuring and evaluating exceedances has been established. With respect to projects requiring CEQA analysis, LAWA shall include the SCAQMD as a responsible agency in the review process to seek adherence to the threshold standards to be established.

4. LAWA Project Assessment of PM 2.5. LAWA shall conduct and complete a CEQA assessment of PM 2.5 impacts related to the first LAX Master Plan Program project to be initiated after establishment of applicable thresholds, either by SCAQMD or as outlined above. This assessment shall be completed in consultation with SCAQMD as a responsible agency in the CEQA review process."

Status → Completed:
In 2008, LAWA initiated the environmental analysis of the Crossfield Taxiway Project (CFTP) and published a Draft Environmental Impact Report (EIR) on September 25, 2008. The Draft EIR included an assessment of PM2.5 impacts in its air quality analysis. Note: This requirement did not apply to the SAIP (the CEQA analysis for that project was already well underway before the CBA took effect - the SAIP EIR NOP was published in August 2004, while the CBA was executed in February 2005).

Section X.L. Rock-Crushing Operations and Construction Material Stockpiles

"LAWA shall locate rock-crushing operations and construction material stockpiles for all construction related to the LAX Master Plan Program in areas away from LAX-adjacent residents to reduce impacts from emissions of fugitive dust…"

Status → In Progress:
Subject requirement was included in construction specifications of the Bradley West Project (BWP) and Taxilane T, and the rock-crushing plant for these projects complied with this requirement. This requirement is included in construction specifications for all upcoming projects at LAX to the extent that a plant could be accommodated on site.

Section X.M. Limits on Diesel Idling

"LAWA shall prohibit diesel-powered vehicles from idling or queuing for more than ten consecutive minutes On-Site, unless CARB adopts a stricter standard, in which case LAWA shall enforce that standard. Exemptions to this rule may be granted for safety-related and operational reasons, as defined in CARB regulations."

Status → Completed:
Subject requirement was included in construction specifications for the CFTP and BWP and was monitored by LAWA's Independent Third Party Monitor. This requirement will be included in construction specifications for all upcoming projects at LAX.

Section X.N. Provision of Alternative Fuel

"LAWA shall ensure that its infrastructure for providing fuel to Alternative-Fuel Vehicles is sufficient and available, where not Operationally Infeasible and/or Technically Infeasible, to meet all requests for alternative fuel from contractors and other uses of LAX."

Status → In Progress:
LAWA has a liquefied natural gas (LNG)/compressed natural gas (CNG) facility located on airport property to service LAWA vehicles. There is also a public retail station owned and operated by Clean Energy on the southeast corner of Aviation Boulevard and 104th Street that sells CNG and hydrogen fuels.

In early 2013, Clean Energy completed building a second CNG station at 9601 Aviation Boulevard, one block north of Century Boulevard. The new station is a $3 million private-sector investment. Clean Energy owns and operates the station under a long-term property lease with Hertz. The new Clean Energy CNG station is the largest capacity public-access CNG station in the U.S and is capable of fueling up to six full-size transit buses or 10 light-duty vehicles, simultaneously. This new station is designed to have better lighting and faster fueling. It is estimated that the fuel flow of the new dispensers is twice as fast as those at existing stations. The combined CNG capacity for both Clean Energy stations will be 3,500+ gallons per hour.

In addition, LAWA is working with the Los Angeles Department of Water and Power to procure 14 electric vehicle chargers for LAX's long-term parking, Lot C. The entire project was expected to be completed in 2014.

LAWA currently has sufficient alternative fuel infrastructure at LAX. LAWA continues to assess demand and look for appropriate opportunities to expand its alternative fuel infrastructure.

Section X.O. Hydrogen Fuel Cell Infrastructure

"LAWA shall support efforts to place a hydrogen fuel cell system for the generation of electricity at or near LAX. This fuel cell system shall meet or exceed CARB 2007 distributed generation certification standard."

Status → Completed:
LAWA investigated the use of hydrogen fuel cells for the Central Utility Plant Replacement Project (CUP-RP) Environmental Impact Report published in 2009. The use of hydrogen fuel cells would not be feasible due to size constraints and energy inefficiency.

Section X.P. Cleaner Burning Jet Fuels

"LAWA shall support efforts to encourage the airlines and petroleum industries to embark on a study to promote the use of jet fuels that minimize air pollutant emissions from jet engines."

Status → In Progress:
The Airport Cooperative Research Program (ACRP) is a research program that is managed by the Transportation Research Board (TRB) and sponsored by the FAA. The ACRP researches and develops near-term, practical solutions to problems faced by airport operators. In 2013, LAWA's Executive Director, Gina Marie Lindsey, served as a member of the ACRP's Oversight committee to develop a handbook for airport operators and interested parties of "drop-in" alternative fuel production and delivery. The handbook provides an overview of issues and opportunities associated with locating (on- or off-airport) an alternative jet fuel production facility, and its fuel storage and distribution requirements. ACRP Report 60: Guidelines for Integrating Alternative Jet Fuel into the Airport Setting can be downloaded from the following link: http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_060.pdf

Also in 2013, the Federal Aviation Administration Center of Excellence (COE) for Environment and Energy selected Washington State University and the Massachusetts Institute of Technology to lead a new Air Transportation Center of Excellence for alternate jet fuels and the environment. To further support research and development of alternative jet fuels, LAWA has agreed to participate as an Industry Affiliate for the University of Kansas and University of California, Los Angeles (UCLA) in the Air Transportation Center of Excellence for Alternative Jet Fuels and Environment.

In 2013, United Airlines announced an agreement with AltAir Fuels to purchase 15 million gallons of alternative jet fuel over a three year period. According to AltAir Fuels, the biofuels will replace petroleum-based fuel, which requires no modification to factory-

standard engines or aircraft. AltAir Fuel will begin manufacturing the biofuels as its first fuel production project in Los Angeles.

Section XI. Green Building Principles

The Agreement states in part:

"To the extent practical and feasible, in accordance with local building codes and California state codes, and subject to limitation or restrictions in accordance with FAA or Transportation Security Administration standards guidelines, LAWA shall incorporate Leadership in Energy and Environmental Design (LEED) building standards into demolition, design, construction and operation of all aspects of the LAX Master Program. LAWA shall apply the LEED standards for New Commercial and Major Renovations, Version 2.1, as defined by the U.S. Green Building Council.

LAWA shall abide by all applicable City regulations with respect to energy efficiency, sustainability and green building design."

Status → In Progress:
This measure is currently in practice to the extent feasible and practical.

The Villaraigosa Pavilion at the New Tom Bradley International Terminal (TBIT) opened September 2013 as part of the Bradley West Gates project. The new terminal was designed to achieve LEED Silver Standards by optimizing the use of recycled building materials, minimizing the amount of energy used in construction, utilizing daylighting and optimizing energy efficiency. The TBIT Star Alliance Lounge, which also opened September 2013, uses daylighting, energy efficient design, and sustainable materials as part of the effort to achieve LEED Gold for Commercial Interiors. The TBIT Renovations project, which renovates the original Bradley terminal, is being designed and constructed to LEED Silver standards.

Villaraigosa Pavillion at the new
Tom Bradley International Terminal

LAWA's new Central Utility Plant Replacement Project (CUP-RP) is designed to be approximately 25 percent more energy efficient that the current facility, and is being designed and constructed to meet LEED Silver standards. When completed plant equipment will include electric and steam driven chillers; gas-turbine-driven generators with heat-recovery steam generators (co-generation); and a 1.6 million gallon thermal energy storage tank. Phase I of the CUP-RP was completed and started operation in October 2013. It was fully operationally by December 2013.

Building projects in the City of Los Angeles are subject to the Los Angeles Green Building Code (LAGBC), which is based on the California Green Building Code (Cal Green). As the LAGBC replaced LEED in the Los Angeles Municipal Code in 2008,

LAWA has since replaced its Sustainability Planning, Design, and Construction Guidelines with the sustainable construction standards on the mandatory and voluntary tiers defined in the LAGBC.

Section XII. Traffic

The Agreement states in part:

"A. Construction Traffic

1. Designated Routes. LAWA shall designate routes for construction equipment, construction-related vehicles, and trucks participating in construction projects related to the LAX Master Plan Program to access LAX. These route designations shall ensure that such construction equipment, construction-related vehicles, and trucks do not travel (i) on 111th Street between Hawthorne Boulevard and Inglewood Avenue; (ii) on 104th Street between Hawthorne Boulevard and Inglewood Avenue; (iii) on Inglewood Avenue between Century Boulevard and Inglewood Ave….

   a. Community Response Program. LAWA shall establish a mechanism for members of the public to report instances of non-compliance with designated truck routes….

2. Lennox/405 Interchange. If LAWA participates in construction of an interchange to the 405 Freeway at Lennox Boulevard, LAWA shall consult with the Coalition Representative and impacted residents in developing mitigation measures that shall be included in the project's Environmental Impact Report, to minimize negative impacts such as residential relocations and the demolition of a community center. These mitigation measures shall include pedestrian and bicycle access over or under the 405 Freeway at Lennox Boulevard, to ensure that local residents can safely access both sides of the 405 Freeway at Lennox Boulevard."

Status → In Progress:
LAWA, working with the Los Angeles Department of Transportation, designates routes for construction traffic on a project by project basis. LAWA developed a website at http://www.lawa.org/laxdev to provide construction information for the public. The general, program-wide construction hotline number, which is posted on the website, to report incidences of non-compliance is (310) 649-LAWA (5292).

The Lennox Boulevard/ I-405 interchange and associated mitigations will be considered further within the context of the planning and programming for the Ground Transportation Center.

Section XIII. Minority Business Enterprise, Women Business Enterprise, and Small Business Utilization and Retention Program

The Agreement states in part:

"A. LAWA shall coordinate with the Mayor's Office, CDD, and other relevant business advocacy and assistance organizations to initiate a program to increase participation in the planning, construction, operation and maintenance of LAX by PIA small businesses and minority-owned business enterprises and women-owned business enterprises (MBE/WBE)….."

Status → Ongoing:
In collaboration with the Procurement Services Division, the Business Outreach Unit (BOU) conducts a monthly workshop, "Doing Business with LAWA." The workshop provides the business owner an opportunity to about the procurement processes, administrative requirements and certification and bond assistance services.

LAWA presenters are from Procurement Services, including Purchasing and Contract Administration sections, LAWA's Certification staff, Bond Assistance Program, and Business and Job Resources/Business Assistance. Business owners are given the opportunity to introduce their company so that the presenters know who is in the audience so the presenters can provide information on a particular product or service. Annually, attendance at the workshops averages 240 business representatives. Attendance at the monthly workshops averages 20. There is no charge for parking.

In October 2012 the Board of Airport Commissioners adopted a mandatory Small Business Enterprise (SBE) program to replace the Minority/Women/Other Business Enterprise (M/W/OBE) program. SBE is defined as an independently-owned and operated business that meets criteria set forth by the Federal Small Business Administration (SBA), or State of California SBE Program, whichever is greater. LAWA sets a specific, mandatory percentage of small business subcontracting on construction, professional and non-professional projects valued in excess of $150,000; there is a penalty for failure to meet goal. Unlike the M/W/OBE program, Primes that are certified SBEs are credited for 100% participation. The first year results are promising, with significant participation by SBEs, and increased participation by MBEs and WBEs.

The BOU has developed a database, BizConnect, of approximately 6,500 businesses that are seeking to do business with LAWA. This database was developed with the support of LAWA's Information Management and Technology Group, and is maintained by the BJRC staff. Staff periodically requests updated information from the listed businesses so that current information is always available. BizConnect lists the companies' contact, concept, and certification information for distribution internally and externally. The database is accessible to the public at www.lawa.org/bjrc.

The BOU actively participates in LAWA Division's Request for Qualifications, Request for Proposals, and Request for Bids meetings. Announcements on potential procurement opportunities are sent to businesses listed on BizConnect and to other business assistance agencies that LAWA partners with for distribution.

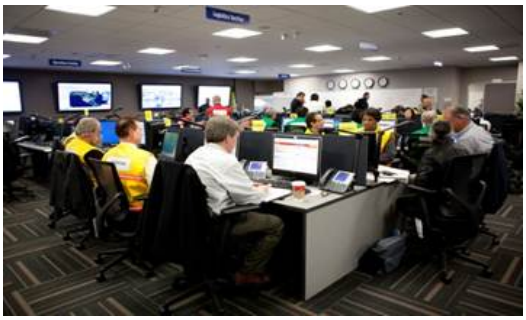
The BOU also participates and supports outreach events by LAWA's Divisions, City Departments, and other public agencies. This past year LAWA conducted or participated

in approximately 200 meetings and events. The unit is actively involved with local Chambers and ethnic business organizations.

Section XIV. Community Preparedness for Airport-Related Emergency

The Agreement states:

"LAWA shall assist in the coordination and dissemination of appropriate information related to emergency preparedness and response of local law enforcement agencies, emergency response groups (e.g., Red Cross, FEMA), and the local communities in the event of an airport-related emergency."



LAX's ARCC Centralized Operations Center

Status → Ongoing:
In 2013, LAWA continued to assist in the coordination and dissemination of appropriate information related to emergency preparedness and response of local, state and federal law enforcement agencies, emergency response groups and the local communities in the event of an airport-related emergency. On the day of the active shooter incident in Terminal 3 on November 1, 2013, the Department Operations Center was activated at its highest level (level 3) supporting first responders and serving as the information hub.

Also in 2013, LAWA developed a robust training program to motivate employee preparedness and invited stakeholders to participate in training sessions. The sessions ranged from basic to complex preparedness, and were offered multiple times and at different locations throughout the year. Presenters from the American Red Cross led basic training sessions, and instructors from the Los Angeles Fire Department for the Community Emergency Response Team (CERT) program provided training on first aid and search and rescue techniques. Additionally, LAWA initiated programs to support mass care and comfort for the traveling public in case of an emergency event, starting with pre-positioned inventories of supplies that have been placed both on and off the airport. These supplies can be distributed by Airport personnel, including a newly developed Airport Response Team which focuses on passenger comfort, face to face communication, and support for the ADA population. In addition, significant improvements were made for communicating with the surrounding communities. The use of mass notification platforms (Alert LA for landlines and Wireless Emergency Alerts (WEA) for wireless phones were initiated and standard operating procedures were developed. These notifications aid in communicating to the surrounding communities in case of an emergency event and supplement LAWA's subscription-based mass notification system. A proposal to test the landline mass notification system early in 2015 with the surrounding communities was also introduced in 2013, with the first step being a poll to see which community partners would be interested in participating in such a test.

Section XV. Designated Airport Fund

The Agreement states in part:

"Where this Agreement provides that LAWA shall contribute airport revenues to job training funds or air quality funds, LAWA will follow the procedures set forth in the Cooperative Agreement regarding "Alternative Job Training and Air Quality Expenditure."

Status → Not applicable at this time:
If an FAA determination, as defined in and pursuant to the procedures set out in the Cooperative Agreement, or any other regulatory authority prohibits LAWA from taking actions required by the CBA Sections V, VII, VIII, IX, X, or threatens to withhold federal funding if LAWA takes actions required by the referenced sections, then LAWA will set aside funds to the Job Training and Air Quality Funds to the extent allowed.

Section XVI. Miscellaneous

The Agreement states in part:

"A. Implementation Meetings. To facilitate implementation of this Agreement, address concerns, and ensures an ongoing dialogue between the Coalition Representative and LAWA, the Coalition Representative and LAWA shall have regular Implementation Meetings….

B. Annual Reports. LAWA shall prepare annual reports on the implementation of this Agreement and the progress of the LAX Master Plan Program, and shall forward these reports to the Coalition Representative and post the reports on the LAWA website for at least a one-month period….

C. Contract Award Process. Where a provision of this Agreement refers to a Contract Award Process, that process shall be as described in this Section XVI.C. A Contract Award Process is "initiated" on the date the draft protocols and/or scope of work to be included in the RFP are provided to the Coalition Representative…"

D. Special Arbitrator…"

E. General LAWA Enforcement Responsibility…"

Status → In Progress:
Implementation meetings are regularly scheduled with the Coalition. LAWA ensures that one deputy executive director and one other management-level LAWA staff member attend each meeting. LAWA prepares annual reports on the implementation of the CBA and the progress of the LAX Master Plan Program. The annual reports are posted on LAWA's website at http://www.lawa.org/ourLAX/AnnualReports.aspx?id=8034.

