Special Conditions

Permit Number 55013

- 1. This permit authorizes the operation of fiber reinforced plastic (FRP) pipe manufacturing facilities at 1413 Richey Road in Houston, Harris County. This permit covers only those sources of emissions listed on the maximum allowable emission rates table (MAERT) and those sources are limited to the emission limits and other conditions specified in that attached table. The annual rates are based on any consecutive 12-month period. **(02/20)**
- 2. This permit does not include the facilities or maintenance, startup, or shutdown (MSS) activities at the site listed in Attachment I, except as noted in the MAERT. Instead, these facilities are authorized by a permit-by-rule (PBR) under Title 30 Texas Administrative Code (30 TAC) Chapter 106, standard exemption, exemption from permitting, or are a de minimis source listed under 30 TAC § 116.119. The lists provided in Attachment I are not intended to be all-inclusive and can be altered at the site without modifications to this permit. (06/23)
- 3. The facilities and/or activities listed in the following table operate per the criteria of the referenced Standard Exemption (SE)/Permit by Rule (PBR)/Standard Permit and are incorporated by reference: **(06/23)**

Facilities/Activities	SE No./PBR No./Standard Permit	Registration No.
Degreasing Unit	PBR 106.454	74232
Diesel Engine (Emergency Operations)	PBR 106.511	76043
Boiler	PBR 106.183	80993
Main & Secondary Vacuum Cleaning System (DC-4 & DC-5)	PBR 106.266	86099
Coupling Vacuum Cleaning System (DC-6)	PBR 106.266	91794
Diesel Engine (Demand Operations)	PBR 106.511	152180
Casting Sand Silo Loading System (DC-8)	StdPrmt 6001	162442
NC Pipe End Grinder (DC-9)	PBR 106.262	163329
Spencer Vacuum System (DC-10)	PBR 106.262	165077
Fitting Shop Drops to Spencer (DC-10)	StdPrmt 6001	165428
Diesel & Gasoline Fuel Tanks	PBR 106.412/473	166507
Pipe Joint Lubricant	<u>PBR 106.261</u>	167814
Water Grinders	PBR 106.265	167815
Groover and Rectification Machine	PBR <u>106.262</u>	169211
Hand Application of Stencil Ink and Paint	PBR 106.433	170922

- 4. A copy of this permit shall be kept at the site and made available at the request of personnel from the Texas Commission on Environmental Quality (TCEQ) or any other air pollution control agency with jurisdiction. **(02/20)**
- 5. With the exception of fugitive sources, the holder of this permit shall clearly label all equipment at the property that has the potential of emitting air contaminants. Permitted emission points shall be clearly labeled corresponding to the emission point numbering on the MAERT. **(02/20)**

- 6. There shall be no visible emissions from building openings or vents (EPNs FUG12, NCBLDGFUG, and WP-BLDFUG). This determination shall be made as follows. **(10/21)**
 - A. Observe for visible emissions while (frp) pipe manufacturing is ongoing. Contributions from uncombined water shall not be included in determining compliance with this condition.
 - B. Observations shall be performed and recorded quarterly. If visible emissions are observed from the building openings or vents, identification of the source and cause of the visible emissions shall be conducted within 24 hours and documented.
 - C. Corrective action to eliminate the cause of visible emissions shall be taken promptly. Corrective action shall be documented within one week of the first observation of the visible emissions. After corrective action has been taken, another visible emissions observation shall be performed and recorded to ensure the visible emissions have been eliminated
- 7. Opacity shall not exceed five percent averaged over a six-minute period from EPNs RTO, DC-1, and WP-DC and the determination shall be made as follows: (10/21)
 - A. Observe for visible emissions while each facility is in operation. Observations shall be made at least 15 feet and no more than 0.25 miles from the emission points. Up to three emission points may be read concurrently, provided that all three emission points are within a 70 degree viewing sector or angle in front of the observer such that the sun position is at the observer's back and can be maintained for all three emission points. Contributions from uncombined water shall not be included in determining compliance with this condition.
 - B. Observations shall be performed and recorded quarterly. If visible emissions are observed from an emission point, corrective action shall be taken promptly to eliminate the cause of the visible emissions.
 - C. The cause of the visible emissions and the corrective action taken to eliminate the cause shall be documented within one week of the first observation. After corrective action has been taken, another visible emissions observation shall be performed and recorded to ensure the visible emissions have been eliminated.
- 8. Styrene emissions from this facility shall not cause or contribute to a nuisance odor problem as defined in 30 TAC § 101.4. Additional controls of odors may be required if determined to be necessary by the TCEQ Houston Regional Director or representatives.
- 9. Manufacturing operations shall comply with the applicable requirements of 40 CFR Part 63, Subpart WWWW (National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites).

