Engineering Evaluation Report
Dow Chemical, Plant #31
901 Loveridge Road, Pittsburg
Application #8894

Background

The District recently issued a Major Facility Review Permit to Dow Chemical. Shortly before proposal of the permit, the District determined that some of the existing District permit conditions contained information that Dow had submitted under a "trade secret" label. With one exception (Part 8 of Condition 2039), these conditions all described the maximum capacity of certain equipment or operations. "Maximum capacity" conditions are intended to demarcate, for District regulatory purposes, the maximum production capabilities of a unit, and are typically based on information included in the original permit application. The District uses the maximum capacity of a unit both to estimate permit fees and for calculating emissions for purposes of the District's emissions inventory that is used for planning. Maximum capacity limits also facilitate implementation of the District's new source review program. Exceedance of a capacity limit contained in a permit condition is, by definition, a modification of the source (BAAQMD 2-1-234.2). If a capacity limit is exceeded, there is a presumption that equipment must have been physically modified, or the method of operation changed, to allow for the additional capacity. Because, for most sources, emissions are related to throughput, an increase in throughput above capacity limits is often a useful indicator that emissions may have increased. Further investigation may be required to determine whether the modification has resulted in an emission increase that would trigger BACT or offsets.

Removal of a maximum capacity limit is not, however, an authorization to increase emissions. Whether a physical modification or change in the method of operation that may increase emissions has occurred can be determined (and the case for a violation of new source review established) independently of whether maximum capacity limits are codified in the permit. Thus, the temporary omission of these maximum capacity limits from the Title V permit did not create a legal pathway for Dow to increase its emissions. BAAQMD Regulation 2-1-234.1 would still prohibit Dow from increasing emissions without first obtaining a permit from the District.

One option available to the District is to permanently delete the maximum capacity limits that are trade secret while still requiring Dow to keep records of throughput at these units. Though this option is legally available, the District has determined that it is not desirable because it makes it more difficult for the District to verify compliance with new source review. The preferable alternative therefore is to translate the throughput figures that constituted the trade secret-protected limits into emissions limits, compliance with which is determined by multiplying throughput data by an emission factor. The net effect will be the same: Dow will be required to track its throughput and will be prohibited from exceeding an emissions limit without first applying for an increase of that limit, at which point a determination can be made as to whether a modification triggering new source review has occurred.

Not all of the trade secret-protected limits require replacement. As noted in the Statement of Basis for the Dow Title V permit, the District had not finished analyzing the significance of each of these limits at the time the Statement of Basis was released. Upon further review, the District has determined that certain limits can be deleted altogether because regulation of the specific unit is unnecessary given the presence of emission controls downstream from that unit. These instances are explained in detail below.

Part 8 of Condition 2039 imposed a throughput limit that served a different function. By limiting throughput to the Sym-Tet thermal oxidizer, this condition helped assure compliance with the destruction efficiency requirement found in Part 5 of Condition 2039. This limit is discussed in greater detail below.

As noted above, the throughput limits that were not included in the Title V permit held trade secret status because they reflected information about maximum capacity that was claimed by Dow as trade secret when it was originally submitted. The District's historical practice had been to use such information to establish limits enforceable as District permit conditions, but to treat those limits as entitled to trade secret status under the Public Records Act. While use in this manner has facilitated regulation of air emissions in the past, that approach is not viable under Title V. As District permit conditions, these limits are applicable requirements under the Regulation 2, Rule 6. However, the District is prohibited from releasing this information without first following certain procedural steps, and therefore could not include them in the Title V permit unless and until trade secret status was removed. Due to the trade secret claims, the District's only option was to propose the Major Facility Review Permit with these conditions excluded. The permit was proposed in this manner on October 14, 2003.

The District pursued two alternative solutions to this situation:

1. Replace the throughput limits claimed as trade secret with alternate but equivalent permit conditions: Equivalent emission limits could be substituted for the affected throughput limits, and since emission limits would not reveal the trade secret information, these limits could be included in the Major Facility Review Permit. The emission limits being equivalent to the original throughput limits would therefore serve the same purpose as the replaced throughput limits. On October 30, 2003, the District sent Dow an initial analysis of the emissions corresponding to each of the affected permit conditions to begin the process of substituting emission limits for the throughput limits at issue.
2. Seek release of the information claimed as trade secret through the procedures specified in the District's Administrative Code, Division I, Section 11: This section of the District's Administrative Code specifies the procedures governing handling and release of information claimed as trade secret. The procedures include, among other things, an opportunity for the company to obtain judicial injunctive relief against release of the trade secret information. In case alternate permit conditions as discussed above could not be developed, on November 23, 2003 the District initiated the procedures to release this information. The first step in the procedures governing trade secret claims requires Dow to provide a written description of the trade secret records and provide a statement of basis for each claim. Dow met this requirement on December 15, 2003, stating the throughput limits in the affected permit conditions could be used to reverse-engineer Dow's manufacturing process, calculate key elements of manufacturing costs, and gain information about Dow's market share.

Neither of these approaches had been concluded at the end of the public notice period for proposal of the Major Facility Review Permit. The District issued the Major Facility Review Permit to Dow Chemical Company on December 1, 2003, meeting a deadline set by a state court consent decree. As the confidential information claims had not been resolved at the time of permit issuance, and since all terms and conditions of a Major Facility Review Permit permit must be public information, the affected conditions were removed from the Major Facility Review Permit and replaced with the identifier "*deleted due to confidential information claim*." The removed permit conditions continued to exist in the District permit condition database and therefore continued to exist as valid and enforceable permit conditions outside of the Title V permit.

Notwithstanding that it had initiated release of trade secret information, the District's preference has been to implement the first alternative, and to replace trade secret throughput limits with publicly available

emissions limits. This alternative provides equivalent functionality and enforceability, and avoids the effort, expense, and uncertainty that would be associated with litigation over whether Dow's trade secret claims are valid. The District has informed Dow that if equivalent limits can be established, the District will cease to pursue release of the trade secret information. On December 16, 2003, Dow also submitted comments on the District's October 30, 2003, analysis of equivalent emission limits, agreeing with the District's analysis and in one case providing further information to demonstrate that the affected condition already contains an adequate emission limit. This application for a Change of Conditions (Application #8894) was opened to replace the standing trade secret/confidential information claims with equivalent limits that can be disclosed to the public.

In summary, all of Dow's trade secret/confidential information claims have been addressed in one of the following manners:

- Several have been retracted by Dow. Where the claims were retracted *prior* to issuance of the Major Facility Review Permit, the Major Facility Review Permit was issued with the original text of those conditions included, intact. Where the claims were retracted *since* issuance of the permit, the permit conditions in their original form will be added back to the Major Facility Review Permit through reopening of the permit. All of these cases are listed below for completeness and to document the fact that these conditions are no longer considered trade secret/confidential business information. No changes to these conditions are being made.
- In a few cases, the capacity-based limits claimed as trade secret were in fact redundant limits, since other parts of the affected conditions already contained the equivalent emission limits. In these cases, the redundant throughput limits may be deleted without the need to add any new conditions. The instances where this has occurred are explained below.
- For the remaining conditions, the District is replacing the original capacity-based limits claimed as trade secret with the equivalent emission limits. The emission limits have been derived directly from the evaluations of the applications under which the capacity-based limits were originally imposed. These new conditions are therefore equivalent in functionality and enforceability to those conditions claimed as trade secret/confidential. Dow has not requested any change to the modes of operation for the affected sources or any increase in the emissions from the originally permitted levels. The conditions are included below in strikeout/underline format, showing the original limits and the replacement limits.

