

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

N128030702

FACILITY: Flint Hills Resources Marysville, LLC		SRN / ID: N1280
LOCATION: 2701 S RANGE RD, MARYSVILLE		DISTRICT: Southeast Michigan
CITY: MARYSVILLE		COUNTY: SAINT CLAIR
CONTACT: DAVID ZARLING, JR., SUPERVISOR-PRODUCTION OPERATIONS		ACTIVITY DATE: 08/07/2015
STAFF: Rem Pinga	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Level 2 Scheduled Inspection		
RESOLVED COMPLAINTS:		

On 8/07/2015, I conducted a level 2 scheduled inspection at Flint Hills Resources Polymers, LLC, formerly known as Huntsman, LLC. The facility is located on 2701 Range Road, Marysville, Michigan. The purpose of the inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), and the administrative rules. During the inspection, I was accompanied by Mr. David Zarling, Jr., Supervisor-Production Operations, and facility consultant Mr. Steve Kapeller, Barr Engineering Company. During the pre-inspection conference, I conducted the pre-inspection routine of showing my ID Badge, stated the purpose of my visit, and gave Mr. Zarling a copy of the pamphlet "Environmental Inspections: Rights and Responsibilities".

The facility manufactures Polypropylene resins from liquid chemical grade Propylene and polymer grade Ethylene gas. The process utilizes Hexane as transport medium for the catalysts and Hydrogen gas to augment the catalytic reaction of Propylene and Ethylene to Polypropylene. The reaction occurs in 4 reactor tanks, the first 2 in liquid phase and the last 2 in gas phase. Initial reaction occurs in Reactor 1 where Propylene, various catalysts, and Hydrogen is introduced and the slurry goes to Reactor 2 for more residence time. The slurry goes to Reactor 3 and gets converted into gas phase on way to Reactor 4. Ethylene is introduced in Reactor 4 for copolymerization reaction with Propylene in the presence of the catalysts to form Polypropylene powder/resin. The gas phase goes to a gas separation tank to remove the gases in the upper stream. The gases in the upper stream pass through a filter system and reused in Reactor 4. The bottom solid stream goes to a dryer and another reactor tank where Nitrogen and steam is introduced. The Nitrogen gas, produced on-site, is used to purge reaction vessels and lines, deactivate catalysts, and transfer Polypropylene powder prior to extrusion and pelletizing processes. Heated Nitrogen gas is used in the drying section to remove unreacted monomer (Propylene and Ethylene) and trace Hexane. Purged hydrocarbon that is not reused goes to an outside flare for incineration. The dried powder is mixed with stabilizers and additives, and then conveyed to one extruder to form into pellets. The pellets are dried and stored in silos ready for shipment by railcar hoppers, trucks, or conveyed into a packaging room. In the preparation stage, liquid Propylene is refined on-site to remove

impurities such as propane, via distillation, and sold.

In April 2015, AQD staff learned that the company was closing the facility permanently and will be removing all process equipment over a period of time. On July 5, 2015, the facility's air use Permit to Install Nos. 122-86F and 352-06A were voided per company's request. PTI No. 122-86F was also an opt-out permit to keep the facility a synthetic minor for Hazardous Air Pollutant/s emissions and opt the facility out of the Title V, Clean Air Act of 1990, Renewable Operating Program.

During the inspection, AQD staff found out from Mr. Zarling that the facility ceased operations last May 1, 2015 and has been conducting decommissioning activities to prepare for removal all above ground equipment. Mr. Zarling mentioned that all hook ups to the power grid have been cut except for 3 lines to keep power on 3 buildings necessary for decommissioning activities (medical building, maintenance building, and front office building). During the facility walk through, I was shown equipment/piping connections that were blinded to prevent transmission of fluids and prepare the equipment/line for dismantling. The blinded connections were marked with "orange" marker for easy identification by dismantling crews. I was shown the blinded connection to the flare at DCP Midstream/Marysville Hydrocarbon facility and several other blinded piping systems/equipment throughout the main process area. I was informed that all storage tanks are now empty and ready for removal. The underground tanks have been lifted and prepared for removal per DEQ staff Jim Day instructions. All equipment systems including the boilers have been "air gapped" and ready for removal. The emergency generator was also disconnected and in the process of being sold or removed from the facility.

Overall, the only activities I observed at the facility were related to dismantling and removal of equipment. Mr. Zarling mentioned that the current target date for completion of dismantling and removal of equipment is December 31, 2015. I did not find any noncompliance issues during the inspection.

NAME Jim Day

DATE 8/19/2015

SUPERVISOR CJE