

Plain Language Summary

The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 Texas Administrative Code Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.

Chevron Phillips Chemical Company LP (CN600303614) operates a Polyethylene Plant (RN100825249) that consists of two polyethylene units and associated facilities and utilities on a 97-acre tract of land. The facility is located adjacent to the Phillips 66 Sweeny Complex, in Old Ocean, Brazoria County, Texas 77480. This application is being submitted for a permit renewal and a permit amendment for the new 1-Hexene Unit being constructed on a 23.6-acre vacant tract of land adjacent to the Polyethylene Plant.

Discharges from the facility are expected to contain dissolved oxygen, chlorine, total zinc, total suspended solids, volatile organics, semi-volatile organics, oil and grease. During the permit period process wastewater, process area stormwater, miscellaneous wastewaters, miscellaneous non-storm, cooling tower blowdown, water treatment wastes, non-process area stormwater and miscellaneous non-stormwater will be discharged via Outfall 001 with an intermittent and flow-variable rate. Discharges via Outfall 101 during the permit period will consist of process wastewater, process area stormwater, miscellaneous wastewaters, and miscellaneous non-stormwater at a daily average flow rate not to exceed 0.540 million gallons per day (MGD). Discharges via Outfall 002 during the permit period will consist of cooling tower blowdown and water treatment wastes at a daily average flow rate not to exceed 0.620 MGD and a daily maximum flow of 1.2 MGD. Discharges via Outfall 003 will consist of non-process area stormwater, miscellaneous non-stormwater, cooling tower blowdown, and water treatment wastes. Oily wastewaters are treated offsite.

The remaining process wastewater streams consist of blowdown and washdown from pellet and fluff handling, catalyst area, and loading areas. The streams are collected and treated prior to discharge. Stormwater from inside battery limits (ISBL) is also routed through the treatment system.

The ISBL area contains fugitive materials, namely pellets and fluff. The pellet water collection system collects stormwater from the ISBL area, the load out structures, the talc/fluff unloading area, pelletizer cooling water tank overflow, and area wash down water. The bulk of materials that may be present in the storm water from these areas consists of pellets, but fluff may also be present. The northern area of the PE plant has greater fugitive materials, therefore the stormwater run-off from this area receives greater treatment.

The blowdown and washdown and the stormwater from the northern portion of the ISBL is routed to the Pellet Storm Water Sump. Water from the sump is pumped to a hydro-sieve to screen the pellets and deposit them into a roll off box. The clean pellet water discharged from the hydro-sieve is routed to a fluff removal filter system. The effluent from that system is routed back to Pellet Storm Water Sump. Effluent from the sump is pumped to the Pellet Water Pond.

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The Catalyst Area Sump also discharges into the South ISBL Sump. The Catalyst Area sump is used to collect and contain wash water, storm water, and decontamination showers within the catalyst area. The sump acts as a sedimentation basin. Settled solids are removed for offsite disposal. Clarified water from the sump is routed to the Pellet Storm Water Sump.

The southern area of the ISBL does not contain fugitive materials but there is a potential for contamination, so the waters produced in that area are routed to the Pellet Water Pond to ensure that fugitive materials are captured and removed prior to discharge. Stormwater run-off from the southern ISBL area is collected in the South ISBL sump, which pumps directly to the Pellet Water Pond.

The Pellet Water Pond provides final treatment prior to discharge via an internal outfall. The pond is equipped with an overflow/underflow forebay to trap any floating materials. It is also equipped with two floating booms and an engineered clay liner. The outlet to the pond discharges to an internal ditch that flows to the East and North Rail Channels. These channels also collect non-process area storm water run-off (primarily from the rail loading area) prior to discharge via Outfall 001.

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