On November 6, 2013, LAWA released a Request for Proposals (RFP) for an Independent Third Party Monitor to monitor compliance with various air quality requirements in the CBA. LAWA followed the protocols set forth in the CBA regarding the Contract Award Process, and consulted with the Coalition Representative throughout the process.

4.0 Lennox School District – Sound Attenuation Measure

The Agreement states in part:

"LAWA Funding of Certain District Mitigation Measures. Subject to FAA Determination regarding the use of airport funds under the federal anti-revenue diversion laws, LAWA will fund certain mitigation measures for the District not to exceed $111,000,000 for noise abatement. Mitigation measures include replacement of HVAC equipment with pollution abatement, double-paned windows and/or sound reduction windows and doors, roofing upgrades, replacement of relocatable classrooms, and temporary housing during construction.

Security-Related Items. LAWA will assist the District in the coordination and dissemination of appropriate information related to emergency preparedness and response of local law enforcement agencies, emergency response groups (e.g., Red Cross, Federal Emergency Management Agency) and the local communities in the event of an airport-related emergency.

Community Programs. LAWA will work collaboratively with the District to support a variety of community programs, such as job training and academic programs; and…"

Status → In Progress:
On December 7, 2005, LAWA and Lennox School District (Lennox) submitted a request to the FAA for an advisory opinion on the use of airport revenues for noise mitigation measures at Whelan School. In their response on January 12, 2006, the FAA raised questions and issues regarding the Los Angeles County Superior Courts' April 8, 1976 Judgment and Final Order.

On October 2, 2008, Public Law 110-337 authorized the Secretary of Transportation to expand the use of passenger facility fees for the purpose of carrying out certain noise mitigation at Lennox and Inglewood Unified School Districts.

In July 2009, LAWA submitted a letter to the FAA on behalf of Lennox asking that the Secretary of Transportation make a determination, based on Public Law 110-337, that certain schools in Lennox are adversely affected by airport noise, and thereby would be eligible for PFC funding for noise mitigation. Subsequently, the FAA indicated to LAWA that this determination will be made as part of the PFC application process.

On January 10, 2011, the BOAC authorized LAWA to submit the PFC application to the FAA for authorization to collect and use PFC funds to sound insulate impacted schools in the Lennox, with the application submitted to FAA on February 2, 2011.

On May 2, 2011 the FAA issued the Final Agency Decision finding the schools in Lennox to be "significantly impacted and adversely affected by aircraft noise," and authorized the expenditure of up to $34,089,058 in PFC funds to insulate the schools listed in the Settlement Agreement between LAWA and Lennox.

On September 19, 2011, the BOAC approved the Letter of Agreement between LAWA and Lennox, and authorized the release of $10 million to Lennox for the first year of the sound insulation program. The funds were delivered to Lennox on December 12, 2011. A new school, Dolores Huerta Elementary School, was completed in 2011, and later in

2011 LAWA provided Lennox with an additional $1,214,600 for reimbursement of sound insulation construction for this school.

During 2012, the District contracted work related to those schools listed in their Year One Work Plan, including Felton Elementary School, Lennox Middle School, Jefferson Elementary School and new construction north of Jefferson Elementary School. Progress has been made on all of these projects, including the approval of designs by the Division of State Architects and acquisition and construction of temporary classrooms for the construction phase. Animo Leadership High School, the District's charter school under the management of Green Dot, was also in the Year One Work Plan and was completed in in September 2012.

The District continues to work on sound attenuation of instructional spaces identified in the Year One Work Plan, and will add on other projects in the Second Work Plan. Through June 30, 2013, the District had expended eligible costs of $2,353,596 on sound attenuation projects. It was anticipated that an additional $8 Million would be expended in Fiscal Year (FY) 2013-14. Felton Elementary School has acquired temporary classrooms to be used during construction, which is slated to begin in 2014. Lennox Middle School's planning and design portion of the project was completed and construction is scheduled to begin in 2014 as well. Jefferson Elementary School's sound attenuation plans were submitted to the Division of State Architect (DSA). Construction has begun at the site north of Jefferson Elementary.

No additional funding was provided to the District in 2013. The second installment of funds would be provided in 2014. LAWA will provide authorization for the next $10 million dollars to be spent for the Second Work Plan.

5.0 Inglewood Unified School District – Sound Attenuation Measure

The Agreement states in part:

"LAWA Funding of Certain District Mitigation Measures. Subject to FAA Determination regarding the use of airport funds under the federal anti-revenue diversion laws, LAWA will fund certain mitigation measures for the District not to exceed $118,500,000 for noise abatement. Mitigation measures include replacement of HVAC equipment with pollution abatement, double-paned windows and/or sound reduction windows and doors, roofing upgrades, replacement of relocatable classrooms, and temporary housing during construction.

Security-Related Items. LAWA will assist the District in the coordination and dissemination of appropriate information related to emergency preparedness and response of local law enforcement agencies, emergency response groups (e.g., Red Cross, Federal Emergency Management Agency) and the local communities in the event of an airport-related emergency.

Community Programs. LAWA will work collaboratively with the District to support a variety of community programs, such as job training and academic programs; and…"

Status → In Progress:
On October 2, 2008, Public Law 110-337 authorized the Secretary of Transportation to expand the use of passenger facility fees for the purpose of carrying out certain noise mitigation at Inglewood Unified and Lennox School Districts.

Per communications with the FAA related to Lennox School District in 2005 and again in 2009, eligibility for funding projects listed under this Settlement Agreement with Inglewood Unified School District (IUSD) will be made by the FAA through the PFC application process. Further details related to these communications with the FAA are described in Section 4.0.

LAWA worked with the IUSD and the FAA to complete the PFC application process requesting authorization to use PFC funding for sound insulation of impacted schools in the IUSD. The PFC application was submitted to the FAA on August 19, 2013 for $64 million dollars which would attenuate eight schools including:

Inglewood High School	Child Dev. Ctr at Woodworth Elementary
Morningside High School	Hudnall Elementary School
Monroe Middle School	Payne Elementary School
Woodworth Elementary School	Oak Street Elementary School

The FAA had 120 days to respond to the application unless additional information was requested. The FAA requested additional information which LAWA provided and the final response was expected in 2014.

6.0 Summary

To date, LAWA continues to implement applicable provisions from the Community Benefits Agreement. Construction-related provisions were included in the Taxilane T and Tom Bradley International Terminal projects using contract specifications and are being implemented during construction. These provisions are also being incorporated into all ongoing Master Plan projects at this time. Working together with the Coalition, LAWA continues to monitor and implement the required provisions as the LAX Master Plan Program moves forward.

APPENDIX A

UPDATED NOISE MITIGATION PROGRAM AND SCHEDULE

LAWA - Residential Soundproofing Program

December 2013

LAX Residential Soundproofing Program

Background

Los Angeles World Airport's (LAWA) Residential Soundproofing Program (RSP) was established in 1997 to implement the LAX Aircraft Noise Mitigation Program by soundproofing dwelling units in noise-impacted areas in the City of Los Angeles. The program initially covered approximately 8,200 residential units in areas of the City of Los Angeles, around LAX, with a recorded Community Noise Equivalent Level (CNEL) of 65 decibels (dB) and higher, as shown on the map produced by LAWA for the fourth quarter of 1992. An additional 1,200 units became eligible by the Community Benefits Agreement (CBA) calling for the soundproofing of properties within the same block of a previously impacted parcel. These 9,400 homes are located in Playa del Rey, Westchester and areas of South Los Angeles. The RSP is strictly voluntary and will not incur any cost to the property owner.

Typical examples of soundproofing include replacing or modifying loose-fitting doors and windows with acoustically rated doors and windows, adding insulation to attics, upgrading the air ventilation system, and fitting chimneys and vents with dampers and/or acoustic louvers. Residences located east of the San Diego Freeway also receive a central air conditioning system in lieu of the ventilation system.

At this time, soundproofing is not offered to new participants within the City of Los Angeles. LAWA understands there may be some homeowners who feel that their homes are impacted by aircraft noise; however due to possible contour changes as a result of current or upcoming projects, as well as changes in FAA Guidelines for Noise Mitigation programs, additional soundproofing may take place when a new noise program is established with the updated FAA's Guidelines.

The construction portion of the program is on track to be completed in 2014 at a cost of about $160 million. This Soundproofing Program is fully funded by Passenger Facility Charges (PFCs).

Program Status

As of December 2013, of the approximately 9,400 originally eligible units, 7,319 have been soundproofed. The last three residences are currently undergoing soundproofing. Furthermore, 722 units are no longer eligible due to new construction, vacant parcels, business use, or prior easements. Owners of 275 units opted-out of the program, and approximately 1,081 remained unresponsive after numerous contacts and/or certified mailings.

To date, there have been 135 construction contracts awarded, totaling approximately $135 million, in construction costs alone.

Project Budget: $160 million **Project Completion Date:** 2014

Project Spent to date: $155 million **Project Percent complete:** 97%

PROJECT COMPLETION PLAN

On April 2010 LAWA notified (via certified mail) all non-responsive homeowners of the program completion and informed them of a deadline to sign up by June 1, 2010. LAWA anticipates construction will be completed in 2014 for those homeowners who signed installation agreements in a timely manner.

APPENDIX B

THIRD PARTY MONITOR SEMI-ANNUAL REPORT DATED MARCH 15, 2014

LAX Master Plan Projects Semiannual Report
Independent Third Party Monitor

Prepared by:

Clean Fuel Connection, Inc.

March 15, 2014

TABLE OF CONTENTS

Cover Photo Courtesy of Ray Gorski

SECTION 1 - INTRODUCTION

This Semiannual Report was prepared by Clean Fuel Connection Inc. (CFCI), Independent Third Party Monitor for LAX Master Plan Projects, and is submitted in accordance with Section X.F.8 of the Community Benefits Agreement (CBA)[1]. The purpose is to document CFCI's efforts as they relate to the monitoring of LAX Master Plan construction activities and construction contractor conformance to all requirements incorporated in CBA Section X.F.

This Semiannual Report covers the period commencing July 1, 2013 and ending December 31, 2013. During this timeframe, two (2) LAX Master Plan projects that were undergoing construction activities - these include the Tom Bradley International Terminal (formerly referred to as the Bradley West Project), and Taxilane T Project. While major construction work continues on the Tom Bradley International Terminal Project, the Central Core and South Concourse were completed in May 2013. Previous Semiannual Reporting has characterized and documented the construction equipment utilized on the Tom Bradley International Terminal; a summary of this equipment will be included in this Report. However, as the detailed database entries have been previously presented, it is not duplicated in this Report. This Semiannual Report will focus on new documentation pertaining to the most current LAX Master Plan Project, the construction of Taxilane T adjacent to the Bradley Terminal complex and the recently completed Taxilane S. Note that a new phase of Bradley International Terminal construction, the Bradley East Gates, commenced in early 2014. Construction activities for the East Gates construction is currently undergoing Third Party Monitoring and will be documented in the next Semiannual Report for the period ending June 30, 2014.

Third Party Monitoring - CFCI's efforts in monitoring, documenting, and reporting on the status of CBA Section X.F as it pertains to LAX Master Plan projects include:

- **Development of an Equipment database to include all known equipment utilized in each Master Plan Project**. This database documents the technical specifications of each piece of on and off-road construction equipment. The database documents each piece of equipment relative to compatibility with diesel emission control devices, the emission control device used or planned for use on each piece of construction equipment, or whether the equipment was determined to be incompatible with any available emission control system. The database also documents all equipment operating under an approved LAWA exemption, including but not

[1] http://www.ourlax.org/comBenefits.cfm

limited to "20-day" exemptions, driver-visibility safety exemptions, or special circumstance exemptions;

- **Field verification of the equipment database and reconciliation with LAWA project management vehicle records**. The construction contractors provide LAWA project management with airfield equipment lists on a periodic basis (typically bimonthly). The Third Party Monitor reviews all available vehicle records for the purpose of verifying compliance with 20-day exemption obligations as well as reconciling LAWA project management records with the Third Party Monitor equipment database;
- **Examination and verification of requests for exemptions from installation of Best Available Control Technology (BACT).** As discussed in Section 2 of this Report, CFCI independently reviews each piece of construction equipment proposed for use on a LAX Master Plan Project to determine compatibility with a commercially available California Air Resources Board (CARB) or U.S. Environmental Protection Agency (EPA) verified Diesel Emission Control System (VDECS). The results of this independent assessment are documented in each Semiannual Report as well as the equipment database;
- **Examination of fuel purchase records to verify that low sulfur diesel is being used**.
- **Monitoring of installed emission control devices on construction equipment**. This includes physical inspections of diesel construction equipment retrofitted with a VDECS to ensure emission control devices are properly installed and functioning;
- **On-airfield monitoring of construction equipment operations enforcement**. This includes, but is not limited to, observation of construction operations to determine compliance with equipment idling restrictions, fugitive dust emissions mitigation requirements, as well as identification of construction equipment in an apparent state of disrepair due to the presence of visible smoke;
- **Annual Reassessment of Available Emission Control Systems**. On an annual basis, the Third Party Monitor conducts a comprehensive evaluation of available CARB and EPA-verified emission control systems. The purpose of this reassessment is to ensure LAWA incorporates the any newly designated best available control strategies into construction bid documents prior to bidding of new construction phases of the LAX Master Plan Program. The process of emission control technology review also includes any new, relevant requirements promulgated by CARB

or EPA. This Semiannual Report includes the results of the Annual Emission Control System Reassessment.

The CFCI project staff is comprised of the following individuals:

- Enid Joffe, founder and owner of Clean Fuel Connection, Inc.;
- Ray Gorski, lead air quality engineer and principal field engineer;
- Lauren Dunlap, air quality engineer and principal analyst in determining compatibility of emission control devices and calculations of emission reductions for VDECS installed on Master Plan project equipment.

While major construction work continues on the Tom Bradley International Terminal Project, the Central Core and South Concourse construction was completed as of May 2013. Bradley East Gate construction has commenced and is scheduled for completion in 2015. To date, the Third Party Monitor has independently reviewed 284 pieces of construction equipment associated with the Tom Bradley International Terminal.

The Taxilane T Project commenced in August 2013, with Phase I scheduled for completion in Summer 2014. Eighty nine (89) pieces of construction equipment were submitted for independent review as of December 31, 2013. Taxilane T is the focus of this Semiannual Report.

SECTION 2 - TASK-BY-TASK STATUS REPORT

The following section documents CFCI's work over the past six months on each of the specific tasks in the Third Party Monitor Scope of Work.

Task 1: Best Available Emissions Control Devices Required

Section X.F.1 of the Community Benefits Agreement (CBA) for the LAX Master Plan Program requires that all diesel equipment used for construction be outfitted with the best available emission control devices, primarily to reduce diesel particulate matter on the order of 10 microns[2] in diameter (PM_{10}), and fine particulate, which is on the order of 2.5 microns in diameter ($PM_{2.5}$). A secondary objective of this requirement is to reduce oxides of nitrogen emissions (NO_x), which are ozone precursors. Section X.F.1 of the CBA applies the requirement to outfit all diesel equipment, including off-road vehicles such as heavy-duty construction equipment, as well as on-road vehicles such as trucks, street sweepers, etc.

[2] One micron equals $1x10^{-6}$ meter or 0.000001 meter.

The requirement also affects non-mobile diesel sources, such as portable generators, air compressors, and light towers. Thus, the requirement to retrofit diesel equipment used in LAX Master Plan construction projects encompasses every piece of diesel equipment, irrespective of its status as on-road mobile, off-road mobile, or stationary.

Section X.F.1 requires that the diesel emission control systems used to retrofit diesel equipment be verified or certified for use on on-road or off-road vehicles or engines by the California Air Resources Board (CARB), or verified by the U.S. Environmental Protection Agency (EPA) for use on on-road or off-road vehicles or engines. Section X.F.1 further allows CARB and EPA-verified "mobile source" devices to be applied to "stationary sources", such as generator engines, and allows technologies verified for "on-road" engines to be applied to "off-road" equipment. Thus, the overall context of Section X.F.1 is very broad and allows maximum flexibility in matching diesel emission control systems with diesel equipment used in Master Plan construction.

