AB 2766/MSRC Alternative Fuel Infrastructure Program Contract
CONTRACT NO. MS12081
Penske Truck Leasing Co., L.P.
October 2015

Contents:
Final Report
Photos of the Completed Upgrades
Payment Request Letter
Invoices
Certifications of the Completed Upgrades

2000 East Wilshire Avenue
Santa Ana, CA 92705

AB 2766/MSRC Alternative Fuel Infrastructure Program Contract
CONTRACT NO. MS12081
Penske Truck Leasing Co., L.P.

Executive Summary

Penske Truck Leasing Co., L.P. (Penske) has partnered with the Mobile Source Air Pollution Reduction Review Committee (MSRC) to improve its vehicle maintenance facility located at 2000 East Wilshire Avenue in Santa Ana, California. With the $75,000 in grant support from the MSRC, Penske was able to retrofit its maintenance and repair facility to ensure compliance for natural gas vehicles. As part of its agreement, Penske has developed a report to outline the progress achieved to date, and the support it has received for its facility to be in compliance for natural gas vehicle maintenance and repair.

Results

Penske's objective in modifying their vehicle maintenance facility in Santa Ana is to bring the facility into compliance for natural gas vehicle maintenance. Additionally, the modifications will ensure safety when dealing with gaseous fuels, specifically in the maintenance of CNG vehicles. The upgraded facility will also provide support for Penske's expanding fleet of natural gas powered vehicles in its Orange County operations, in addition to the many well-known customers for which Penske provides maintenance services. This will assist in the continued deployment of low-emission transportation within Penske, in addition to promoting the use of alternative fuels like natural gas as a commercially viable and preferable fueling option.

See attached photos for a visual guide on the work that was completed as well as accompanying inspection reports.

Issues or Problems Encountered

During the course of the project, Penske did not encounter any significant issues or problems.

Budget

Penske expended $166,955 implementing the facility upgrades. These expenses include Penske's co-funding ($91,955) and MSRC grant ($75,000). Please note that Penske's actual co-funding amount exceeds the original co-funding amount stated in the contract. Below is the contract cost breakdown and Penske's final costs:

Description	Maximum AB 2766 Discretionary Funds payable under this contract	Other Co-Funding	Total Cost
Modify maintenance facility	$75,000	$91,955	$166,955

Penske Cost Breakdown

Inv. Date	Invoice No.	Company	Amount
12/31/2014	64515	Facility Builders & Erectors, Inc.	$ 13,427.00
1/29/2015	64530	Facility Builders & Erectors, Inc.	$ 127,852.00
2/26/2015	64565	Facility Builders & Erectors, Inc.	$ 8,981.00
2/26/2015	64556	Facility Builders & Erectors, Inc.	$ 16,695.00
		TOTAL	**$ 166,955.00**

Media/Outreach

On May 7, 2014, Penske announced its award from MSRC on its official blog, which is available for viewing at: http://blog.gopenske.com/lease/penske-gets-grants-to-retrofit-socal-facilities-for-ngv-maintenance/. In addition, there will be another blog posted shortly that summarizes the project's completion. These stories will then be shared across the company's social media channels, including: LinkedIn, Twitter, Facebook, and Google+

Conclusion

Natural gas is 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 assist in the use and deployment of natural gas vehicles. Penske is committed to reducing emissions and implementing cleaner solutions, such as the construction of alternative fuel infrastructure and natural gas vehicle deployment throughout the South Coast Air Basin.