Emission Calculations, Toxic Emissions, Cumulative Increase

The emission limits that will be used to replace the capacity-based limits claimed as trade secret have been derived from the original evaluation of the applications which imposed the capacity-based limits. The new conditions are equivalent to those conditions claimed as trade secret/confidential. Therefore, there is no change in emissions, no change in toxic emissions, and no change to the facility's cumulative increase due to this Change of Conditions. All emissions have been calculated under the original evaluations, attached.

Compliance Determination

District Regulations, NSPS, NESHAPS

There is no change to the applicable requirements for the affected sources as this application does not permit any change from the originally permitted modes of operation.

Public Notice Requirements

There is no increase in toxic emissions associated with this application, therefore Waters Bill Notification requirements are not triggered.

Toxic Risk Assessment

There is no increase in toxic emissions associated with this application, therefore, no toxic risk screening analysis is required.

CEQA
This application is exempt from the California Environmental Quality Act (CEQA) review under Regulation 2-1-312.1:

> *"Applications to modify permit conditions for existing or permitted sources or facilities which do not involve any increase in emission or physical modifications."*

Therefore, the requirements of CEQA are not triggered. Moreover, CEQA was not triggered when the initial Dow Major Facility Review Permit was issued without these conditions included. As explained above, though the maximum capacity limits facilitate implementation of new source review by shifting the burden for compliance verification from the District to the facility, the absence of a maximum capacity limit does not authorize a physical or operational change to a source or facility, nor does it authorize an emissions increase. Moreover, the limits that were not included in the Title V permit continued to exist in the District's permit condition database and were therefore enforceable in the same manner as was historically the case. Finally, in the case of the thermal oxidizer limit, which served to provide assurance of compliance with a destruction efficiency requirement, the throughput limit excluded from the Title V permit was identical to a limit in a hazardous waste facility boiler and industrial furnace permit issued by the California Department of Toxic Substances Control (Permit No. 01-NC-08).

BACT, Offsets
There is no increase in emissions associated with this application, therefore BACT and emission offsets are not triggered.

Permit Condition Revisions
Permit Condition 4780

This condition regulates the Methyl Ester Intermediate (MEI) Plant and the associated storage vessels and loading operation. Dow has claimed the maximum processing rate at S-593, S-594, S-595, and S-596 contained in Part 10 of this condition as trade secret. These different sections in the MEI Plant are required to be abated by A-147 or A-149 by permit condition. Therefore, deletion of Part 10 of this condition requires no replacement condition, as Part 1 of the condition already limits the combined emissions from A-147 and A-149. Converting the trade secret-protected throughput limit to an emissions limit would be redundant with an existing emissions limit. Therefore, it will simply be deleted as shown below. Part 10 was deleted in the issued Major Facility Review Permit, since the District determined prior to issuance of the Major Facility Review Permit that this condition was redundant.

Applications 4128, 16468, 8894
Permit Conditions for Sources
S-593, Plant 640, Section 1, including: R-101, R-201, R-1;
S-594, Plant 640, Section 2
S-595, Plant 640, Section 3
S-596, Plant 640, Section 4, including: B-1701, R-280;
S-604, Truck Loading Facility Plant 640;
S-606, T-602 Plant 640
S-607, T-1904 Plant 640 and
S-618, Cooling Tower (exempt)
A-147, B-3210 Scrubber
A-149, B-1303 Packed Bed Scrubber:

1. Emissions of precursor organic compounds from the A-147 Scrubber (P-242) and the A-149 Scrubber (P-243) combined shall not exceed 8 pounds on any day.

(Basis: Cumulative Increase)

*2. Emissions of 4-amino-3,5 dichloro-2,6 difluoro pyridine from the A-147 Scrubber (P-242) and the A-149 Scrubber (P-243) combined shall not exceed 0.02 pounds on any day.
(Basis: TRMP)

*3. Emissions of ammonia from the A-147 Scrubber (P-242) and the A-149 Scrubber (P-243) combined shall not exceed 0.02 pounds on any day; and the exhaust concentration of ammonia from either P-242 or P-243 shall not exceed 200 ppm at stack exit conditions.
(Basis: TRMP)

4. Deleted.

*5. If the source test conducted for this plant identifies the emission of any material not identified in the below listing, then the applicant shall submit a either a revised Risk Screening Analysis or sufficient information to indicate that the new material is less toxic than Methyl Chloroacetate:

Methyl Chloroacetate (MCA)
4-amino-3,5 dichloro-2,6 difluoro pyridine
N-Methyl Pyrrolidone (NMP)
Methyl Chloride
Methanol
Ethylene Glycol
Fully Halogenated Heterocycle (FHC)
Ammonia
Potassium Chloride
Potassium Hydroxide

(Basis: TRMP)

6. There shall be no detectable organic emissions from Tank Truck Loading at source S-604. "Detectable emissions" for the purpose of this permit condition is defined as 100 ppm organic as methane measured 1 cm from the source using an FID, OVA, or equivalent monitoring device.
(Basis: Cumulative Increase, TRMP)

7. Deleted.

8. Deleted.

9. The S-618 Cooling Tower shall circulate a maximum of 6200 gpm water and shall not exceed 2500 ppm (wt) Total Dissolved Solids, nor emit more than 1 lb/day (wt) Volatile Organic Compounds as defined in District Reg 1-236. Cooling water shall be tested on a monthly basis for the first 6 months of operation, then quarterly afterwards, in order to confirm compliance with this condition.
(Basis: BAAQMD Regulation 6-301, Cumulative Increase)

10. ~~The total throughput of herbicide intermediate for sources S-593, S-594, S-595, and S-596 shall not exceed [redacted] gallons per hour on a 24-hour average basis.~~Deleted.
~~(Basis: Cumulative Increase)~~

11. Total rail car shipments at S-593, S-594, S-595, and S-596 combined shall not exceed 210 cars per year.
(Basis: Cumulative Increase)

*12. The proposed modification to Plant 640 (S-593, S-594, S-595, and S-596) shall not result in any detectable off-property odors as defined in District Regulation 7. The owner/operator of Plant 640 shall take immediate measures to eliminate any suspected or identified odorous emissions to the satisfaction of the APCO.
(Basis: BAAQMD Regulation 7-301)

*13. All materials handled at Tank Truck Loading source S-604 shall not be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation to the atmosphere.
(Basis: TRMP)

14. Plant 640 (S-593, S-594, S-595, and S-596) product (herbicide intermediate) shall only be loaded in solid form, with sufficient moisture present to prevent visible emissions and odors from occurring at the loading site.
(Basis: TRMP, Cumulative Increase)

15. Deleted.

16. The owner/operator of S-593, S-594, S-595, S-596, S-604, and S-618 shall maintain appropriate records in order to confirm compliance with Parts #9, ~~10,~~ 11, and 18. These records shall be kept on file for a minimum of five years and shall be made available to District personnel upon request.
(Basis: Cumulative Increase, BAAQMD Regulation 6-301, BAAQMD Regulation 2-6-501)

17. A-147 Scrubber (P-242) shall abate S-593, S-594, S-596, S-606, and S-607 at all times each source is operating, and A-149 Scrubber (P243) shall abate S-595 at all times S-595 is operating.
(Basis: Cumulative Increase, BAAQMD Regulation 8-2)

