ATTACHMENT E
PLAIN-LANGUAGE SUMMARY

Pergan Marshall LLC (Pergan) is applying for renewal and amendment of Underground Injection Control (UIC) Permit Nos. WDW449 and WDW450. The Pergan facility is located outside the limits of the City of Marshall in Harrison County, Texas at 710 Bussey Road, Marshall, TX 75670. The chemical manufacturing facility, formerly owned by Witco Chemical, has been in operation since 1968. The facility was acquired by Pergan GmbH in 2007.

Pergan manufactures a range of organic peroxide products through the reaction of various organic compounds with hydrogen peroxide or hydroperoxides. Organic peroxides are used in several types of industrial processes by Pergan's customers to produce materials used in household, commercial and industrial applications. For example, organic peroxides are used as initiators for polymerization reactions to produce various plastics like polyethylene, polypropylene, polyvinyl chloride (PVC) and polystyrene. They are also used as curing and crosslinking agents in polymerization processes such as those in synthetic rubber production.

WDW450 was completed in 2016 and has been in operation since February 2017. WDW449 was completed in 2019 and has been in operation since October 2019. The permitted injection interval for both wells is within the Pettit member of the Lower Glen Rose Formation at the approximate depths of 6,370 to 6,600 feet below ground level. The permits currently authorize a maximum combined instantaneous injection rate of 89 gallons per minute (gpm) per well (maximum combined monthly average rate of 56.25 gpm), with a maximum combined annual injection volume for both wells of 29.565 million gallons. The maximum specific gravity of the wastewater that is injected is 1.10. Pergan continuously monitors both surface injection pressure and flowing bottomhole injection pressure to ensure that formation pressures will remain below acceptable levels.

Pergan is not requesting any changes to the current permitted operating parameters. The application requests a minor permit amendment to: (1) enhance monitoring of the injectate for pH and specific gravity by replacing grab sampling with continuous monitoring, (2) expressly recognize all wastes represented in the prior permit application and clarify waste descriptions in the prior application, and (3) correct waste sampling frequency and locations.

The peroxide production processes generate a nonhazardous wastewater stream comprising the majority of the waste stream that is disposed by underground injection. This process wastewater is high in dissolved solids such as sodium, chloride, sulfate and potassium and contains low levels of organic chemicals. Lesser contributions to the injection waste stream are generated intermittently and consist of potentially contaminated stormwater from process and wastewater area containments and wash waters generated from occasional process equipment cleaning and cleanup of spills/leaks. These intermittent waste streams are chemically similar but more dilute than the process wastewater.

The injection wells are sited, engineered, constructed, and operated in accordance with TCEQ permits and regulations and industry accepted practices as follows:

- Thorough evaluation of geologic and hydrogeologic information demonstrates the geologic suitability of the facility and area for disposal of wastewater by underground injection. The

injection interval is separated from the lowermost underground source of drinking water by almost 5,000 feet of predominantly low permeability strata.

- Each well has been designed and constructed to prevent potential leaks from the well, to prevent the movement of fluids along the wellbore into or between underground sources of drinking water, to prevent movement of fluids along the well bore out of the injection zone, to permit the use of appropriate testing devices and workover tools, and to permit continuous monitoring of injection tubing, long string casing, and annulus.
- Each well is routinely operated to maintain the operating pressures below the limits determined to satisfy TCEQ performance standards, and the annulus pressure is maintained at least 100 psi greater than the injection tubing pressure to prevent leaks from the well into unauthorized zones and to detect well malfunctions.
- Mechanical integrity tests, as required by the TCEQ, are conducted annually to ensure that the well's tubing, casing, and packer continue to function as intended, preventing impacts to groundwater.
- When injection operations are permanently terminated at any of the injection wells, the well will be plugged by cementing the well from below the top of the permitted injection zone to ground surface. Financial assurance to ensure adequate funds for closure is provided.

These practices and procedures, coupled with the favorable geologic setting, will prevent possible leakage from the well into unauthorized zones and ensure that there will be no impact on groundwater from injection well operations.