The role and responsibilities of the Independent Third Party Monitor as it relates to Section X.F.1 of the CBA is delineated in the following contract Task statements:

- Task 1.1 - Contractor shall develop a monitoring process and database to track each piece of diesel equipment used for construction, including documentation procedures and reporting requirements;
- Task 1.2 – Contractor shall monitor, document, and report independently from LAWA, each construction firm's compliance as it relates to outfitting their diesel construction equipment with the best available emissions control devices available.

The following are the results and findings of the Third Party Monitor as they relate to Tasks 1.1 and 1.2 for the period commencing in July 1, 2013 through December 31, 2013.

Task 1.1 – Monitoring Process, Database Development, and Documentation:

Key elements of the monitoring process include:

- *Review of available documentation* – The principal source of technical information for each vehicle proposed for operation on the Tom Bradley International Terminal and Taxilane T projects are the equipment reports submitted by the construction contractors for review by LAWA project management and environmental management staff. These reports document

whether or not a compatible verified diesel emission control system (VDECS) is available for a given piece of diesel equipment;

- *Incorporation of all available data into an Equipment Database* – All relevant information derived from review of the equipment reports or field inspections is documented in the equipment database. This database is the principal tool for performing independent verification and validation of the information contained in the equipment reports reviewed and approved by LAWA;
- *Identification and documentation of missing, inconsistent, or inaccurate data* – The database notes which pieces of information are either missing or whose accuracy is suspect;
- *Request for Additional Information and/or Clarification* – Missing data or data that require validation are compiled, and a request for clarification is issued by the Independent Third Party Monitor to LAWA project management staff;
- *Field Inspections* – In specific cases, the Independent Third Party Monitor will request permission to conduct a field inspection of the specific piece of equipment under scrutiny;
- *Task 1.2 Independent Verification and Validation* – For each piece of diesel construction equipment included in the database, an independent determination of whether or not a compatible VDECS device is available is conducted;
- *Documentation of Analysis Results* – For each piece of diesel equipment assessed, the availability and compatibility of a VDECS is recorded in the database;
- *Data Reconciliation* – The Third Party Monitor reconciles information contained in the database with the reports maintained by LAWA project management and the construction manager's staff.

The Database Development element of Task 1.1 was conducted in accordance with a single objective – record as much data and supporting information as possible to fully characterize each piece of equipment proposed for operation on an LAX Master Plan construction project. To ensure completeness the database incorporates the following data fields:

- *Equipment ID Number* – Most equipment operating on an LAX Master Plan construction project is marked with a unique identifying number by the equipment owner. It has been the practice of the Independent Third Party Monitor and LAWA project management staff to use this unique

ID when describing, discussing or documenting a specific piece of equipment. All equipment is tracked and monitored relative to this ID number;

- *Owner* – the owner of the piece of diesel equipment, including prime contractor and name of subcontractor or equipment rental company;
- *Equipment Category* – A brief description for the type of diesel equipment, such as "articulated dump truck";
- *Equipment Manufacturer* – The manufacturer of the piece of equipment, usually the equipment chassis. In most cases the manufacturer of the chassis is different from the engine manufacturer;
- *Equipment Model Year* – The year of manufacture of the equipment or vehicle, usually referring to the chassis and vehicle body. It should be noted that it is common for the equipment chassis or body and diesel engine to be different model years;
- *Equipment Model Number* – The number or other descriptive terminology used by the equipment manufacturer in marketing the vehicle, oftentimes used to differentiate similar products;
- *Equipment Serial Number* – This differs from the Equipment ID number described above. The equipment serial number is the vehicle chassis or body identification number assigned by the equipment manufacturer;
- *Engine Manufacturer* – The manufacturer of the main diesel engine used in the equipment. In some cases, most notably off-road heavy-duty scrapers and on-road street sweepers, the equipment has two diesel engines. The first and second engines are designated #1 and #2, respectively, in the database;
- *Engine Model* – The number or other descriptive terminology used by the manufacturer in engine marketing, used to differentiate similar products;
- *Engine Model Year* – The year of manufacture of the diesel engine, diesel emission control devices are often verified for a specific engine model year;
- *Engine Serial Number* – A unique identification number or alphanumeric code assigned by the engine manufacturer;

- *Engine Displacement* – The total volumetric size of the engine's combustion cylinders, usually described as "cubic inches" or "liters". Displacement expressed in cubic inches is calculated by multiplying the number of cylinders by the piston area (square inches) and by the length of the piston stroke (inches). The commonly used metric designation of "liters" is the total engine displaced volume measured in cubic centimeters (1 liter = 1,000 cubic centimeters);
- *Engine Horsepower* – The rated horsepower of the engine by the engine manufacturer;
- *Engine Family* – Engine Family is a descriptive designation given by CARB to a diesel engine upon certification. It is a code, similar to an automobile Vehicle Identification Number, that identifies the engine model year, engine manufacturer, the engine's displacement, on-road or off-road applicability, emissions equipment included during certification testing. This piece of data, along with engine manufacturer and engine model year, is essential to determine conclusively if a VDECS is compatible with the engine undergoing assessment. With practice, one can quickly ascertain a substantial amount of information about an engine by deciphering the engine family designation;
- *Engine #2 Data* – Similar to the above for Engine #1, data are documented for the second diesel engine on a piece of equipment. In the case of heavy-duty earth moving scrapers, the two engines are front and rear; in the case of street sweepers, the second engine is an auxiliary engine that operates the vehicle's rotary brooms and vacuum system.

For each piece of diesel equipment, the database also documents:

- Whether that piece of equipment has or is currently operated on a Master Plan project. For equipment that has been removed, the date of removal is recorded if known. This portion of the database is currently undergoing reconciliation with the results of the airfield equipment inventory.
- For equipment operating under a 20-day exemption, the date the equipment was placed on the airfield and the date removed. For more discussion on 20-day exemption status, please refer to the Task 4 Section of this report;
- Each piece of equipment's compatibility with both off-road and on-road Verified Diesel Emission Control Systems available at the time the equipment was originally submitted by the owner for review by project management staff.

During the period ending December 31, 2013, 89 pieces of construction equipment associated with the Taxilane T Project were assessed – the results of this assessment are included in the following Sections of this Report.

Task 1.2 – Independent Monitoring, Documentation, & Reporting of Compliance with CBA Section X.F.1; Best Available Emission Control Devices Required:

The primary objective of this Task is to independently verify and validate the findings of LAWA project management and contractor staff as it relates to the availability and compatibility of diesel emission control systems for diesel equipment operating on a Master Plan Project. Using the methodology described under Task 1.1, CFCI staff regularly coordinates with LAWA project management, requesting and receiving access to files and records for diesel equipment operating or proposed for operation on a Master Plan project.

Only CARB and/or EPA-verified devices available at the commencement of construction activities on a specific Master Plan project were considered when assessing compliance with CBA Section X.F.1. This is based upon the following language included in the CBA:

- The CBA stipulates in Section X.F.9.a. "Reassessments of Emission Control Devices", that *"the process of emission control technology review shall include any new relevant requirements or regulations promulgated by CARB or EPA. Results from the reassessments shall not be applied retroactively"*;
- CBA Section X.F.9.b. states under "Application of New Requirements", that *"any new designations of emission control devices as best available shall apply only to projects that start after the devices are verified or certified for use by CARB or EPA, or approved for use as part of a Demonstration Project"*.

At the time of commencement of construction activities on Tom Bradley International Terminal, and Taxilane T projects, multiple diesel emission control devices were verified by CARB for off-road use. CARB assigns a designation to each diesel emission control device as a function of its effectiveness in reducing diesel particulate matter (PM) emissions. This is referred to as the "Verification Level" of the device; CARB currently recognizes three verification levels, as follows:

- Level 1 – greater than or equal to 25% reduction of diesel PM;
- Level 2 – greater than or equal to 50% reduction in diesel PM;

- Level 3 – greater than or equal to 85% reduction in diesel PM.

As shown above, CARB Level 3 offers the highest level of diesel pollution reduction. In accordance with the CBA, the "Best Available Control Technology" (BACT) is Level 3 verification.

Task 1.2 Results

Each piece of diesel equipment submitted for LAWA project management review was independently assessed to determine their compatibility with a CARB and/or EPA-verified diesel emission control system. The following sections discuss conformance with Task 1.2 for LAX Master Plan projects monitored during the previous six months. As noted above, a Summary of findings for the Tom Bradley International Terminal are included; details have been presented in previous Semiannual Reports. This Report will focus on the Taxilane T Project, the results of which are presented for the first time.

1.2.1 Tom Bradley International Terminal Summary – The Central Core and South Concourse are complete as of May 2013. The new construction provides greater capacity to the Tom Bradley International Terminal's (TBIT) west side with the addition of eighteen (18) new boarding gates to accommodate new-generation aircraft such as the Airbus A380. The facility includes an expanded passenger waiting areas and a Great Hall with 140,000 square feet of dining, retail shopping, airline club lounges, and other passenger amenities beyond passenger screening. The interior is shown in Figure 1.2.1-2.

The project includes upgraded customs and immigration federal inspection areas for more efficient passenger processing, as well as secured corridors between Terminal 3, TBIT and Terminal 4 so connecting passengers can conveniently go from one terminal to the next.

Figure 1.2.1-1: Tom Bradley Terminal Construction Progress as of December 2013

Figure 1.2.1-2: Tom Bradley International Terminal Project Interior

Photo Courtesy of LAWA

At the start of major construction for the Tom Bradley International Terminal, 284 pieces of diesel construction equipment were assessed relative to their compatibility with a verified diesel emission control system. While not all of this equipment has been utilized on the Bradley Terminal, the contractor is required to provide a listing of all potential equipment that could be utilized during construction activities. Only a subset of the total equipment list is ultimately brought onto the airfield. The Third Party Monitor, however, assesses all equipment submitted, irrespective of whether or not it is actually utilized.

Each piece of diesel equipment with valid data was correlated against a CARB database of over twenty verified diesel emission control strategies. In accordance with CBA Section X.F.1, both off-road and on-road diesel emission reduction technologies were evaluated for compatibility with diesel equipment operating on the Tom Bradley International Terminal Project. The complete results of the analysis are included in the database.

Of the 284 pieces of diesel equipment included in the database, 228 are on-road vehicles granted an exemption by LAWA. One vehicle was granted 20-day exemption status, and 27 due to driver visibility

concerns. Eight (8) were found to be incompatible with any CARB or EPA-verified device. It should be noted that these vehicles are undergoing additional scrutiny to ensure the CARB engine family designation is correctly recorded; any changes will be noted in the next Semiannual Report. However, the majority of equipment operating on the Tom Bradley Terminal Project is technically compatible with a verified diesel emission control system.

Table 1.2.1-1: Summary of Tom Bradley Terminal Diesel Equipment as of December 31, 2013

BACT Device Installed	8
Identified as Compatible But BACT Device Not Installed	7
Exemption on Basis of Safety	27
"20-Day" Exemption Status	1
Small Displacement Engine Exemption	5
On-Road Vehicle Exemption	228
Identified as Not Compatible with BACT Device	8

1.2.2 Taxilane T Project – Construction of Taxilane T commenced in August 2013. This two-part project represents the first phase of the future Dual Taxilane / Taxiway System between the proposed Midfield Satellite Concourse and the Tom Bradley International Terminal. It consists of a new 3,785-foot long Taxilane T parallel to the recently completed Taxilane S. This construction also included relocating fuel lines and other utilities, all grading, airfield signage and lighting, and construction of power and communication duct banks. The location of Taxilane T is shown in the following figure 1.2.2-1.

Figure 1.2.2-1: Taxilane T Construction Location on the Airfield

The following photos show construction activity on Taxilane T:

Figure 1.2.2-1: Taxilane T Construction in Progress – October 9, 2013

Figure 1.2.2-2: Dust Suppression Performed During Taxilane T Construction

Figure 1.2.2-3: Tier 4i Construction Equipment Utilized on Taxilane T

Table 1.2.2-1, below, shows the equipment list for the Taxilane T project. The prime contractor for Taxilane T construction is Coffman Specialties, Inc.

Table 1.2.2-1: Coffman Equipment List for Taxilane T Project

REF. NO.	TYPE	DESCRIPTION	FUEL TYPE	EMISSION CHARACTERISTICS
110	VE	2004 CHEVROLET TAHOE	Gasoline	
122	VE	2007 FORD EDGE	Gasoline	
131	VE	2012 FORD FUSION	Gasoline	
173	PU	2006 FORD F-150 4X4	Gasoline	
178	PU	2008 FORD F-350	Diesel	2008 LEVEL Standards Equipped W/ DPF
180	PU	2008 FORD F-350	Diesel	2008 LEVEL Standards Equipped W/ DPF
186	PU	2008 FORD F-350	Diesel	2008 LEVEL Standards Equipped W/ DPF
187	PU	2008 FORD F-150	Gasoline	
191	PU	2006 FORD F-150 CREW LARIAT	Gasoline	
194	PU	2007 FORD F-150 SUPERCREW	Gasoline	
195	PU	2008 CHEVROLET SILVERADO 2500 4X4 CIC	Diesel	2008 LEVEL Standards Equipped W/ DPF
196	PU	2008 CHEVROLET SILVERADO 2500	Diesel	2008 LEVEL Standards Equipped W/ DPF
198	PU	2008 CHEVROLET SILVERADO 2500	Diesel	2008 LEVEL Standards Equipped W/ DPF
199	PU	2008 CHEVROLET SILVERADO 2500	Diesel	2008 LEVEL Standards Equipped W/ DPF

200	PU	2009 FORD F-150	Diesel	2008 LEVEL Standards Equipped W/ DPF
202	PU	2009 CHEVROLET SILVERADO 2500	Diesel	2008 LEVEL Standards Equipped W/ DPF
203	PU	2009 CHEVROLET SILVERADO 2500	Diesel	2008 LEVEL Standards Equaled W/ DPF
204	PU	2010 FORD F-150	Gasoline	
205	PU	2010 FORD F-350	Diesel	2008 LEVEL Standards Equipped W/ DPF
206	PU	2008 FORD F-150 XL CREW CAB 4X4	Diesel	2008 LEVEL Standards Equipped W/ DPF
207	PU	2008 FORD F-150 XL CREW CAB	Gasoline	
208	PU	2008 FORD F-150 XL CREW CAB	Gasoline	
209	PU	2008 FORD F-150 XL CREW CAB	Gasoline	
210	PU	2008 FORD F-150 XL CREW CAB	Gasoline	
211	PU	2012 FORD F-150	Gasoline	
212	PU	2012 FORD F-150	Gasoline	
213	PU	2012 FORD F-150	Gasoline	
214	PU	2013 FORD F-150	Gasoline	
215	PU	2013 FORD F-150	Gasoline	
216	PU	2013 FORD F-150	Gasoline	
217	PU	2013 CHEVROLET SILVERADO	Diesel	2010 LEVEL Standards Equipped W/ DPF and SCR
218	PU	2013 FORD F-150	Gasoline	
219	PU	2013 FORD F-150	Gasoline	
220	PU	2013 CHEVROLET SILVERADO	Diesel	2010 LEVEL Standards Equipped W/ DPF and SCR
221	PU	2013 CHEVROLET SILVERADO	Diesel	20l 0 LEVEL Standards Equipped *WI* DPF and SCR
222	PU	2012 FORD F-250	Diesel	2010 LEVEL Standards Equaled W/ DPF and SCR
223	PU	2013 FORD F-350	Diesel	2010 LEVEL Standards Equipped W/ DPF and SCR
266	PU	2007 FORD F-450	Diesel	2008 LEVEL Standards Equipped W/ DPF
271	PU	2008 STERLING CONV 4500 TRUCK	Diesel	2008 LEVEL Standards Equipped W/ DPF
272	PU	2008 STERLING CONY 4500 TRUCK	Diesel	2008 LEVEL Standards Equipped/ DPF
273	PU	2008 STERLING CONY 5500 TRAFFIC TRUCK	Diesel	2008 LEVEL Standards Equipped W/ DPF
274	PU	2008 STERLING CONY 4500 TRUCK	Diesel	2008 LEVEL Standards Equipped W/ DPF
275	PU	2008 STERLING CONY 5500 TRUCK	Diesel	2008 LEVEL Standards Equipped W/ DPF
276	PU	2008 STERLING CONY 5500 TRUCK	Diesel	2008 LEVEL Standards Equaled W/ DPF
279	PU	2008 STERLING CONY 5500 TRUCK	Diesel	2008 LEVEL Standards Equaled W/ DPF
280	PU	2008 STERLING CONY 5500 TRUCK	Diesel	2008 LEVEL Standards Equaled W/ DPF
281	PU	2008 FORD F550 XL CREW CAB	Diesel	2008 LEVEL Standards Equipped W/ DPF
282	PU	2008 FORD F550 XL	Diesel	2008 LEVEL Standards Equaled W/ DPF
283	PU	2006 FORD F550 XL CREW CAB	Diesel	2008 LEVEL Standards Equipped W/ DPF
284		FORD F550	Diesel	2010 LEVEL Standards Equaled W/ DPF and SCR
285		FORD F550	Diesel	2010 LEVEL Standards Equipped W/ DPF and SCR
543	BT	2008 FORD F650 XLT	Diesel	Level 3 - Electronic with DPF
546	BT	2014 PETERBILT 337	Diesel	Level 4 with SCR