18. To demonstrate compliance with the emission limit in Part 1, the owner/operator shall perform a District-approved source test at least once every 5 years. The owner/operator shall notify the Manager of the District's Source Test Section at least seven (7) days prior to the test, to provide the District staff the option of observing the testing. Within 45 days of test completion, a comprehensive report of the test results shall be submitted to the Manager of the District's Source Test Section for review and disposition.
(Basis: Cumulative Increase)

Permit Condition 8894

This condition regulates the Catalytic Hydrogen Chloride Plant and the associated storage vessels. Dow has claimed the following parts of this condition as trade secret:

Part 3 - only the portion of the condition limiting carbon tetrachloride throughput limit for S-647
Part 9 - the maximum annual HCl throughput for S-648
Part 15 - the maximum annual HCl throughput for S-649, and
Part 18 - the maximum annual HCl throughput for S-650, S-651, and S-652 combined

This condition was originally imposed under Application 9962. Under that application the Catalytic HCl Plant, S-647 and S-648 with 2 associated carbon tetrachloride pressure vessels, S-431 and S-432, (not affected by the trade secret claim) and the 4 HCl storage tanks (S-649 through S-652) were permitted. Process emissions (non-fugitive) were calculated using the Advanced System for Process Engineering (ASPEN) and totalled 292 pounds of precursor organic compounds (POC) per year and 730 pounds of hydrogen chloride (HCl) per year. Regulation of fugitive emissions was addressed through requiring "leakless" type connectors, and since those permit conditions are not affected by the trade secret claims, addressing fugitive emissions is not necessary.

The process emissions from the plant and the storage vessels are required, by permit condition, to be abated by two packed bed columns, A-181 and A-182, for removal of acid emissions, then further abated by either two carbon beds in series (A-184) or the Manufacturing Services Thermal Oxidizer (S-336) to control organic emissions. The process emissions are largest when routed through the carbon beds A-184, since the Thermal Oxidizer S-336 has a much higher abatement efficiency (99.99%). Therefore, the replacement emission limits will regulate the largest process emissions – those from A-184.

An increase in carbon tetrachloride throughput to current levels was subsequently permitted under Application 17824, but this increase did not change the organic emissions from the operation since the maximum permitted outlet POC emissions for S-647 were not modified (Parts 11 and 12). This throughput increase was accompanied by a corresponding increase in the HCl throughputs at the storage tanks S-648 through S-652 to current levels, but the emissions were offset by increasing the size of the HCl scrubbers. Therefore, annual emissions from this plant were not changed from the calculations under Application 9962, and these emissions will be used to replace the throughput limits claimed as confidential as follows:

Application 9962, 17824, 16468, 8894
For S-431, Carbon Tetrachloride Pressure Vessel, D-260A:
For S-432, Carbon Tetrachloride Pressure Vessel, D-260B:
For S-647, Catalytic Hydrogen Chloride Plant:
For S-648, Hydrogen Chloride Adsorber, E-277:
For S-649, HCL Storage Tank, V-277:
For S-650, HCL Storage Tank, V-280A:
For S-651, HCL Storage Tank, V-280B:
For S-652, HCL Storage Tank, V-280C:
A-181, B-278 Packed Bed Column
A-182, B-279 Packed Bed Column
A-184, ME 290A/B Carbon Beds
S-336, Manufacturing Services Thermal Oxidizer
Catalytic Hydrogen Chloride Plant

Conditions for S-431 & S-432

1. All valves in carbon tetrachloride service at S-431 and S-432 shall be of the "leakless" type (i.e. bellows sealed or diaphragm type).
   (Basis: Cumulative Increase, TRMP)

2. All emissions from S-431 and S-432 shall be abated by S-336 Thermal Oxidizer at all times. When S-336 Thermal Oxidizer is not in operation, S-431 and S-432 shall be operated as pressure vessels, with no emissions to the atmosphere.
   (Basis: Cumulative Increase, TRMP)

Conditions for S-647

3. All process emissions from S-647 shall be vented to S-648. ~~The total carbon tetrachloride throughput at S-647 shall not exceed [redacted] tons in any consecutive 12 month period.~~
   (Basis: Cumulative Increase, TRMP)

4. All pumps utilized in carbon tetrachloride service at S-647 shall be of the magnetic, coupled, sealess type.
   (Basis: Cumulative Increase, TRMP)

5. All pressure relief valves (PRVs) utilized in carbon tetrachloride service at S-647 shall be equipped with upstream rupture disks or soft-seats (O-Rings).
(Basis: Cumulative Increase, TRMP)

6. All valves in carbon tetrachloride service at S-647 shall be of the "leakless" type (i.e. bellows sealed or diaphragm type).
(Basis: Cumulative Increase, TRMP)

7. Deleted.

8. The owner/operator of S-647 shall maintain monthly records of carbon tetrachloride throughput in a District-approved log. These records shall be retained on site for a minimum of five years from the date of entry and made available to District representatives upon request.
(Basis: Cumulative Increase, TRMP, BAAQMD Regulation 2-6-501)

Conditions for S-648

*9. ~~The total hydrogen chloride throughput at S-648 shall not exceed [redacted] tons in any consecutive 12 month period.~~Deleted.

10. S-648 shall be abated by A-181 (B-278) Packed Bed Scrubber and A-182 (B-279) Packed Bed Scrubber, in series. The A-182 Packed Bed Scrubber shall be vented to either the A-184 Carbon Beds or the S-336 Thermal Oxidizer. Whenever A-182 is vented to A-184, A-184 shall consist of two 600-pound activated carbon canisters, in series, except when changing out the first carbon bed in series or when performing maintenance on a carbon bed. Whenever A-182 is vented to A-184, S-648 shall be abated by at least one carbon canister.
(Basis: Cumulative Increase, TRMP)

11. The organic compound concentration of the exit stream of the first carbon bed in series shall be monitored on a daily basis with either a portable hydrocarbon detector or a gas chromatograph. The first carbon bed in series shall be changed out with unspent carbon within 72 hours of the detection of an organic compound concentration exiting the bed of 10 ppmv or greater.
(Basis: Cumulative Increase, TRMP)

12. The organic compound concentration at the outlet of the carbon bed exhausting to atmosphere shall be monitored whenever the other carbon bed is out of service. If this concentration exceeds 10 ppmv, then S-648 shall be shut down immediately or vented to the S-336 Thermal Oxidizer.
(Basis: Cumulative Increase, TRMP)

13. Emissions from the outlet of A-184 Carbon Beds (P-264) shall not exceed 292 pounds of precursor organic compounds (POC) nor 730 pounds of hydrochloric acid (HCl) in any consecutive 12-month period.
(Basis: Cumulative Increase, TRMP)

~~13.~~14. The owner/operator of S-648 shall maintain the following records ~~on a daily basis~~ in a District-approved log:
a. total hydrochloric acid throughput on a daily basis,
b. daily hydrocarbon concentration readings as required in Parts #11 and #12,
c. number, time, and date of carbon bed replacements,
d. dates and times that S-648 is vented to S-336 instead of to A-184,~~.~~ and
e. emissions of POC and HCl from A-184 on a monthly basis for the previous 12 month period.
These records shall be retained on site for a minimum of five years from the date of entry and made available to District representatives upon request.
(Basis: Cumulative Increase, TRMP, BAAQMD Regulation 2-6-501)

Conditions for S-649

*15. ~~Total hydrochloric acid throughput at S-649 shall not exceed [redacted] gallons in any consecutive 12-month period.~~Deleted.

