**Response to Comments**
**Application 8895**
**Reopening of Dow Chemical's Major Facility Review Permit**

EPA Region IX filed the following comments regarding the reopening of the Title V permit and the original permit for Dow Chemical:

1. *"Catalytic Hydrogen Chloride Plant: Condition 8894 relies on monitoring that is contained in Table VII-Y to assure compliance with the Precursor Organic Compounds and Hydrochloric Acid emission limits for the plant (page 180). However section VII does not appear to contain monitoring for the other control devices in the exhaust stream (see Table VII-Y) other than the thermal oxidizer. Please ensure that monitoring for the absorber and scrubber units in included in the permit."*

**Response:** Table VII-Y is the summary of numerical limits and monitoring for the Manufacturing Services Thermal Oxidizer, S-336. Dow currently monitors pH of the final scrubbers for both of the Thermal Oxidizers as part of EPA's BIF/HAF requirements for burning liquid waste. Rather than requiring duplicative monitoring, the existing BIF/HAF monitoring will be added to the Title V permit conditions 6859 and 2039 for both Thermal Oxidizers, S-336 and S-389 respectively.

2. *"Vikane Plant, Existing Plant: We understand that the District proposes to replace throughput limits with emission limits. The proposed limit #1 on page 14 limits sulfuryl fluoride, hydrofluoric acid, hydrochloric acid, and other toxics via a "particulate" limit of 718 lbs/yr; condition 2 contains a daily limit. However the permit does not contain any method to measure the quantity of these emissions.*

   *We understand that the District intends to allow Dow to rely on a chemical process-modeling software to determine compliance with this limit. However, the evaluation does not contain any information on whether the software will accurately predict small quantities of releases at Dow' Pittsburg plant, and whether the permit contains enforceable conditions to ensure that the model is used correctly. We recommend requirement periodic measurement of emissions to determine the accuracy and reliability of the model (this comment also applies to the new Vikane plant)."*

**Response:** This comment refers to the emission limits added to permit condition 18128, which applies to the Vikane plant. The District has added a source test requirement to measure the emission rates from contained in Part 10 of the condition once per permit term. The emission rates limited in Part 10 are the emissions from the process vent at the Vikane Plant, the vent from scrubbers, A-46 and A-197. No source test requirement has been added for the acid absorbers, A-90 and A-91, since the acid absorber system is subject to the HCl MACT and will be subject to the compliance testing required under the MACT. A source test requirement once per permit term has also been added for the future Sulfuryl Fluoride Plant.

3. *"Vikane Plant, Proposed New Plant: Condition 20303 has parameter monitoring for future expansion of the Vikane plant, but does not contain a way to enforce lbs/day limits nor residence time monitoring in table VIII-Z page 230. Also, the control requirements on page 227 Table VII-V for units S-311 and S-312 should be marked federally enforceable."*

**Response:** Table VII-Z on page 230 of the proposed permit is unrelated to the new Vikane Plant. This table summarizes the numerical limits and monitoring for the Sym-Tet Thermal Oxidizer, S-389. The daily limit in question is the organic emission limit in Regulation 8, Rule 2. The Thermal Oxidizer is subject to EPA's BIF/HAF requirements, including the required trial burn sources testing under that regulation. The trial burn for S-389 was conducted under 3 operating conditions, including normal operating conditions, minimum combustion temperature, and maximum combustion temperature at the maximum allowed feed rate. The daily rate of organic emissions for all scenarios were well below 15 lbs/day, ranging between 0.017 to 0.047 lbs/day. These measures emissions are expected to be met on an ongoing basis, as the required abatement efficiency of 99.99% is subject to continuous parametric monitoring (temperature). As the emissions have been demonstrated to be less than 1% of the 15 lbs/day emission limit and existing monitoring should ensure emissions remain at this level, the District has deemed additional monitoring for this limit unnecessary. Likewise, the residence time was verified to be more than twice the required value as part of the start-up source test for S-389, required by District permit conditions. The District is not adding residence time monitoring as the BIF/HAF monitoring requirements are presumed sufficient.

As for the control requirements in Table VII-V for S-311 and S-312 on page 227 of the permit, these requirements are contained in permit conditions that were imposed under the District's Toxic Risk Management Policy and are therefore not federally enforceable.

