

B2927
MAVILA

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B292763889

FACILITY: Alpha Resins, LLC / MI -TER(New Owner)	SRN / ID: B2927
LOCATION: 17350 Ryan Rd, DETROIT	DISTRICT: Detroit
CITY: DETROIT	COUNTY: WAYNE
CONTACT: Jack Shanholtz , Environmental Engineer	ACTIVITY DATE: 07/15/2022
STAFF: C. Nazaret Sandoval	COMPLIANCE STATUS: Compliance
	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2022 Targeted Inspection	
RESOLVED COMPLAINTS:	

SRN: B2927

COMPANY NAME: Alpha Resins

FACILITY ADDRESS: 17350 Ryan Rd, Detroit, Suite B, MI 48212

DATE OF INSPECTION: 7/15/2022

REASON FOR INSPECTION: Scheduled Inspection

INSPECTED BY: Nazaret Sandoval, Air Quality Division, EGLE

PERSONAL PRESENT:

Jack Shanholtz, Consultant Engineer, (810) 333 5558, jackshanholtz2@gmail.com

John Bamford, Site Co-Owner (810) 560 2922, jbamfordsr@gmail.com

COMPLIANCE CONTACT: Jack Shanholtz, Consultant Engineer

1.- FACILITY BACKGROUND

Alpha Resins is located North of McNichols Rd., West of Mound Rd., South of Nevada St., and East of Conant St. in Detroit.

Over the years, the facility has gone through various changes in the type of resins manufactured at the site as well as changes in ownership. The following site history and timeline of events was provided by Mr. Bamford (minority owner for the site) during the site inspection on 7/15/2022.

1942 -1962 (Ryan Coal Co.)

1962 (Marston Co. – Auto Insulation)

Manufacturing located at the east end of the plant site.

1975 – 1979 (International Mineral Plant)

The plant is built out and expanded to resin manufacturing. International Mineral moved Aristo Corp (located at Mound & Davison) to this site.

1980 – 2002 (Delta Resins)

Manufacture of Phenolic-Alkyd-Furan resins that were used in the foundry industry. In 2001, the plant was sold to Borden Chemical. Borden moved production to their plant and closed the Ryan Rd site.

2002 – 2011 (Alpha Resins)

The property was brought by Mr. John Bamford and other investors to restart operations at the site for the production of foundry resins.

2012 – 2021 (Alpha Resins, LLC. – COVIA)

Fairmount Mineral purchased the site and installed the “Novolac Process” to manufacture fracking coatings. The facility kept the same name. Covia brought Fairmount Mineral around 2019.

2021 – 2022 (Michigan Terpenes)

Ownership transfer from Covia to Michigan Terpenes (MI Terpenes) occurred on July 31, 2021. MI Terpenes purchased the site and planned to dismantle some of the equipment to change the site usage, but that did not happen. Shortly after, Capital Resins became interested in designing a new production strategy for the plant.

2022 (Capital Resins Corporation)

As of the date of the inspection (7/15/2022), the transfer of ownership and the deal with Capital Resins Corporation has not been signed yet.

2.- INSPECTION NARRATIVE

On July 15, 2022, I conducted an inspection of Alpha Resins, LLC. I arrived at the site at 10:00 am and met with Jack Shanholtz, Environmental Consultant for MI Terpenes and with John Bamford, Site Co-Owner. The purpose of the inspection was to determine the facility's compliance with the state and federal air pollution regulations, and the conditions and requirements of Permit to Install (PTI) 157-10C, issued on December 4, 2014.

I asked for the plant updates since the last inspection of 7/22/2019. I was informed that the company, Alpha Resins, which had been acquired by Covia in 2019 and later bought by MI Terpenes in 2021, is currently in the process of being purchased by another company, Capital Resins (herein Capital). The negotiations are near completion.

According to Mr. Shanholtz, the resin production has been decreasing over the years. In 2021 the production rate went down from one batch a day to three or four batches in a six-month period. The facility made synthetic resins and when MI Terpenes bought the plant, they planned on doing something completely different, but ultimately, MI Terpenes made no products and changed nothing. The facility stopped the manufacturing of products on July 1, 2021.

