PROJECT SUMMARY REPORT

CONTRACT

ML06035

Project Title

Purchase Seven (7) CNG Refuse Trucks

& Install CNG Station

Contractor Organization:

City of Hemet

December 1, 2015

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

Acknowledgements

This report was submitted in fulfillment of Contract ML06035 and the project to Purchase Seven (7) CNG Refuse Trucks & Install CNG Station by the City of Hemet under the (partial) sponsorship of the Mobile Source Air Pollution Reduction Review Committee (MSRC). Work was completed as of June 2015.

Disclaimer

The statement and conclusions in 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 here in is not to be construed as either an actual or implied endorsement of such products.

Scope, Purpose, Background

Purchase of Seven CNG Refuse Vehicles This project involved the purchase of seven (7) CNG refuse collection trucks, each with a gross vehicle weight rating greater than 14,000 pounds and equipped with dedicated compressed natural gas-fueled (CNG) engines. All seven vehicles were purchased from Rush Truck Center, 8830 E. Slauson, Pico Rivera, CA 90660.

Vehicles Purchased	Stock #	Cost Each	Delivery Date
Peterbilt Model 320 Front Loader (4)	P717788	$ 253,450.89	11-13-2007
Peterbilt Model 320 Front Loader (4)	P717789	$ 253,450.89	11-20-2007
Peterbilt Model 320 Front Loader (4)	P717790	$ 253,450.89	11-15-2007
Peterbilt Model 320 Front Loader (4)	P717791	$ 253,450.89	11-15-2007
Peterbilt Model 320 Side Loader (2)	P717793	$ 267,768.68	10-11-2007
Peterbilt Model 320 Side Loader (2)	P717792	$ 267,768.68	9-27-2007
Peterbilt Model 320 Roll Off (1)	P717794	$ 182,531.80	9-27-2007
TOTAL COST		**$1,731,872.72**	

All seven refuse trucks were placed in to service by December 1, 2007. Each of these CNG-fueled trucks replaced an older diesel-fueled refuse truck from the City of Hemet fleet. The total cost of purchasing these seven vehicles was $1,731,872.72. The Local Government Match Grant contributed $175,000.

In December 2011, the City of Hemet sold its refuse operation, vehicles, and other related equipment to CR&R Waste Services. This sale included the 7 CNG vehicles purchased in 2007. The contract effectuating the sale required CR&R to comply with the geographical restriction requirements of Contract ML06035: vehicles funded must accrue 85-percent of annual mileage within SCAQMD for a period of 5 years. CR&R management verified that all seven vehicles were operated (and continue to be operated) within the SCAQMD.

Installation of CNG Fueling Station This project also involved the construction of a CNG slow-fill fueling station at the City of Hemet Corporation Yard sized to fuel our fleet of refuse collection trucks and future CNG-fueled heavy duty vehicles. In October 2009, the City was able to secure additional funding ($369,100) for the CNG station through the Energy Efficiency and Conservation Block Grant (EECBG) program of the American Recovery and Reinvestment Act (ARRA) of 2009. This allowed for an increase in the number of fuel dispensing posts from 10 to 20.

The bid package for station construction was issued in February 2011. The bid was awarded to Amtek Construction of Whittier, California in April 2011. The station began dispending fuel in January 2014. The Notice of Project Completion was filed on February 6, 2014. However, after project completion, Amtek Construction and several sub-contractors continued working on the station to resolve lingering equipment and operational issues through a one-year maintenance/service contract, which ended in June 2015. Total cost of the station was $665,315. The Local Government Match Grant contributed $148,107.

The City of Hemet CNG Fuel Station is comprised of three Knox Western 100-HP compressors and one natural gas dryer mounted on a concrete footing. The station has twenty (20) single-hose time-fill fuel posts.

Emissions Benefits

Purchase of Seven CNG Refuse Vehicles The emission benefits from replacing diesel-powered heavy-duty trucks with CNG heavy-duty trucks was estimated using data from SCAQMD staff based on the types of engines used by these CNG vehicles and their hours of operation. All seven refuse vehicles are Peterbilt Model 320 equipped with Cummins ISL G natural gas engines. Per SCAQMD, a heavy duty CNG truck with a Cummins ISL G engine and an average use of 1,189 hours/year will generate 0.18 tons/year less oxides of nitrogen (NOx). Therefore, these seven CNG vehicles will eliminate the production of NOx by 1.26 tons during each year of operation. Each refuse truck has a useful life of 10 years. If each truck operates for the full ten year period, the total production of NOx will be reduced by 12.6 tons.