*16. S-649 shall be abated by A-181 (B-278) Packed Bed Scrubber and A-182 (B-279) Packed Bed Scrubber, in series.
(Basis: TRMP)

*17. The owner/operator of S-649 shall maintain records of hydrochloric acid throughput in a District-approved log. These records shall be retained on site for a minimum of five years from the date of entry and made available to District representatives upon request.
(Basis: TRMP, BAAQMD Regulation 2-6-501)

Conditions for S-650, 651, & 652

*18. ~~Total combined hydrochloric acid throughput at S-650, S-651, & S-652 shall not exceed [redacted] gallons in any consecutive twelve month period.~~Deleted.

*19. S-650, S-651, & S-652 shall be abated by A-181 (T-278) Packed Bed Scrubber and A-182 (T-279) Packed Bed Scrubber, in series.
(Basis: TRMP)

*20. The owner/operator of S-650, S-651, & S-652 shall maintain records of hydrochloric acid throughput in a District-approved log. These records shall be retained on site for a minimum of five years from the date of entry and made available to District representatives upon request.
(Basis: TRMP, BAAQMD Regulation 2-6-501)

Permit Condition 12956

Dow had claimed Part 1 of this condition as trade secret/confidential business information. This condition applies to exempt source S-674. This source, a pressure vessel that receives a blend of chlorinated pyridine compounds from the Symtet Plant, was originally permitted under Application 25447, where permit conditions were issued since no exemption was claimed at the time. Since that time, the source has been exempted under Regulation 2-1-103 with emissions less than 10 pounds per day. As permit conditions are not attached to exempt sources, this condition will be deleted. Exempt sources are also not included in the Major Facility Review Permit, unless they are significant sources. This source is exempt and not significant as maximum emissions were evaluated at only 14.5 pounds per yr. This source and the deleted condition were accordingly not included in the Major Facility Review Permit.

~~Dow Chemical Company~~
~~Plant 31~~
~~Conditions for S-674~~

~~1. Total chlorinated pyridine throughput at S-674 shall not exceed [redacted] gallons during any consecutive twelve month period.~~

~~2. The owner/operator of S-674 shall maintain records of chlorinated pyridine throughput on a monthly basis in a District-approved log. These records shall be retained onsite for a minimum of two years from the date of entry and made available to District personnel upon request.~~

Permit Condition 14438

This condition regulates the Dowicil Plant and the associated storage vessels. Dow has claimed the following parts of this condition as trade secret:

Part 1 – the annual production limit for S-302 and S-303
Part 2 - the annual methlyene chloride throughput for S-662, S-663, and S-664

The Dowicil Plant process emissions are abated by the vent recovery system A-192 to control methylene chloride emissions, followed by the Sym-Tet Thermal Oxidizer S-389 at least 89% of the plant operating time. The associated storage vessels S-662, S-663, and S-664 can be operated as pressure tanks (with no emissions), abated by A-192 (followed by S-389 as specified previously), or abated by S-389 directly. Therefore, all of the emissions from the sources affected by the trade secret claim are processed through A-192. Deletion of Parts 1 and 2 of this condition require no replacement conditions, as Part 6 of the condition already limits emissions from A-192. Since an emissions limit replacing the trade secret-protected throughput limit would be redundant with an existing emissions limit, the throughput limit will simply be deleted as shown below. Part 1 was shown as deleted in the Major Facility Review Permit. Part 2 will be deleted from the Major Facility Review Permit when it is reopened.

Application 16769, 8894
Conditions for S-302, Dowicil Train 1;
S-303, Dowicil Train 2;
S-662, Storage Tank, T-243;
S-663, Storage Tank, T-242;
S-664, Storage Tank, T-244; and
A-192, Vent Recovery System
S-389, Sym-Tet Thermal Oxidizer R-501

1. ~~The combined total dry fungicide production rate from S-302 Dowicil Train 1 and S-303 Dowicil Train 2 shall not exceed [redacted] tons during any consecutive 12 month period.~~Deleted.

2. ~~The throughput of methylene chloride at the S-662, S-663, or S-664 Storage Tanks shall not exceed [redacted] gallons per tank during any consecutive 12 month period.~~Deleted.
~~(Basis: Cumulative Increase)~~

3. The Dowicil Plant, Trains 1 and 2 (S-302 and S-303), shall be abated by the properly operated and properly maintained A-192, Dowicil Plant Solvent Recovery System, during all hours of operation of S-302 and S-303.
(Basis: BACT)

4. Emissions from the methylene chloride Storage Tanks (S-662, S-663, and S-664) shall be controlled by one of the following methods at all times:
   a. Each tank shall be equipped with a pressure-vacuum valve set to 10 psig or higher, or
   b. Each tank shall be abated by the A-192 Dowicil Solvent Recovery System, or
   c. Each tank shall be abated by the S-389 Thermal Oxidizer.
   (Basis: Cumulative Increase, BAAQMD Regulation 8-5-306 or 307)

5. The A-192 Dowicil Solvent Recovery System shall be vented to the S-389 Thermal Oxidizer at least 89.0% of the total annual Dowicil Plant operating time.
(Basis: BACT)

6. The A-192 Dowicil Plant Solvent Recovery System shall emit no more than 1233 pounds per day of methylene chloride.
(Basis: BACT)

7. The owner/operator of A-192 shall demonstrate compliance with Part #6 by:
   a. Measuring the gas flow rate from A-192 (Q in cubic feet per hour) on a continuous basis, integrated over a 24 hour period,
   b. Measuring the temperature of the gas exiting A-192 (T in degrees F) on a continuous basis, integrated over a 24 hour period, and

c. Calculating the methylene chloride emission rate from A-192 using the following equation:

E = 0.15304*Q*H*P/(T+460)

Where,

E = methylene chloride emissions from A-192, pounds/day
Q = measured gas flow rate from A-192, cubic feet/hour
H = operating time for A-192, hours/day
T = measured temperature of gas from A-192, degrees F
P = vapor pressure of a gas saturated with methylene chloride at the measured temperature, mm Hg

(Basis: BACT)

8. The owner/operator of S-302, S-303, S-662, S-663, and S-664 shall demonstrate compliance with Parts #~~1~~ 3 through #7 by maintaining the following records in a District approved log book:
   a. Daily records of the dry fungicide production rate (tons/day) from each Dowicil Train (S-302 and S-303) and the combined total for the Dowicil Plant, summarized on a monthly basis.
   b. Daily records of the operating times and total operating hours for the Dowicil Plant and the A-192 Dowicil Solvent Recovery System, summarized on a monthly basis.
   c. Monthly records of the methylene chloride throughput rate at each Storage Tank (S-662, S-663, and S-664).
   d. Record the dates, times, and operating hours of all incidences of A-192 venting to the atmosphere instead of to S-389 while S-302 or S-303 are operating. Summarize the operating hours for A-192 venting to atmosphere on an annual basis.
   e. Calculate the percentages of annual Dowicil operating time that A-192 was vented to the atmosphere and to S-389 using the data collected for b. and d. above.
   f. Daily records of the A-192 exhaust flow rate, Q, measured pursuant to Part #7.a.
   g. Daily records of the A-192 exhaust gas temperature, T, measured pursuant to Part #7.b.
   h. Daily records of the A-192 methylene chloride emission rate, E, calculated pursuant to Part #7.c.