547	BT	2014 PETERBILT 337	Diesel	Level 4 with SCR
555	HT	2012 WESTERN STAR 4900FA	Diesel	Level 4 with DPF and SCR
560	HT	2009 PETERBILT SUPER DUMP	Diesel	Level 3 - Electronic with DPF
561	HT	2009 PETERBILT SUPER DUMP	Diesel	Level 3 - Electronic with DPF
562	HT	2009 PETERBILT SUPER DUMP	Diesel	Level 3 - Electronic with DPF
563	HT	2009 PETERBILT SUPER DUMP	Diesel	Level 3 - Electronic with DPF
564	HT	2007 PETERBILT SUPER DUMP	Diesel	Level 3 - Electronic with DPF
565	HT	2007 PETERBILT SUPER DUMP	Diesel	Level 3 - Electronic with DPF
566	HT	2007 PETERBILT SUPER DUMP	Diesel	Level 3 - Electronic with DPF
830	CA	2013 ATLAS COPCO AIR COMPRESSOR	Diesel	Tier 4
831	CA	2013 ATLAS COPCO AIR COMPRESSOR	Diesel	Tier 4
832	CA	2013 ATLAS COPCO AIR COMPRESSOR	Diesel	Tier 4
833	CA	2013 ATLAS COPCO AIR COMPRESSOR	Diesel	Tier 4
834	CA	2013 ATLAS COPCO AIR COMPRESSOR	Diesel	Tier 4
1136	CT	2004 VOLVO EC330BLC HYDRAULIC EXCAVATOR	Diesel	Tier 3
1144	CT	2006 CAT 950H LOADER	Diesel	Tier 3
1146	CT	2006 CAT 950H LOADER	Diesel	Tier 3
1147	CT	2007 CAT 430E BACKHOE	Diesel	Tier 3
1150	CT	2007 CAT 950H LOADER	Diesel	Tier 3
1155	CT	2007 CAT 345CL EXCAVATOR	Diesel	Tier 3
1157	CT	2007 CAT 450E BACKHOE LOADER	Diesel	Tier 3
1160	CT	2008 CAT 972H WHEEL LOADER	Diesel	Tier 3
1162	CT	2008 CAT 613G SCRAPER	Diesel	Tier 3
1169	CT	2007 CAT 950H LOADER	Diesel	Tier 3
1173	CT	2010 CAT 972H WHEEL LOADER	Diesel	Tier 3
1175	CT	2011 CAT CB64 VIB ROLLER	Diesel	Tier 3
1176	CT	2012 CAT 972K WHEEL LOADER	Diesel	Tier 4
1178	CT	345 CL HYD EXCAVATOR	Diesel	Tier 3
1179	CT	2007 CAT 345CL HYDRAULIC EXCAVATOR	Diesel	Tier 3
1180	CT	2007 CAT 345C HYDRAULIC EXCAVATOR	Diesel	Tier 3
1182	CT	2008 CAT D6TXL TRACK TYPE TRACTOR	Diesel	Tier 3
8307	CT	CAT 272 SKID STEERE	Diesel	Tier 3
606	HT	2007 Peterbilt 340 T/A Water Truck	Diesel	
397	CT	2008 Caterpillar TL1255 Telehandler Forklift	Diesel	

As shown in the above table, Coffman Specialties, Inc. submitted an initial listing totaling of 89 pieces of construction equipment for potential use on the Taxilane T project. Note that not all equipment operates on Taxilane T construction at any given time, and some equipment may never actually be used in Taxilane T construction.

As shown in Table 1.2.2-1, of the 89 pieces of equipment listed, 20 are gasoline fueled and thus fall outside of CBA Section X.F. Of the remaining 69 pieces of equipment, 48 pieces are configured with a BACT technology that meets or exceeds CBA requirements. Specifically:

- Forty-eight (48) diesel vehicles or equipment meet or exceed the CBA requirements for diesel emission control devices, specifically as it pertains to control of diesel particulate matter emissions;
- Of these 48, Seven (7) pieces of equipment are retrofitted with Level 3 verified diesel emission control systems (VDCES); these achieve reductions in particulate matter greater than 85%. Level 3 VDECS typically reduce emissions of reactive organic hydrocarbon gases (ROG) and carbon dioxide (CO) in addition to diesel particulate matter;
- Of the 48, thirty-three (33) pieces of equipment are equipped with engines certified to either the 2010 on-road emissions standard or the off-road Tier 4/Tier 4 Interim emission standards. The 2010 on-road standards are the strictest air quality standards to date in terms of oxides of nitrogen (NOx) and particulate matter emissions. The NOx threshold for 2010 on-road heavy-duty engines is 0.02 grams per brake horsepower – hour (g/bhp-hr) with the particulate matter emissions threshold set at 0.01 g/bhp-hr.
- Eight (8) pieces of off-road equipment are certified to the Tier 4/Tier 4 interim off-road standards. Tier 4 refers to a generation of federal air emissions standards established by the U.S. Environmental Protection Agency (EPA) that apply to new diesel engines used in off-road equipment. Essentially it requires manufacturers to reduce the levels of particulate matter and oxides of nitrogen (NOx) to a level that is 50-96 percent lower than existing generation of diesel engines. It is important to note that Tier 4 emissions requirements apply to new products only and do not apply retroactively to any existing machines or equipment. Tier 4 represents the strictest standards for off-road engine equipment. Specific Tier 4 emission levels are a function of engine horsepower but in all cases meet or exceed the CBA Emissions Reduction Standards.

In addition to the above-listed vehicles and equipment, one (1) Badger T 8600 Breaker was used at the start of Taxilane T construction activities to break existing concrete. The equipment is owned by Antigo Construction and due to its short duration on the airfield was granted 20-day exemption status. This is further discussed under Section 2 Task 4, Exemptions.

Task 2: Demonstration Projects

Section X.F.2 of the CBA states that LAWA may allow construction-related diesel equipment to be outfitted with new emission control systems that are not CARB verified or EPA certified for use for on-road or off-road vehicles or engines. Such projects will be designated by LAWA as "Demonstration Projects". The roles and responsibilities of the Independent Third Party Monitor as they relate to Demonstration Projects is set forth in Task 2 of the contract and includes the following two primary subtasks:

- Task 2.1 – The Third Party Monitor shall perform a technical evaluation of the proposed demonstration technology and provide written findings to the Coalition Representative and LAWA. The Third Party Monitor shall also assist with the implementation of a Demonstration Project, including identifying suitable emission control devices and Demonstration Project funding sources;
- Task 2.2 – Upon acceptance by LAWA, the Third Party Monitor shall monitor, document, and report independently from LAWA, compliance of the demonstration equipment with all defined Demonstration Project requirements, including but not limited to the pollution reduction requirements specified in Section X.F.3 of the CBA.

No demonstration projects were conducted during the six-month period of July 1st through December 31st 2013.

Task 3: Emission Reduction Standard

Section X.F.1 of the Community Benefits Agreement (CBA) for the LAX Master Plan Program requires that all diesel equipment used for construction be outfitted with the best available emission control devices, primarily to reduce diesel particulate matter which is on the order of 10 microns[3] in diameter (PM_{10}), and fine particulate, which is on the order of 2.5 microns in diameter ($PM_{2.5}$). A secondary objective of this requirement is to reduce oxides of nitrogen emissions (NO_x), which are ozone precursors. This section also states that under no circumstance shall an emission reduction device or strategy used on the LAX Master Plan Program construction site increase the emission of any pollutant above that which is the standard for that engine.

[3] One micron equals $1x10^{-6}$ meter or 0.000001 meter.

The role and responsibilities of the Independent Third Party Monitor as it relates to Section X.F.1 of the CBA is delineated in the following contract Task statements:

- Task 3.1 - Contractor shall monitor, document, and report independently from LAWA, compliance of each piece of diesel construction equipment used pursuant to CBA X.F.1. as it relates to meeting or exceeding Level 2 diesel emission reductions for a similar sized engine;
- Task 3.2 – Contractor shall monitor, document, and report independently from LAWA, compliance of each piece of diesel construction equipment used pursuant to CBA X.F.1 to ensure its emission reduction device or strategy does not result in an increase of any pollutant above that which is standard for that engine;
- Task 3.3 – Contractor shall monitor, document and report on emission reductions of NO_x, ROG, PM and CO achieved through the use of best available control technology.

Task 3.1 - Monitor, document, and report equipment compliance with Level 2 requirement.

As summarized above in Task 1, the Third Party Monitor compiled a database of LAX Master Plan project equipment. This database is continually updated with new information collected from LAWA project management staff on behalf of the construction contractors or visual inspection by CFCI. As part of this inventory, the Task 1 effort included an equipment-by-equipment review for applicability of approved Best Available Control Technologies (BACT). Specifically, the equipment listed in this master database was compared against all available Verified Diesel Emission Control Systems (VDECS), with first priority given to Level 3 diesel emission reductions.

Not all equipment proposed for operation on the Tom Bradley Terminal and Taxilane T Projects is necessarily used – contractors provide a list of potential needs prior to the start of construction activities. Typically, a subset of this proposed equipment is actually used in construction activities. This was illustrated in Table 1.2.2-1, above. Also, not all equipment resides on the airfield during the entire project duration; equipment is moved on and off the airfield as construction demands dictate.

Task 3.2 – Ensure emission reduction devices/strategy does not result in an increase of any pollutant above that which is standard for that engine.

The U.S. EPA and ARB verification procedures are designed to ensure that no measurable increase on other pollutant emissions results from installation of the approved VDECS. One issue that should be

noted is that the ARB verification procedures include a NO_2 limit requirement. Specifically, NO_2 may not increase more than 20 percent as a result of the installation and operation of the device[4]. All VDECS assessed under Task 1 for the Tom Bradley International Terminal comply with the CARB NO_2 limit requirements. No equipment used in Taxilane T was equipped with a VDECS.

Task 3.3 –Contractor shall monitor, document and report on emission reductions of NO_x, ROG, PM and CO achieved through the use of best available control technology.

The following Table provides an estimate of air quality benefits attributable to adherence to CBA obligations. Note that these estimates are conservative – equipment operating on the airfield in support of LAX Master Plan Projects that is equipped with engines certified at the Tier 4 and Tier 4 interim levels have particulate matter (PM) that comply with CBA obligations. These vehicles also emit oxides of nitrogen (NOx) emission levels that exceed obligations under the CBA.

However, because these vehicles are designed manufactured to meet more stringent emission standards, they are not "retrofitted" per se with Best Available Control Technologies (BACT) in compliance with CBA provisions – these vehicles in their baseline configuration meet CBA requirements. Thus, because Tier 4 vehicles achieve CBA-mandated emission levels in their baseline configuration, there is no other vehicle configuration to compare them to. As a result, Tier 4 diesel equipment is not shown as offering an emissions benefit as a result of imposition of CBA requires the equipment is inherently low emitting. Tier 4 vehicles represent the "state of the art" for reduced off-road equipment emissions.

Air quality benefits corresponding to vehicles and equipment retrofitted with diesel particulate filters or other emission reduction technology are quantified as in past evaluations and are included in the Table.

In addition, emission reduction benefits attributable to onsite recycling of Taxilane pavement material are quantified. Taxilane T is constructed using recycled concrete. The original surface area concrete that is demolished is moved to a crusher, where it is crushed into aggregate and used as a component of the new concrete pavement for Taxilane T. The crusher is Title 5 compliant under the California Code of Regulations and is powered by electric motors utilizing grid electricity as opposed to electricity produced by diesel generators. The new concrete is mixed in an onsite concrete batch plant that is also powered by grid electricity as opposed to diesel generators.

[4] Title 13 CCR section 2706(a)

Air quality benefits are achieved through onsite concrete recycling and mixing as a result of not having to transport the demolished concrete to a landfill as well as not importing new concrete from an offsite concrete mixing plant. According to LAWA Project Management, Taxilane T has recycled 44,757 cubic yards of waste concrete. The amount of diesel fuel not consumed as result of onsite recycling is estimated at 53,777 gallons of diesel fuel.

Figure 3.3-1: Taxilane T Recycled Concrete in Piles Awaiting Crushing

Figure 3.3-2: Concrete Recycling Crusher in Operation

Note the water spray jet that wets the crushed concrete aggregate as it leaves the crusher conveyer belt. The water spray is designed to reduce fugitive dust emissions associate with the concrete crushing.

Figure 3.3-3, below, shows the concrete batch plant undergoing final assembly. The batch plant will produce the majority of concrete that is used to pave the new Taxilane T.

Figure 3.3-3: Concrete Batch Plant Undergoing Final Assembly in Preparation for Taxilane T Construction

Material crushing is documented by LAWA using standard forms – an example of LAX Waste Reduction Reporting and Recycling Reports are shown below in Figures 3.3-4 and 3.3-5, respectively:

Figure 3.3-4: Waste Reduction Progress Report Form - Sample

No.: 0218

CONTRACTOR'S SUBMITTAL TRANSMITTAL

LOS ANGELES WORLD AIRPORTS – AIRPORTS DEVELOPMENT GROUP

TAXIWAY T – PHASE 1

CITY OF LOS ANGELES, LOS ANGELES INTERNATIONAL AIRPORT

SUBMITTAL NO. 0218 **DATE:** 1/28/2014

SUBMITTAL / SHOP DRAWING: Waste Reduction Progress Report (December 2013)

CONTRACTOR: COFFMAN SPECIALTIES, INC.

SPEC. REFERENCE: 017419-1.5 DRAWING REFERENCE: _____ SCHEDULE ACTIVITY NO. _____

FOR ALL CONTRACTOR SUBMITTALS, INCLUDING SHOP DRAWINGS, SAMPLES, CALCULATIONS, DATA OR OTHER.

TO: CITY OF LOS ANGELES LOS ANGELES WORLD AIRPORTS AIRPORTS DEVELOPMENT GROUP 7301 WORLD WAY, 8TH FLOOR LOS ANGELES, CA 90045	CONTRACTOR'S SUBMITTAL NO.:
FROM: COFFMAN SPECIALTIES, INC. 9685 VIA EXCELENCIA, SUITE 200 SAN DIEGO, CA 92126	THIS IS (CHECK ONE): X AN ORIGINAL SUBMITTAL _____ A REVISION ONE (R1) SUBMITTAL OF _____ (ORIGINAL SUBMITTAL NO.) _____ A REVISION _____ (R?) SUBMITTAL OF _____ (ORIGINAL SUBMITTAL NO.) _____ AN O & M SUBMITTAL

ITEM NO.	*	SUBJECT OF SUBMITTAL/EQUIPMENT SUPPLIER
		Waste Reduction Progress Report (December 2013)

* CHECK FOR SPECIFIED SHOP INSPECTION REQUIREMENT. FOR ITEM SOURCE GREATER THAN 50 MILES, ATTACH TESTING LABORATORY DOCUMENTATION FOR ACCEPTANCE.