Capital wants to use the production capability of the current site in Detroit to make a synthetic resin similar to that of Covia in Ohio. According to the plans, it appears as if Capital will be using the existing equipment in Building D and the current installation at Detroit, with minor modifications. The main difference will be in the raw materials. Capital will mainly be using acetone, isocyanates and triethylamine while Alpha Resins has been using phenol, formaldehyde, glycol and isocyanates. Also, instead of pumping the product to a bulk tank and then blending it with solvent, Capital will drum the product from the reactor.

Mr. Shanholtz handed out a few schematic flow diagrams prepared by the consultant engineers who are working on the proposed project design. I suggested him to coordinate a pre-application meeting with AQD permit section to evaluate permit requirements under the new process. I provided the link to EGLE – AQD permit section (an update about the pre-application meeting was included at the end of this report).

I asked Mr. Shanholtz to explain the status of the Detroit facility. He handed out to me a map that showed the layout of the site. The drawing showed all the production buildings and the tank farms for raw materials, solvent, intermediate products, and final products. For illustration purposes, the layout and a printout from Google Earth identifying the buildings and tanks are attached to this inspection report.

The facility, as it was permitted on December 4, 2014 under PTI 157-10C, included:
FGTANKFARM

48 tanks ranging from 6,000 gallons to 25,000 gallons for the storage of a variety of fluids (i.e., raw material, solvent, intermediate, product). TKs 504, 505 and 506 are 125-gallon extender storage tanks.

FG100TKFARM (18 tanks) - Raw materials and products from Building D

FG200TKFARM (14 tanks) - Solvents. Nitrogen blanket on TANK207

FG300TKFARM (6 tanks) - Intermediate products

FG400TKFARM (6 tanks) - Raw materials and products from Building K

FG500TKFARM (5 tanks) - Two isocyanate tanks and three gallon-extender

FGBUILDINGD

Phenolic/formaldehyde resins and furfuryl alcohol resins production housed in Building D. Consists of reactors and blend tanks

5 Resin Reactors (EUREACTOR2, EUREACTOR3, EUREACTOR4, EUREACTOR5, EUREACTOR6) – It looks like only (4) four reactors were built.

6 Blend Tanks (TKs Nos. 11, 12, 14, 15, and 16) and TK16OV-overflow blend tank.

FGBUILDINGK

This building was used for Alkyd resin production. It housed five reactors and two blend tanks.

One active reactor (EUREACTORK1) and several other reactors (EUREACTORK2 to EUREACTORK5) used for other purposes.

Blend tanks identified as EUBLENDTANK18, EUTANK322.

Pollution control equipment: Scrubber and thermal oxidizer

FGBUILDINGG

Group of six (6) blending tanks; EUBLENDTANK10, EUBLENDTANK13, EUBLENDTANK17, EUBSBLENDTANK, EUFSBLENDTANK1, EUFSBLENDTANK2; housed in Building G for the storage of various resin products.

FGFACILITY

All process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment are grouped under FGFACILITY, as follows:

Two (2), 15,000-gallon formalin storage tanks (EUFORMALIN1 and EUFORMALIN2) . Formaldehyde emissions from the system are controlled by an ammonia scrubber. The scrubber was in service at the beginning of June 2015. This system was not used in 2021.

One, 20,000- gallon distillate storage tank (EUDISTILLATE).

EUBOILER1 and EUBOILER2 - Natural gas fired boilers in the boiler room, rated at less than 16 mmBtu/hr and 6 mmBtu/hr, respectively.

EUBACKUPGEN

500 kW (or less) natural gas fired emergency generator

BUILDING H

5 Product Storage Tanks (EUNEWTANK1 to EUNEWTANK5).

3 Pastillators Lines used for solidifying phenol formaldehyde resins into pellets.

(EUPASTILLATOR1 EUPASTILLATOR2 EUPASTILLATOR3). Only two were built.

Resin is pumped to tanks in Building H to feed the pastillator system. The pastillator cools

the product into pellets. The pastillators and the five tanks use stacks SVBuildingFan1 and SVBuilding Fan 2.

There are several loading racks, two inbound and three outbound.