Operational Limitations

- 10. The dust collection system in the Saw Table Area (EPN DC-1) and the Winder Dust Collector (EPN WP-DC) shall meet the following requirements. **(06/23)**
 - A. Each dust collection system shall be equipped with cartridge filters designed or warranted to have a control efficiency of 99.9 percent or greater (down to 0.5 micron) for particulate matter (PM).

- B. Each dust collection system shall be maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when in operation.
- C. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the filter pads. If a monitoring device requires calibration, it shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of \pm 0.5 inch water gauge pressure (\pm 125 pascals) or a span of \pm 3 percent. If a monitoring device requires to be zeroed, it shall be zeroed at least once a week.
- D. The filter media differential pressure shall be maintained within the operating range specified by the manufacturer. Filters shall be replaced whenever the pressure drop reading across the filter media is outside the manufacturer's specified operating range.
- E. Pressure drop readings shall be recorded at least once per day that the system is required to be operated.
- F. Maintenance on the ventilation system, including filter replacement, shall be performed only when the facility being controlled is not in operation.
- 11. All volatile organic compounds (VOC), organic compound, and acetone emissions from the coupling filament winding operations, the NC Pipe and Winding Pipe manufacturing operations, and the centrifugal casting operations shall be captured and vented to the Regenerative Thermal Oxidizer (RTO) except during MSS. Manufacturing operations shall not be performed unless the collection system and RTO are properly functioning. **(10/21)**
- 12. Fuel for the RTO shall be pipeline-quality, sweet natural gas.
- 13. The Fitting Shop shall have one stack (EPN FITSTK) with a vertical discharge point at least 48.0 feet above ground level and shall have no obstructions or restrictions to vertical exhaust flow. The exhaust stack shall be equipped with a fan that achieves a flow rate of at least 9,500 actual cubic feet per minute.

RTO

- 14. The RTO shall achieve 98 percent or greater destruction efficiency for organic compounds (VOC and acetone). To achieve the destruction efficiency stated above, the set point temperature for the RTO burner chamber shall be maintained at a minimum of 1550 °F during coupling filament winding operations, the NC Pipe and Winding Pipe manufacturing operations, and the centrifugal casting operations. The monitoring system shall maintain chamber temperature above 1450 °F by fuel gas input in response to variations in waste gas heat input to the RTO. **(01/24)**
- 15. Temperature monitors shall be installed, calibrated, and maintained to continuously measure the gas temperature in the burner chamber.
- 16. Operating instructions shall be established and posted such that they are readily available to all operators.
- 17. The RTO shall be operated and maintained in conformance with all manufacturer's specifications and recommendations including (but not limited to) monthly preventative maintenance.
- 18. The RTO shall have one stack (EPN RTO) with a vertical discharge point of at least 76.0 feet above ground level and shall have no obstructions or restrictions to vertical exhaust flow.

- 19. General Condition No. 7 regarding information and data to be maintained on file is supplemented as follows and shall be used to demonstrate compliance with the special conditions and the MAERT: **(02/20)**
 - A. Environmental Data Sheet (EDS) or similar documentation (including material safety data sheets) for all material used in the FRP facilities and all solvents used in the cleanup operations. The EDS or similar documentation for materials shall indicate the maximum composition of all constituents.
 - B. Data shall be recorded as follows:
 - (1) Actual quantities of resin used on a daily basis.
 - (2) Actual operating hours of manufacturing on a daily basis.
 - (3) Quantities of calcium carbonate and sand usage based on purchase records on a monthly basis
 - C. The data recorded in paragraph B of this special condition shall be used to produce a monthly summary that reflects.
 - (1) Hourly average VOC and PM emission rates (excluding combustion and dust collector emissions) from manufacturing operations in pounds per hour.
 - (2) Rolling annual VOC, PM, and acetone emission (excluding combustion and dust collector emissions) from manufacturing operations in tons per year over the previous 12-months.
 - D. Field records of visible emissions observation and/or opacity measurements. Records of any corrective action taken.
 - E. Records sufficient to demonstrate compliance with the applicable requirements of 40 CFR Part 63, Subpart WWWW (National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites).
 - F. Records of the combustion chamber temperature for the RTO.
 - G. Records of the RTO temperature monitor calibrations.
 - H. A log documenting each inspection or routine maintenance action on the RTO, including the date, the name of the inspector, and a description of any repair or maintenance work performed.
 - I. Records of the differential pressure readings across the cartridge filters authorized by this permit.
 - J. A copy of initial test reports and any records of subsequent testing performed shall be kept for the life of the permit. **(10/21)**
- 20. The records required by the special conditions shall be maintained in hard copy or electronic format and shall be maintained for at least two years. The recordkeeping summary required shall contain examples of the calculations performed (including but not limited to units, conversion factors, and emission factors), any assumptions made in the calculations, and the basis for those assumptions. These records shall be kept on-site and made available for review upon request by representatives of the TCEQ or any air pollution control agency with appropriate jurisdiction. **(02/20)**

