



**AB 2766/MSRC Alternative Fuel Infrastructure Program Contract  
CONTRACT NO. MS14039  
Waste Management Collection and Recycling, Inc.**

**Executive Summary**

Waste Management Collection and Recycling, Inc. (WM) has partnered with the Mobile Source Air Pollution Reduction Review Committee (MSRC) to modify their vehicle maintenance facility located in Irvine, California. As part of its agreement, WM has developed a report to outline the progress achieved to date, and the support they have received to be in compliance for natural gas vehicle maintenance and repair. With the \$75,000 in grant support from the MSRC, WM was able to install two (2) emergency system electrical subpanel with conduits and feeders, forty-eight (48) new lighting fixtures and circuits, six (6) new exhaust fans with explosion proof disconnects, ventilated door slats in one (1) building, occupancy sensors allowing for continuous ventilation while the trucks are in the maintenance bays.

**Tasks Completed**

Waste Management has completed the tasks required as part of contract MS14039 with the MSRC. The following table outlines the complete project schedule and list of tasks:

<b>Task Number</b>	<b>Task Description</b>	<b>Task Completion</b>
1	Emergency System	Complete
2	New Lighting Fixtures and Circuits	Complete
3	Exhaust Fans with Explosion Proofs Disconnects	Complete
4	Ventilated Door Slats	Complete
5	Occupancy Sensors	Complete

**Results**

WM's objective in modifying the vehicle maintenance facility was to allow for the maintenance and repair of CNG vehicles indoors. To do so required upgrades to the ventilation system as well as upgrades to existing appliances such as wiring and electrical fixtures to bring the facility into compliance with various codes that govern the maintenance and repair of CNG vehicles indoors. This will assist in the continued deployment of low-emission transportation within Waste Management, in addition to promoting the use of alternative fuels like natural gas as a commercially viable and preferable fueling option.

**Issues or Problems Encountered**

During the course of the project, WM submitted and received approval for a contract amendment for this project. The overall scope of the project remained the same, the only difference being that rather than using twelve (12) exhaust fans, WM opted to use six (6), and added occupancy sensors allowing for continuous ventilation throughout the trucks bays.

**Budget**

WM expended \$267,143.65 implementing the facility upgrades. These expenses include WM’s co-funding (\$192,143.65) and MSRC grant (\$75,000). Please note that WM’s actual co-funding amount exceeds the original co-funding amount stated in the contract. Below is the contract cost breakdown and WM’s final costs:

Contract Cost Breakdown

Description	Maximum AB 2766 Discretionary Funds payable under this contract	Other Co-Funding	Total Cost
Maintenance facility modifications	\$75,000	\$192,143	\$267,143

WM Cost Breakdown

Inv. Date	Invoice No.	Company	Amount
3/15/2013	02884-ET-Task C #1-MA-Irvine Shop	ET Environmental Corp, LLC	\$ 16,500.00
5/17/2013	02884-ET-Task C #2-MA-Irvine Shop	ET Environmental Corp, LLC	\$ 16,500.00
6/20/2013	02884-ET-Task C #3-MA-Irvine Shop	ET Environmental Corp, LLC	\$ 16,500.00
12/11/2013	02884-ET-Task C #4-MA-Irvine Shop	ET Environmental Corp, LLC	\$ 11,197.00
2/7/2014	02884-ET-Task C #5-MA-Irvine Shop	ET Environmental Corp, LLC	\$ 5,654.00
2/18/2014	02884-D-1-Irvine Shop	ET Environmental Corp, LLC	\$ 6,949.00
3/25/2014	02884-D-1-Irvine Shop	ET Environmental Corp, LLC	\$ 146,600.00
4/24/2014	02884-D-1-Irvine Shop	ET Environmental Corp, LLC	\$ 43,980.00
5/30/2014	212494	Data Consultants, Inc.	\$ 3,263.65

**TOTAL \$ 267,143.65**

**Conclusion**

Natural gas is a clean, safe, and abundant, and is used as an alternative fuel to meet low-emission standards. Maintenance facilities servicing natural gas vehicles must be constructed or modified to meet safety requirements specific to the use of natural gas. Unlike most liquid fuels, the properties of natural gas cause the liquid to rise in the event of a leak. This requires facilities to implement detection and ventilation systems to meet safety standards. The modification of the maintenance facility will support in the use and deployment of natural gas vehicles. Waste Management is committed to reducing emissions and implementing cleaner, lower emission transportation solutions, such as the construction of alternative fuel infrastructure and natural gas vehicle deployment throughout the South Coast Air Basin.