Texas Natural Resource Conservation Commission

INTEROFFICE MEMORANDUM

To: Billy Spiller, Permits Section — Date: May 17, 2000
Waste Permits Division, Office of Permitting

Thru: Paul E. DeCiutiis
Mechanical & Combustion Section
Air Permits Division, Office of Permitting

From: Darla Holtzclaw
Mechanical & Combustion Section
Air Permits Division, Office of Permitting

Subject: Rhodia, Inc. - Houston Plant
Air Review of Minor Amendment for
Clarification to RCRA Part B Renewal Application
Industrial Solid Waste Registration No. 31019
Hazardous Waste Permit No. HW-50095-001
U.S. Environmental Protection Agency (EPA) ID. No.
TXD-008099079

This memorandum is to document a review conducted on the RCRA Part B minor amendment submitted by Rhodia, Inc. and received by the Air Permits Division (APD) of the Texas Natural Resource Conservation Commission (TNRCC) on March 10, 2000.

The staff from the APD have reviewed the Part B Renewal Application, with an emphasis on assessing technical deficiencies which will effect the air authorization for the facility. It should be noted that the following comments are not intended to reflect a comprehensive evaluation of the Part B revision submitted.

APD has no questions or comments on the Part B revision which will require response before proceeding with the Initial Draft Permit process. However, revisions to air permit provisions have been attached to address the requested modification to the fugitive monitoring program.

If you have any additional questions or concerns, please contact me at (512) 239-4497.

cc: Mr. Leonard Spearman, Jr., TNRCC Region Office 12

Draft Air Permit Conditions for
Hazardous Waste Permit HW-50095
Pursuant to Hazardous Waste Permit Renewal

IX. ~~Texas Air Control Board (TACB)~~ **Air** Permit Provisions

1. This facility shall comply with all applicable requirements of Environmental Protection Agency Regulations on National Emission Standards for Hazardous Air Pollutants promulgated for fugitive emission sources of benzene in Title 40 code of Federal Regulations Part 61 (40 CFR Part 61), Subparts A, J, V, **and FF. (6/00)**

2. The permittee shall comply with these requirements for all equipment items, except relief valves, which contact hazardous or specified non-hazardous wastes or vapors from these wastes:

   1. All valves and piping shall be above ground and so located as to be reasonably accessible for leak checking during plant operation.

   2. Piping connections shall be welded or flanged. Flanges and flange gaskets shall be of the design and quality that the potential for fugitive losses is minimized.

   3. All pumps shall be sealless or equipped with double mechanical seals using an oil or water based barrier fluid which operates at a pressure high than the process pressure.

   4. All valves shall be designed, constructed, tested and certified by the manufacturer for leak free performance.

   5. New and reworked valves installed as replacements shall be tested prior to operation by hydrostatic or gas testing in-place or by an appropriate bench test to determine that the valves do not leak.

   6. Prior to the initial burning of hazardous waste and annually thereafter all pumps, valves and flanges shall be hydrotested or gas tested at 100 percent or more the maximum operating pressure and adjustments made as necessary to obtain bubble-tight, leak-free performance.

   7. All pumps, valves and flanges shall be monitored monthly with a hydrocarbon gas analyzer. Monitored values which are greater than 25 ppm above any background concentration when measured at a distance of less than three inches shall be considered evidence of a leak.

      a. **In lieu of the monthly monitoring frequency**

specified in Provision 7, pumps, valves, and flanges may be monitored on a quarterly basis if the leak percentages of these components for three consecutive monthly monitoring periods is less than 0.2 percent.

If the leak percentage for any quarterly monitoring period is 0.2 percent or greater, the facility shall revert to monthly monitoring for pumps, valves, and flanges until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

b. The leak percentage used in paragraph a shall be determined using the following formula:

$(Cl_1 + Cs_1) \times 100/Ct_1 = Cp_1$

Where:

Cl_1 = the number of pumps, valves, and flanges found leaking by the end of the monitoring period

Cs_1 = the number of pumps, valves, and flanges for which repair has been delayed and are listed on the facility shutdown log.

Ct_1 = the total number of pumps, valves, and flanges in the facility subject to the monitoring requirements, as of the last day of the monitoring period.

Cp_1 = the percentage of leaking pumps, valves, and flanges for the monitoring period. (6/00)

8. **All agitator seals shall be monitored monthly with a hydrocarbon gas analyzer. Monitored values which are greater than 25 ppm above any background concentration when measured at a distance of less than three inches shall be considered evidence of a leak.**

a. In lieu of the monthly monitoring frequency specified in Provision 8, agitator seals may be monitored on a quarterly basis if the leak percentages of these components for three consecutive monthly monitoring periods is less than 0.2 percent.

If the leak percentage for any quarterly monitoring period is 0.2 percent or greater, the facility shall revert to monthly monitoring for agitator seals until the facility again qualifies for the alternative monitoring schedules previously outlined in this paragraph.

b. The leak percentage used in paragraph a shall be determined using the following formula:

$$(Cl_2 + Cs_2) \times 100/Ct_2 = Cp_2$$

Where:

Cl_2 = the number of agitator seals found leaking by the end of the monitoring period

Cs_2 = the number of agitator seals for which repair has been delayed and are listed on the facility shutdown log.