- 21. A routine program shall be established and performed to ensure minimization of fugitive emissions. The program shall include (but not be limited to) the following:
 - A. All acetone or styrene-containing material spills shall be cleaned up immediately and the waste materials, rags, and other absorbent materials that were used for cleanup shall be stored in closed containers until removed from the site.
 - B. Hoods, ducts, etc., in the pipe manufacturing and tank areas shall be maintained in good operating condition.
 - C. The used filter cartridges from the dust collectors shall be handled in such a manner that prevents trapped PM from escaping into the atmosphere until the filters are removed from the site.

Testing (10/21)

- 22. Upon request of the TCEQ Regional Office testing and sampling of the thermal control device shall be performed in order to do the following:
 - A. Verify the destruction efficiency of the thermal control device; and
 - B. Determine the minimum operating temperature needed to meet the minimum required destruction efficiency. The operating temperature shall be based on a 3-hour rolling average.
- 23. Specific requirements of the testing are as follows:
 - A. Submit a proposed test plan to accomplish the required testing for approval to the appropriate TCEQ regional **o**ffice. The proposed test plan must be submitted within 60 days after the WP Plant achieves normal operating conditions of the thermal control device under this permit. The testing should be performed as follows:
 - (1) The testing shall be performed during maximum operating conditions for the facilities that are controlled by the thermal control device; and
 - (2) The thermal control device shall operate at a temperature high enough to ensure compliance with the minimum required destruction efficiency.
 - B. Schedule a pretest meeting with the appropriate TCEQ regional office staff at least 45 days in advance of testing. The purpose of the meeting is to review the test details which include sampling and measuring procedures to be used, the forms required for recording the pertinent data, and the format and content of the test report as outlined in Chapter 14 of the TCEQ Sampling Procedures Manual;
 - C. Testing shall be completed no later than 90 days after regional approval of the test plan and no later than 180 days after the WP Plant achieves normal operating conditions; and
 - D. Submit a test report to the appropriate TCEQ regional office and TCEQ Austin Office of Air, Air Permits Division, no later than 60 days after the testing has been completed. The report shall provide documentation including calculations which demonstrate compliance with the required destruction efficiency.

Date: January 5, 2024

Attachment I

Permit Number 55013

Activities and Authorizations

Source or Activity – PBR	Authorization
Cleaning and stripping solvents greater than 50 gallons per year,	§ 106.261 and/or
sile-wide	§ 106.262
Water-based surfactants/detergents, greater than 2,500 gallons	§ 106.261 and/or
per year, site-wide	§ 106.262
Licago of organia colyante for maintaining equipment	§ 106.261 and/or
Usage of organic solvents for maintaining equipment	§ 106.262
Blast cleaning operations with slurry as the cleaning media	§ 106.451
Enclosed abrasive blasting cleaning operations	§ 106.452(1)
Baghouse/dust collector/filter system for facilities authorized by PBR	§ 106.231, § 106.392, and/or § 106.452(1)
Baghouse/dust collector/filter system for facilities authorized in this permit	§ 106.263(c)(1)
Non-enclosed abrasive blasting for routine facility maintenance (500 feet to the nearest off-property receptor and less than one ton per day, 15 tons per month, and 150 tons per year)	§ 106.452(2)
Routine facility maintenance including painting and abrasive blasting on immovable structures	§ 106.263(c)(3)(A)
Remote reservoir and cold solvent cleaners for maintenance	§ 106.454
Parts cleaning equipment with cold solvent/remote reservoir, conveyorized, and open-top cleaners	§ 106.454
Maintenance, startup, and shutdown of degreasers/ solvent cleaning machines authorized by a PBR	§ 106.454
Cleanup of overspray on plenums, booth surfaces, and interior of stacks by mechanical means not covered in this permit	§ 106.263(c)(1)
Cleanup of overspray on plenums, booth surfaces, and interior of stacks by using solvents not covered in this permit	§ 106.263(c)(1)

