

N6962
MANILA

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N696237490

FACILITY: Ricardo Inc.	SRN / ID: N6962
LOCATION: 40000 Ricardo Drive, VAN BUREN TWP	DISTRICT: Detroit
CITY: VAN BUREN TWP	COUNTY: WAYNE
CONTACT: Theodore Byrne , Quality Liason	ACTIVITY DATE: 10/20/2016
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance
	SOURCE CLASS: MAJOR
SUBJECT: Inspection and ROP renewal meeting	
RESOLVED COMPLAINTS:	

DATE OF INSPECTION : October 20, 2016
TIME OF INSPECTION : 9:00 am
NAICS CODE : 541330
EPA POLLUTANT CLASS : VOC, CO, NOx
INSPECTED BY : Jill Zimmerman
Gloria Torello, MDEQ – Gaylord
PERSONNEL PRESENT : Ted Byrne, Quality Environmental H&S Manager
Craig Assenmacher, Engineer Manager, Powertrain Development
FACILITY PHONE NUMBER : 734-394-3712
FACILITY EMAIL ADDRESS : craig.assenmacher@ricardo.com
ted.byrne@ricardo.com

FACILITY BACKGROUND

Ricardo operates twelve engine test cells and one cold start test cell. The engines being tested in these cells are capable of operate on gasoline, diesel or compressed natural gas. The facility operates two shifts per day, five days per week based on a need from the customers.

PERSONAL PROTECTION EQUIPMENT

The personal protection equipment required to inspect this facility is safety glasses and steel toe shoes.

COMPLAINT/COMPLIANCE HISTORY

No complaints have been received regarding this facility.

OUTSTANDING VNs

No VNs have been issued since at least the last time that this facility was inspected.

PROCESS EQUIPMENT AND CONTROLS

Each engine is equipped with a catalytic convertor to control emissions. Each test cell operates one of the engines to be tested on a dynamometer. The test is controlled in the control room by the technician based on the test protocol. Typically, it takes about a week to install the engine onto the dynamometer. Testing time for a particular engine varies based on the customers' needs.

INSPECTION NARRATIVE

I arrived at the facility on Thursday October 13, 2016 at 9:00 am with Ms. Gloria Torello from the MDEQ Gaylord Office, and met with Mr. Ted Brynes and Mr. Craig Assenmacher. The purpose of this meeting and inspection was to discuss the ROP renewal. Ms. Torello has been assigned to write the ROP renewal. No process changes have been made since my last inspection.

Initially we met in a conference room and discussed the permit. The facility has not had any work involving compressed natural gas (CNG) as of the time of this inspection. Ms. Torello discussed with the facility some changes in language in the permit. Also, the language from permit to install (PTI) 370-08B, which allowed the facility to use CNG in the test cells, will be added to the ROP.

Fuel usage records are kept and recorded weekly, with the data being entered into a spreadsheet to track fuel usage as well as emissions. These calculations are then used to for the annual emissions reporting requirements. These spreadsheets were reviewed during the onsite inspection, and appear to contain all necessary information. Daily shift logs are kept which track the fuel usage through a fuel meter and the hours that the engines operated. This information is recorded into the spreadsheet for the monthly totals.

Each gasoline or diesel fuel delivery contains a fuel sheet which lists the lead content in the gasoline and the sulfur content in the diesel fuels. A sample of these sheets is attached to this report. There are four underground storage tanks onsite which store diesel or gasoline. At the time of the inspection, tank 3 was virtually empty, though some residual fuel may be present in the tank.

After we discussed the process of the facility, Mr. Assenmacher, Mr. Byrnes, Ms. Torello and I walked through the facility. Test cells 6 and 7 are not currently being used, but the facility wishes to maintain this cell for possible future work. These cells are anechoic cells, which can contain sound deadening walls.

The facility has four cold cleaner units onsite. None of these units are heated. Each of these units is maintained by Safety Kleen. During the onsite inspection, one unit was observed and was closed.

APPLICABLE RULES/PERMIT CONDITIONS

The facility is currently operating under Title V permit MI-ROP-N6962-2010. The facility has submitted a permit renewal application on September 14, 2014.

Source-wide conditions – NA – The facility is required to comply with MACT CCCCCC. However, AQD has not been delegated the authority to enforce this MACT.

EU-ROLLCELL – NA – This equipment was never installed.

FG-TESTCELLS – This flexible group contains thirteen compression and spark-ignited engine dynamometer test cells and one temporary cold start module. The emission units included in this group are EU-TESTCELL-01, EU-TESTCELL-02, EU-TESTCELL-03, EU-TESTCELL-04, EU-TESTCELL-05A & B, EU-TESTCELL-06, EU-TESTCELL-07, EU-TESTCELL-08, EU-TESTCELL-09, EU-TESTCELL-10, EUTESTCELL-11 and EU-TCS.

