



**AB 2766/MSRC Alternative Fuel Infrastructure Program Contract
CONTRACT NO. MS14040
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 Santa Ana, 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 one (1) emergency system electrical subpanel with conduit and feeder, seven (7) new exhaust fans with explosion proof disconnects, ventilated door slats in six (6) doors, occupancy sensors allowing for continuous ventilation while the trucks are in the maintenance bays, in addition to strengthening the roof.

Tasks Completed

WM has completed the tasks required as part of contract MS14040 with the MSRC. The following table outlines the complete project schedule and list of tasks:

Task Number	Task Description	Task Completion
1	Emergency System	Complete
2	Exhaust Fans with Explosion Proofs Disconnects	Complete
3	Ventilated Door Slats	Complete
4	Occupancy Sensors	Complete
5	Roof Strengthening	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 WM, 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 instead of using gas detection onsite, WM opted to use continuous ventilation as an alternative means to complete the facility modifications. This is a different approach from gas detection that is fully compliant with the applicable fire codes, local authority having jurisdiction, and ultimately resulted in the full upgrade of WM's facility.

Budget

WM expended \$177,300 implementing the facility upgrades. These expenses include WM’s co-funding (\$102,300) and the 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	\$102,300	\$177,300

WM Cost Breakdown

Inv. Date	Invoice No.	Company	Amount
6/20/2013	02515-ET-Task C #3-MA-Santa Ana Shop	ET Environmental Corp, LLC	\$ 16,750.00
12/11/2013	02515-ET-Task C #4-MA-Santa Ana Shop	ET Environmental Corp, LLC	\$ 4,523.00
2/7/2014	02515-ET-Task C #5-MA-Santa Ana Shop	ET Environmental Corp, LLC	\$ 12,227.00
3/25/2014	02515-D-1-Santa Ana Shop	ET Environmental Corp, LLC	\$104,385.00
4/22/2014	02515-D-1-Santa Ana Shop	ET Environmental Corp, LLC	\$ 34,277.00
7/7/2014	02515-D-1-Santa Ana Shop	ET Environmental Corp, LLC	\$ 5,138.00

TOTAL \$177,300.00

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 the use and deployment of natural gas vehicles. WM is committed to reducing emissions and implementing cleaner, lower emission transportation solutions, including the construction of alternative fuel infrastructure and natural gas vehicle deployment throughout the South Coast Air Basin.