   All records, including continuous temperature charts, shall be kept on site for a minimum of 5 years from the date of entry and shall be made available to District personnel upon request.
   (Basis: Cumulative Increase, BACT, BAAQMD Regulation 2-6-501)

Permit Condition 15932

This condition regulates the AFTF Plant and the associated storage vessels and loading operation. The AFTF Plant process emissions are abated by A-194 and A-195. Dow has claimed the following parts of this condition as trade secret:

Part 1 – the annual FTF production limit for S-693
Part 5 – the annual CTC throughput limit for S-694
Part 9 – the annual FTF throughput limit for S-695

Dow originally claimed Part 13 as trade secret but retracted this claim prior to issuance of the Major Facility Review Permit, which was issued including Part 13 intact. The AFTF process was originally permitted under Application 18750 and attributed emissions of 56.9 pounds of POC per year to S-693 and S-694 combined and 198.9 pounds of POC per year to the three sources S-695, S-696, and S-697 combined. These process emissions will be used to replace the material throughput limits in the condition as follows:

Application 18750, 16468, 8894
For S-693, Distillation System:
For S-694, Reaction/HCL Absorption System:
For S-695, Storage Tank, T-526:
For S-696, Storage Tank, T-527:
For S-697, ISO Container Loading Operation:
For S-699, Purge Tank/Drum Loading Operation:
A-194, X-600 Venturi

A-195, B-615 Scrubber

Conditions for S-693 and S-694

1. ~~The owner/operator shall operate the S-693 Distillation System such that the FTF (2-fluoro-6-trifluoromethyl pyridine) throughput at S-693 does not exceed [redacted] gallons totaled over any consecutive twelve month period.~~Emissions from S-693 and S-694 combined shall not exceed 56.9 pounds of precursor organic compounds (POC) in any consecutive twelve month period.
(basis: Cumulative Increase, Offsets)

2. The owner/operator shall ensure that A-194 Venturi Scrubber X-600 abates S-693 Distillation System at all times.
(basis: TRMP, Offsets)

3. The owner/operate shall operate A-194 Venturi Scrubber X-600 such that its alkali solution circulation rate is maintained at a minimum of 17 gallons per minute whenever FTF is being processed at S-693.
(basis: TRMP, Offsets)

4. ~~The owner/operator of S-693 shall maintain records of FTF throughput and A-194 alkali solution circulation rate on a weekly basis in a District-approved log. These records shall be retained on site for a minimum of five years from the date of entry and made available to District personnel upon request.~~ Deleted.
~~(basis:Cumulative Increase, Offsets, TRMP, BAAQMD Regulation 2-6-501)~~

~~Conditions for S-694~~

5. ~~The owner/operator shall ensure that the 2-chloro-6-trichloromethyl pyridine (CTC) throughput at S-694 Reaction/HCL Absorption System does not exceed [redacted] gallons totaled over any consecutive twelve month period.~~Deleted.

6. The owner/operator shall ensure that A-195 Packed Bed Scrubber B-615 abates S-694 Reaction/HCL Absorption System at all times.
(basis: Cumulative Increase, TRMP)

7. The owner/operator shall ensure that the alkali solution circulation rate at A-195 Packed Bed Scrubber B-615 is maintained at a minimum of 50 gallons per minute whenever organic material is being processed at S-694.
(basis: Cumulative Increase, TRMP)

8. The owner/operator of S-693 and S-694 shall maintain records of FTF and CTC throughput and ~~A-195~~ alkali solution circulation rates for A-194 and A-195 on a weekly basis in a District-approved log. The POC emissions from S-693 and S-694 shall be calculated on a monthly basis to demonstrate compliance with Part 1. These records shall be retained on site for a minimum of five years from the date of entry and made available to District personnel upon request.
(basis: Cumulative Increase, Offsets, TRMP, BAAQMD Regulation 2-6-501)

Conditions for S-695, ~~and~~ S-696, and S-697

9. ~~The owner/operator shall ensure that the FTF (2-fluoro-6-trifluoroethyl pyridine) throughput at S-695 Storage Tank does not exceed [redacted] gallons totaled over any consecutive twelve month period.~~
Emissions from sources S-695, S-696, and S-697 combined shall not exceed 198.9 pounds of POC in any consecutive twelve month period.
(basis: Cumulative Increase)

10. S-695 and S-696 may not store any liquid containing organic compounds with a vapor pressure greater than 0.5 psia.
(Basis: BAAQMD Regulation 2-1-301)

11. ~~The owner/operator of S-695 and S-696 shall maintain records of FTF throughput, as well as throughput and vapor pressure of any other liquid stored, on a weekly basis in a District-approved log. These records shall be retained on site for a minimum of five years from the date of entry and made available to District personnel upon request.~~Deleted.
~~(basis: Cumulative Increase, BAAQMD Regulation 2-6-501)~~

~~Conditions for S-697~~

12. The owner/operator shall ensure that S-697 ISO Container Loading Operation is abated by a properly connected and operated vapor balance system whenever FTF is being transferred from S-695 and/or S-696 Storage Tanks to ISO containers.
(basis: Cumulative Increase)

13. The owner/operator of S-695, S-696, and S-697 shall maintain the following records in a District-approved log:
    a. ~~for all loading of~~ FTF throughput at S-695, S-695, and S-697 as well as throughput and vapor pressure of any other liquid stored on a weekly basis,
    b. ~~including~~ the date and verification of leak tight connection at S-697,~~-~~ and
    c. calculations of POC emissions from S-695, S-696, and S-697 on a monthly basis for the previous 12 month period to demonstrate compliance with Part 9.

    These records shall be retained on site for a minimum of five years from the date of entry and made available to District personnel upon request.
    (basis: Cumulative Increase, BAAQMD Regulation 2-6-501)

Conditions for S-699

14. The owner/operator shall ensure that the distillation system purge stream (halogenated pyridine) throughput at S-699 Purge Tank/Drum Loading does not exceed 30,000 gallons totaled over any consecutive twelve month period.
(basis: Cumulative Increase)

15. The owner/operator of S-699 shall maintain records of distillation system purge stream throughput on a weekly basis in a District-approved log. These records shall be retained on site for a minimum of five years from the date of entry and made available to District personnel upon request.
(basis: Cumulative Increase, BAAQMD Regulation 2-6-501)

Permit Condition 15944

This condition regulates the Dowicil Packaging System, abated by a Dust Collector Sysem, A-193. Dow has claimed Part 1 of this condition, the annual Dowicil throughput for S-684, as trade secret/confidential business information. This operation was originally permitted under Application 30585 in 1985, with no explicit permit conditions. The abatement device for this operation was replaced by a more efficient device, A-193 Baghouse, under Application 18794. There was no net increase in emissions from this modification due to the increased abatement efficiency. However, the existing permit condition was imposed under that application, and the evaluation attributed emissions of 2.3 pounds of PM per 12 months to the Dowicil throughput limit in the condition. This emission limit will replace the material throughput limit in the permit condition as follows:

Applications 18794, 8894
Conditions for S-684, Dowicil Packaging System
A-193, Cartridge Dust Collector System:

1. ~~Total material throughput at S-684 Dowicil Packaging System shall not exceed [redacted] tons totaled over any consecutive twelve month period.~~ Abated particulate emissions (PM10) from S-684 shall not exceed 2.3 lbs in any consecutive 12-month period.
   (basis: Cumulative Increase)

2. S-684 shall be abated by A-193 Cartridge Dust Collector whenever S-684 is in operation.
   (basis: Cumulative Increase, BAAQMD Regulation 6)

