

Carol Browner
Environmental Protection Agency
401 M Street SW
Washington, DC 20460

May 30, 1997

Ref: Petition to terminate or revoke the Title V permit for Shintech and It's Affiliates, Inc.

Dear Ms. Browner,

The following public petition to terminate or revoke the Title V permit for Shintech and It's Affiliates, Inc., is made to the Administer of the Environmental Protection Agency as allowed under the 1990 Clean Air Act and under Louisiana Administrative Code 33:III Chapter 5. The petition is submitted by the Louisiana Environmental Action Network on behalf of the Louisiana Environmental Action Network, St. James Citizens for Jobs and the Environment. The public petition follows.

Public Petition to the EPA Requesting That the Administrator Object to the Issuance of the Title V Proposed Permit for Shintech and It's Affiliates, Inc.

This public petition is submitted based on objections raised during the public comment period and based on objections for which it was impracticable to raise such objections within the public comment period. The objections raised during the public comment period are those submitted by the Tulane Environmental Law Clinic on behalf of Louisiana Environmental Action Network (LEAN).

Even though LEAN, in cooperation with the Tulane Environmental Law Clinic, did submit objections during the public comment period, it should be noted that the Louisiana Administrative Code 33:III Chapter 5, Section 533.E (LAC 33:III.5.533.E, where Chapter 5 is titled Permit Procedures) states that any person may submit a petition, and that the petitioner isn't required to have sent in the objections, only that the petitioner base the petition on objections made within

the public comment period, or objections for which it was impracticable to raise such objections within the public comment period.

LEAN is requesting that the administrator object to the issuance of the proposed permit for the following reasons: the permit would not result in compliance with federally applicable requirements or with the requirements of the approved Louisiana Part 70 program or with 40 CFR part 70; the permitting authority or the owner or operator has not provided information regarding the permit in accordance with Subsection B of LAC 33:III.5.517; and the permitting authority failed to submit information necessary to review adequately the proposed permit.

The petition is in three parts. Part 1- General Comments, Part 2- The VCM Plant, which contains a general overview followed by a more through analysis, and Part 3- Problems with the Proposed Permit. Part 3 pertains to information for which it was impracticable to raise objections within the public comment period.

1. General Comments.

a. Shintech invokes the heretofore unknown term "Clarification of Non-Applicability" in Table 4-1 of each application as a reason for not having to comply with MACT standards.

b. Shintech didn't include a statement that they would comply with the federal MACT rules for the PVC Plant and chlorine production plant (the Chlor-Alkali Plant). The federal MACT standards for these source categories have not been finalized by the EPA. In this situation LAC 33:III.5.517.E.3. states "for applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis". This statement was not made in the permit application or the proposed permit.

c. Shintech submitted a revision to the Part 70 permits on November 6, 1996. The public notices were published on November 7, 1996. This means that the Department of Environmental Quality (DEQ) didn't have time to study the

changes before including them in the draft permit, which they made available on November 7, 1996.

d. The PVC plant emissions in Shintech's application are not close to those that will be required by the MACT standard for PVC production when that MACT standard is finalized. As a result, it would be a poor decision to allow Shintech to begin building this facility using 1970's control technology when the MACT standards will be finalized in the next few years. The BACT control technology proposed in the permit application should not be allowed in the proposed permit. Shintech should be required to make a reasonable effort towards using currently available control technology in the design of the PVC plant.

e. Since the federal MACT standards for polyvinyl chloride production aren't final. This facility shouldn't be built until the federal MACT standards are available.

f. Under LAC 33:III.5.519.C.5, DEQ didn't properly consider the impact Shintech's emissions would have on maintaining ozone attainment in St. James Parish. St. James Parish was included in the ozone non-attainment list in the 1990 Clean Air Act Amendments (CAA). St. James Parish was recently taken off this list, based on contingency provisions given by the DEQ. What happens to these contingency provisions and to potential changes in St. James Parish's attainment status was not adequately addressed by DEQ. Specifically, the DEQ didn't adequately study the situation, and was not in a position to make the determination required in LAC 33:III.5.519.C.5.

