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

N820725490

FACILITY: AIRGAS CARBONIC AND DRY ICE	SRN / ID: N8207
LOCATION: 7031 Silbernhorn Highway, BLISSFIELD	DISTRICT: Jackson
CITY: BLISSFIELD	COUNTY: LENAWEE
CONTACT: Daniel Schwartz , Riga Carbonic Plant Manager	ACTIVITY DATE: 06/13/2014
STAFF: Diane Kavanaugh-Vetort COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Complete scheduled inspection. Minor Source with permitted and exempt equipment.	
RESOLVED COMPLAINTS:	

CONTACT: Daniel Schwartz, Riga Carbonic Plant Manager, Daniel.Schwartz@Airgas.com phone: 517-682 -1122

On June 13, 2014, Diane Kavanaugh Vetort, MDEQ-AQD conducted a complete scheduled compliance inspection of the Airgas, Riga Carbonic Plant (Airgas), located at 7031 Silberhorn Hwy, Blissfield, MI. The inspection was scheduled a short time prior to assure contact availability. The purpose of the inspection was to determine the facility's compliance status with the Natural Resources and Environmental Protection Act 451, Part 55, Air Pollution Control regulation and the adminstrative rules, and the conditions of Airgas PTI No. 31-13 covering process equipment for air stripping of acetaldehyde impurities from scrubber waste water as part of a liquid CO2 manufacturing process.

Airgas manufactures food grade Dry Ice for various customers. It obtains CO2 in a gaseous state from the emissions produced by the adjacent Green Plains Holdings Plant (ethanol fuel producer and Title V Major Source) and processes the CO2 into Dry Ice. Various impurities are removed from the CO2 and cooling and pressurization are involved as it is processed into liquid and solid forms. During the inspection I was informed that a second separately managed Airgas Division is co-located within the Airgas plant building. That Division actually forms the Dry Ice into blocks, and packages and ships it out to their customers. Today's inspection focused on the known regulated Division of Airgas that receives and processes the CO2 portion preceeding the Dry Ice formation.

Important to Note: The entrance to Airgas is the same as for the Green Plains Holdings Company. The Airgas plant building is located behind the Green Plains Holdings plant, at the end of the long driveway with a security gate, and on the same property. AQD files listed an address of 11440 Cemetery Rd, Riga for Airgas - AQD database will be corrected to reflect the 7031 Silberhorn Hwy., Blissfield address.

Upon my arrival I observed what appeared to be uncombined water vapor plumes from the neighboring Green Plains Holdings process stack. I did not observe any odors or other emissions until I arrived and parked in front of the Airgas plant building. I then observed the visible uncombined water vapor (steam) plume was from the Green Plains Holdings exhaust stack. It appeared to be upwind of the Airgas plant. I detected a distinct corn, sweet type odor, likely resulting from the ethanol process. I have inspected the Green Plains facility and am familiar with the process. The odor was fairly continuous but was not strong or unbearable.

I then entered the main office, presented identification to Daniel Schwartz, Plant Manager and stated the purpose of the inspection. Daniel accompanied me during the inspection. He is familiar with their PTI No. 31-13. During the pre-inspection conference we discussed the permit applicable requirements including record keeping. It is noted the last AQD inspection was conducted on April 14, 2011, as a result of an Anhydrous Ammonia release notification we received for the facility. The National Response Center notification / complaint received April 13, are received through the DEQ Pollution Emergency Alert System (PEAS) and distributed by email.

Daniel informed me our prior contact, Russ Fryman, Plant Manager, is no longer with the Company. He said the plant operates 24/7 and is not always staffed. Staff are there 12 hours per day, 6 AM to 6 PM. It is equipped with alarms and has remote/ computer access to the site from other locations. We briefly discussed that Airgas was formerly named Pain Enterprises and underwent an ownership and name change several years ago. The prior Anhydrous Ammonia release was caused by a failed emergency pressure relief valve. The valve was found to have failed earlier than the manufacturer predicted. Pain (at that time) implemented measures to prevent a reoccurance. Daniel informed me that the subject valves have all been replaced since that time with a different closed loop system wherein the pressure is

floor plan. I observed two main rows of equipment comprising the CO2 processing. I observed the EUAIRSTRIP covered by PTI 31-13 consisting of piping to and from a rather small metal tank. The scrubber waste water is discharged to the local POTW (Blissfield) after ungoing air sparging to remove the Acetaldehyde contaminant. The emissions are ducted and exhausted vertically out of a PVC stack near the air cooling fans outside the building. While walking near the EUAIRSTRIP tank area inside the plant I detected a definite "sweet" type odor which I attributed to acetaldehyde. It was distinct, not strong, and only in the immediate area.

I observed several, possibly four, stationary process engine compressors within the CO2 production equipment. Daniel informed me that the entire process is electric powered only. He said they do not have any stationary internal combustion engine generators powered by natural gas, gasoline, or diesel, either emergency or process. I briefly explained to him that there is a federal standard for RICE (MACT subpart ZZZZ) that covers almost all non-electric RICE.

During the inspection I observed several 55 gallon containers of machining oils and lubricants in the area outside Airgas' laboratory. Per Daniel they recently hired Safety Klean as their waste hauler. He also said they have scrubber packing material, both a carbon and another desiccant-type material, in their process vessels that require regular change out and are disposed of through Blue Water Environmental.

We then went outside through the parking lot to the Southeast end of their building. This equipment is completely outside and on a raised platform (can walk under it). It is a cooling tower of six fans. The waste water air stripper process exhaust stack is located on the post next to these fans. I observed five above ground liquid CO2 horizontal storage tanks are also located here.

At the closing conference Daniel and I discussed the emission factor used to estimate the Acetaldehyde emission limit in the PTI 31-13. It is possible to estimate emissions by either water sampling or air sampling. Daniel indicated the Lenawee County Drain Commissioner periodically (annually) samples their water discharge. He said they just took the sample today. I stated this actual data may be useful in verifying the emission factor proposed as part of the PTI application. Daniel said he could send me a copy of the result when they receive it and review it related to their Special Condition V.1.. The PTI includes a performance testing option.

Following the inspection I received an email from Daniel saying he'd spoken with their corporate EHS manager. He suggested they pull an air sample from the stack and have it analyzed for acetaldehyde and then send me the results rather than waiting on the POTW's water testing results. He asked if that was acceptable. I responded that air sampling is preferable however at this time I am not requiring it. Since the water sample was taken already it is acceptable - if as assumed it can serve as an informal check on the existing emission factor used for their calculations. The purpose is to update or verify the existing EF they are using with available data. At this time formal performance testing is not warranted. I requested he keep me informed as to when to expect the results report and to please refer to the conditions of the Permit to Install No. 31-13.

On July 3, Daniel provided an update that they will obtain an air sample the week of July 7th and should have the results by the end of July.

COMPLIANCE SUMMARY

At this time the AQD has determined that Airgas Carbonic appears to be in substantial compliance with their PTI No. 31-13 special conditions, and the applicable exemptions, particularly Rule 290.

Upon receipt of the sampling information indicated in this report the file will be updated.

NAME _____ DATE 7/3/14 SUPERVISOR _____