3. The owner/operator of A-193 shall monitor backpressure on a weekly basis to ensure that the automatic pulsejet cleaning cycle is operating properly.
   (basis: BAAQMD Regulation 2-1-403, BAAQMD Regulation 6)

4. The owner/operator of S-684 shall maintain records of material throughput on a monthly basis and A-193 back pressure readings on a weekly basis in a District-approved log. Particulate emissions shall be calculated each month to demonstrate compliance with Part 1. These records shall be retained on site for a minimum of five years from the date of entry and made available to District personnel upon request.
   (basis: Cumulative Increase, BAAQMD Regulation 1-441, BAAQMD Regulation 2-6-501, BAAQMD Regulation 6/BAAQMD Regulation 2-1-403)

Permit Condition 18128

This condition regulates the Vikane Plant and the associated storage vessels. Dow has claimed the following parts of this condition as trade secret/confidential business information:

Part 1 - the annual Vikane production limit for S-454
Part 2 – the daily Vikane throughput limit for S-454
Part 3 – the annual HCl throughput limit for S-449
Part 4 – the daily HCl throughput limit for S-449

The current permit conditions were generated from the modification to the Vikane Plant permitted under Application 2047. Emissions of 718.8 pounds of PM per year and 10.4 pounds of SO2 per year were attributed to S-454, and 68 lbs/yr PM (HCl) to S-449. Although Best Available Control Technology (BACT) requirements were not triggered under Application 2047 based on daily emissions, daily throughput limits were also imposed. The District has added such daily limits under Major Facility Review to help ensure compliance with District rules addressing preconstruction review. Therefore, each of the throughput limits will be replaced by the equivalent emission limits as follows:

Applications 30453, 681, 6955, 19565, 2047, 7475, 16468, 8894
Conditions for the Vikane Plant including:
S-454, Vikane Plant;
S-449, Hydrochloric Acid Storage Tank, T-30;
S-268, Fumigants Closed Pressurized Storage Tank T-4 (exempt);
S-269, Fumigants Closed Pressurized Storage Tank T-5 (exempt);
A-90, H-30 Acid Absorber;
A-91, B-30 Absorber;
A-46, B-7 Caustic Scrubber; and
A-197, B-4 Caustic Scrubber

1. ~~The total amount of Vikane produced at the S-454 Vikane Plant shall not exceed [redacted] pounds ([redacted] tons) during any consecutive 12 month period.~~ Abated particulate emissions, including emissions of hydrochloric acid, hydrofluoric acid, and sulfuryl fluoride, from S-454 (P-127 and P-128 combined) shall not exceed 718.8 pounds and sulfur dioxide emissions from S-454 shall not exceed 10.4 pounds in any consecutive 12-month period.
   (Basis: Cumulative Increase)

2. ~~The total amount of Vikane produced at S-454 shall not exceed [redacted] pounds ([redacted] tons) during any one day.~~ Abated particulate emissions, including emissions of hydrochloric acid, hydrofluoric acid, and sulfuryl fluoride, from S-454 (P-127 and P-128 combined) shall not exceed 2.5 pounds and sulfur dioxide emissions from S-454 shall not exceed 0.04 pounds in any day.
(Basis: BAAQMD Regulation 2-1-301)

3. ~~The total throughput of hydrochloric acid (expressed as 36% HCl) at the S-449 Hydrochloric Acid Storage Tank shall not exceed [redacted] tons during any consecutive 12 month period.~~ Abated hydrochloric acid emissions from S-449 (P-188) shall not exceed 68 pounds in any consecutive 12-month period.
(Basis: Cumulative Increase)

4. ~~The total throughput of hydrochloric acid (expressed as 36% HCl) at S-449 shall not exceed [redacted] tons during any one day.~~ Abated hydrochloric acid emissions from S-449 (P-188) shall not exceed 0.3 pounds in any day.
(Basis: BAAQMD Regulation 2-1-301)

5. Emissions from the S-454 Vikane Plant shall be vented to the A-90 Acid Absorber and A-91 Acid Absorber (in series) during all hours of operation, except as described below in Part 6.
(Basis: Cumulative Increase, Toxic Risk Management Policy, and BAAQMD Regulation 6-310/BAAQMD Regulation 2-1-403)

6. Emissions from S-454 shall be vented to either
   a. the A-46 Caustic Scrubber, or
   b. the A-197 Caustic Scrubber, or
   c. the S-434 Manufacturing Services Facility and A-199 Manufacturing Services Scrubber B-12 in series, or
   d. the A-87 HCl Absorber H-109 and A-85 Absorber B-102 and A-199 in series,

   during any time that emissions are not vented to A-90 and A-91. Emissions from S-454 may be vented to any of the abatement trains above during start-up or shut-down of the reactors, during maintenance, or during upset conditions.
   (Basis: Cumulative Increase, Toxic Risk Management Policy, and BAAQMD Regulation 6-310/BAAQMD Regulation 2-1-403)

7. Emissions from the S-449 Hydrochloric Acid Storage Tank shall be vented to the A-91 Acid Absorber, whenever S-449 is storing hydrochloric acid.
(Basis: Cumulative Increase, Toxic Risk Management Policy, and BAAQMD Regulation 6-310/BAAQMD Regulation 2-1-403)

8. The A-90 and A-91 Acid Adsorbers shall achieve a combined removal efficiency of 99.99 percent by weight of the hydrogen chloride (HCl) emissions vented to A-90, or A-91 shall emit no more than 0.068 pounds/hour (477 grains/hour) of HCl (including all HCl from any hydrochloric acid mist emissions).
(Basis: Cumulative Increase, Toxic Risk Management Policy, and BAAQMD Regulation 6-310/BAAQMD Regulation 2-1-403)

9. The Permit Holder shall demonstrate compliance with Part 8 by maintaining the bottom temperature of B-30 (A-91) to no greater than 80 degrees C. In no event shall the average temperature exceed 80 degrees C during any consecutive 24-hour period. The Permit Holder shall measure the temperature at the bottom of B-30 and calculate a rolling 24-hour average temperature each hour to demonstrate compliance with this requirement. (Basis: Cumulative Increase, Toxic Risk Management Policy, and BAAQMD Regulation 6-310/BAAQMD Regulation 2-1-403)

10. The A-46 and A-197 Caustic Scrubbers shall each achieve either the minimum removal efficiencies (percent by weight) or maximum emission rates identified in subparts a.-d. below.
    a. For hydrogen chloride and hydrochloric acid mist, A-46 and A-197 shall each achieve either 99 percent control by weight or shall each emit no more than 0.0023 pounds/hour of HCl.
    b. For hydrogen fluoride and hydrofluoric acid mist, A-46 and A-197 shall each achieve either 97 percent control by weight or shall each emit no more than 0.59 pounds/hour of HF.
    c. For all other acid gases and acid mists, A-46 and A-197 shall each achieve either 99 percent control by weight or shall each emit no more than 0.025 pounds/hour of acid gas.
    d. For sulfur dioxide, A-46 and A-197 shall each achieve either 99 percent control by weight or shall each emit no more than 0.61 pounds/hour of SO2.

