

MSRC Off-Road Engine Repower Program

Contract No. MS11055

KEC Engineering

November 2014

**Prepared for the Mobile Source Air Pollution Review Committee (MSRC)
under the AB 2766 Discretionary Fund Work Program.**

Acknowledgements

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This report was submitted in fulfillment of Contract No. MS11055 and the MSRC Off-Road Engine Repower Program by KEC Engineering under the partial sponsorship of the Mobile Source Air Pollution Reduction Review Committee (MSRC). Work was completed as of September 30, 2014.

The statement and conclusions of this report are those of the contractor and not necessarily those of the Mobile Source Air Pollution Reduction Review Committee (MSRC) or the South Coast Air Quality Management District (SCAQMD). The mention of commercial products, their sources or their uses in connection with material reported is not to be construed as either an actual or implied endorsement of such products.

Project Description

As part of the FY2010-11 Work Program, the MSRC released a \$3.5 million Alternative Fuel Engines for Off-Road Heavy-Duty Vehicles Program. The Program Announcement provided a maximum \$50,000 incentive for owners of existing, older heavy-duty off-road equipment to re-power (replace the engine) their vehicles with new, lower-emitting alternative fuel engines certified at a Tier 4 interim emission level. Funding was to be distributed on a first-come, first-served basis for vehicles with model year 2005 or older engines with a horsepower of 150HP or greater.

Work Performed

KEC Engineering re-powered four (4) of its heavy-duty off-road vehicles (excavators). SCAQMD reimbursed KEC Engineering \$50,000 per re-power.

Linkbelt Excavator LS5800 (ID#523) Repowered with new Cummins QSL9 Tier 4 Interim Engine
Purchased Dec-12; Actual Cost \$84,841.37

Linkbelt Excavator LS5800 (ID#522) Repowered with new Cummins QSL9 Tier 4 Interim Engine
Purchased Jul-13; Actual Cost \$82,780.34

Linkbelt Excavator LS5800 (ID#528) Repowered with new Cummins QSL9 Tier 4 Interim Engine
Purchased Feb-14; Actual Cost \$82,780.34

Linkbelt Excavator LS3400 (ID#525) Repowered with new Cummins QSB6.7 Tier 4 Interim Engine
Purchased Sep-14; Actual Cost \$66,476.91

All replaced engines were scrapped (large holes were punched through the engine block)

Delays

Project delays were encountered due primarily to the additional lead time required to order and deliver the new Tier 4 interim engines.



NEWS RELEASE

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FOR IMMEDIATE RELEASE
December 1, 2014

KEC Engineering Does its Part to Improve Air Quality in Southern California with Four Upgraded, Cleaner Operating Excavators

LOS ANGELES, Calif. – KEC Engineering is helping to improve air quality in the Southland with its newly re-powered excavators that are used for digging work on construction projects. With the help of \$200,000 in Clean Transportation Funding from the Mobile Source Air Pollution Reduction Review Committee (MSRC), KEC Engineering replaced the engines of four of its heavy-duty off-road excavators with new, cleaner burning diesel engines, which now reduce harmful exhaust emissions by more than 90 percent.

KEC Engineering applied for a grant through the MSRC's Off-Road Engine Re-Power Program. This program offered incentives to equipment owners to re-power their existing vehicles with new diesel or alternative fuel engines that are certified at U.S. EPA Tier 4 Interim or cleaner emission standards. The old engines were taken out of use and scrapped.

Replacing dirty diesel engines is a cost-effective measure to help reduce emissions that contribute to air pollution. Statewide, construction and mining equipment emits 20 percent of all diesel particulate matter (PM) and 15 percent of all mobile diesel nitrogen oxide (NOx), which is a smog-forming pollutant. Diesel PM is a toxic air contaminant, which can lead to premature death and increased respiratory disease.