AB 2766/MSRC Alternative Fuel Infrastructure Program Contract
CONTRACT NO. MS12081
Penske Truck Leasing Co., L.P.
Final Photos
October 2015

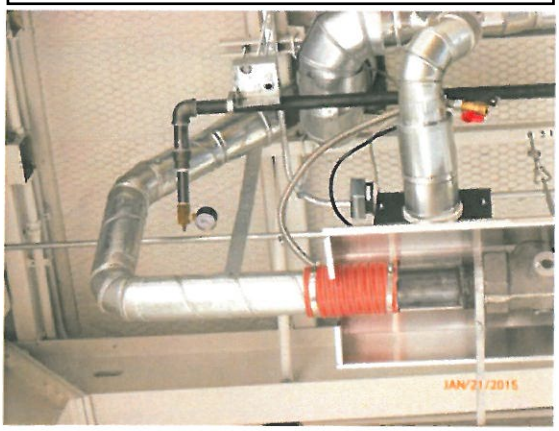
April 1, 2015

COMPLETED UPGRADES

1. Motorized air intake louvres

2. CorRay Vac infra-red tube heater (IRH-1 thru IRH-6)

3. Heater exhaust ducting



4. Sidewall mounted garage exhaust propeller fan (EF-1)

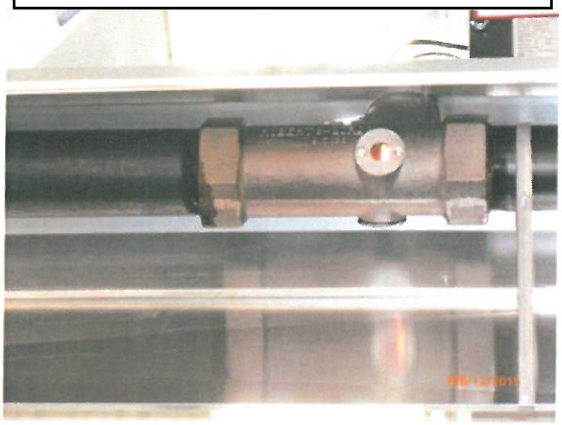
April 1, 2015

COMPLETED UPGRADES

5. CorRay Vac infra-red tube heater (IRH-1 thru IRH-6)

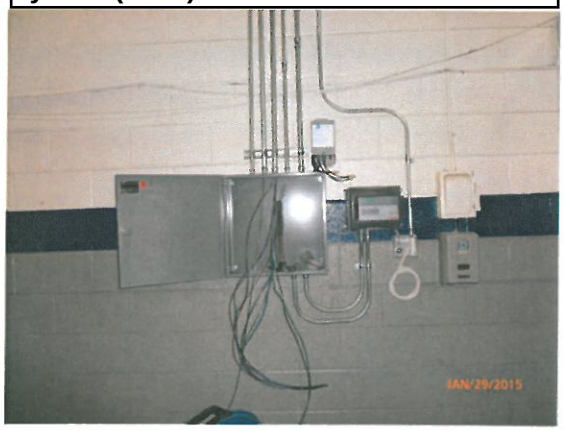
6. Relocated electrical conduit

7. CorRay Vac heater combustion chamber



8. Relocated electrical conduit

9. Honeywell Analytics CH4 monitoring system (301C)



10. Louvered exhaust fan discharge

City of Santa Ana
Planning and Building Agency
20 Civic Center Plaza, M-19
Santa Ana, CA 92702
www.santa-ana.org

INSPECTION RECORD CARD
MUST BE POSTED ON JOB SITE

Project: T.I.

Address: 2000 E Wilshire Ave

Building Permit #:		**Date Issued:**	
Electrical Permit #:	20154539	**Date Issued:**	09/29/2014
Plumbing Permit #:	30133805	**Date Issued:**	09/29/2014
Mechanical Permit #:	40127453	**Date Issued:**	09/29/2014
Grading Permit #:		**Date Issued:**	
Solar Permit #:		**Date Issued:**	