    (Basis: Cumulative Increase, Toxic Risk Management Policy, BAAQMD Regulation 6-310, and BAAQMD Regulation 9-1-302)

11. The Permit Holder shall demonstrate compliance with Part 10 above by using a caustic scrubbing solution in A-46 and A-197 with a minimum hydroxide (OH-) concentration of 2 percent by weight from either sodium hydroxide (NaOH) or potassium hydroxide (KOH). To demonstrate compliance with this requirement, the Permit Holder shall collect a sample of scrubbing solution used at A-46 and A-197 once per day and shall analyze the sample for pH and weight percent of NaOH or KOH.
    (Basis: Cumulative Increase, Toxic Risk Management Policy, BAAQMD Regulation 6-310, and BAAQMD Regulation 9-1-302)

12. In order to demonstrate compliance with Parts 1-11 above, the Permit Holder shall maintain the following records:
    a. Daily records of operating time for the Vikane Plant (S-454).
    b. Hourly records of the temperature at the bottom of B-30 (A-91) and the rolling 24 hour averages.
    c. Daily records of the pH and hydroxide concentration in the scrubbing solution for the A-46/A-197 Caustic Scrubbers.
    d. Daily records of the amount of Vikane produced at S-454, totaled each month.
    e. Monthly records of the throughput rate for hydrochloric acid (expressed as 36% HCl) at S-449.
    f. Monthly and daily records of particulate emissions (HCl, HF, and sulfuryl fluoride) and SO2 emissions from S-454 for the previous 12 month period.
    g. Monthly and daily records of hydrochloric acid emissions from S-449 for the previous 12 month period.

    These records shall be kept on site for a minimum of five years from the date of entry and shall be made available to District personnel upon request.
    (Basis: Cumulative Increase, TRMP, BAAQMD Regulation 2-6-501, BAAQMD Regulation 6-310, and BAAQMD Regulation 9-1-302)

Future Permit Condition 20303

This condition regulates the new Sulfuryl Fluoride Plant being built to replace the existing Vikane Plant. The project was evaluated and the condition imposed under Application 6290. Dow has claimed the maximum annual sulfuryl fluoride production limited in Part 1 of this future condition as trade secret/confidential business information. The annual emissions attributed to the permitted throughput were 440.8 lbs sulfuryl fluoride, PM/HF 15.1 lbs, PM/HCl 0.39 lbs, and SO2 3.6 lbs. These emission limits will replace the material throughput limit in the condition as follows:

Application 6290, 8894
For: S-712, Sulfuryl Fluoride Plant
A-201, Venturi Scrubber
A-202, Caustic Scrubber

1. ~~The total amount of sulfuryl fluoride produced at the S-712, Sulfuryl Fluoride Plant, shall not exceed [redacted] tons during any consecutive 12 month period.~~ Abated emissions from S-712 (P-277) shall

not exceed 440.8 pounds of sulfuryl fluoride, 15.5 pounds of hydrofluoric acid and hydrochloric acid, and 3.6 pounds of sulfur dioxide in any consecutive 12-month period.
(Basis: Cumulative Increase and Toxics Risk Management Policy)

2. Hydrogen chloride emissions from B-40 shall be abated by the acid absorbers at the S-434 Manufacturing Services Facility.
(Basis: Cumulative Increase and Toxics Risk Management Policy)

3. All other emissions from S-712, including emissions due to purge streams, pressure relief valves, loading events, start-ups, shut-downs, or malfunctions, shall be abated by the A-201, Venturi Scrubber, followed by the A-202, Caustic Scrubber.
(Basis: Cumulative Increase and Toxics Risk Management Policy)

4. The A-201, Venturi Scrubber, and the A-202, Caustic Scrubber, shall achieve a minimum overall control efficiency (combined control efficiency for A-201 and A-202) of 98.5% for sulfuryl fluoride and 99.98% for all other pollutants. The Permit Holder shall demonstrate compliance with these control efficiency requirements by maintaining the following:
   a. The flow rate of the scrubber water to A-201 shall be maintained at a minimum of 145 gallons/minute.
   b. The flow rate of the scrubber solution to A-202 shall be maintained at a minimum of 50 gallons/minute.
   c. The pH of the scrubber solution at A-202 shall be maintained at a minimum of 8.
   (Basis: Cumulative Increase and Toxics Risk Management Policy)

5. In order to demonstrate compliance with Parts 4.a. and 4.b., the Permit Holder shall continuously monitor the scrubber water flow rate at A-201 and the scrubber solution flow rate at A-202, during all times that S-712 is operating. The Permit Holder shall use automated control valves to ensure that the required minimum flow rates are achieved.
(Basis: Cumulative Increase, Toxics Risk Management Policy)

6. In order to demonstrate compliance with Part 4.c., the Permit Holder shall sample the scrubber solution at A-202 on a daily basis. The Permit Holder shall analyze the sample for pH, in accordance with the manufacturer's recommended procedures for the analyzer, and shall record the pH in an APCO approved log. All records shall be maintained on site or made available to District staff upon request for a minimum of five years from the entry date.
(Basis: Cumulative Increase, Toxics Risk Management Policy, BAAQMD Regulation 2-6-501)

7. In order to demonstrate compliance with Part 1., the Permit Holder shall maintain monthly records of the sulfuryl fluoride production rate from S-712 in an APCO approved log and shall calculate emissions of sulfuryl fluoride, hydrochloric acid, hydrofluoric acid, and sulfur dioxide each month for the previous 12 month period. All records shall be maintained on site or made available to District staff upon request for a minimum of five years from the entry date.
(Basis: Cumulative Increase and Toxics Risk Management Policy, BAAQMD Regulation 2-6-501)

Permit Conditions – Trade Secret Claims Retracted

Permit Condition 2039

Part 8 of Condition 2039 imposed a throughput limit that functioned to help assure compliance with the destruction efficiency requirement found in Part 5 of Condition 2039. Subsequent to issuance of the Title V permit, Dow retracted its trade secret claim regarding this information. The District is therefore revising the District permit to confirm that this limit is public information. Though there was insufficient time to analyze the issue before Title V issuance, it now appears that Dow's claim of trade secret status for this limit was probably based on incorrect assumptions. Dow has during this time been subject to the permit issued to it by the Department of Toxic Substances Control (DTSC), which imposes the same throughput limit (expressed as lbs/hr) on the thermal oxidizer. Had Dow exceeded this throughput limit subsequent to issuance of the Title V permit, it would have violated the DTSC permit. The issuance of this District permit merely has the effect of making Part 8 public information.

Applications 26939, 726, 12387, 16468
For S-389, Sym-Tet Thermal Oxidizer, R-501:
A-74, B-502 Caustic Scrubber
A-75, X-505 Particulate Scrubber
A-76, B-503A Carbon Adsorber
A-77, R-502 Nonselective Catalytic Reduction Unit
A-80, B-503B Carbon Adsorber
A-94; B-501 Acid Absorber

1. The S-389 Sym-Tet Thermal Oxidizer R-501 combustion chamber shall operate at a minimum of 1000 degrees C (1830 degrees F) at all times that chlorinated liquids and/or gases are being burned.
   (Basis: Cumulative Increase, BACT)

2. S-389 shall operate with a minimum gas residence time of 0.9 seconds in the combustion chamber at all times that chlorinated liquids and/or gases are being burned.
   (Basis: Cumulative Increase, BACT)

3. S-389 shall be abated by A-94 Acid Absorber and A-74 Caustic Scrubber at all times that S-389 is operating. S-389 shall be abated by A-75 Particulate Scrubber at all times that S-389 is burning chlorinated hydrocarbon liquid.
   (Basis: Cumulative Increase, BACT, BAAQMD Regulation 6)

4. Carbon Monoxide (CO) emissions from S-389 shall not exceed 250 ppm at 3% oxygen (upstream of all abatement equipment).
   (Basis: Cumulative Increase, BACT)