“We wanted to upgrade these engines to help improve air quality and because the new engines help extend the useful life of the equipment,” said Steve Stanage, Manager of Finance and Accounting for KEC Engineering. “So these types of projects are good for business and for the environment.”

Founded in the 1953, KEC Engineering’s work focuses primarily on public works projects in the areas of highway and bridge construction, large storm drains and underground shoring. The company is a union contractor located in Corona, California, operating exclusively in the Southern California region.

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Media Type	Outlet	First Name	Last Name	Contact Topic	Email	City	Outlet Topic	Outlet Profile
Magazine	Grading & Excavation Contractor	John	Trotti	Civil Engineering	jtrotti@forester.net	Santa Barbara	Regulatory Issues; Civil Engineering; Demolition; Heavy Equipment	Published for professionals responsible for various aspects of grading, excavating and site preparation. Contains how-to articles and case studies that deal with the practical, day-to-day professional challenges of readers.
Community Newspaper	Perris Progress and City News	Gary	Lendenni		lmsentinel@aol.com	Corona	Community News	Perris Progress is a local weekly newspaper based in Corona, CA. It covers local news, sports, weather, business, and arts & entertainment issues that impact readers. The publication is written for residents of Perris Valley, CA and surrounding areas.
Magazine	ECA Magazine	John	Simpson Lendenni	Building & Construction	innovators@aol.com	Anaheim	Engineering; Building & Construction	ECA Magazine is written for contractors and construction and building material suppliers.
Community Newspaper	Sentinel Weekly News	Elisa May	e		sentinelweekly@aol.com	Corona	Community News	Sentinel Weekly News is written for the residents of Corona, CA. It covers local news.
Magazine	CalContractor	Brian	Hoover	Building & Construction	bhoover@ironads.com	Temecula	Golf; Building & Construction; Civil Engineering; Recycling; Asphalt; Concerts & Tours; Demolition; Landscaping; Resorts; Building Supplies; Contractors	Written for construction equipment companies and contractors. Includes topics such as crane and high reach; golf course and resort construction; underground; equipment guides; asphalt; demolition/recycling; compact equipment; concrete; owner/operator; general contractors; landscaping; and grading and excavating.
Magazine	SCCA	Bill	Davis	Civil Engineering Metro; Environment; Air Quality; Investigative News	williamedavis@cox.net	Los Angeles	Building & Construction; Civil Engineering; Commercial Development; Heavy Equipment; Building Supplies	Official publication of the Southern California Contractors Association. Articles cover topics related to union heavy construction, equipment, materials, supplies and information technology for the construction industry and keeps union contractors informed of the news and activities of the association and the industry. Includes information on legislative action and specific job stories.
Daily Newspaper	The Press-Enterprise	David	Danelski		ddanelski@pe.com	Riverside	News; Local News	The Press-Enterprise, established in 1878, is a general interest newspaper serving the Riverside and San Bernardino counties in Southern California.
Magazine	California Contractor	Herb	Chase	Building & Construction	chase@californiacontractor.us	Santa Monica	Building & Construction	Addresses profitability and success for owners and managers of contracting companies in California. Includes educational listings, business news, product information and informational opportunities for contracting companies engaged in the plumbing, electrical, heating, ventilation, air conditioning, refrigeration and building industries.
Magazine	ENR California	Scott	Blair	West Coast (US); Building & Construction	scott.blair@mhfi.com	Monrovia	Building & Construction; Civil Engineering; Commercial Development	Previously titled California Construction. Written and edited for participants and professionals in the commercial construction industry throughout the state of California and published as an insert in ENR/Engineering News-Record. Reports on the condition of the construction industry, forecasts market trends, and provides news and information related to commercial construction. Does not cover product news.
Daily Newspaper	The Press-Enterprise	Michael	Coronado		mcoronado@pe.com	Riverside	News; Local News	The Press-Enterprise, established in 1878, is a general interest newspaper serving the Riverside and San Bernardino counties in Southern California.