- I. Emission Limits – Based on the values reported in MAERS for 2015
 1. NO_x – Compliance – The facility reported emitting 3.83 tons during 2015, which is less than the permit limit of 34.5 TPY.
 2. CO – Compliance – The facility reported emitting 8.76 tons during 2015, which is less than the permit limit of 74.6 TPY.
 3. PM₁₀ – Compliance – The facility reported emitting 0.133 tons during 2015, which is less than the permit limit of 7.48 TPY.
 4. SO₂ – Compliance – The facility reported emitting 0.12 tons 2015, which is less than the permit limit of 6.94 TPY.
 5. VOC – Compliance – The facility reported emitting 2.00 tons 2015, which is less than the permit limit of 21.7 TPY.
- II. Material Limits
 1. Fuel: Compression ignited – Compliance – The facility reported using 2,344 gallons of diesel fuel during 2015, which is less than the permit limit of 325,000 gallons per year.
 2. Fuel: Spark-ignited – Compliance – The facility reported using 27,002 gallons of gasoline fuel during 2015, which is less than the permit limit of 185,000 gallons per year.
- III. Process / Operational Restrictions – NA – During tests run on EU-TCS, the facility is required to operate with a properly functioning catalytic converter. During the onsite inspection, I did not observe a test being run in this testing cell.
- IV. Design / Equipment Parameters – NA
- V. Testing / Sampling – A stack test was performed on August 19, 2014 and August 20, 2014 to verify that the emission rates of CO and NO_x. The results of this test were determined to be acceptable. CNG has not been tested because the facility has not used CNG for any jobs since the permit was issued.
- VI. Monitoring / Recordkeeping
 1. Compliance – All emission calculations are completed and updated on a weekly basis. The records for the month of September 2016 were reviewed during the onsite inspection, and appeared to be reported properly.
 2. Compliance – The facility tests each fuel delivery to verify the reference grade. Fuel usage records are completed daily. Emissions are calculated on a weekly basis. Each load of fuel is delivered with a fuel sheet which contains the sulfur content for diesel fuels and the lead content for the gasoline fuel.
- VII. Reporting

1. NA – No deviations occurred during at least the past 24 months.
 2. Compliance – The semiannual deviation reports have been received on September 9, 2016 and March 11, 2016. These reports were received on time and no deviations were reported.
 3. Compliance – The annual deviation reports have been received on March 11, 2016. This report was received on time and no deviations were reported.
 4. NA – No new equipment has been installed since the last inspection.
- VIII. Stack / Vent Restrictions – Compliance – No changes have been made to the stacks since the stacks were installed.
- IX. Other Requirements – NA – No change in land use has occurred for this property.

FGCOLDCLEANERS – Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281 (h) or Rule 285 (r)(iv). This flexible group includes EU-COLDCLEANER-01, EU-COLDCLEANER-02, EU-COLDCLEANER-03 and EU-COLDCLEANER-04

- I. Emission Limits – NA
- II. Material Limits – Compliance – All the cold cleaners are maintained by Safety Kleen and use acceptable solvents.
- III. Process / Operational Restrictions
 1. Undetermined – No parts were being cleaned during the onsite inspection
 2. Compliance – All cold cleaners are routinely maintained by Safety Kleen.
- IV. Design / Equipment Parameters – Compliance – All of the cold cleaners meet these design parameters. All units seen during the onsite inspection were covered during the onsite inspection.
- V. Testing / Sampling – NA
- VI. Monitoring / Recordkeeping – Compliance – None of the cold cleaner units are heated so there are no required records. All cold cleaner units have identification information maintained onsite.
- VII. Reporting
 1. Compliance – No deviations have been reported in at least the past 24 months.
 2. Compliance – The semiannual deviation reports have been received on March 11, 2016 and September 9, 2016. These reports were received on time and no deviations were reported.
 3. Compliance – The annual deviation report was received on March 11, 2016. This report was received on time and no deviations were reported.
- VIII. Stack / Vent Restrictions – NA
- IX. Other Requirements – NA

On March 5, 2013 the facility was issued PTI 370-08B for the ability to use compressed natural gas in the test engines. The facility has not yet used compressed natural gas in any test engines. Therefore this permit was not evaluated at this time. This permit should not be voided because the equipment has been installed, and the permit was to allow the use of a new fuel source.

This facility is a true minor source for hazardous air pollutants (HAPs), which was determined during the permitting process for permit 370-08B. Therefore this source is not subject to MACT P P P P P.

The cold cleaner units use a naphtha-based solvent, which meets the Rule 707(2) requirements to have a Reid vapor pressure of less than 0.6 psia. These units are exempt from Rule 201 under Rule 281 (h). These units are not subject to MACT T.

MAERS REPORT REVIEW

This report was received on March 10, 2016. All reported emissions were reviewed and appear to have been reported accurately. The review was completed on May 17, 2016.

FINAL COMPLIANCE DETERMINATION

Ricardo appears to be operating in compliance with all state and federal requirements, as well as all conditions of the ROP and any other permits. MAERS was submitted on time and appears to have been reported accurately. The ROP is in the process of being renewed, with the draft permit being sent to the facility for review soon.

NAME Jill Zimmerman

DATE 9/28/17

SUPERVISOR JK