

EcoSolvent™ ETI-927™

In today's constantly expanding oil and gas industries every minute of production time is necessary to fulfill production requirements. Lost production time means financial penalties. Unfortunately process units must be shut down periodically for routine maintenance.

In the case of process units containing heavier hydrocarbons, such maintenance is often difficult and dangerous due to the presence of:

- Thick sludge or Coke deposits
- Pyrophorics
- Explosive and/or carcinogenic vapors

Although such maintenance cannot be avoided, it can be made easier and safer using modern technology. With this in mind, EnvTech has developed a decontamination process for heavy oil units that can be completed in less than 48 hours, and leaves the entire unit gas-free and ready for hot work.

In general each process unit is cleaned by recirculation of **EcoSolvent ETI-927** using the unit's pumps. All vessels and exchangers are liquid filled except for large columns such as Main Fractionators or Vacuum Towers, which are cascaded. The solution is heated to a temperature range of 180°F to 200°F using process unit reboilers, furnaces, and/or direct steam injection. The goal is to provide adequate flow through the entire system while minimizing the amount of temporary connections and blinding required prior to the start of the cleaning. This system is suitable for both packed or tray type towers – it has proved equally successful in both applications.

EnvTech's proprietary **EcoSolvent ETI-927**, is recirculated with ETI Cleaning & Gas Freeing solution, which utilizes a strong buffer system in combination with appropriate chelants and surfactant in order to: neutralize polythionic acids on contact, dissolve all scales found in nearly any refinery process unit. This mixture also renders pyrophoric substances inactive. In addition, Benzene and other regulated air contaminants have been absent from the vapor spaces of vessels opened after these cleanings.

- ❖ **EcoSolvent ETI-927** vastly improves the removal of asphaltenes, coke deposits, and heavy hydrocarbons.
- ❖ **EcoSolvent ETI-927** is 100% biodegradable, and will have no ill effect on the environment.
- ❖ **EcoSolvent ETI-927** is a non-hazardous product that may be safely handled and will have no ill effect on personnel.
- ❖ **EcoSolvent ETI-927** creates a stable emulsion, which can be safely drained to Bio Treatment Plants.

Note: The stable emulsion created can be de-stabilized very easily if refinery-draining restrictions require this.