After Mr. Bamford described the history of the site and its past operations, Mr. Shanholtz explained the function/purpose of each one of the existing buildings and the various tanks when the facility was in operation. The main production building was Building D where phenolic/formaldehyde resins and furfuryl alcohol resins were manufactured. Phenolic resins are used as the binders for sand in the manufacture of shell molds and cores in the foundry industry. Phenolic Novolac sand coating resins in pastille form were produced to meet foundry's requirements. The process included reactors and blend tanks housed in Building D. As indicated earlier, production shut down in July 2021. The reactors and the associated tanks have been emptied, drained, and cleaned. Another resin manufactured at the facility was used by the fracking industry.

I requested copies of the records for one-years' worth of data, for the period when the plant was still operating. Mr. Shanholtz provided most of the production and emissions records during our opening meeting. At the site, I reviewed some of the records for the scrubber logs for past years. The recorded ammonia scrubber liquid pH values were above 9.0 showing compliance with the permit requirements. I also did a quick review of the records that were handed out to me during that initial meeting. I said that a more in-depth review will be done during the preparation of the inspection report. We then proceeded to the facility walkthrough.

From the office building we walked outside and started the inspection in Building D. During the walkthrough I observed that all the production equipment and ancillary equipment were not operating. Mr. Shanholtz described the process that occurred in Building D when resins were produced, and a base resin was combined with other materials to meet customer specifications.

I observed the ammonia scrubber. Mr. Shanholtz showed me the monitoring device they used to measure the pH. We walked in the room housing the reactors. There were four reactors and two blending tanks. One of the reactors in Building D was opened and I could see that it was empty. Mr. Shanholtz explained that when the facility was in production two reactors were dedicated to the manufacture of foundry resins (phenolic resin coated foundry sands) and the other two were used for the manufacture of the resins used in the fracking industry.

In foundries, when producing dies for metal casting, manufacturers using the shell molding process experience excellent dimensional accuracy, surface smoothness, and high production rates when phenolic resin coated foundry sands are used.

In the fracking industry, the oil and natural gas producers improve petroleum yields using hydraulic fracturing fluids containing round specialty sands coated with phenolic resin. The industry refers to these sands as "Proppant or Frac Sands". The hydraulic fracturing fluid containing the proppant sand is pumped into the well effectively pressurizing the borehole and fracturing the surrounding rock. The fluid fills the nascent fissures, and the resin-coated sand works as a prop to keep the fissure from sealing on release of pressure. Round sand is used to provide a porous medium through which the oil and gas can easily flow.

I was told during the inspection that the phenolic resins used for the fracking industry were manufactured at the facility only for a short period of time because the demand for the

product went down. During 2021, only the resins for foundry applications were manufactured, and lately in a very low production.

The scrubber controlled the emissions from the reactors and the operators monitored the pressure drop. The pressure drop log was still hanging on the wall and the last value was recorded on July 1, 2021, when the operations in Building D appeared to shut down.

We went back outside, and I saw two storage tanks that are part of the 100 series; Mr. Shanholtz said that those were dedicated to phenol storage. The plant used to receive two rail cars a week to unload into the tank farm.

From Building D, we went to building H. Resin was pumped into tanks in Building H to feed the pastillator (pelletizer system). The product used to be filtered and fed into the holding tank 401(EUNEWTANK5), 402 (EUNEWTANK3), and 403 (EUNEWTANK4) which fed the process. Tanks 421(EUNEWTANK1), and tank 422 (EUNEWTANK2) provided additional filtering. All the listed tanks are in building H. The two lines (pastillators) transported resin and cooled the product through the line, solidifying it into pellets at the end of the process. I observed the two pelletizer lines but none of the lines were running at the time of the inspection.

After observing Building H, we walked outside. I observed the 200-series tank farm used for storage holding solvents. Mr. Shanholtz said that the tanks were all empty. In one of the buildings (I believe it was building D), I observed the methanol storage log which was still hanging on the wall by the manometer. When the plant was in operation the staff verified that there was nitrogen blanket on the tanks, and they recorded the manometer readings in inches of water. Mr. Shanholtz indicated that there was methanol in the tank 207 until 7/1/2021 (very little methanol and no throughput) but they kept the readings until it was empty completely. No product was made in a reactor or blend tank after 7/1/2021.

