

217/782-2113

"REVISED"
LIFETIME OPERATING PERMIT

PERMITTEE

Ortek, Inc.
Attn: Francis J. Lappin
7601 West 47th Street
McCook, Illinois 60525-1508

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| <u>Application No.:</u> 97050092 | <u>I.D. No.:</u> 031174ACF |
| <u>Applicant's Designation:</u> AIRPERMIT | <u>Date Received:</u> December 8, 2000 |
| <u>Subject:</u> Oil and Glycol Reclaiming | |
| <u>Date Issued:</u> | <u>Expiration Date:</u> See Condition 1. |
| <u>Location:</u> 7601 West 47th Street, McCook, IL 60525-1508 | |

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Distillation Towers T-1 through T-6 Controlled by Condenser and McGill Thermal Oxidizer;
Two Film Wipe Evaporators with Vacuum System;
Waste Water Treatment Plant with Oil/Water Separator also Controlled by McGill Thermal Oxidizer;
Distillation Tower Heaters T-5 at 10 mmBtu/hr and T-6 at 12.5 mmBtu/hr;
Cleaver Brooks 20.92 mmBtu/hr Natural Gas/#2 Fuel Oil Boiler;
Bigelow 19.1 mmBtu/hr Natural Gas/#2 Fuel Oil Boiler; and
One hundred Six Storage Tanks

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This permit shall expire 180 days after the Illinois EPA sends a written request for the renewal of this permit.
 - b. This permit shall terminate if it is withdrawn or is superseded by a revised permit.
 - c. Prior to issuance, a draft of this permit has undergone a public notice and comment period to incorporate the thermal oxidizer from construction permit #98030069.
2. The Permittee shall only operate the emission units with adequate control equipment to meet the applicable regulations 35 Ill. Adm. Code 218.302(a) and 218.141. The re-refining processes and the water separator controlled by the thermal oxidizer must achieve at least 85% reduction of organic material emissions.

- 3a. Emissions and operation of the tower heaters (T-5 and T-6), Cleaver and Bigelow boilers, and thermal oxidizer shall not exceed the following limits:

| <u>Material</u> | <u>Usage</u> | | <u>Pollutant</u> | <u>Emission</u> | <u>Emissions</u> | |
|-----------------|-------------------|-------------------|------------------|-----------------|------------------|-----------------|
| | <u>(mmscf/Mo)</u> | <u>(mmscf/Yr)</u> | | <u>Factor</u> | <u>(Ton/Mo)</u> | <u>(Ton/Yr)</u> |
| Natural Gas | 57 | 567 | NO _x | 100 | 2.85 | 28.5 |
| | | | CO | 84 | 2.40 | 23.9 |
| | | | TSP | 7.6 | 0.22 | 2.2 |
| | | | SO ₂ | 0.6 | 0.02 | 0.2 |
| | | | VOM | 5.5 | 0.16 | 1.6 |

- b. Emissions and operation of the tower heaters (T-5 and T-6) and Cleaver and Bigelow boilers shall not exceed the following limits:

| <u>Material</u> | <u>Usage</u> | | <u>Pollutant</u> | <u>Emission</u> | <u>Emissions</u> | |
|-----------------|-----------------|-----------------|------------------|-----------------|------------------|-----------------|
| | <u>(Gal/Mo)</u> | <u>(Gal/Yr)</u> | | <u>Factor</u> | <u>(Ton/Mo)</u> | <u>(Ton/Yr)</u> |
| Fuel Oil #2 | 225,000 | 225,000 | NO _x | 20 | 2.25 | 2.25 |
| | | | CO | 5 | 0.56 | 0.56 |
| | | | TSP | 2 | 0.23 | 0.23 |
| | | | SO ₂ | 39.76 | 4.5 | 4.5 |
| | | | VOM | 0.252 | 0.1 | 0.1 |

These limits define the potential emissions of NO_x, CO, TSP, SO₂, and VOM and are based on maximum fuel usage and standard emission factors. Compliance with annual limits shall be determined from a running total of 12 months of data.