2. The VCM Plant.

The VCM (Vinyl Chloride Monomer) plant is required to meet federal MACT standards under 40 CFR 63 Subparts F, G, H and I. Collectively these subparts are known as the HON which stands for Hazardous Organic NESHAPS (National Emissions Standards for Hazardous Air Pollutants). The HON sets the MACT standards for the synthetic organic chemical manufacturing industry.

a. Shintech's Part 70 Permit application did not include all of the information required in LAC 33:III Chapter 5, Section 517.B. Among other things, they did not provide sufficient calculations or an adequate description for emissions sources M-4 and M-5, which are thermal oxidizers with scrubbers. The permit application may not meet the MACT requirements of the HON in Subpart G 63.113 (c)(1)(i) which requires that chlorine be reduced by 99% or be reduced to 0.45 kilograms per hour, whichever is less stringent.

b. The VCM application doesn't meet MACT for source M-13, described as an analyzer vent. This stream is actually the combined vents from five different analyzers with the majority coming from the "reactor recycle gas stream analyzer". Shintech incorrectly stated that this vent isn't a process vent and doesn't need to be controlled. This vent should have been controlled under Subpart G 63.113.

c. Neither the VCM plant application nor the proposed permit correctly apply the requirements of the HON to emissions from M-15, which is listed as "HCl Tank Scrubber Vent". The proposed permit and the application claim that the HON does not apply because "Does not apply Hydrogen Chloride is an inorganic chemical". We don't question the validity of this statement, but this isn't sufficient grounds to ignore the requirements of federal law and the HON in particular. Though little information is given about the origination of this emissions source, it is probably considered as a tank. The appropriate requirements of the HON must be applied.

Analysis of the VCM Plant Part 70 Permit Application.

The VCM Plant produces vinyl chloride monomer from 1,2-dichloroethane, which is then polymerized into polyvinyl chloride in the PVC Plant. The VCM Plant is part of a major source of hazardous air pollution as defined in the 1990 Clean Air Act Amendments. The CAA defines 188 chemicals as hazardous air pollutants (HAP's). The VCM Plant permit application requests a total HAP emission of 14.3135 tons per

year (equal to 28,627 pounds per year). The largest HAP emissions from the VCM plant are:

Chemical	Emissions in tons per year
1,2-dichloroethane	7.6465
vinyl chloride	2.9468
ethyl chloride	2.1606

The major problems in this plant are with the thermal oxidizers exhaust streams, referred to as sources M-4 and M-5, and with source M-13 called the Analyzer Vent-II.

Sources M-4 and M-5.

Descriptions and information about these emissions sources are given in several arts of the permit application, including Chapter 3, Chapter 4, Figure 3, Appendix A and ppendix F. In chapter 3 an Emission Inventory Questionnaire (EIQ) for Air Pollutants is illed out for each source. In the EIQ they are referred to as VCM Plant Thermal Oxidizer ents of 63.113(c)(1)(i).

Appendix F gives the MACT determination. This correctly states that MACT for M-4 and M-5 will be 40 CFR 63, Subpart G.

Source M-13.

Descriptions and information about this emissions source is also given in Chapter 3, Chapter 4, Figure 3, Appendix A and Appendix F. The EIQ, in Chapter 3, describes M-13 as VCM Plant Analyzer Vents-II. The control efficiency is given as 0.0 for all pollutants. The major HAP's emitted from M-13 are 1,2-dichloroethane (4.98 tons per year), ethyl chloride (1.75 tons per year) and hydrochloric acid (HCl at 5.02 tons per year).

Table 4.1 states that M-13 doesn't have to meet the HON, 40 CFR 63, due to "Clarification of Non-Applicability". This is described in the permit applications as:

"- The regulations apply to this general type of emissions source (i.e., vents, furnaces, towers, fugitives), but do not apply to this particular emissions source.

Example: NSPS NNN for Distillation tower vents does not apply to an absorber tower vent."

Table 4.1 further states that M-13 is subject only to LAC 33:III Chapter 21.

Table 4.2 Page 18 states that the applicable requirement for M-13 is "Hazardous Organic NESHAP (HON) Process Vents (40 CFR 63.110)". The Compliance Method/Provision is then given as"

"DOES NOT APPLY. This analyzer vent does not meet the definition of "process vent" defined in 40 CFR 63.101."

Under NOTES the application states:

"This vent will not discharge from an air oxidation reactor, other reactor, or distillation unit."

This isn't correct. Appendix A shows that the majority of this stream comes from analyzers on the recycle gas stream and the reactor vent gas stream. The General Flow Diagram, Figure 3, doesn't show where the vents in M-13 originate and Shintech should have included sufficient information to determine exactly where these vents originate as required in LAC 33:III Chapter 5, Section 517.B. The definition of process vent from 40 CFR 63.101 is:

40 CFR 63.101 - Definition of a process vent

" Process vent means a gas stream containing greater than 0.005 weight percent total organic hazardous air pollutants that is continuously discharged during operation of the unit from an air oxidation reactor, other reactor, or distillation unit (as defined in this section) within a chemical manufacturing process unit that meets all applicability criteria specified in §63.100(b)(1) through (b)(3) of this subpart. Process_vents

include vents from distillate receivers, product separators, and ejector-condensers. Process vents include gas streams that are either discharged directly to the atmosphere or are discharged to the atmosphere after diversion through a product recovery device. Process vents exclude relief valve discharges and leaks from equipment regulated under subpart H of this part."