We went into the boiler room and generation building. I observed two boilers. The facility only used one boiler and the other boiler was on standby. I examined the working boiler and copied the relevant information:

York Shipley

Model: S76C-53D-5300-NIN

Serial Number: 12-22558

Year Shiped: 2012

Maximum Firing Rate: 12,562 CFH (1,000 BTU/CF for Natural Gas)

The boiler is a natural gas fired boiler with 1/3 stack air recirculation to burner for better environmental control and flue gas recirculation. The function of the boiler was to generate steam to be used in the manufacturing process.

I then saw the emergency generator. I wrote down the relevant information and asked for records of operations:

Kohler Power Systems

S/N- SGM322CLX

Generator Model No. 400REZXB

400 kW/hr/500 kVA, with EPA Certificate of Conformity in AQD Files.

The installation date for the emergency generator was listed as July 2012. The generator is used for backup power, and readiness testing is done weekly. The generator has an hour meter. The screen that displayed the hours of operation tracked by the meter showed a

value of 48.8 hours. Mr. Shanholtz said that the meter stopped functioning and they tried to repair it but they couldn't. I indicated that a working meter must be installed to account for the hours of operation of the generator. They acknowledge that a permanent repair or replacement is required.

We walked into Building M, where some raw materials used to be stored, the building was empty.

On the facility east side, we walked into Buildings E (shipping) and F (product storage) and they both were empty. The 400 series tanks, from 403 to 407, the rectangular tank Big Scale (BS), the blending tanks in Building G, and the 500 series farm tanks have all been out of service since 2012. We then walked to the Formalin Tank Farm Building (white building on the east side) but the building was locked. Mr. Shanholtz said that this system was not used in 2021.

I did not enter Building K, but Mr. Shanholtz pointed out that the reactors and the associated equipment/tanks for Alkyd Resins (thermoplastic polyester resins created by heating polyhydric alcohols with polybasic acids) production, occurring in building K, has been inactive since 2012 and the building has been used primarily for raw material storage. The control devices, thermal oxidizer and scrubber were also out of service. The only tank in building K that was in-service until the plant shutdown was a 1,500-gallon blending tank identified as K-3, which is described in MAERS as "Blending Polythane, Ram Set Co-Reactant and intermediates". This blending activity appears to support the manufacturing process occurring in Building D.

At one point during the walkthrough, I saw a dust collector outside of one of the buildings with the exhaust duct into the ambient air. I asked Mr. Shanholtz if the equipment had a separate permit. He indicated that the process and equipment was exempt from permitting. He explained that the equipment was used to physically separate the resin-pastilles that stuck together for further processing. I asked for the exemption analysis and the information was provided via email on 7/19/2022. Please refer to "Alpha Resins, LLC, EXEMPTION ANALYSIS - Resinator 10,000".

During the inspection I observed that there were no operators, except one maintenance worker. He was responsible for cleaning out the tanks, turning the boiler on periodically, and other activities.

We walked back into the conference room and went over the records required by the permit. I left the facility at about 2:30PM.

3.- COMPLAINT/COMPLIANCE HISTORY

Odor complaints were received in 2018, but the facility made changes to their operations to resolve the odors. Offsite odors were not detected at the time of the inspection on 7/15/2022.

4.- OUTSTANDING CONSENT ORDERS AND/OR VNs

None

5.- APPLICABLE RULES/PERMIT CONDITIONS

Permit to Install 157-10C was issued on December 4, 2014. Compliance with the permit conditions is evaluated below.

The following conditions apply to:

EUBOILER1

DESCRIPTION: Natural gas fired boiler rated at less than 16 mmBtu/hr

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS: NA

II. MATERIAL LIMITS

1. The permittee shall burn only natural gas in EUBOILER1. (R 336.1205, R 336.1225, R 336.1702, R 336.1901, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subparts Dc).

In Compliance – Only natural gas is burned in the boiler.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The heat input capacity of EUBOILER1 shall not exceed a maximum of 16.0 MM BTU per hour.

Further Information is needed - According to the boiler plate information, which seems to be the original boiler installed in 2012, the maximum input capacity is calculated as: 12,562 CF x 1,000 BTU/CF = 12,562,000 BTU/HR (approx 13 MMBTU/HR) This value is less than 16 MMBTU per hour.

Further investigation in AQD permit files indicated that PTI 157-10C was issued to allow a heat input capacity increase of the existing boiler from 13 MMBTU/HR to 16 MMBTU/HR. Therefore, to demonstrate compliance with III.1., AQD has to gather additional information to document the modifications that were implemented in the boiler design after December 4, 2014, to increase the input capacity.