	CODE	DATE	INSP.
FOUNDATION (FOOTINGS)			
Rough Grading/Compaction	01		
Setback	02		
Forms/Foundation/Elevation Certification	03		
Main Grounding System	04		
Pre-Slab (Steel/PT Cables)	05		
Masonry/Grout Lift (Bond Beam/Steel)	06		
Sub-Surface NPDES BMPs - PWA	401		
PLUMBING			
Under Floor/Under Slab	11		
A) Waste and Vent	11A		
B) Water Piping	11B		
Backflow Protection (647-3341)			
Roughs	12		
A) Water	12A		
B) Top Out Waste and Vent	12B		
C) Gas Piping	12C		
Shower Pan/Tub Test	13		
Water Service	14		
Gas Service (Under Ground)	15		
Sewer/Sewer Cap	16		
Lawn Sprinklers	17		
Gas Air Pressure Test OVER	18		
Roof Drains	19		
ELECTRICAL			
Temporary Construction Power Pole	21		
Rough Fire Alarm Wiring	22		
Rough Ground Work	23		
Service (Meter/Panel)	24		
Grounding/Bonding	25		
Permanent Power Pole	26		
Lighting Standards	27		
Roughs	28	2/3/15	JAlan (QC)
A) Walls	28A		
B) Hard Ceilings	28B		
C) T-Bar Ceilings	28C		
D) Solar	28D		
Roof Top Equipment	29		
STRUCTURAL			
Under Pinning (Floor Joist/Girders)	31		
A) First Floor	31A		
B) Second Floor and Above	31B		
Under Floor Insulation	32		
Roof (Diaphragm Sheathing/Frame)	33		
Framing (After Rough Elec., Plbg., & Mech. approvals)	34		
Planning Rough 714-647-2700			
Shear Nailing	35		
Insulation	36		
Lath – Exterior	37		
Lath – Interior	38		
Drywall	39		
Stucco	41		
A) Scratch Coat	41A		
B) Brown Coat	41B		
T-Bar Grid (After Elec., Plbg. & Mech. approvals above grid)	42		
Trash Enclosure	43		
Accessibility Requirements (Interior)	44		
Accessibility Requirements (Exterior)	45		
High Pile Storage Racks	46		
Solar Rough	47		
Building NPDES BMPs - PWA	402		

	CODE	DATE	INSP.
POOLS & SPAS			
Electrical Bonding	51		
Pool Water Piping	52		
Main Drain	53		
Steel/Forms/Setbacks OK TO GUNITE	54		
Pool Trap	55		
Back Flow Device	56		
Gas Piping	57		
Gas Piping Air Test	58		
Electrical Groundwork	59		
Electrical Rough	61		
Handicap Equipment	62		
Pool Fence OK TO PLASTER	63		
Pool Demo-Drainage/Bond Beam	64		
SIGNS			
Footing/Setback	71		
Electrical Groundwork	72		
Electrical Rough	73		
Structural/Framing	74		
Planning Approval	75		
MECHANICAL-HEATING/VENTING/COOLING			
Ducts - Prewrap	81		
Rough (After Police)	82		
A) HVAC Ductwork	82A		
B) Piping (HW, CW, etc.)	82B		
C) Exhaust Ducts	82C		
D) Dampers	82D		
Underground Piping	83		
Metal Fireplace	84		
Type I Hood Clearances	85		
OCFA Fire Inspections 714-573-6150			
POLICE DEPT. 714- 647-5840			
Parking Lot Lighting	203		
Burglar Bars	206		
Security Alarm	208		

FINAL INSPECTION APPROVALS

	CODE	DATE	INSP.
CALL CASE PLANNER OR 714-647-5804 (Architecture & Landscaping)			
PUBLIC WORKS 714-647-5074			
NPDES- PWA 714-647-5013	400		
GRADING	00		
PLUMBING	10	2/2/15	81
ELECTRICAL 3/3/15 JAlan (QC)	20		
MECHANICAL-HVAC	80	2/2/15	89
POLICE 714-647-5840	200		
OCFA 714-573-6150			

	CODE	DATE	INSP.
STRUCTURAL FINAL PROJECT COMPLETE	40		

INSPECTION REQUEST LINE – 714-667-2738

Read the required information on the backside of this form.

