

## Hopewell Cogeneration Facility

### Pollution Prevention

- Air Pollution
  - Over the past 3 to 4 years, NOx on plant startup has been studied. The plant has developed a way to start the plant that reduces NOx by 65 tons or better based on a 200 start year.
  - The plant has worked out a plan for use of our auxiliary boilers so they do not stay on line unless absolutely necessary. Because the gas turbines produce fewer emissions for the same amount of fuel needed to produce steam by the auxiliary boilers. This will eliminate about 35 tons on NOx per year.
  - New natural gas contracts have made gas supplies more available with less run time on the back-up fuel, #2 Diesel. The effect is not easy to quantify, but it appears that the plant has reduced the amount Diesel fuel burned by almost half. This reduces the amount on NOx by about 10 to 20 percent and reduces SO2 by about 98% to 99%.
  - The plant's study of Bio-Diesel has been curtailed because of the cost of the fuel.
- Water Pollution
  - The plant wants to reduce water usage as much as possible.
    - As many drains have been returned to the system instead of sending them out as waste water.
    - The cooling tower is cycled up as much as possible to reduce blow-down.
    - The plant is presently working on rerouting drains from water treatment to the cooling tower.
    - Systems such as Ozone are being evaluated to reduce chemical additives.
    - CO2 injection for pH control is being evaluated to remove CO2 from the atmosphere and at the same time control pH in the cooling tower.
  - Over the years additional dike and curbing have been added to the plant to keep oil and chemicals from getting into the waste water.
- Waste

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- HCF has reduced the number of Hazardous Waste Chemicals to just Sulfuric Acid and Sodium Hydroxide (Caustic). These are used in water treatment. All others have been removed from service or replaced with a non-hazardous chemical.
- Recycling efforts are being expanded, but in the last year there have been some products that have not found a recycler that will take them.
- Copy of HCF recycling program is attached.
- Oil
  - The plant is working on natural gas contracts in order to reduce the amount of back-up fuel (#2 Diesel Fuel) needed. The less oil the less chance of a spill as well as the reduction of the size of a spill. This will also reduce VOC's.
  - Bio-Diesel has been tested here at HCF, but economics have kept the plant from expanding the testing. HCF's goal was to run a blend of Bio-Diesel and #2 Diesel, such that there would be a reduction of both SO<sub>2</sub> and VOC's. The Bio-Diesel is safer to work with and is less harmful to the environment.