IV. DESIGN/EQUIPMENT PARAMETERS: NA

V. TESTING/SAMPLING: NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall monitor, in a satisfactory manner, the natural gas usage rate for EUBOILER1 on a monthly basis. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 60.48c(g)).

In Compliance - Records are kept in a monthly basis. According to the backup information included with the MAERS report submittal for year 2021, the monthly usage varied from 0 to a maximum of 0.604 million standard cubic feet of gas (MMSCF). The total usage for year 2021 was reported to be 2.223 MMSCF.

2. The permittee shall keep, in a satisfactory manner, all monthly fuel use records for EUBOILER1, as required by SC VI.1., on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 60.48c(g))

In Compliance – The facility keeps records in satisfactory manner, and records were available for review.

3. The permittee shall monitor emissions, operating information, and keep records for EUBOILER1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in

40 CFR Part 60 Subparts A and Dc. The permittee shall make all records available to the Department upon request. (40 CFR Part 60 Subparts A and Dc).
In Compliance - Emissions were calculated monthly and records were received demonstrating it. See attached from MAERS emissions for 2021.

VII. REPORTING

1. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. (40 CFR 60.7).

Compliance - Notice was received. See records in file.

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID: SVBOILER1

Maximum Exhaust Diameter (36 inches)

Minimum Height Above Ground (28.6 feet)]

In Compliance - The exhaust gases from stack SVBOILER1 are discharged unobstructed vertically upwards to the ambient air. The dimensions of SVBOILER1 were not verified during the site visit but the stack has not been modified since its initial installation and the dimensions appeared correct.

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to EUBOILER1(40 CFR Part 60 Subparts A & Dc).

In Compliance - Facility is complying with 40 CFR 60 Subparts A & Dc. Facility only burns natural gas in boiler and keeps records of usage.

The following conditions apply to:

EUBACKUPGEN

DESCRIPTION: 500 kW (or less) natural gas fired emergency generator

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

1. The permittee shall demonstrate compliance for EUBACKUPGEN with the emission limits under 40 CFR Part 60, Subpart JJJJ. (40 CFR 60 Subpart JJJJ).

In Compliance - Natural Gas(only) fired generator with EPA Certificate of Conformity with the Clean Air Act of 1990. Rated at 400 kW/500 kVA.

II. MATERIAL LIMITS

1. The permittee shall burn only pipeline quality natural gas in EUBACKUPGEN. (R 336.1205(3), R 336.1225, 40 CFR 60.4230)

In Compliance - Facility only burns natural gas in generator.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUBACKUPGEN greater than 500 hours per year, based on a 12-month rolling time- period. (R 336.1205(3), R 336.1225, 40 CFR 52.21 (c) & (d))

In Compliance - Records are kept and were provided. Hours are less than 500 hours.

2. The permittee may operate EUBACKUPGEN for no more than 100 hours per 12-month rolling time-period as determined at the end of each calendar month for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per year. (40 CFR 60.4243(d)).

In Compliance - Less than 100 hours a year for maintenance checks and readiness testing. Records were provided.

3. The permittee shall install, maintain, and operate EUBACKUPGEN and any control device according to the manufacturer's emission-related written instructions, over the entire life of the engine. In addition, the permittee may only change those settings that are permitted by the manufacturer. The permittee shall also meet the applicable requirements of 40 CFR part 1068. ((R 336.1205(1)(a) & (3), R 336.1225, R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR 60.4234, 40 CFR 60.4243(a))

In Compliance - Facility is operated generator according to manufacturer's instructions.

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a non-resettable device to monitor and record the hours of operation for EUBACKUPGEN. (R 336.1205(3), R 336.1225, 40 CFR 52.21 (c) & (d), 40 CFR 60.4237).

Compliance - Hour meter is installed. The facility reported a malfunction of the meter and indicated they tried to repair it once but apparently it only worked for a short time. According to the operational records provided by Mr. Shanholtz, it appears as if the last time the meter monitored the hours of operation was in April 2020. The last recorded value (48.8 hours) was on May 4, 2020. Then, in August 2020, the facility reported that the generator ran for one-hour, but the meter did not track that time. During the inspection I indicated that a working meter must be installed to accurately account for the hours of operation of the generator. The facility acknowledged that a permanent repair or replacement is required. However, since the generator was not used for the rest of year 2020, and it did not run in year 2021, AQD is showing compliance discretion provided that the repair or replacement of the meter is accomplished in an expedited manner. This issue will be followed up with an email requesting a notification of the meter's permanent repair or replacement.