- c. Natural gas shall be the primary fuel used in the fuel combustion emission units and the thermal oxidizer. Fuel oil #2 shall be used as a back up fuel only in the tower heaters and boilers. Use of any other fuel other than natural gas or fuel oil #2 requires a permit revision.
- 4a. Emissions of volatile organic material (VOM) and operation of the distillation towers shall not exceed the following limits:

| <u>Dist. Towers</u> | <u>Throughput</u> | | <u>Control</u> | <u>VOM Emissions</u> | |
|---------------------|---------------------------------|---------------------------------|---|----------------------|---------------|
| | <u>(10⁶ Gals/Mo)</u> | <u>(10⁶ Gals/Yr)</u> | <u>Efficiency</u> <u>____(%)____</u> | <u>(T/Mo)</u> | <u>(T/Yr)</u> |
| T-1 through T-6 | 2.0 | 16.78 | 99 | 0.06 | 0.44 |

These limits define the potential emissions of VOM and are based on maximum throughput and stack test results. Compliance with annual limits shall be determined from a running total of 12 months of data.

- b. The Permittee shall only operate two of the four distillation towers (T3 - T6) at any given time. If the Permittee intends to operate more

than two of these four towers at any given time, the Permittee must perform a stack test to demonstrate compliance with 35 Ill. Adm. Code 218.301 and 218.302(a).

- 5a. This permit is issued based on negligible emissions of VOM from the two film wipe evaporators and wastewater treatment plant. For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
 - b. Volatile organic material (VOM) emissions from the storage tanks shall not exceed 1.0 ton/year based upon standard calculation methods.
 - c. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.
6. Within 90 days of a written request from the Agency, pursuant to 35 Ill. Adm. Code Section 201.282, the emissions from the facility shall be measured during conditions which are representative of the maximum performance. The Agency may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.
 7. In the event that the operation of this emission unit results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors.
 8. The McGill thermal oxidizer shall be operated at all times when the associated emission units are in operation and emitting air contaminants.
 - a. The thermal oxidizer combustion chamber shall be preheated to at least 1,175°F before beginning operation of the associated emission units. This temperature shall be maintained during operation. The setpoint temperature shall be maintained at 1225°F.
 - b. The thermal oxidizer shall be equipped with a continuous temperature monitoring device and strip chart recorder or disk storage for the thermal oxidizer combustion chamber temperature. This device shall be calibrated, maintained and operated according to vendor's specifications at all times that the thermal oxidizer is in use.
 - c. A log of operating times of the thermal oxidizer and associated emission units shall be maintained to demonstrate compliance with this special condition.

9. The Permittee shall maintain monthly records of the following items:
 - a. The amount of natural gas burned (mmscf/mo and mmscf/yr);
 - b. The amount of #2 fuel oil burned (gal/mo and gal/yr);
 - c. The amount of oil processed in the distillation towers (T1 through T-6) (gal/mo and gal/yr);
 - d. The amount of waste oil received (gal/mo and gal/yr);
 - e. The amount of recovered lube oils shipped off site (gal/mo and gal/yr); and
 - f. The amount of residues shipped off site (gal/mo and gal/yr).
10. The Permittee shall collect and record the following information each day:
 - a. Thermal oxidizer combustion chamber monitoring data (temperature);
 - b. A log of operating times for the capture system, thermal oxidizer, monitoring device, and associated emission units; and
 - c. A maintenance log for the capture system, thermal oxidizer, and monitoring device detailing all routine and non-routine maintenance performed including dates and duration of any outages.
11. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
12. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
13. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

14. Persons with lifetime operating permits must obtain a revised permit for any of the following changes at the source:
- a. An increase in emissions above the amount the emission unit or the source is permitted to emit;
 - b. A modification;
 - c. A change in operations that will result in the source's noncompliance with conditions in the existing permit; or
 - d. A change in ownership, company name, or address, so that the application or existing permit is not longer accurate.

It should be noted that T-1 Heater at 7.5 mmBtu/hr, T-2 & 3 Heater at 5.3 mmBtu/hr, T-4 Heater at 7.5 mmBtu/hr and Dow Therm Vaporizer at 5.72 mmBtu/hr are exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146.

It should be noted that this permit has been revised to no longer include operation of the filter presses with odor scrubber.

Please note that the McGill Thermal Oxidizer has been incorporated into this permit from Construction Permit 98030069.

If you have any questions on this permit, please contact Tara T. Nguyen-Ede at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

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