CHECK EITHER (a) OR (b):

X **(a)** **WE HAVE VERIFIED THAT THE EQUIPMENT OR MATERIAL CONTAINED IN THIS SUBMITTAL MEETS ALL THE REQUIREMENTS SPECIFIED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS WITH NO EXCEPTIONS.**

_____ **(b)** **WE HAVE VERIFIED THAT THE EQUIPMENT OR MATERIAL CONTAINED IN THIS SUBMITTAL MEETS ALL THE REQUIREMENTS SPECIFIED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS EXCEPT FOR THE FOLLOWING DEVIATIONS (LIST DEVIATIONS):**

GENERAL CONTRACTOR'S AUTHORIZED SIGNATURE: _____ **Jasper Alderete**

Figure 3.3-5: Concrete Recycling Report - Example

Crown Disposal Co. Inc.
FAMILY OF COMPANIES

9189 DE GARMO AVENUE • Mailing Address: P.O. BOX 1081 • SUN VALLEY CALIFRONIA 91352
(818) 767-0675 • (323) 875-0587 • FAX# (818) 768-3930

COFFMAN SPECIALTIES

RECYCLING REPORT

Month: October-13
Job Site: 10700 Pershing Dr., Los Angeles Acct # 078335

DATE	TICKET #	BIN SIZE	MATERIAL TYPE	TONS GENERATED	TONS RECYCLED
10/04/2013	0000114480	40RO	CD	10.42	9.67
10/04/2013	0000114479	40RO	CD	2.97	2.76
10/22/2013	0000119458	40RO	CD	5.03	4.67

Legend
AC= Clean aggregate
AM = Mixed aggregate
CD=Construction and Demolition Debris
TT=Trash Trummel
TX=Trash
W=Wood
GW=Green Waste
XR=Hand Sort
Submitted by:
Crown Disposal Co. Inc.

Total Generated	18.42
Total Recovered	17.09
Percent Recovered	92.80%

All material is processed at Community Recycling & Resource Recovery's Facility located at 9189 DeGarmo St. Sun Valley, Ca.

Table 3.3-1 shows the quantified air quality benefits attributable to adherence to CBA provisions. Note that construction companies continue to adhere to rush hour traffic restrictions, and operate employee shuttles to reduce traffic congestion in and around LAX.

Table 3.3-1: Quantified Air Quality Benefits Attributable to Taxiway T Pollution Mitigation Measures

Strategy / Performance Measure (Pounds of Pollution Reduced)	PM_{10}	$PM_{2.5}$	CO	CO_2	ROG	NO_x	SO_2
Emission Control Technology							
Diesel Engine Retrofits	1.1	0.93	N/A	N/A	N/A	N/A	N/A
Comments	This estimate assumes each of the 15 units that are equipped with VDECS operate an average of 20 hours per week. On-road vehicles assumed to have an average speed of 10 miles per hour.						
ULSD Fuel	The use of Ultra Low Sulfur Diesel (ULSD) fuel is mandated by the State of California. All CFTP equipment uses ULSD in compliance with this state law. CARB estimates that the use of ULSD reduces PM emissions by 20 to 28 percent and NOx emissions by 5 to 7 percent, depending on the age of the engine.						
Operational Requirements							
Engine Idling Restrictions	1.3	1.2	N/A	5,174	19	97	N/A
Comments	Emissions from the avoided truck trips due to the construction material recycling on-site and from the 5-minute idling rule applied to both on-road and off-road construction equipment. Approximately two violations per month were identified; enforcement followed each violation.						
Required Engine Maintenance	0	0	0	0	0	0	0
Comments	This section tracks the emissions avoided due to identification and prompt repair of malfunctioning equipment. No high emitters were identified during this reporting period, and thus there are no avoided emissions for this category.						
Traffic Control Measures							
Rush Hour Restrictions	Since emissions from free flowing traffic are lower compared to congested conditions, scheduling truck deliveries during off-peak hours had a positive impact on air quality.						
Comments	The effect of vehicle velocity on emissions has been well established. A comprehensive study of diesel emissions done by Cambridge Systematics, Inc. investigated PM emissions as a function of speed. Comparing emission factors from 1995, heavy-duty trucks under urban operational conditions, on average there was a 60% decrease in emissions when the speed increased from the range of 0-16 km/hr to 32-48 km/hr.						
Employee Shuttle	Final evaluation pending receipt of shuttle participation, operating hours and route data.						

Strategy / Performance Measure (Pounds of Pollution Reduced)	**PM_{10}**	**$PM_{2.5}$**	**CO**	**CO_2**	**ROG**	**NO_x**	**SO_2**
Comments	By using a parking shuttle, emissions were avoided from individual cars of about 40-50 employees (the distance was 6 miles round-trip and the shuttle ran twice a day but not every day, therefore a scaling factor of 0.9 was applied for this calculation).						
Onsite Material Recycling	204	188	3,348	1,248,975	185	7,546	12
Comments	Emissions avoided from recycling used construction material (concrete, asphalt) instead of hauling material to a landfill 40 miles away. Note that the concrete batch plant was grid-powered (no diesel-fueled generators were used).						
Total (lbs.)	**206**	**190**	**3,348**	**1,254,149**	**204**	**7,643**	**12**
Total (tons)	**0.10**	**0.10**	**1.67**	**627.07**	**0.10**	**3.82**	**0.01**

As shown above, enforcement of CBA air quality provisions results in a nearly four-ton reduction in ozone precursor NOx emissions and over 200 pounds of particulate matter, including diesel particulate.

Task 4: Exemptions

4.1 Taxilane T

20-Day Exemptions

As of December 31st 2013, eight pieces of diesel construction equipment owned by Coffman Specialties, Inc. had been formally granted a 20-day exemption, as shown below:

Table 4.1-1: Taxilane T Construction Equipment Granted a "20-Day" Exemption

Equipment Owner	Equipment Model Number	Equipment Category	Engine Model/HP	Manufacturer	Engine Model Year	Engine Family
Coffman	DT6	Crawler Tractor	C9/200	Caterpillar	2008	8CPXL08.8ESK
Coffman	345	Excavator	C13	Caterpillar	2007	7CPXL12.5.ESK
Coffman	Peterbilt	Water Truck	C7	Caterpillar	2006	6CPX80445HBK
Coffman	CC8000	Ride-on Saw	TBD	TBD	TBD	TBD
Coffman	TL 1255	Telehandler	C4.4	Caterpillar	2008	8PKXL04.4NJ1
Coffman	450E	Backhoe	C4E1	Caterpillar	2007	TBD
Coffman	272	Skidsteer	3044C	Caterpillar	2007	7MVXL3.3DDE
Coffman	SH8000	Striper	TBD	TBD	TBD	TBD

Antigo	Badger T8600	Breaker	6068HF285	John Deere	2009	8JDXL06.8105

As previously noted, the Badger concrete breaker was used at the initial phase of Taxilane T construction. It is owned and operated by Antigo Construction who acts in the capacity of subcontractor to Coffman Specialties, Inc.

Task 5: Ultra Low Sulfur Diesel and Other Fuels

Section X.F.5 of the Community Benefits Agreement requires that all diesel equipment used for construction on LAX Master Plan Projects use only Ultra-Low Sulfur Diesel (ULSD) fuel containing 15 parts per million (ppm) of sulfur by weight or less. This requirement is in effect as long as adequate supplies are available in the Southern California region.

There are three tasks in the Scope of Work for the Third Party Monitor related Ultra Low Sulfur Diesel.

- Task 5.1 - Contractor shall monitor, document, and independently report on construction equipment related to LAX Master Plan Program construction as it relates to the use of ultra-low sulfur diesel fuel. Contractor will be provided all available fuel procurement records for construction equipment related to the LAX Master Plan Program;
- Task 5.2 – Contractor shall independently verify and report to LAWA and the Coalition Representative that adequate supplies of ULSD are or are not available in Southern California. For the purpose of this Task, "Southern California" is defined as the geographic region comprising Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties;
- Task 5.3 – Contactor shall independently verify and report to LAWA and the Coalition Representative that fuels substituted in lieu of ULSD do not result in greater emissions of fine PM or NO_x than that which would be produced by the use of ULSD at 15-ppm or lower. Verification will be based on CARB certification or equivalent.

South Coast AQMD Rule 431.2, which took effect on June 1, 2006, requires diesel fuel refined and sold for on-road and off-road use within the jurisdiction of the AQMD to contain no more than 15-ppm sulfur by weight. The California Air Resources Board subsequently adopted this requirement on a statewide basis on September 1, 2006. Thus, ULSD is the only diesel fuel legally available for purchase within California.

To independently verify the sulfur content of the diesel fuel used by equipment operating on LAX Master Plan projects, CFCI has requested fuel purchase records from the contractor and has examined the fuel receipts to ensure that only ULSD is being used. Note that all equipment certified as "on-road", equipped with a diesel particulate filter, or certified to the off-road Tier 4 standard must use ULSD or risk serious damage to the equipment's emission control system.

Task 6: Operational Requirements

Section X.F.6 of the CBA requires that Operational Requirements be issued and enforced by LAWA as it pertains to: a) limitations of equipment engine idling; and, b) maintenance of equipment engines.

The environmental requirements mandated by LAWA state that *"Contractor shall prohibit construction diesel vehicles or equipment from idling in excess of the idling restrictions as defined in the CARB Vehicle Idling Rule. The contractor shall advise drivers and operators of these requirements at the pre-construction orientation meeting, remind them on a daily basis, and post signs in appropriate places indicating the CARB Vehicle Idling Rule. Exemptions may be granted for safety and operational reasons, as defined in CARB or as approved by the Engineer. The contractor and subcontractors shall have policies and procedures in place for compliance with the Vehicle Idling Rule and a copy of such shall be submitted within 30 days of Notice to Proceed to the Engineer for approval"*.

In CFCI's capacity as Third Party Monitor, monitoring, documentation, and reporting of operational requirements was conducted in accordance with the following two Tasks:

- Task 6.1 – The Independent Third Party Monitor shall establish processes and procedures for determining whether a construction firm is complying with the operational requirements specified by LAWA. For the purpose of this Task, Operational Requirements include, but are not limited to, engine idling and engine maintenance requirements;
- Task 6.2 – The Independent Third Party Monitor shall monitor, document, and independently report to LAWA and the Coalition Representative on operational requirements issued and enforced by LAWA as they relate to limitations on idling and engine maintenance, at a minimum. Idling and engine maintenance records for construction equipment related to the LAX Master Plan Program will be provided to the Contractor by LAWA.

The following sections describe the process developed and implemented to track adherence to the operational requirements delineated in the CBA, as well as the independent findings of the Interim Third Party Monitor.

Process for Determining Compliance with Operational Requirements

The process to determine construction contractor compliance with the Operational Requirements set forth in the CBA has two distinct components:

1. Review by the Independent Third Party Monitor of applicable written procedures, monthly logs, and records documenting construction contractor compliance with Operational Requirements;

2. Onsite inspections conducted independently by the Third Party Monitor to confirm Operational Requirements are being implemented in accordance with CBA requirements.

In conducting reviews of construction contractor records, logs, and written procedures, requests for specific information and/or documents were submitted by the Third Party Monitor to LAWA's construction manager's staff. Requests for documentation were in turn submitted to the construction contractor by LAWA. This protocol was established and adhered to by all parties to ensure the reporting relationships between LAWA project management and the construction contractor were maintained and to prevent requests from the Third Party Monitor being construed by the construction contractor as contractual direction.

Once obtained by LAWA construction manager staff, the requested records, logs, and written procedures are provided to the Third Party Monitor for review. In most cases, photocopies are provided. In certain cases, such as equipment maintenance records, however, documents are retained at a location other than the on-site construction trailers; this requires that the documents be inspected at the offsite location. This is discussed further under Task 6.2, below.

Vehicle and Equipment Idling – The Environmental Requirements for the Tom Bradley Terminal Project and Taxiway T Project prohibit construction vehicles and equipment from excessive idling in accordance with the restrictions defined in the CARB Vehicle Idling Rule[5]. This Rule, more formally referred to as the *Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling*, is

[5] www.arb.ca.gov/toxics/idling/regtext.htm

codified in Title 13 Section 2485 of the California Code of Regulations and took affect on February 1, 2005.

The law states that operators of diesel fueled commercial vehicles with a gross vehicle weight rating (GVWR) of 10,000 pounds or greater shall not idle their vehicle's primary diesel engine for greater than five (5) minutes at any location. The law only applies to commercial vehicles that are or must be licensed for operation on the highway.

The "five minute rule" is waived under the following circumstances:

- Idling when the vehicle must remain motionless due to traffic conditions;
- Idling when the vehicle is queuing that at all times is beyond 100 feet from any restricted area (i.e., homes and schools);
- Idling to verify safe operating condition;
- Idling mandatory for testing, servicing, repairing, or diagnostic purposes (cleaning of commercial vehicles is not considered servicing);
- Idling when positioning or providing power for equipment that is performing work;
- Idling when operating defrosters, heaters, air conditioners, or other equipment to prevent a safety or health emergency.

While the CARB Rule pertains only to "on-road" vehicles, it is important to note that LAWA extends the CARB idling restrictions to off-road vehicles and equipment operating in conjunction with the Tom Bradley International Terminal and Taxilane T projects. In practice, LAWA's enforcement of idling restrictions exceeds those mandated under the CARB Rule for both on-road and off-road vehicles and equipment.

The Third Party Monitor reviewed and independently verified the following documentation pertaining to notice of idling restriction requirements:

- Written Policies – LAWA construction manager staff provided the Third Party Monitor with copies of the written idle restriction policies and procedures provided to the construction contractor;

- Notes from construction contractor/LAWA Project Management Status Meetings – in which reiteration of LAWA idling restrictions were reviewed;
- Interviews with LAWA Project Management who are responsible for idling restriction enforcement;

It is the observation of the Third Party Monitor, and confirmed by LAWA project management, that excessive idling is not a serious issue at this time. The CARB anti-idling rule has been in place long enough that most vehicle and equipment operators are aware of its existence. Also, due to the price of diesel fuel, it is cost-effective to turn the vehicle engine off when not needed.

The limited amount of necessary enforcement of excessive idling restrictions continues to be performed on a "catch and release" basis; the LAWA project management staff detect an idling vehicle and inform the driver of the idling restrictions and ask them to turn their engine off. LAWA does not cite or fine the driver for a first offense. In discussion with LAWA project management, the policy of issuing a warning has worked successfully and there have been no documented repeat offenders. According to LAWA project management, during the period of July 1st through December 31st 2011 the average occurrence rate for excessive idling is less than one to two incidents per week.

Equipment Maintenance Records – The CBA requires that the construction contractor properly maintain all equipment in accordance with the manufacturers' specifications and schedules. Further, that all maintenance and repair records shall be made available upon request. The Third party Monitor has made this request and is awaiting receipt of vehicle maintenance records.

LAWA project management and the Third Party Monitor also conduct regular visual inspections of diesel equipment operating on LAX Master Plan projects, looking for excessive exhaust soot or other indications that the equipment is in a state of disrepair. During the reporting period, no vehicles or equipment was observed to be emitting visible soot. This is due in large part to the overall newness of equipment being utilized on LAX Master Plan Projects.

Task 7: Enforcement by LAWA

Section 7 of the Independent Third Party Monitor Scope of Work states that: "The Contractor shall monitor, document and independently report to the Coalition Representative on enforcement actions by LAWA".

During the period of January 1st through December 31, 2013, LAWA project management and environmental contract staff did not levy any fines against a Master Plan project construction contractor.

No enforcement actions were required for fugitive dust emissions. As shown below, the Taxilane T project has been implemented with strict dust control measures in place.

Figure 7-1: Dust Control Measures Being Implemented on Taxilane T

Task 8: Reassessments of Emission Control Devices

The Community Benefits Agreement Section X.F.9 requires that a reassessment of best available emission control devices be conducted on an annual basis, or more frequently if warranted. The purpose is to ensure that bid documents take into account advances in emission control devices prior to

bidding new construction phases of the LAX Master Plan Program. This reassessment was conducted for all verified devices as of December 31, 2013.