2. The nameplate capacity of EUBACKUPGEN shall not exceed 500 kW, as certified by the equipment manufacturer. (R 336.1205(1)(a) & (3), 40 CFR 60.4230(a))

Compliance - Generator has a rated capacity of 400 kW/500 kVA. The EPA Certificate of Conformity specifies a 21.9 L engine, rated at 650 HP or 484.7 KW (gross flywheel rating corrected to 77° F at an altitude of 328 feet, using a heating value for Natural Gas of 1,015 BTU/SCF)

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. Within 180 days after commencement of trial operation, the permittee shall verify NOx, CO, and VOC emission rates from EUBACKUPGEN, by testing at owner's expense, in accordance with Department requirements or by providing manufacturer certification

documentation as required in SC VI.2. If testing is to be performed, the permittee must submit a complete stack-testing plan to the AQD. No less than 60 days prior to testing, the permittee must submit a complete stack-testing plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.4244, 40 CFR 60.4245(a)).
In Compliance - Certification was provided. See records in AQD facility files.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205(1)(a) & (3), 40 CFR 52.21 (c) & (d)).

In Compliance - Calculations are done monthly

2. The permittee shall keep, in a satisfactory manner, a record of testing required in SC V.1 or manufacturer certification documentation indicating that EUBACKUPGEN meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart JJJJ. The permittee shall keep all records on file and make them available to the Department upon request. (40 CFR 60.4245(a)).

In Compliance - Certification was provided with application.

3. The permittee shall monitor and record the hours of operation of EUBACKUPGEN during emergencies and non-emergencies, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall record the time of operation of EUBACKUPGEN and the reason it was in operation during that time (R 336.1205(1)(a) & (3), 40 CFR 60.4243(d)).

In Compliance - Records are kept regarding use.

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUBACKUPGEN. (R 336.1201(7)(a))

In Compliance - Notification was submitted. Refer to records in AQD files.

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID: SVBACKUPGEN

Maximum Exhaust Diameter (12 inches).

Minimum Height Above Ground (28.6 feet)

In Compliance - The exhaust gases from stack SVBACKUPGEN are discharged unobstructed vertically upwards to the ambient air. The dimensions of SVBACKUPGEN were not verified during the site visit but the stack has not been modified since its initial installation and the dimensions appeared correct.

IX. OTHER REQUIREMENTS

1.The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and JJJJ, as they apply to EUBACKUPGEN. (40 CFR Part 60 Subparts A & JJJJ).

In Compliance - Facility is compliance with provisions of Subparts A and JJJJ by keeping records of hour usage.

The following conditions apply to:
FG200TANKFARM

DESCRIPTION: 200 Tank Farm – solvents

Emission Units: EUTANK201, EUTANK202, EUTANK203, EUTANK204, EUTANK205, EUTANK206, EUTANK207, EUTANK208, EUTANK209, EUTANK210, EUTANK211, EUTANK212, EUTANK213, EUTANK214

POLLUTION CONTROL EQUIPMENT: Nitrogen blanket on EUTANK207

FG200TANKFARM consists of one special condition, as follows:

IV. DESIGN/EQUIPMENT PARAMETERS

1.The permittee shall not operate EUTANK207 unless the nitrogen blanket system is installed, maintained, and operated in a satisfactory manner. (R 336.1205, R 336.1702, R 336.1901, R 336.1910)

In Compliance – Tank 207 stored methanol and a nitrogen blanket system was installed and maintained during operations. Received log of pressure readings for Tank 207 showed compliance. The readings reported values of 2 or 3 inches of water.

The following conditions apply to:

FGBUILDINGD

DESCRIPTION: Phenolic/formaldehyde resins and furfuryl alcohol resins production housed in Building D. Consists of reactors and blend tanks.