Filter replacement not covered by this permit for facilities which are authorized by this permit	§ 106.263(c)(1)
Routine maintenance activities for carbon adsorption (e.g., carbon replacement) which are planned and predictable and ensure the continuous normal operation of the facility or control device or return a facility or control device to normal operating conditions	§ 106.263(c)(1)
Startup and shutdown activities not included in the conditions of this permit for combustion units used as control devices	§ 106.263(c)(2)
Natural gas-fired comfort heating	§ 106.102
Maintenance, startup, and shutdown of boilers, heaters, and other combustion devices emitting only products of combustion of the fuel and authorized by a PBR	§ 106.183
Maintenance, startup, and shutdown of heat cleaning devices	§ 106.495
Purging of natural gas or other organic compounds to atmosphere from ovens and dryers before startup	§ 106.263(c)(2)
Startup and shutdown of ovens and dryers authorized by a permit	§ 106.263(c)(2)
Maintenance of ovens and dryers authorized by a permit	§ 106.263(c)(1)
Emergency diesel fire water pumps, electric generators, and portable engines	§ 106.511
Maintenance, startup, and shutdown of portable and emergency engines and turbines authorized by a PBR	§ 106.511
Maintenance, startup, and shutdown of stationary engines and turbines authorized by a PBR	§ 106.512
Startup and shutdown of engines and turbines authorized by a permit	§ 106.263(c)(2)
Maintenance of engines and turbines authorized by a permit	§ 106.263(c)(1)
Fugitive component repair, replacement; leaks – piping, pumps,	§ 106.261 and/or
valves, flanges, etc. for facilities not authorized by a permit	§ 106.262
Fugitive component repair, replacement; leaks – piping, pumps, valves, flanges, etc. for facilities authorized by a permit	§ 106.261, § 106.262, and/or § 106.263(c)(1)
Maintenance, startup, and shutdown of refrigeration equipment used in support of manufacturing operations	§ 106.373
Maintenance of sewage treatment facility	§ 106.531

Maintenance of water and wastewater treatment facility	§ 106.532
Welding, soldering, and brazing equipment	§ 106.227
Manually operated and hand-held equipment	§ 106.265
Routine maintenance activities which are planned and predictable and ensure the continuous normal operation of a facility or control device or return a facility or control device to normal operating conditions	§ 106.263(c)(1)
Routine maintenance, startup, and shutdown of facilities and temporary maintenance facilities	§ 106.263(c)(3)
Equipment fueling	§ 106.412
Diesel fuel storage tanks, gasoline storage tanks, lube oil storage tanks, and loading and unloading	§ 106.472 and/or
	§ 106.473
Maintenance, startup, and shutdown of storage tanks authorized by a PBR	§ 106.472, § 106.473, and/or § 106.474
Abrasive blasting, painting, and surface preparation of storage tanks	§ 106.263(c)(3)

Source or Activity – De Minimis	Authorization
Equipment used exclusively for steam cleaning of fabrics, plastics, rubber, wood, or vehicle engines or drive trains.	§ 116.119(a)(1)
Cleaning and stripping solvents, less than or equal to 50 gallons per year, site-wide	§ 116.119(a)(2)(A)
Water-base surfactants/detergents less than or equal to 2,500 gallons per year, site-wide	§ 116.119(a)(2)(F)
Application of aqueous detergents, surfactants, and other cleaning solutions containing less than 1% of any organic compound by weight	§ 116.119(a)(1)
Application of aqueous detergents, surfactants, and other cleaning solutions containing not more than one percent of any organic compound by weight or containing not more than five percent of any organic compound with a vapor pressure less than 0.002 pounds per square inch absolute.	§ 116.119(a)(1)
Manual application of cleaning or stripping solutions or coatings for maintenance	§ 116.119(a)(1)
Glove box/self-contained abrasive blasting and associated filter replacement	§ 116.119(a)(1)

Blast cleaning operations with water as the cleaning media	§ 116.119(a)(1)
Usage of organic chemicals including lubricants, greases, and oils without propellants other than air or nitrogen for maintaining equipment	§ 116.119(a)(1)
Application of lubricants for maintaining equipment	§ 116.119(a)(1)
Office equipment maintenance and cleaning (printers, copiers, etc.)	§ 116.119(a)(1)
Maintenance and cleaning of in-situ computer and office equipment	§ 116.119(a)(1)
Janitorial and maid services	§ 116.119(a)(1)
Grounds maintenance and landscaping	§ 116.119(a)(1)
Maintenance of heating and cooling equipment for personal use	§ 116.119(a)(1)
Comfort air conditioning or comfort ventilation systems which are not used to remove air contaminants generated by or released from specific units or equipment	§ 116.119(a)(1)
Maintenance of equipment by hydraulic or hydrostatic testing	§ 116.119(a)(1)
Application of argon, ethane, helium, hydrogen, methane, neon, nitrogen, and propane for testing, purging, and leak checking of equipment.	§ 116.119(a)(1)
Aerosol product use – no more than 4 cans (64 oz) per day based on a 12 month rolling average	§ 116.119(a)(1)
Aerosol can puncturing, recycling, and disposal – less than 40 cans per 24-hour period	§ 116.119(a)(1)
Pesticide and insecticide use and fumigation	§ 116.119(a)(1)