Section X.F.9 further requires that the emission control technology review process include any new and relevant requirements or regulations promulgated by CARB or the U.S. EPA, with the understanding that the results from any reassessment of diesel emission control systems cannot be applied retroactively. Specifically, Section X.F.9.b. states "any new designations of emission control devices as best available shall apply only to projects that start after the devices are verified or certified for use by CARB or the EPA... "

In the period between July 1, 2013 and December 31, 2013, the following devices received updated CARB Executive Order verifications for off-road equipment:

- The Air Resources Board has verified the ESW CleanTech Phoenix diesel retrofit system for certain off-road diesel engines used in off-road equipment. This system was initially verified in April 2009. The Phoenix system reduces emissions of diesel particulate matter by at least 85 percent and is designated as a Level 3 Plus system. The primary components of the actively regenerated Phoenix system include a silicon carbide wall-flow filter, an exhaust flow conditioner, a diesel-fueled burner assembly, and a system controller. The Phoenix system is compatible with off-road equipment using diesel fuel that contains up to 20 percent biodiesel;
- The Air Resources Board has verified the ESW CleanTech Vista diesel retrofit system for certain 1993 through 2010 model year heavy-duty diesel engines used in on-road vehicles. This system was initially verified in February 2012. The Vista system reduces emissions of diesel particulate matter by at least 85 percent and is designated as a Level 3 Plus system. The primary components of the actively regenerated Vista system include a silicon carbide wall-flow filter, an exhaust flow conditioner, a diesel-fueled burner assembly, and a system controller. The Vista system is compatible with on-road vehicles using diesel fuel that contains up to 20 percent biodiesel.

Task 9: Implementation of Public Complaint Registration Process

Task 9 of the Third Party Monitor Scope of Work requires the contractor to develop and implement a public complaint registration process. The components of the task are:

- Task 9.1 – Contractor shall develop and implement a process allowing any member of the public to register a complaint alleging any entity's noncompliance with the requirements of CBA Section X.F.
- Task 9.2 – Contractor shall investigate all complaints registered by a member of the public and determine if, when, and where a violation occurred. Contractor shall notify LAWA and the LAX Coalition Representative each time a complaint is registered.
- Task 9.3 – Contractor shall provide records or summaries of public complaints registered with Contractor, including actions, findings, and determinations, to the public upon request. Contractor shall provide LAWA and the LAX Coalition Representative copies of all actions, finding, and determinations requested by the public.

As LAWA already has a widely publicized hotline for complaints, it was decided to utilize the existing number instead of establishing a new one in order to avoid duplication and potential confusion in the community.

Zero (0) documented public complaints were logged during the period of July 1, 2013 through December 31, 2013. No fugitive dust complaints were recorded, and LAWA, the South Coast AQMD, or any other environmental regulatory authority took no enforcement actions during that period.

Factors that most likely contribute to the absence of public complaints include:

- Dissemination and strict enforcement of the environmental requirements of the CBA by LAWA project management and inspectors;
- Construction activities associated with Tom Bradley Terminal and Taxilane T projects primarily take place largely in the geographic center of the LAX airfield. Sensitive receptors, such as the communities of El Segundo, are to a large extent buffered by the South airfield runways. A similar situation exists on the Northern area, where the North airfield runways provide a buffer. This serves as a barrier to common construction nuisances such as noise curfew violations.

SECTION 3 - RESULTS AND CONCLUSIONS

The following is a summary of Third Party Monitor independent monitoring results and findings for the six-month period commencing July 1, 2013 and ending December 31, 2013:

- Monitoring and documentation of diesel equipment utilized or proposed for utilization on two LAX Master Plan projects. Approximately 284 pieces of diesel equipment were independently assessed to determine compatibility with a commercially available CARB/EPA-verified diesel emission control system on the tom Bradley Terminal. Eighty-nine pieces of equipment have been reviewed to date associated with Taxilane T;
- Monitoring of diesel emission control devices installed on construction equipment. As documented in the above Sections of this report, all devices currently in use on LAX construction projects have been deemed functional;
- A review and documentation of all exemptions granted by LAWA that allow a piece of diesel construction equipment to operate on LAX construction projects without a best available control technology retrofit. This includes equipment that was deemed incompatible with a verified VDECS, granted an exemption on the basis of safety, or granted a "20-day" exemption on the basis of infrequent equipment use;
- In accordance with CBA requirements, CFCI conducted a reassessment of available CARB and EPA-verified diesel emission control systems. This reassessment is conducted on an annual basis. The intent is that LAWA use these findings to designate newly verified devices as best available control devices and incorporate the requirement to use these devices into construction bid documents for new construction phases of the LAX Master Plan Program. These findings, however, are not to be applied retroactively to Master Plan Projects already in the construction phase.

Overall, diesel equipment used on construction activities during the specified time period was found to be in substantial compliance with all provisions of the CBA Section X.F. As noted, the 89 pieces of equipment listed, 20 are gasoline fueled and thus fall outside of CBA Section X.F. Of the remaining 69 pieces of equipment, 48 pieces are configured with a BACT technology that meets or exceeds CBA requirements. Specifically:

- Forty-eight (48) diesel vehicles or equipment meet or exceed the CBA requirements for diesel emission control devices, specifically as it pertains to control of diesel particulate matter emissions;
- Of these 48, Seven (7) pieces of equipment are retrofitted with Level 3 verified diesel emission control systems (VDCES); these achieve reductions in particulate matter greater than 85%. Level 3 VDECS typically reduce emissions of reactive organic hydrocarbon gases (ROG) and carbon dioxide (CO) in addition to diesel particulate matter;
- Of the 48, thirty-three (33) pieces of equipment are equipped with engines certified to either the 2010 on-road emissions standard or the off-road Tier 4/Tier 4 Interim emission standards. The 2010 on-road standards are the strictest air quality standards to date in terms of oxides of nitrogen (NOx) and particulate matter emissions. The NOx threshold for 2010 on-road heavy-duty engines is 0.02 grams per brake horsepower – hour (g/bhp-hr) with the particulate matter emissions threshold set at 0.01 g/bhp-hr.
- Eight (8) pieces of off-road equipment are certified to the Tier 4/Tier 4 interim off-road standards. Tier 4 refers to a generation of federal air emissions standards established by the U.S. Environmental Protection Agency (EPA) that apply to new diesel engines used in off-road equipment. Essentially it requires manufacturers to reduce the levels of particulate matter and oxides of nitrogen (NOx) to a level that is 50-96 percent lower than existing generation of diesel engines. It is important to note that Tier 4 emissions requirements apply to new products only and do not apply retroactively to any existing machines or equipment. Tier 4 represents the strictest standards for off-road engine equipment. Specific Tier 4 emission levels are a function of engine horsepower but in all cases meet or exceed the CBA Emissions Reduction Standards.

The next Semiannual Report will cover the period commencing January 1, 2014 and ending June 30, 2014. The Report will cover Phase I construction activities for the Taxiway T Master Plan Project and the Bradley East Gate construction project.

CARB EIN	Equipment Number	Equipment Owner	Equipment Model Number	Engine Model
N/A	I-85	Fine Grade Equipment	VALEW 7400	MAXXFORCEDT
	500	Robertson's	357	TBD
	766	Robertson's	357	ISC 315
	721	Robertson's	357	ISC 315
	N/A	Goss Construction	Silverado 3500	N/A
	N/A	Goss Construction	F450	N/A
	N/A	Goss Construction	F450	7.3
	VH134	Royal Electric	F450 XL	TBD
	369001	ARB, INC.		
AY9C69	771	La Londe	328D	C6.4
LC3C85	772	La Londe	321D	C6.4
CG8A85	732	La Londe	450E	C4.4
EU3H63	EU3H63	Adams Demolition	345	
NN4U65	NN4U65	Adams Demolition	345	
BL5L65	BL5L65	Adams Demolition	330	
EL4V45	EL4V45	Adams Demolition	330	
NN4U65	NN4U65	Adams Demolition	345B	
	LP003	Royal Electric	MH400	D-850
	FL006	Royal Electric	R80	1004-42
UT9S99	391	La Londe	H90XL	1004-42
		King		
	TBD	ARB, INC.		
	TN012	Royal Electric	OCC145A	6068T
	LP004	Royal Electric	LT4	3LB1/PV.04
	LP007	Royal Electric	320-4000 LT4	3LB1
	LP006	Royal Electric	320-4000 LT4	3LB1
	LP008	Royal Electric	LTC4L	LDW 1003
	LP009	Royal Electric	LTC4L	LDW 1003
	LP010	Royal Electric	LTC4L	LDW 1003
	482098	ARB, INC.		
	482132	ARB, INC.		
	534003	ARB, INC.		
	534033	ARB, INC.		
	RLF1488	ARB, INC.		
	RLF1610	ARB, INC.		
	3354	King		
		La Londe		
DD7F38	16-21	Fine Grade Equipment	16G	3406

KM6D73	623-5	Fine Grade Equipment	623B	3406	
HG7B34	16-27	Fine Grade Equipment	16G	3406	
FM5V55	824-1	Fine Grade Equipment	824C	3406	
CTW37	16-19	Fine Grade Equipment	16G	3406	
LJ5F47	623-8	Fine Grade Equipment	623E	3406	
DV8G57	350-1	Fine Grade Equipment	950L	3306	
DG3L49	623-11	Fine Grade Equipment	623F	3406	
TW3H37	3503	Griffith	613C	3116T	
VR9K9H	16-22	Fine Grade Equipment	16G	RM736	
LW7M96	16-24	Fine Grade Equipment	16G	RM736	
YJ6N48		King	RS6-42	6,000 lb. Telescoping Forklift	
148995	105G	Pacific Boring	TAD1353GE		
na	GP1	Pacific Boring	V2203		
143779	GP2	Pacific Boring	BF4L1011F		
143780	GBM	Pacific Boring	4045TF270		
na	GBM PUMP	Pacific Boring	1B30-X		
CM7S67	A8	Pacific Boring	BF4M1013		Bc
YT3C76	A9	Pacific Boring	TCD914L06		Bc
JH7S57	140	Pacific Boring	C7		
RX3W44	111-004	Malcom Drilling	RG 19 T	C16	
	TR037	Royal Electric	S220	V-33-DI	
GH6Y45	643	La Londe	570XMT	4T-390	
GM9N87	623-9	Fine Grade Equipment	623F	3406C	
UW3P75	140-10	Fine Grade Equipment	140H	3306	
YH6R35	14-10	Fine Grade Equipment	14H	3306	
JR5A94	160-1	Fine Grade Equipment	160H	3306	
MG3F83	3414	Griffith	345 BL	3176C	
EP7K73	140-12	Fine Grade Equipment	140H	3306	
SP9W86	557	La Londe	D6RXL	3306	
HL8R74	140-11	Fine Grade Equipment	140H	3306	
	TR026	Royal Electric	416C	1907/2200	
PT5P94	578	La Londe	330B	3306	
YF6U45	980-2	Miller Equip. Co.	980G	3406	
XS6G93	452	La Londe	320LC	3066	
PX8N73	3485	Griffith	TH103	3054T	
TD9M65	TD9M65	ECCO Equipment	345	3176	
LH9N56	479	La Londe	140H	3306	
XW5S84	14-11	Fine Grade Equipment	14H	3306	
WK8A45	3478	Griffith	TH103	3054T	
HU4M53	515	La Londe	950GII	3123	

WY7K66	645	Jason Groom	850	3114
HH9F74	552	La Londe	950GII	3126
DT7S44	140-13	Fine Grade Equipment	140H	3176
FP9M89	140-14	Fine Grade Equipment	140H	3176
PC3M66	537	La Londe	345BLII	3176
YG4L36	550	La Londe	966GII	3176
DC4C84	551	La Londe	140H	3176
TN9K63	553	La Londe	140H	3176
PU4U47	554	La Londe	963	3126
MW5U95	616	La Londe	320CL	3066
GJ9B68	3501	Griffith	TH560B	3054E
	TR033	Royal Electric	248	3034T
CK9W38	D6-3	Fine Grade Equipment	D6	3126B
VB7J47	657	La Londe	950GII	3126B
MF4E55	715	La Londe	330CL	C9
UD6B58	302016	ARB, INC.	330CL	C9
BL3E88	3473	Griffith	140H	3176C
DE4W37	3486	Griffith	140H	3176C
TC6T58	544	La Londe	345BLII	3176
YL4H74	606	La Londe	966GII	3176
GS3D65	569	La Londe	980GII	3406
EG5P36	586	La Londe	320CL	3066
UN5R73	650	La Londe	320CL	3066
PP9K69	711	La Londe	950GII	3126B
KW7J58	709	La Londe	308CCR	4M40-EA
BB7J43	412015	ARB, INC.	950GII	3126
	E-143	Savala	330CL	C9
BT3G68	721	La Londe	963C	3126
	L-69	Savala	950G	QSB6.7
	E-144	Savala	330CL	SAA6D107E-1
MR5Y85	747	La Londe	330CL	C9
XX8S34	720	La Londe	303CR	S3L2
GP9N87	C-21	Fine Grade Equipment	CS563E	3056E
PG7M84	3511	Griffith	446D	3114
	B-64	Savala	446D	3114
	B-65	Savala	446D	3114
	B-66	Savala	446D	3114
	B-67	Savala	446D	3114
	B-68	Savala	446D	3114
	B-69	Savala	446D	3114
	B-70	Savala	450E	C404/ACERT

UV8Y65	672	La Londe	939C	3046
YG4M56	705	La Londe	321CLCR	3066
NE5J58	302015	ARB, INC.	D6RXL	C9
RT7W56	706	La Londe	345CL	C13
YF4L36	719	La Londe	226B	3024CT
FM7F85	392087	ARB, INC.	345	3054C DIT
BL5M98	3541	Griffith	330 DL	C9
RJ8D87	363028	ARB, INC.	330DL	C9
	B-71	Savala	450E	C404/ACERT
	B-72	Savala	450E	4045T059
CT5A83	749	La Londe	966H	C11
GK7H49	3591	Griffith	CB 24	C1.5
KE4883	770	La Londe	321D	C6.4
WC8E39	3575	Griffith	450E	C4.4 ACERT
JD8C33	754	La Londe	450E	C4.4
RR9B66	3590	Griffith	CS 56	C6.6
PR3L74	623-10	Fine Grade Equipment	623F	C15
	N/A	Goss Construction	B3.3	N/A
XE9F44	N/A	Malcom Drilling	RS8-44	6WG1XAB
	E-133	Savala	ZX450H	AH-GWG1T
	E-137	Savala	ZX480MTH	AH-6WG1T
MT4V96	647	La Londe	ZX330	AA-6HK1X
WY7K66	645	La Londe	ZX850H	6WG1XAB
	E-136	Savala	ZX200LC	AA-6BG1T
	E-138	Savala	ZX200LC	AA-6BG1T
YF8D58	591	La Londe	Z450X	AA6WGIT
	E-140	Savala	ZX200LC	AA-6BG1T
	E-142	Savala	ZX200LC	SAA6D107E-1
	E-141	Savala	ZX300LC	C9
	E-146	Savala	ZX450LC	AA6WG1T
JN8W58	664	La Londe	Z450X	AA-6WG1T
VM3U57	667	La Londe	Z450X	AA-6WG1T
	E-145	Savala	ZX450LC	AH-GWG1X
	AC021	Royal Electric	P185 WJD	4024-TF-150B
	AC022	Royal Electric	P185 WJD	4024-TF-150B
TL4T98	C-23	Fine Grade Equipment	SD116DX	QSB6.7
	AC025	Royal Electric	P185 WJDR	4024-TF-270
	AC026	Royal Electric	P185 WJDR	4024-TF-270
	LP006	Royal Electric	320-4000 LT4	V-33-DI
RX8J67	762-2	Fine Grade Equipment	762B	6081AT001
GD7A47	762-3	Fine Grade Equipment	762B	6081AT001