Emission Units: EUREACTOR2, EUREACTOR3, EUREACTOR4, EUREACTOR5, EUREACTOR6, EUBLENDTANK11, EUBLENDTANK12, EUBLENDTANK14, EUBLENDTANK15, EUBLENDTANK16, EUBLENDTANK16OV

POLLUTION CONTROL EQUIPMENT: Main scrubber, ammonia scrubber

NOTE: The following evaluation refers to the production records for a 12-month production period from April 1, 2020, to Mar 31, 2021.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	COMPLIANCE Yes or No
1. Formaldehyde	114 lb/yr ¹	12-month rolling time period as determined at the end of each calendar month	EUREACTOR5 and EUREACTOR6	Refer to: SC VI.4	Yes. The highest formaldehyde emission for the evaluated period was reported to be 0.456 lb/yr

II. MATERIAL LIMITS: NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGBUILDINGD unless all applicable provisions of Rule 631 are met. (R 336.1205, R 336.1631, R 336.1901, R 336.1910)

In Compliance - Paragraph 631(3)(b) requires emissions of VOC at 0.5 lb/1000 lb organic resin. Based on VOC emission calculations and resin production records, compliance with Rule 631 is met. The calculated pounds of VOC per 1000 pounds of resin was approximately 0.07.

The total VOC emissions from the resin manufacturing process added up to 12.06 pounds, and the production records for year 2021 showed a total of 162,240 pounds of resin. The VOC included the emissions from Building D resin production, plus the VOC emissions from the blending tanks in Buildings K and G – which supported Building D manufacturing process-.

DESIGN/EQUIPMENT PARAMETERS AND MONITORING/RECORDKEEPING

(IV. 1, IV.3 and VI.1)

IV.1 -The permittee shall not operate any FGBUILDINGD reactor or blend tank unless the main scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the main scrubber includes, but is not limited to, maintaining a minimum pressure drop across the plate of 0.7 inches water gauge. (R 336.1205, R 336.1631, R 336.1901, R 336.1910).

IV.3 - The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the main scrubber pressure drop on a continuous basis. (R 336.1205, R 336.1631, R 336.1901, R 336.1910).

VI.1 - The permittee shall keep, in a satisfactory manner, all daily records of the main scrubber pressure drop for days that any FGBUILDINGD reactor or blend tank is in operation on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1631, R 336.1901, R 336.1910).

In Compliance -The scrubber operated satisfactorily, and the pressure drop was always maintained above the minimum required. A continuous pressure drop meter was installed, calibrated, and maintained. Pressure drop reading logs were available for review and a copy of the records was received. Review of the log showed compliance with permit requirements. The minimum value for the evaluated period was reported on 10/29/2020, as 1.03 inches of water.

(IV. 2, IV.4 and VI. 2)

IV.2 - The permittee shall not operate EUREACTOR3, EUREACTOR4, EUREACTOR5, or EUREACTOR6 unless the ammonia scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the ammonia scrubber includes, but is not limited to, maintaining a minimum scrubber liquid pH of 9.0.

IV.4 -The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the ammonia scrubber liquid pH on a continuous basis. (R 336.1205, R 336.1631, R 336.1901, R 336.1910).

VI.2 - The permittee shall keep, in a satisfactory manner, all daily records of the ammonia scrubber liquid pH for days that EUREACTOR3, EUREACTOR4, EUREACTOR5, or EUREACTOR6 is in operation on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1631, R 336.1901, R 336.1910).

In Compliance – The scrubber operated satisfactorily. A device monitored pH on a continuous basis. All daily records are kept on file. The pH logs were reviewed during the inspection. Readings appear to be above the minimum pH requirement of 9.0.

V. TESTING/SAMPLING: NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

3. The permittee shall keep records for FGBUILDINGD as specified in Rule 631(6) to show compliance with Rule 631. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1631, R 336.1901)

In Compliance - Records on resin production and VOC emission calculations are kept on file and were available for review.

4. The permittee shall keep, in a satisfactory manner, formaldehyde emission calculations determining the total annual emission rate in pounds per 12-month rolling time period as determined at the end of each calendar month from EUREACTOR5 and EUREACTOR6, as required by SC I.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1225)

In Compliance - Formaldehyde emission calculations are kept on file and were provided during this inspection.