5. S-389 shall achieve a minimum organic Destruction Removal Efficiency of 99.99% (wt) for each POHC in the feed at all times.
   (Basis: Cumulative Increase)

6. Deleted.

7. Annual average liquid feed throughput for S-389 shall not exceed 45.1 gallons/hour.
   (Basis: Cumulative Increase)

8. *Maximum daily liquid feed throughput for S-389 shall not exceed 70 gallons/hour.*
   (Basis: Cumulative Increase, BACT)

9. The owner/operator of S-389 shall conduct a District approved source test every 6 months to demonstrate compliance with the CO limit in Part 4 and to determine NOx emission rates in each of

the following operating modes (each liquid feed mode shall be tested at the nominal rate of 18-22 gallons/hour and at the maximum achievable rate, which shall not exceed 70 gallons/hour; all vent feed modes shall be tested at maximum venting rates):
a. Reactor startup on methane firing only, no NSCR (A-77) abatement.
b. Process vents and methane feed, no NSCR (A-77) abatement.
c. Process vents, chlorinated hydrocarbon liquid, and methane feed, no NSCR (A-77) abatement.
d. Process vents, chlorinated hydrocarbon liquid, and methane feed with NSCR (A-77) abatement.
e. Process vents and methane feed with NSCR (A-77) abatement.
The owner/operator shall notify the Manager of the District's Source Test Section at least seven (7) days prior to the test, to provide the District staff the option of observing the testing.
(Basis: Cumulative Increase, BACT)

10. NOx emissions from S-389 shall not exceed 6194 pounds/year. The owner operator of S-389 shall submit the source test results for CO and a total NOx emission calculation based on the source test data from Condition, Part #9. The results of this source test and the corresponding emission calculations shall be summarized in a District approved format and submitted to the District's Engineering Division within 30 days of source test completion.
(Basis: Cumulative Increase, BACT)

11. Carbon Adsorbers B-503 A and B (A-76 and A-80) shall operate at all times that the R-502 NSCR Unit (A-77) is operating.
(Basis: Cumulative Increase)

12. Deleted.

13. The owner/operator of S-389 shall install District approved continuous monitors and recorders to measure the following:
a. Chlorinated hydrocarbon liquid feed rate.
b. S-389 O2 emission rate.
c. S-389 combustion chamber temperature.
d. A-77 NSCR Unit bypassing incidents and duration.
(Basis: Cumulative Increase, BACT)

*14. The stack height of the NSCR Unit A-77 Main Stack (P-1) shall be at least 45 ft above grade. The stack height of the A-77 Bypass Stack (P-8) shall be at least 35 ft above grade.
(Basis: TRMP)

15. The owner/operator of S-389 shall maintain appropriate records to determine compliance with all Permit Conditions. These records shall be kept for a minimum of five years from the date of last entry and shall be made available to District personnel upon request.
(Basis: Cumulative Increase, BACT, BAAQMD Regulation 2-6-501)

Permit Condition 3712

Dow had claimed Parts 5 and 6 of this condition as trade secret/confidential business information. The claim was retracted for Part 5 before issuance of the Major Facility Review Permit, so Part 5 was included in the issued Major Facility Review Permit. The claim for Part 6 has been retracted since issuance of the Major Facility Review Permit. No change to the original condition is being proposed, but Part 6 will be added back to the Major Facility Review Permit in the reopening of that permit. This condition is being included below to document the fact that it is public information:

Applications 4220, 8824, 12143, 16468
Conditions for S-588, Drum Filling Station
S-589, Product Recovery Tank, T-203
S-638, Truck Mounted Bulk Transportable Pressure Tank X-205

A-142, Vapor Balance System from Drum Filling Station to Truck Mount Bulk Pressure Vesssel
A-177, Container Loading Vapor Balance Line

1. During any drum filling operations involving perchloroethylene, trichloroethylene, xylene, or any agricultural product containing the above chemicals, all emissions from the Small Volume Recyclable Container Filling Line (S-588) shall be vapor balanced via A-142 or A-177 to the airtight Bulk Transportable Containers (S-638). Emissions resulting from drum filling of Lorsban 4E-HF are not required to be vapor balanced back to the S-667 Bulk Transportable Container.
   (Basis: Cumulative Increase)

2. Deleted.

3. Deleted.

4. Deleted.

5. *The combined throughput of chlorinated solvents (perchloroethylene and trichloroethylene) at S-588 shall not exceed 3,416,000 gallons during any consecutive 12 month period. The throughput of chlorinated solvent drums (15.5 gallon capacity) at S-588 shall not exceed 604 drums during any calendar day.*
   (Basis: Cumulative Increase)

6. *The throughput of drums loaded with agricultural products at S-588 shall not exceed 32,258 drums during any consecutive 12-month period; nor 576 drums per calendar day.*
   (Basis: Cumulative Increase)

7. The owner/operator of S-588 shall maintain appropriate daily records to confirm compliance with Parts ~~#3, #4,~~ #5~~,~~ and #6. These records shall be made available to District personnel upon request and shall be kept on file for a minimum of five years from the date of last entry.
   (Basis: Cumulative Increase, BAAQMD Regulation 2-6-501)

8. The operator of shall test S-638 for compliance with Regulation 8-5-307 once every 3 months, or if S-638 is not operated during the previous 3-month period, then the operator shall check for compliance at the next loading event.
   (Basis: BAAQMD Regulation 8-5-307/BAAQMD Regulation 2-1-403)

9. The operator shall keep records that the gas tight condition was verified for S-638 and the results of the check. These records shall be kept on site for a minimum of five years from the date of entry and shall be made available to District personnel upon request.
   (Basis: BAAQMD Regulation 8-5-307/BAAQMD Regulation 2-1-403)
   Regulation 2-6-501)

The following conditions were claimed as trade secret/confidential business information, but the claims were retracted prior to issuance of the Major Facility Review Permit. The permit was issued with the conditions intact. The conditions are listed below to document the fact that they are public information; no revisions to these conditions are being made.

Permit Condition 7775: Dow had claimed Parts 1 and 3 of this condition as trade secret/confidential business information, but retracted that claim prior to issuance of the Major Facility Review Permit. The original condition was included, intact, in the issued Major Facility Review Permit.

Permit Condition 15372: Dow had claimed Part 3 of this condition as trade secret/confidential business information, but retracted that claim prior to issuance of the Major Facility Review Permit. The original condition was included, intact, in the issued Major Facility Review Permit.

Permit Condition 17878: Dow had claimed Part 3 of this condition as trade secret/confidential business information, but retracted that claim prior to issuance of the Major Facility Review Permit. This future condition was included, intact in its original form, in the issued Major Facility Review Permit.

Recommendations

I recommend issuing a change of conditions for the following conditions and equipment:

Condition 4780 for S-593, S-594, S-595, S-596
Condition 8894 for S-647, S-648, S-649, S-650, S-651, S-652
Condition 14438 for S-302, S-303, S-662, S-663, S-664
Condition 15932 for S-693, S-694, S-695, S-696, S-697
Condition 15944 for S-684
Condition 18128 S-454, S-449
Future Condition 20303 for S-712

I recommend deleting the following condition for the exempt source S-674:

Condition 12956

Signed by Tamiko Endow 3-1-2004
Tamiko Endow Date
Air Quality Engineer

Reviewed and Approved by Signed by Steve Hill 3-1-2004
Steve Hill Date
Manager, Permit Evaluation