Installation of CNG Fueling Station Alternative fuel stations do not directly generate emission benefits. These benefits are derived by the vehicles that use the alternative fuel. Prior to the completion of the new station, City of Hemet CNG refuse collection vehicles were fueling at the nearby Riverside Transit Agency (RTA) fast-fill CNG facility. The construction of this new slow-fill CNG fueling facility has reduced the time spent traveling to refuel vehicles more than once per day, and provided the City with the capacity to expand our CNG fleet. More efficient use of vehicles and the ability to increase the number of CNG vehicles in our fleet have and will result in emissions benefits.

Outreach Materials & Photographs

A press release with information about the MSRC-funding CNG fueling station and our existing fleet of CNG heavy-duty vehicles was submitted to our local media, including the Valley Chronicle and the Press-Enterprise on December 1, 2015. (Attached)

We are currently in the process of creating a page on the City of Hemet website to provide those interested with information about our use of CNG vehicles and the benefits in terms of emissions reductions. To launch and promote this new page, we will be posting information on social media, including the City Facebook page and Twitter Feed. Estimated launch date for the new page is 12/31/2015.

Photographs of vehicles and the CNG station are attached on pages 6 and 7.

Recommended Future Actions

We have no recommendations to make at this time.

Press Release

FOR IMMEDIATE RELEASE
December 1, 2015

Contact: Linda Nixon
Phone: 951-765-3880

City Celebrates Compressed Natural Gas Fueling Station, Expands Natural Gas-Powered Fleet

The City of Hemet Public Works Department is excited to celebrate the one-year anniversary of our compressed natural gas (CNG) fueling station which began fueling fleet vehicles in January 2015. Construction of the station was funded in part by $148,107 in Clean Transportation Funding from the Mobile Source Air Pollution Reduction Review Committee (MSRC). Other funding sources included $369,100 from the Federal Energy Efficiency and Conservation Block Grant of the American Recovery and Reinvestment Act (ARRA) of 2009, and $148,108 in funds allocated to the City through California AB 2766, which sets aside a portion of the State's annual vehicle registration fees to fund programs and projects to reduce air pollution from motor vehicles. We are proud to report that the project was fully funded through grants and non-general fund resources!

The station consists of three (3) compressors and 20 fueling posts. The large capacity of the facility was designed to accommodate the expected addition of CNG vehicles to the City's fleet for many years to come. The City facility is a time-fill station that slowly dispenses CNG into vehicles overnight. Time-fill stations require very little storage of natural gas and fuel vehicles completely, as the gas has time to adjust to its surroundings within the tank overnight.

Fleets that run on CNG have lower exhaust and carbon emissions compared to those powered by diesel and gasoline. CNG fuel is also less expensive than diesel fuel. In addition to being better for the environment and less costly to tax payers, using domestic natural gas to fuel vehicles reduces dependence on foreign oil sources.

The station was originally sized to fuel the City's fleet of 15 CNG refuse collection vehicles and street sweepers, seven of which were also were partially funded with $175,000 ($25,000 per vehicle) in MSRC Clean Transportation Funding. In 2011 the City entered into an Exclusive Franchise Agreement with CR&R Incorporated and all refuse collection vehicles were transferred to CR&R for continued use in the valley. However, the Public Works CNG fleet is continuing to grow as aging diesel-powered vehicles are replaced by lower-emission CNG vehicles. To date a total of four heavy-duty CNG vehicles have been purchased and partially funded by MSRC Clean Transportation Funding ($30,000 per vehicle). The current City of Hemet heavy duty CNG fleet includes two dump trucks, an asphalt patch truck, and a vacuum truck. The City's CNG fleet also includes 5 passenger vehicles used by the Police, Fire, and Public Works Departments. An additional CNG-fueled dump truck is anticipated to be approved for purchase using equipment replacement funds and MSRC grant funding in early 2016. The City will continue to seek out alternative fuel vehicles for all future fleet needs as we continue our commitment to supporting clean air efforts in our valley.

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PROJECT SUMMARY REPORT—PHOTOGRAPHS

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One of 7 CNG refuse vehicles purchased in 2007 & transferred to CR&R in 2011. Photo from 2009.

CNG Heavy-Duty Vehicle Fleet in 2015

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City of Hemet CNG Station (2015)

Compressor Units (2015)

MSRC Decal (2015) **Fuel Posts (2015)**