VII. REPORTING: NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stack listed below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted

Stack & Vent ID: SVSCRUBBER

Maximum Exhaust Diameter (32 inches)

Minimum Height Above Ground (56 feet)

In Compliance - The exhaust gases from stack SVSCRUBBER are discharged unobstructed vertically upwards to the ambient air. The dimensions of SVSCRUBBER were not verified during the site visit but the stack has not been modified since its initial installation and the dimensions appeared correct.

IX. OTHER REQUIREMENTS: NA

The following conditions apply to:

FGBUILDINGK

DESCRIPTION: Alkyd production housed in Building K.

POLLUTION CONTROL EQUIPMENT: Scrubber and thermal oxidizer

FGBUILDINGG

DESCRIPTION: Group of blending tanks housed in Building G

The Alkyd process occurring in Building K and the original process activities occurring in Building G have been out of service since 2012. Therefore, the special conditions applicable to FGBUILDINGK and FGBUILDING G were not evaluated during this inspection. However, a couple of blending tanks located in these buildings have been used for activities such as blending reactants and intermediate in support of the resin production

in Building D. Emission records for EUBLEND Tank K-3 in Building K reported 1.2 pounds of VOC in 2021. Similarly, the reported VOC emissions from Building G were estimated to be 0.9 pounds per year in 2021. The cited VOC emissions were accounted for the total pounds of VOCs reported earlier for the evaluation of compliance with Rule 631, in SC III.1 for FGBUILDINGD.

The following conditions apply Source-Wide to:
FGFACILITY

DESCRIPTION: All process equipment source-wide including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

I. EMISSION LIMITS:

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Compliance Yes or No
1. Each Individual HAP	8.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	Refer to SC VI.2	Yes.
2. Aggregate HAPs	22.4 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	Refer to SC VI.2	Yes.

II. MATERIAL LIMITS: NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGFACILITY unless all applicable provisions of Rule 631 are met. (R 336.1205, R 336.1631, R 336.1901, R 336.1910)

Compliance - Emission calculations were provided along with resin production.

IV. DESIGN/EQUIPMENT PARAMETERS: NA

V. TESTING/SAMPLING: NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years.

1. The permittee shall keep records for FGFACILITY as specified in Rule 631(6) to show compliance with Rule 631. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1631, R 336.1901)

In Compliance - Emission calculations were provided along with resin production.

2. The permittee shall keep, in a satisfactory manner, individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month, as required by SC I.1

and I.2. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205(3)) In Compliance – Emission calculations were performed in a satisfactory manner and the records were provided. The 2021 MAERS reported maximum HAP emissions for Phenol (9.5 lb./yr. ~ 0.0048 tpy). Aggregated HAPs are not listed, but MAERS 2021 reported max total VOC emissions equal to 46.7 lb./yr. or 0.023 tpy.

VII. REPORTING: NA

VIII. STACK/VENT RESTRICTIONS: NA

IX. OTHER REQUIREMENTS: NA

6.- MAERS (Michigan Air Emissions Report System)

The 2021 MAERS report was received electronically on 3/24/2022. The report was reviewed and audited. The facility passed the audit. For audit details, please refer to the compliance activity report CA_ B292763067 filed in AQD facility's records files.

7.- FINAL COMPLIANCE DETERMINATION

The facility was not in operation at the time of the visit, and it had officially shut down on July 1, 2021. However, I evaluated the status of the equipment/processes and I reviewed previous records when the plant was still in production. Based on the inspection conducted on 7/15/2022 and the review of the records, the facility appears to have operated in substantial compliance with the applicable state and federal air regulations and the conditions of PTI 157-10C, except for a nonfunctional hour meter on the standby generator which the facility will be replacing or repairing in a timely maner before the generator goes back into service.

As of the date of completion of this report the transfer of ownership to Capital Resins Corporation has not been signed yet but Mr. Shanholtz contacted Andrew Drury at AQD permit section to schedule a permit pre-application meeting. A virtual meeting via MS Teams took place on 8/25/2022. Andrew Drury, David Thomson and Oje Chukuemeka attended the meeting from AQD permit section and I attended from the AQD Detroit District Office. Mr. Shanholtz and the Consultant Engineer (Nathan) represented the company. At the conclusion of the meeting the facility representatives agreed on submitting a permit application to AQD permit section so that the new proposed project can be evaluated and permitted.

NAME Handoral

DATE 09/19/2022

SUPERVISOR JK