NK4F64	451	La Londe	450H	TO4045TT
	CB1	Concrete Coring	N/A	N/A
	CB6	Concrete Coring	N/A	N/A
NY5P55	549	La Londe	450H	PE4045TT090
	L-59	Savala	210LE	4045T059
	L-60	Savala	210LE	SAA6D114E-2
JM8D79	555	La Londe	450H	PE4045TT090
AF5T49	564	La Londe	710G	PE46068TT057
TT7T69	210-2	Fine Grade Equipment	210 LE	PE4045DT059
NP3L36	210-3	Fine Grade Equipment	210 LE	PE4045DT059
	N/A	Goss Construction	4045D	N/A
WK8W43	592	La Londe	210LE	PE4045TT092
HL6B99	594	La Londe	3102G	PE4045TT089
WC3T88	593	La Londe	710G	PE6068TT057
HW3P37	595	La Londe	710G	PE6068TT057
LT9J54	3515	Griffith	210 LE	4045TT092
GE9R68	3508	Griffith	210 LE	4045TT092
AR5K45	674	La Londe	710G	PE6068TT057
ND3A95	683	La Londe	710G	PE6068TT057
EW9D98	690	La Londe	710G	PE6068TT057
HA7E69	RLF1491	ARB, INC.	710	
FC6F85	3577	Griffith	210 LJ	4045HT054
	TR042	Royal Electric	410J	4045HT054
	TR043	Royal Electric	410J	4045HT054
LJ5C38	761	La Londe	210LJ	4045HT054
	TR041	Royal Electric	35D	3TNV88-BNHB
LT5X49	741	La Londe	35D	3TNV88
VX8S35	762	La Londe	710J	6068HT067
LV5Y74	533	La Londe	PC300LC-7	SAA6D114E-2
NH5A77	699	La Londe	PC228	SAA6D102E-2
NN5575	L-64	Savala	WA380-5L	SAA6D114E-2
	E-135	Savala	PC300LC	SAA6D114E-2
	E-139	Savala	PC300LC	AA6HK1X
	L-67	Savala	WA450-5L	SAA6D125E-3
	E-134	Savala	PC400LC	AH-GWG1T
	L-65	Savala	WA380-5L	3126
HM7S75	596	La Londe	PC228	SAA6D102E-2
NG7C73	597	La Londe	PC308	SAA6D102E-2
	L-68	Savala	WA450-5L	SAA6D140E-5
	L-72	Savala	WA380-6	SAA6D125E-3
	TR044	Royal Electric	PC200LC-8	SAA6D107E-1

	E-147	Savala	PC308	AA-6BG1T
	L-71	Savala	WA500-6	AA-6BG1T
	L-70	Savala	WA500-6	SAA6D140E-5
DU4D49	751	La Londe	308	SAA6D107E-1
	E-148	Savala	PC228	SAA6D107E-1
NV4P94	E-149	Savala	PC228	SAA6D114E-2
	N/A	Goss Construction	165435	N/A
N/A	3456	Griffith	WRS5200	950D
XG9L98	3573	Griffith	WRS5200	950D
PU8W54	708	La Londe	U80	4T-390
	CB4	Concrete Coring	N/A	N/A
FY9A97	501-022	Malcom Drilling	8042	QSB4.5
	N/A	Goss Construction	BF3L1011F	N/A
	N/A	Goss Construction	BF3L1011F	N/A
AG4L39	AT-1	Fine Grade Equipment	TA40	SERIES 60
NW6S74	AT-2	Fine Grade Equipment	TA40	SERIES 60
RD6W57	AT-3	Fine Grade Equipment	TA40	SERIES 60
	N/A	Goss Construction	600	B5.9
	VH119	Royal Electric	F450 XL	TBD
	N/A	Goss Construction	F650	N/A
	VH128	Royal Electric	F450 XL	B235
	VH129	Royal Electric	F450 XL	B235
	VH170	Royal Electric	F250XL	B250CF
	VH186	Royal Electric	F450XL	A325
	C-3	Concrete Coring	F550	N/A
	C-34	Concrete Coring	F550	N/A
	VH274	Royal Electric	F750	ISB 215
	VH215	Royal Electric	F650	C7
	VH254	Royal Electric	F250 XL	A325
	VH252	Royal Electric	F250 XL	A325
	VH170	Royal Electric	F-250 XL	B250CF
	VH213	Royal Electric	F450 XL	A325
	VH216	Royal Electric	F550 XL	A325
	VH205	Royal Electric	F250XK	A325C
	VH210	Royal Electric	F250 XL	A325C
	VH224	Royal Electric	F550 XL	A325
	VH225	Royal Electric	F550 XL	A325
	VH237	Royal Electric	F250 XL	A325
	VH242	Royal Electric	F250 XL	A325
	VH256	Royal Electric	F550 XL	A325
	VH258	Royal Electric	F250 XL	A325

	VH257	Royal Electric	F550 XL	A325
	VH259	Royal Electric	F450 XL	A325
	VH261	Royal Electric	F450 XL	A325
	C6	Concrete Coring	F550	N/A
	VH116	Royal Electric	FL-70	3126
N/A	3572	Griffith	M2	OM926LA
N/A	3477	Griffith	4300	DT466
PJ9M37	264027	ARB, INC.	10K Reachlift RCH	QSB4.5
RG9C94	3570	Griffith	G10-55A	3472/2400
	351	Robertson's	357	ISC 315
	608	Robertson's	357	ISC 315
	T-22	Savala	330	ISC260
	T-23	Savala	330	ISC260
	147	Robertson's	357	ISC 315
	171	Robertson's	357	ISC 315
	722	Robertson's	357	ISC 315
	179	Robertson's	357	ISC 315
	148	Robertson's	357	ISC 315
	146	Robertson's	357	ISC 315
	682	Robertson's	357	ISC 315
	652	Robertson's	357	ISC 315
	142	Robertson's	357	ISC 315
	143	Robertson's	357	ISC 315
	141	Robertson's	357	ISC 315
	1078	Robertson's	357	ISC 315
	1118	Robertson's	357	ISC 315
	1024	Robertson's	357	ISC 315
	1112	Robertson's	357	ISC 315
	1080	Robertson's	357	ISC 315
	1081	Robertson's	357	ISC 315
	1095	Robertson's	357	ISC 315
	1082	Robertson's	357	ISC 315
	1079	Robertson's	357	ISC 315
	1030	Robertson's	357	ISC 315
	1144	Robertson's	357	ISC 315
	1027	Robertson's	357	ISC 315
	1105	Robertson's	357	ISC 315
	1083	Robertson's	357	ISC 315
	1140	Robertson's	357	ISC 315
	1093	Robertson's	357	ISC 315
	1139	Robertson's	357	ISC 315

	1029	Robertson's	357	ISC 315
	1054	Robertson's	357	ISC 315
	1137	Robertson's	357	ISC 315
	1053	Robertson's	357	ISC 315
	1142	Robertson's	357	ISC 315
	1047	Robertson's	357	ISC 315
	1156	Robertson's	357	ISC 315
	1143	Robertson's	357	ISC 315
	1145	Robertson's	357	ISC 315
	1138	Robertson's	357	ISC 315
	1141	Robertson's	357	ISC 315
KV5C43	264025	ARB, INC.	10K Reachlift DSL	QSB4.5

	110	Coffman	2004 CHEVROLET TAHOE
	122	Coffman	2007 FORD EDGE
	131	Coffman	2012 FORD FUSION
	173	Coffman	2006 FORD F-150 4X4
	178	Coffman	2008 FORD F-350
	180	Coffman	2008 FORD F-350
	186	Coffman	2008 FORD F-350
	187	Coffman	2008 FORD F-150
	191	Coffman	2006 FORD F-150 CREW LARIAT
	194	Coffman	2007 FORD F-150 SUPERCREW
	195	Coffman	2008 CHEVROLET SILVERADO 2500 4X4 CIC
	196	Coffman	2008 CHEVROLET SILVERADO 2500
	198	Coffman	2008 CHEVROLET SILVERADO 2500
	199	Coffman	2008 CHEVROLET SILVERADO 2500
	200	Coffman	2009 FORD F-150
	202	Coffman	2009 CHEVROLET SILVERADO 2500

203	Coffman	2009 CHEVROLET SILVERADO 2500
204	Coffman	2010 FORD F-150
205	Coffman	2010 FORD F-350
206	Coffman	2008 FORD F-150 XL CREW CAB 4X4
207	Coffman	2008 FORD F-150 XL CREW CAB
208	Coffman	2008 FORD F-150 XL CREW CAB
209	Coffman	2008 FORD F-150 XL CREW CAB
210	Coffman	2008 FORD F-150 XL CREW CAB
211	Coffman	2012 FORD F-150
212	Coffman	2012 FORD F-150
213	Coffman	2012 FORD F-150
214	Coffman	2013 FORD F-150
215	Coffman	2013 FORD F-150
216	Coffman	2013 FORD F-150
217	Coffman	2013 CHEVROLET SILVERADO
218	Coffman	2013 FORD F-150
219	Coffman	2013 FORD F-150
220	Coffman	2013 CHEVROLET SILVERADO
221	Coffman	2013 CHEVROLET SILVERADO
222	Coffman	2012 FORD F-250
223	Coffman	2013 FORD F-350
266	Coffman	2007 FORD F-450
271	Coffman	2008 STERLING CONV 4500 TRUCK
272	Coffman	2008 STERLING CONY 4500 TRUCK
273	Coffman	2008 STERLING CONY 5500 TRAFFIC TRUCK
274	Coffman	2008 STERLING CONY 4500 TRUCK

275	Coffman	2008 STERLING CONY 5500 TRUCK
276	Coffman	2008 STERLING CONY 5500 TRUCK
279	Coffman	2008 STERLING CONY 5500 TRUCK
280	Coffman	2008 STERLING CONY 5500 TRUCK
281	Coffman	2008 FORD F550 XL CREW CAB
282	Coffman	2008 FORD F550 XL
283	Coffman	2006 FORD F550 XL CREW CAB
284	Coffman	FORD F550
285	Coffman	FORD F550
543	Coffman	2008 FORD F650 XLT
546	Coffman	2014 PETERBILT 337
547	Coffman	2014 PETERBILT 337
555	Coffman	2012 WESTERN STAR 4900FA
560	Coffman	2009 PETERBILT SUPER DUMP
561	Coffman	2009 PETERBILT SUPER DUMP
562	Coffman	2009 PETERBILT SUPER DUMP
563	Coffman	2009 PETERBILT SUPER DUMP
564	Coffman	2007 PETERBILT SUPER DUMP
565	Coffman	2007 PETERBILT SUPER DUMP
566	Coffman	2007 PETERBILT SUPER DUMP
830	Coffman	2013 ATLAS COPCO AIR COMPRESSOR
831	Coffman	2013 ATLAS COPCO AIR COMPRESSOR
832	Coffman	2013 ATLAS COPCO AIR COMPRESSOR
833	Coffman	2013 ATLAS COPCO AIR COMPRESSOR
834	Coffman	2013 ATLAS COPCO AIR COMPRESSOR
1136	Coffman	2004 VOLVO EC330BLC HYDRAULIC EXCAVATOF
1144	Coffman	2006 CAT 950H LOADER
1146	Coffman	2006 CAT 950H LOADER
1147	Coffman	2007 CAT 430E BACKHOE

1150	Coffman	2007 CAT 950H LOADER	
1155	Coffman	2007 CAT 345CL EXCAVATOR	
1157	Coffman	2007 CAT 450E BACKHOE LOADER	
1160	Coffman	2008 CAT 972H WHEEL LOADER	
1162	Coffman	2008 CAT 613G SCRAPER	
1169	Coffman	2007 CAT 950H LOADER	
1173	Coffman	2010 CAT 972H WHEEL LOADER	
1175	Coffman	2011 CAT CB64 VIB ROLLER	
1176	Coffman	2012 CAT 972K WHEEL LOADER	
1178	Coffman	345 CL HYD EXCAVATOR	
1179	Coffman	2007 CAT 345CL HYDRAULIC EXCAVATOR	
1180	Coffman	2007 CAT 345C HYDRAULIC EXCAVATOR	
1182	Coffman	2008 CAT D6TXL TRACK TYPE TRACTOR	
8307	Coffman	CAT 272 SKID STEERE	
606	Coffman	2007 Peterbilt 340 T/A Water Truck - 4,600 gallon	
397	Coffman	2008 Caterpillar TL1255 Telehandler Forklift	
	Coffman	DT6	C9/200
	Coffman	345	C13
	Coffman	Peterbilt	C7
	Coffman	CC8000	TBD
	Coffman	TL 1255	C4.4
	Coffman	450E	C4E1
	Coffman	272	3044C
	Coffman	SH8000	TBD
	Antigo	Badger T8600	6068HF285

Equipment Category	Engine Horsepower	Engine Displacement (Liters)	Manufacturer	Engine Model Year
Water Truck	300	N/A	International	2009
Concrete Truck	315	TBD	Pete	2004
Concrete Truck	315	8.3	Pete	2004
Concrete Truck	315	8.3	Pete	2005
On-Road Truck	360	6.6	Chevrolet	2006
On-Road Truck	265		Ford	2000
On-Road Truck	265		Ford	2000
On-Road Truck	250	7.3	Ford	2000
Mobile Ram			ABI	
Excavator	157		Caterpillar	2008
Excavator	157		Caterpillar	2008
Loader Backhoe	129		Caterpillar	2008
Excavator	317		Caterpillar	
Excavator	312		Caterpillar	
Excavator	241		Caterpillar	
Excavator	241		Caterpillar	
Excavator			Caterpillar	
Light Plant	15	1.1	Coleman	1990
Forklift	86	4.2	Eagle Picher	1998
Forklift	60		Hyster	1995
Forklift			Hyster	
Loader			Kawasaki	
Trencher	286	6.8	Vermeer	2004
Light Plant	12	1.1	Wacker	1999
Light Plant	15.7	1.1	Wacker	2000
Light Plant	15.7	1.1	Wacker	2000
Light Plant	10	1.0	Wacker	2002
Light Plant	10	1.0	Wacker	2002
Light Plant	10	1.0	Wacker	2002
Air Compressor	49			
Air Compressor	49			
Pump	49			
Pump	49			
Light Plant	N/A			
Street Sweeper				
Roller				
Excavator				
Motor Grader	275	14.6	Caterpillar	1979

Scraper	365	14.6	Caterpillar	1983
Motor Grader	275	14.6	Caterpillar	1988
Rubber Tired Dozer	310	14.6	Caterpillar	1988
Motor Grader	275	14.6	Caterpillar	1990
Motor Grader	365	14.6	Caterpillar	1991
Excavator	286	10.5	Caterpillar	1994
Scraper	365	14.6	Caterpillar	1995
Wheel Scraper	175	6.6	Caterpillar	1995
Motor Grader	275	14.6	Caterpillar	2007
Motor Grader	275	14.6	Caterpillar	2007
Forklift			Gehl	2006
Generator	601		Volvo	2009
Grout Pump (Strong)	40		Kabota	2002
Grout Pump (Swhing)	71		Deutz	2003
Power Motor	99		John Deere	2005
Bentonite Tank	6.5kw		Hutz	2005
›ring Machine 48" A/Aug	112		Deutz	2000
›ring Machine 48" A/Aug	174		Deutz	2007
Grove RT740 Crane	225		Caterpillar	2008
Drill Rig	630	7.2	Bauer	2004
Skid Steer	75	3.3	Bobcat	2006
Loader Backhoe	85		Case	2005
Scraper	365	14.6	Caterpillar	1996
Motor Grader	150	10.5	Caterpillar	1997
Motor Grader	215	10.5	Caterpillar	1997
Motor Grader	180	10.5	Caterpillar	1997
Excavator	290	10.3	Caterpillar	1998
Motor Grader	165	10.5	Caterpillar	1998
Crawler Tractor	175		Caterpillar	1998
Motor Grader	165	10.5	Caterpillar	1999
Backhoe	61	3.9	Caterpillar	2000
Excavator	241		Caterpillar	2000
Rubber Tired Loader	300	14.6	Caterpillar	2000
Excavator	147		Caterpillar	2000
Telehandler	105	3.9	Caterpillar	2000
Excavator	322		Caterpillar	2001
Motor Grader	165		Caterpillar	2001
Motor Grader	215	10.5	Caterpillar	2001
Telehandler	105	3.9	Caterpillar	2001
Rubber Tired Loader	183		Caterpillar	2002