The reactor vent gas presumably comes directly from the reactor. The reactor consists of the cracking furnaces, M-1, M-2 and M-3, which take ethylene dichloride and convert it to vinyl chloride and HCl. Simply because the stream passes through an analyzer before being vented Shintech presumes that the stream is no longer a process vent. This should still be considered a process vent and subject to 40 CFR 63.113.

The recycle gas stream is also not shown on the General Flow Diagram. This is probably the recycle stream from the VCM purification train back to the EDC purification train. This is a separation process that is fed from the reactor. A vent from the recycle gas stream should be considered a process vent and subject to 40 CFR 63.113. A vent from this recycle line is a vent from a product separator. Simply because it then goes to an analyzer doesn't preclude it from being a process vent.

3. Problems with the Proposed Permit.

The DEQ failed to adequately review and address the objections raised in the public comment period before issuing the proposed permit. The DEQ subsequently issued the proposed permit with the same problems described in these public comment objections and with problems that were not included in the draft permit, for which it was impracticable to raise objections within the public comment period.

a. The proposed permit showed lower VCM emissions from the PVC plant than were stated in the draft permit or the application. The calculations for this lower emissions rate were not included as required in LAC 33:III Chapter 5, Section 517.B. Based on the calculations in the permit application,

subsequent calculations for the new scenario would have shown that a significant lowering of the methanol emissions from the same emissions sources would have also been necessary. Specifically, Shintech planned to increase the stripping rate for VCM, but failed to include the necessary lower emissions rates that this increased stripping rate would produce for methanol. Objection should be taken by the administrator due to this error, and due to the failure to provide accurate calculations. The lower methanol emissions rates must also be taken into account and included in the proposed permit.

b. In the proposed permit, these lower VCM emissions rates were included in some references to the PVC portion of the proposed permit. However, these same lower emissions rates were not included in the PSD portion of the proposed permit or in the EIQ for the applicable emissions sources. The result is that different VCM emissions rates are stated in different parts of the proposed permit. This situation can't be tolerated, and objection by the administrator should be made.

c. The proposed permit does not treat hydrochloric acid and chlorine fugitive emissions correctly. Specific condition 8 in the PSD portion of the proposed permit states that only "equipment/components in VCM service" are required to meet the 40 CFR 63 Subpart H fugitive emissions standards. This is incorrect.

The fugitive emissions requirements called for in the VCM portion of the proposed permit are also incorrect. Page 8 correctly states that the Compliance Method/Provision is "Comply with NESHAP 40 CFR 63 Subpart H". However, on the same page under Applicable Requirement "HON for equipment leaks 40 CFR 63, Subpart H", the Compliance Method/Provision is stated as "Will be monitored as required by the subpart". Equipment leaks and monitoring is required by the fugitive emissions standards in 40 CFR 63

The correct fugitive emissions MACT standard for the VCM plant is required to be 40 CFR 63, Subpart H or something more stringent. This standard must include

hydrochloric acid and chlorine fugitive emissions as required by 40 CFR 63, Subpart H.

d. A truly strange turn of events occurred after DEQ issued the proposed permit. At that time Shintech must have realized that they were not meeting the applicable MACT requirements. As a result, Shintech sent a letter to the DEQ stating they would greatly reduce emissions at specific emissions points throughout the plant. These emissions points corresponded with objections stated by the Tulane Environmental Law Clinic during the public comment period. This would seem to be clear evidence that Shintech also thought it's permit application was not adequate. But, this letter from Shintech to the DEQ stated that all of the emissions reductions were "voluntary". The letter goes to great lengths to demonstrate that the emissions reductions are voluntary and repeatedly makes that claim.

There is nothing in the CAA, the MACT standards in 40 CFR 63, or in Louisiana law that allows voluntary reductions of emissions for a new source. There is no room in the Title V permitting process for these voluntary reductions and there is no basis for allowing voluntary reductions in lieu of meeting the applicable MACT standards.

We agree that these emissions reductions will be required for Shintech to meet the requirements for a Title V air permit in Louisiana. Since these emissions reductions aren't included in the proposed permit we request that the administrator terminate or revoke permit.

Due to the serious problems and errors in the permit application and the proposed permit we request that the administrator terminate or revoke the Title V permit for Shintech and It's Affiliates, Inc.

Sincerely,

Marylee Orr

Executive Director

cc: Jane Saginaw, EPA Region VI
Lisa Lavie, Tulane Environmental Law Clinic
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Addresses and fax numbers. Do not include this page in the letter please.

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