Ct_2 = the total number of agitator seals in the facility subject to the monitoring requirements, as of the last day of the monitoring period.

Cp_2 = the percentage of agitator seals for the monitoring period. (6/00)

9. All **agitator seals**, pumps, valves and flanges shall be inspected on a daily basis an shall be monitored if evidence of a potential leak is found by visual, audible, olfactory or any other detection method. Monitored values which are greater than 25 ppm above any three inches shall be considered evidence of a leak. Visible presence of the leaking waste liquid shall always constitute a leak and therefore will not necessitate the use of a monitor for detection purposes. **(6/00)**

10. Four continuous ambient hydrocarbon monitors shall be installed maintained and operated around the perimeter of each of the storage modules for the purpose of identifying fugitive leaks. Each monitor shall alarm at:

a. Calculated hourly averages above 25 ppm; or
b. At a measured value which exceeds the previous 5-minute's average plus four times the previous 5-minute's calculated standard deviation of the mean.

NOTE: A measured value is the average of 5 minutes of a digitized analog signal.

An alarm shall result in both an immediate search for leaking equipment by personnel using portable monitors and a written record of the conclusion of that search.

If the hourly average remains above 25 ppm and the initial search was negative, additional searches need not be conducted except on 24 hour intervals. Regardless of calculated hourly averages, in the event that the condition in Provision IX.B.**10**.b is triggered a search shall be conducted. Alternate, equivalent methods or additions to these required methods for identifying fugitive leaks may be approved by the Executive Director of the ~~Texas Air Control Board (TACB)~~ **Texas Natural Resource Conservation Commission (TNRCC)** upon written request by the permittee.

11. Leaking equipment shall be repaired or isolated within four hours after detection, except for valves connected directly to tanks, which are allowed four hours after the affected tank has been emptied and decontaminated. Emptying and decontamination of the affected tank shall be initiated immediately after the detection of a leak. Equipment shall not be returned to service until the leak is repaired.

12. The repair and maintenance of any equipment component shall be assisted by use of a hydrocarbon gas analyzer such that a minimum concentration of leaking hydrocarbons is achieved and that the resulting concentration is less than 25 ppm above any background concentration when measured a distance of less than three inches. An acceptable alternative of demonstrating VOC to be less than 25 ppm is to pressure test with nitrogen up to 125 psi. If there is no drop in pressure over a fifteen minute period, the equivalent 25 ppm threshold is satisfied.

13. The holder of this permit shall operate and maintain all portable hydrocarbon gas analyzers and ambient monitors consistent with the representations in the Stauffer Chemical Company's letter ~~to the TACB~~ dated July 1, 1986. Design and performance specifications, field tests, calibrations, applicable installation requirements, data analysis, data reduction and reporting requirements shall be those represented in this same letter or otherwise addressed by this permit's conditions. Alternate, equivalent equipment items, operating modes and maintenance activities may be approved by the Executive Director of the **TNRCC** upon written request by the permittee.

14. Records of monitoring and maintenance actions required by the provisions of Section IX of this permit shall be maintained for a period of three years, shall be made available to authorized state and local air pollution control agencies and shall include, at a minimum, the following data:

a. A list of all components affected by this provision;
b. Checklists indicating the daily inspections are being performed;
c. Checklists indicating the monthly inspections are being performed;
d. Checklists indicating the annual inspections are being performed;
e. Checklists indicating the continuous ambient monitors are being operated and maintained;
f. Summaries including the date, time, equipment identification and monitoring results for all leaking items;
g. Summaries including the date, time, equipment identification and corrective actions for all isolations, replacements and/or repairs performed, including monitoring results immediately after repairs;
h. Records of the calibration of the portable and continuous monitoring instruments.

(NOTE: Checklists and summaries may be computerized but shall be verified by signed writing confirming that the required checks were completed).

C. All waste gas streams consisting of vapors from hazardous or specified non-hazardous wastes shall be routed to the acid plant furnace. If the furnace is not operating these streams shall be routed to the contained vapor combustor. The waste gas streams shall include all process vents, relief valve exhausts, sample vents, shutdown related emissions or purges, blowdowns or other system emissions of waste gas. Any other exception to this provision requires prior review and approval by the Executive Director.

D. The contained vapor combustor used to dispose of vapors from hazardous and specified non-hazardous wastes shall comply with the general control device requirements of Environmental Protection Agency Regulations for New Source Performance Standards promulgated for flares in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subpart A, Paragraphs 60.18 (c), (e) and (f). One exception to these requirements is that engineering calculations may replace actual testing requirements since the flare is not used to comply with the subparts of federal new source performance standards. Additionally, the permittee shall monitor the combustor to ensure that it is operated and maintained in conformance with its design.

E. The contained vapor combustor shall be equipped with a continuously burning pilot system or other automatic ignition system that assures combustor ignition and that provides immediate notification of appropriate supervisory personnel when the ignition system ceases to function properly.

F. The incinerator shall not emit nonsulfate particulate matter in excess of 0.02 grain per dry standard cubic feet when corrected for the amount of oxygen in the stack gas in accordance with the formula specified in 40 CFR Section 264.343 (c). Corrections for the amount of sulfate particulate in the stack gas shall conform to the procedures specified in the **TNRCC** Laboratory Methods Manual.