Excavator	483	15.6	Caterpillar	2003
Rubber Tired Loader	309		Caterpillar	2003
Motor Grader	222	10.5	Caterpillar	2003
Motor Grader	222	10.5	Caterpillar	2003
Excavator	439		Caterpillar	2003
Rubber Tired Loader	439		Caterpillar	2003
Motor Grader	205		Caterpillar	2003
Motor Grader	205		Caterpillar	2003
Crawler Tractor	174		Caterpillar	2003
Excavator	147		Caterpillar	2003
Telehandler	100	4.4	Caterpillar	2003
Skid Steer	81	3.0	Caterpillar	2004
Crawler Tractor	150	6.6	Caterpillar	2004
Rubber Tired Loader	309		Caterpillar	2004
Excavator	247		Caterpillar	2004
Excavator	247	8.8	Caterpillar	2004
Motor Grader	205	10.3	Caterpillar	2004
Motor Grader	205	10.3	Caterpillar	2004
Excavator	322		Caterpillar	2004
Rubber Tired Loader	259		Caterpillar	2004
Rubber Tired Loader	311		Caterpillar	2004
Excavator	147		Caterpillar	2004
Excavator	147		Caterpillar	2004
Rubber Tired Loader	183		Caterpillar	2004
Excavator	55		Caterpillar	2004
Loader	183	7.2	Caterpillar	2005
Excavator			Caterpillar	2005
Crawler Tractor	280		Caterpillar	2005
Wheel Loader			Caterpillar	2005
Excavator			Caterpillar	2005
Excavator	345		Caterpillar	2005
Excavator	39		Caterpillar	2005
Roller	150	6.0	Caterpillar	2005
Backhoe	102	4.4	Caterpillar	2006
Backhoe			Caterpillar	2006
Backhoe			Caterpillar	2006
Backhoe			Caterpillar	2006
Backhoe			Caterpillar	2006
Backhoe			Caterpillar	2006
Backhoe			Caterpillar	2006
Backhoe			Caterpillar	2006

Crawler Tractor	99		Caterpillar	2006
Excavator	147		Caterpillar	2006
Dozer	200	8.8	Caterpillar	2006
Excavator	371		Caterpillar	2006
Skid Steer	61		Caterpillar	2006
Backhoe	89		Caterpillar	2006
Excavator	268	8.8	Caterpillar	2007
Excavator	268	8.8	Caterpillar	2007
Backhoe			Caterpillar	2007
Backhoe			Caterpillar	2007
Rubber Tired Loader	262		Caterpillar	2008
Utility Compactor	32.7	1.5	Caterpillar	2008
Excavator	157		Caterpillar	2008
Backhoe	125	4.4	Caterpillar	2008
Loader Backhoe	129		Caterpillar	2008
Compactor Roller	157	6.6	Caterpillar	2008
Scraper	365	14.6	Caterpillar	2009
Ride on Saw	85		Dimas	2005
Forklift	110	6.8	Gehl	2006
Excavator			Hitachi	2002
Excavator			Hitachi	2003
Excavator	248		Hitachi	2003
Excavator	483		Hitachi	2003
Excavator			Hitachi	2004
Excavator			Hitachi	2004
Excavator	320		Hitachi	2004
Excavator			Hitachi	2005
Excavator			Hitachi	2005
Excavator			Hitachi	2005
Excavator			Hitachi	2005
Excavator	320		Hitachi	2005
Excavator	320		Hitachi	2005
Excavator			Hitachi	2006
Compressor	49	4.5	Ingersoll Rand	1999
Compressor	49	4.5	Ingersoll Rand	2000
Roller	140	6.7	Ingersoll Rand	2007
Compressor	49	2.4	Ingersoll Rand	2007
Compressor	49	2.4	Ingersoll Rand	2007
Light Plant, Wacker	15.7	1.1	Wacker	2000
Scraper	150	8.1	John Deere	1996
Scraper	150	8.1	John Deere	1998

Crawler Tractor	70		John Deere	1999
Air Compressor	49	4.0	John Deere	2000
Air Compressor	49	4.0	John Deere	2000
Crawler Tractor	75		John Deere	2004
Skip Loader			John Deere	2004
Skip Loader			John Deere	2004
Crawler Tractor	75		John Deere	2004
Loader Backhoe	131		John Deere	2004
Loader Backhoe	75	4.5	John Deere	2004
Loader Backhoe	75	4.5	John Deere	2004
uck Mounted Compress	49		John Deere	2004
Loader Backhoe	80		John Deere	2005
Loader Backhoe	86		John Deere	2005
Loader Backhoe	131		John Deere	2005
Loader Backhoe	131		John Deere	2005
Wheel Loader	84	4.5	John Deere	2006
Wheel Loader	84	4.5	John Deere	2006
Loader Backhoe	131		John Deere	2006
Loader Backhoe	131		John Deere	2006
Loader Backhoe	131		John Deere	2006
Backhoe	129		John Deere	2008
Wheel Loader	84	4.5	John Deere	2008
Backhoe	98	4.5	John Deere	2008
Backhoe	98	4.5	John Deere	2008
Loader Backhoe	84		John Deere	2008
Excavator	30	1.6	John Deere	2008
Excavator	30		John Deere	2008
Loader Backhoe	125		John Deere	2009
Excavator	255		Komatsu	2001
Excavator	150		Komatsu	2001
Wheel Loader			Komatsu	2003
Excavator			Komatsu	2004
Excavator			Komatsu	2004
Wheel Loader			Komatsu	2004
Excavator			Komatsu	2004
Wheel Loader			Komatsu	2004
Excavator	150		Komatsu	2004
Excavator	189		Komatsu	2004
Wheel Loader			Komatsu	2005
Wheel Loader			Komatsu	2006
Excavator	155	6.7	Komatsu	2007

Excavator			Komatsu	2007
Wheel Loader			Komatsu	2007
Wheel Loader			Komatsu	2008
Excavator	200		Komatsu	2008
Excavator			Komatsu	2009
Excavator			Komatsu	2008
Ride on Saw	83		Meco	1999
Superscreed	24.7	1.0	Multiquip	2001
Superscreed	25	1.0	Multiquip	2008
Loader Backhoe	85		New Holland	2006
Air Compressor	49	2.2	Nissan	2005
Forklift	110	TBD	Sky Trak	2006
Diesel Saw	57		Target POR65	2001
Diesel Saw	57		Target POR65	2001
Off Highway Truck	450	14.0	Terex	2007
Off Highway Truck	450	14.0	Terex	2007
Off Highway Truck	450	14.0	Terex	2007
Sweeper	210		Tymco	2005
On-Road Truck	250	7.3	Ford	1999
On-Road Truck	330		Ford	2000
On-Road Truck	250	7.3	Ford	2000
On-Road Truck	250	7.3	Ford	2000
On-Road Truck	275	7.3	Ford	2002
On-Road Truck	325	6.0	Ford	2003
On-Road Truck	TBD	6.0	Ford	2004
On-Road Truck	TBD	6.6	Ford	2004
On-Road Truck	215	5.9	Ford	2005
On-Road Truck	230	7.2	Ford	2005
On-Road Truck	325	6.4	Ford	2008
On-Road Truck	325	6.4	Ford	2008
On-Road Truck	275	7.3	Ford	2002
On-Road Truck	325	6.0	Ford	2005
On-Road Truck	325	6.0	Ford	2005
On-Road Truck	325	6.0	Ford	2005
On-Road Truck	325	6.0	Ford	2005
On-Road Truck	325	6.0	Ford	2006
On-Road Truck	325	6.0	Ford	2006
On-Road Truck	325	6.0	Ford	2007
On-Road Truck	325	6.4	Ford	2008
On-Road Truck	325	6.4	Ford	2008
On-Road Truck	325	6.4	Ford	2008

On-Road Truck	325	6.4	Ford	2008
On-Road Truck	325	6.4	Ford	2008
On-Road Truck	325	6.4	Ford	2008
On-Road Truck	TBD	6.4	Ford	2008
On-Road Truck	210	7.2	Freightliner	1995
Flat Bed Truck	330	7.2	Freightliner	2006
Fuel Truck	245	7.6	International	2004
10K Reachlift	110	4.5	JLG	2007
Telehandler	125	4.4	JLG	2007
Concrete Truck	315	8.3	Pete	2004
Concrete Truck	315	8.3	Pete	2004
Water Truck			Pete	2004
Water Truck			Pete	2004
Concrete Truck	315	8.3	Pete	2006
Concrete Truck	315	8.3	Pete	2006
Concrete Truck	315	8.3	Pete	2006
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Concrete Truck	315	8.3	Pete	2007
Concrete Truck	315	8.3	Pete	2007
Concrete Truck	315	8.3	Pete	2007
10K Reachlift	110	4.5	Sky Trak	2007

VE	Gasoline
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	HT	Diesel	
	CT	Diesel	
Crawler Tractor		Caterpillar	2008
Excavator		Caterpillar	2007
Water Truck		Caterpillar	2006
Ride-on Saw		TBD	TBD
Telehandler		Caterpillar	2008
Backhoe		Caterpillar	2007
Skidsteer		Caterpillar	2007
Striper		TBD	TBD
Breaker		John Deere	2009

Engine Family
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1316787F
1339308F
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1024NA061
1024NA061
PKZ-NRCI-08-04
TBD
VDJU69
1024NA063
6068TF250
JOZ1.1U6D2RA
Y3ZXX01.1WNA
YSZXS01.1WNA
2LBDL.916F69
2LBDL.916F69
2LBDL.916F69
1263NA023

1263NA020
1263NA028
1263NA038
1347NA017
1347NA011
1263NA034
1263NA
TBD
C13.CAPTV
C13.CAPTV
6JDXL06.8082
9VPXL12.8BCA
2KBXL02.2FCD
3DZXL02.7014
5JDXL04.45057
4HZXL.347V30
YDZXL07.1005
7DZXK06.5074
8CPXL07.2ESL
4CPXL15.8EXK
6TBXJ03.3AAD
5X9XL0239AAB
TCP14.RZDBRJ
VCP10.RZDARF
VCP10.RZDARG
VCP10.RZDARG
WCPXL10.3ERK
WCPXL10.5MRF
WCPXL10.5MRF
XCPXL10.5MRF
XcPXL03.9AK1
YCPXL10.5MRG
YCPXL14.6MRJ
YMVXL06.4AAB
YXPKXL03.9AKI
1CPXL10.3ESK
1CPXL10.5MRF
1CPXL10.5MRG
1XPKXL03.9AKI
2CPXL07.2HSX

352XL15.7EXA
3CPXL07.2HSL
3CPXL10.3ESK
3CPXL10.3ESK
3CPXL10.3ESK
3CPXL10.3ESK
3CPXL10.3ESK
3CPXL10.3ESK
3LPXL07.2HSK
3MVXL06.4DDD
3PKXL04.4RK1
2PKXL03.0UCI
4CPXL07.2HSK
4CPXL07.2HSL
4CPXL08.8HSL
4CPXL08.8HSL
4CPXL10.3ESK
4CPXL10.3ESK
4CPXL10.3ESK
4CPXL10.3ESK
4CPXL14.6ESK
4MVXL06.4DDD
4MVXL06.4DDD
5CPXL07.2HSL
5MFTL02.8M4A
4CPXL07.2HSL
4CPXL08.8HSL
5CPXL07.2HSK
5CPXL07.2HSL
5CPXL08.8HSL
5CPXL08.8HSL
5MVXL01.8AAA
5PKXL06.0VK1
2CPXL04.4MRA
2CPXL04.4MRA
2CPXL04.4MRA
2CPXL04.4MRA
2CPXL04.4MRA
2CPXL04.4MRA
2CPXL04.4MRA
2CPXL04.4MRA

3MVXL05.0AAC
5MVXL06.4DDD
6CPXL08.8ESK
6CPXL12.5ESK
6H3XL2.22N4T
6PKXL04.4RGI
7CPXL08.8ESK
7CPXL08.8ESK
7PKXL04.4NJ1
7PKXL04.4NJ1
8CPXL11.1ESK
8H3XL2.00N84
8MVXM06.4FFF
8PKXL04.4NJ1
8PKXL04.4NJ1
8PKXL06.6PJ2
9CpXL15.2ESW
5CEXL03.3ABB
6JdXL06.8082
1SZXL15.7ETA
3SzXL15.7ETA
3SZXL07.8EXA
3SZXL15.7EXA
4SZXL06.5FXA
4SZXL06.5XSA
4SZXL15.7ETA
4SZXL06.5FXA
5SZXL06.5XFA
5SZXL08.8EXA
5SZXL15.7ETA
5SZXL15.7ETA
5SZXL15.7ETA
6SZXL15.7HXA
XJDXL06.8016
XJDXL06.8016
7CEXL0409AAC
7JDXL02-4090
7JDXL02-4090
yszxs01.1wna
1347NA013
1347NA012

1024NA056
YJDXL06.8015
YJDXL06.8015
3JDXL04.5062
4JDXL04.5043
4JDXL04.5043
4JDXL04.5062
4JDXL06.8041
4JDXL04.5043
4JDXL04.5043
YJDXL06.8016
5JDXL04.5042
5JDXL04.5042
5JDXL06.8041
5JDXL06.8041
6JDXL04.5062
6JDXL04.5062
6JDXL06.8041
6JDXL06.8041
6JDXL06.8041
8JDXL06.8105
8JDXL06.8106
8JDXL06.8106
8JDXL06.8106
8JDXL06.8106
YD2201DNMDEC
YD2201VNMVEC
9JDXL06.8105
1KLxL0505ACA
1KLXL0359ABC
3KLXL0505ABD
3KLXL0505ABD
3KLXL0505ABD
3KLXL11.0DD5
3KLXL11.0DD5
3KLXL0505ABD
4KLXL0359ABC
4KLXL0359ABC
4KLXL11.0DD5
6KLXL0409AAB
6KLXL0409AAC

6KLXL0409AAB
7KLXL15.2ED6
7KLXL15.2ED6
8KLXL0409AAB
8KLXL0409AAC
8KLXL0409AAC
BF4M1011.F
1DMXL.9532D1
8DHXL.9532D1
6X9XL0239AAB
5NDXL02.27TNA
6CEXL0275AAB
4D2XL02.9012
4D2XL02.9012
6DDXL14.0VLD
6DDXL14.0VLD
6DDXL14.0VLD
5CEXH0359BAG
XNVXH07.3ANE
WCOXH0442HSK
YNVXH07.3ANA
YNVXH07.3ANA
2NVXH07.3ANC
3NVXH06.0AEA
3NVXH06.0AEA
4sZXH06.64AA
4CEXH0359BAG
5CPXH0442HBK
6NVXH06.4AGC
7NVXH06.4AGA
2NVXH07.3ANC
5NVXH06.0AEC
5NVXH06.0AEC
5NVXH06.0AED
5NVXH06.0AED
6NVXH06.0AEC
6NVXH06.0AEC
6NVXH06.0AEC
6NVXH06.4AGC
7NVXH06.4AGA
7NVXH06.4AGA

6NVXH06.4AGA
7NVXH06.4AGA
7NVXH06.4AGA
BNVXH06.4AGC
SCP442DzDARK
6MBXH7.20DJA
4NVXH0466ANA
7CEXL02.75AAG
7PKXL04.4NJ1
2CEXH0505CAX
4CEXH0505CAR
4CEXH0505CAS
4CEXH0505CAS
5CEXH0505CAX
5CEXH0505CAX
5CEXH0505CAX
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2008 LEVEL Standards
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2008 LEVEL Standards
Equiped W/ DPF

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2008 LEVEL Standards
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2008 LEVEL Standards
Equiped W/ DPF

2008 LEVEL Standards
Equiped W/ DPF

2010 LEVEL Standards
Equiped W/ DPF and SCR

2010 LEVEL Standards
EQuiped W/ DPF and SCR

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Equiped *WI* DPF and SCR

2010 LEVEL Standards
Equioed W/ DPF and SCR

2010 LEVEL Standards
Equiped W/ DPF and SCR

2008 LEVEL Standards
Equiped W/ DPF

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2008 LEVEL Standards
Eauioed W/ DPF
2010 LEVEL Standards
Equioed W/ DPF and SCR
2010 LEVEL Standards
Eauioed W/ DPF and SCR

Level 3 - Electranic with DPF

Level 4 with SCR

Level 4 with SCR

Level 4 with DPF and SCR

Level 3 - Electranic with DPF

Level 3 - Electranic with DPF

Level 3 - Electranic with DPF

Level 3 - Electranic with DPF

Level 3 - Electronic with DPF
Level 3 - Electronic with DPF
Level 3 - Electronic with DPF
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8CPXL08.8ESK	
7CPXL12.5.ESK	
6CPX80445HBK	
TBD	
8PKXL04.4NJ1	
TBD	
7MVXL3.3DDE	
TBD	
8JDXL06.8105	