EST. 1933
HALDEMAN
INC

environmental and process systems - equipment

2937 Tanager Avenue, Los Angeles, California 90040
Telephone (323) 726-7011 – (800) 621-6918
Fax (323) 726-1644

FRANKLIN MECHANICAL SYSTEM, INC. **2/27/15**
185 WEST 4TH STREET
BEAUMONT, CA 92223
ATTN: JOE HORACEK

RE: CERTIFICATION LETTER FOR THE HONEYWELL ANALYTICS METHANE MONITORING SYSTEM FOR PENSKE LEASING SERVICE GARAGE

Joe:

This letter is to certify that the Honeywell Analytics CH4 (methane) monitoring system installed in the Penske Leasing service garage at 2000 East Wilshire Avenue in Santa Ana, CA, has been started up, calibrated, and is operating properly. Our technician was at the jobsite on Thursday February 26, 2015, and went around to the nine transmitters (E3SM) with CH4 sensor cartridges (E3M), as well as the two explosion-proof transmitters/CH4 sensors (SPXCDULNRXM), and checked their calibration level. He used certified span gas of 50% LEL (lower explosion limit) CH4 to calibrate the sensors. The nine E3SM transmitters with the E3M sensors are located throughout the service garage, and mounted a minimum of 18" below the ceiling. The two SPXCDULNRXM explosion-proof transmitters/CH4 sensors are located in the lube pit, mounted close to the top edge of the pit.

The system is designed that if any of the eleven sensors (#1 Sensor thru #11 Sensor) detect CH4 above 25% LEL, it will de-energize the six low intensity infra-red tube heaters (IRH-1 thru IRH-6), energize the sidewall mounted garage exhaust propeller fan (EF-1), energize the roof mounted filtered supply fan (SF-1), energize the lube pit fan, energize the remote mounted horn/strobe (located on the wall between the service garage and break room), and open the wall damper (located on the opposite wall from the exhaust fan). Once the CH4 level drops below 20% LEL, then the six low intensity infra-red tube heaters will be energized, the remote mounted horn/strobe will be de-energized, and the wall damper will close. The sidewall exhaust propeller fan, roof mounted filtered supply fan, and the lube pit fan, will remain operating for an additional ten minutes.

If the system goes in to a fault, or the system loses 24 volt DC power, then the low intensity tube heaters will be de-energized, the two exhaust fans and one supply fan will be energized, the remote mounted horn/strobe will be energized, and the wall damper will be opened. When the system goes out of fault, or the system regains 24 volt DC power, then the low intensity tube heaters will be energized, the remote mounted horn/strobe will be de-energized, and the wall damper will be closed. The two exhaust fans and one supply fan will remain operating for an additional ten minutes. Keep in mind that all of the relays would need to maintain 24 volt AC power, and all of the fans, remote mounted horn/strobe, and the wall damper would need to maintain their power, for them to operate if the system lost 24 volt DC power.

Our technician checked the entire Honeywell Analytics CH4 monitoring system and put it through a test to make sure the low intensity tube heaters, fans, and remote mounted horns/strobes were energizing and de-energizing, as well as the wall damper was opening and closing, as mentioned above. When our technician was performing the test, the lube pit fan was not energizing, but the relay coil for the lube pit fan in the master control box, was energizing and allowing 208 volt single phase power to go thru the relay contacts.

Listed on the next page is a list of the components in the Honeywell Analytics CO monitoring system:

COMPONENT	MODEL #	SERIAL #
CONTROL PANEL	301C	5340PAR51140005
#1 SENSOR	E3SM/E3M	NM511400246
#2 SENSOR	E3SM/E3M	NM511400173
#3 SENSOR	E3SM/E3M	NM511400247
#4 SENSOR	E3SM/E3M	NM511400248
#5 SENSOR	E3SM/E3M	NM511400245
#6 SENSOR	E3SM/E3M	NM511400244
#7 SENSOR	E3SM/E3M	NM511400174
#8 SENSOR	E3SM/E3M	NM511400175
#9 SENSOR	E3SM/E3M	NM511400176
#10 SENSOR	SPXCDULNRXM	
#11 SENSOR	SPXCDULNRXM	

If any questions please call me on my cell phone at (949) 677-5378.

Regards
Kenny Lautenschlager
Director of Engineering
Haldeman Inc. (Southern California Representative for Honeywell Analytics)