4. *"Monitoring Requirements, Visible Emissions Monitoring: In response to Dow's comments on the proposed initial title V permit, the District concluded that sources 461, 462, 463, 474, and 476 do not require visible emissions monitoring due to "very low emissions." The District removed monitoring requirements for these units prior to issuing the final initial permit but the SOB has not been updated to document the District's rationale in reaching this decision. Given that these sources are involved in processes which the SOB specifically cite as emitting hydrocarbons, particulate, and acid mist, EPA believes it is necessary to include a discussion in the SOB explaining how the district reached the conclusion that particulate emissions from these sources are insignificant enough such that no monitoring is warranted."*

**Response:** At the time the initial Title V permit for Dow was proposed, the District published the proposed permit with a Statement of Basis documenting the applicability decisions represented in the proposed permit. Changes made to the proposed permit due to comments received from EPA and the public were documented and discussed in the Response to Comments document published with the issued permit, with the intent that the rationale for applicability decisions contained within the issued permit was summarized in these two documents. The District did not revise-issue the Statement of Basis to accompany the final permit, as the Statement of Basis was intended to explain the proposed permit rather than as a companion document to the issued permit. The District believes the administrative record for the December 1, 2003, issuance, which includes the Statement of Basis and the responses to comments, sufficiently documents the District's rationale for its decisions.

5. *"Monitoring Requirements, Dowicil Plant: The calculation of emissions from A-192 at the Dowicil plant is based on an equation that takes the flowrate and converts it to pounds without accounting for concentration. (page 10 of evaluation report). We appreciate the clarification by District staff via email on July 1, 2004 that the equation assumes that 100% of the gas is methylene chloride. We suggest explaining this calculation, which will be used to determine compliance with the emission limit for this unit which would be relied on in lieu of a throughput limit, in your Statement of Basis."*

**Response:** Condition 14438, part 7 defines the equation to be used to calculate daily methylene chloride emissions from A-192, the abatement system for the Dowicil Plant. This calculation is used to demonstrate compliance with the existing daily emission limit in part 6 of the condition. For the proposal of the initial permit for Dow Chemical, the Statement of Basis contained discussion of all decisions made regarding applicability of requirements and evaluation of additional monitoring where no monitoring was contained in the existing District permits for each source. The daily emission limit and requirement to calculate emissions on a daily basis to confirm compliance with this requirement were contained in the existing District permit for the Dowicil Plant and not added under Major Facility Review, therefore explanation of these requirements was not discussed in the Statement of Basis published with the issued permit. The explanation of the calculation is included again in this Response to Comments document below:

The calculation of emissions at A-192 does account for concentration. The District's July 1, 2004 email did not state that the vapor from A-192 is pure methylene chloride or that emissions are calculated based on assumption that the vapor is pure methylene chloride. It explained that the calculation is based upon a worst case estimate, one which assumes the vapor stream from A-192 is in contact with a liquid consisting of pure methylene chloride (MeCl) and is *fully saturated* with methylene chloride. This assumption results in the highest level of emissions.

Starting with the ideal gas law, PV = nRT

$$n = (PV)/(RT)$$

For a daily volumetric flowrate, V (ft3/day) = Q (ft3/hr)*H (hrs/day),

$$n, \text{ lbmol/day} = (P*Q*H)/(RT)$$

To convert to a daily emission rate in pounds, multiply by the mole fraction of methylene chloride in the vapor, y, and the molecular weight of methylene chloride, MW:

$$E, \text{ lbs MeCl/day} = P*Q*H*MW*y/(RT)$$

MW = 84.93 lbs MeCl/lbmol
R = gas constant, 0.7302 ft3-atm/lbmol-degR
y = mole fraction of MeCl in saturated vapor = x*(p mmHg/760 mmHg)
x = mole fraction in MeCl in the liquid = 1 lbmol/lbmol, for pure MeCl

Substituting these physical values gives
E = (1 atm)*(Q ft3/hr)*(H hrs/day)*(84.93lbs MeCl/lbmol)*(1 lbmol/lbmol)*(p mmHg/760 mmHg)/[(0.7302 ft3-atm/lbmol-degR)(T+460)degR]

which when reduced gives the equation in Condition 14438:

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

where E = calculated worst case MeCl emissions from A-192, lbs/day
Q = measured gas flowrate from A-192, ft3/hr
H = recorded operating time for A-192, hours/day
T = measured temperature of gas from A-192, degF
p = vapor pressure of gas saturated with MeCl at the measured temperature, mmHg

Communities for a Better Environment ("CBE") filed the following comments regarding the reopening of the Title V permit for Dow Chemical:

1. *"The Public Process: CBE was extremely disappointed at the District's characterization of the public process on Dow's Title V permit. The District's claim that it never explained why it deleted Dow's throughput limits in the permit "because no comment was received on the issue" is disingenuous and misleading. CBE wants to set the record straight. CBE requested a public hearing on the original permit well within the statutory timeframe to request a public hearing. The District rejected CBE's request, in defiance of the Federal Clean Air Act requirements, so that it could meet its fast approaching deadline for finalizing the permit. The District was required by court settlement to complete Dow's Title V permit by December 1, 2003. The District had years to develop Dow's permit but waited until the last minute, made no attempt to extend the deadline, and then decided to cut the public process, reasoning that it is better to have a permit without delay than a public hearing. It also waited until after the public comment period had ended to notify CBE that no public hearing would be held. CBE was then without recourse to submit comments in written or oral form. One is left to seriously wonder if the District would have honestly regarded any written comment given its focus on the approaching deadline.*

   *The District's disregard for the unique importance of public hearings is apparent from its letter denying CBE's hearing request. While written comments can fall in under the radar, viewed only by District staff and the few people who specially request them, a public hearing alerts the public that there may be an issue of particular importance to them. In this case, the District deleted permit conditions and did not seem to want people to find out about the improper permitting; but the community had a right to know.*

   *Paradoxically, the District first created a process that would exclude any meaningful public comment, and then subsequently blamed the permit's deficiencies on the public's failure to comment. CBE strongly objects to the District's misguided and tardy rejection of its request to enter comments at a public hearing, and its decision to use the lack of comments as an excuse for a deficient permit.*

   *Now, the District reopens Dow's Title V permit in full to the Environmental Protection Agency, and it must, but the District limits public comment to the two issues newly discussed in this revised permit. CBE agrees with EPA that the entire permit should be open to comment. Despite the District's expressed intent, CBE submits comments on the entire permit because it was unjustly denied and deprived of its right to comment on the originally proposed permit."*

**Response:** Most of CBE's comments regarding the public participation process for the issuance of the initial Dow Title V permit is not relevant to this revision. Though the District disagrees with much of it, the District will focus its response on the portions of CBE's comments that bear some relevance to this Title V permit revision.

CBE's comment appears to be a reaction to the District's statement that no *additional* explanation regarding treatment of trade secret conditions, beyond that found in the October 2003 proposal, had been offered when the Title V permit was issued in December 2003, because no comment was received. The statement was made in the context of the District's explanation that the trade secret conditions were in fact never deleted, and have remained in force and effective continuously. The issue was discussed in detail in the Statement of Basis that accompanied the

proposal of the initial permit, and was discussed in much greater detail in the Engineering Evaluation for the March 1, 2004, permit action to convert these conditions into publicly-availably emission limits. The District has sought to be explicit and forthright in its handling of this issue, and the only reason there was not additional discussion when the Title V Permit was finalized was because there appeared to be no interest in it from any commenter. CBE's detailed explanation of why it did not offer comment on the initial permit is beside this point.

Though it is not directly relevant to this revision to the Title V permit, the District responds here to the claim that it illegally denied a request for a public hearing. As stated in EPA's July 2, 2004, order denying CBE's petition to object, "Petitioner's claim that it was automatically entitled to a hearing is inconsistent with title V of the Act, its implementing regulations and BAAQMD's federally-approved title V program." Under the District's regulations, the decision to grant a hearing request is discretionary. CBE's belief to the contrary appears to be based not on anything in the District's regulations, but rather on CBE's interpretation of federal requirements for an approvable Title V program. EPA has confirmed that such discretion is appropriate in a Title V program. This aside, it should have been plain that the District would be exercising the discretion allowed it under its regulations. Though it is unfortunate that a member of the public wished to submit comments on the initial Title V permit but did not, the District's actions were not the cause of this.

Today's revision to the Dow Title V permit is to incorporate publicly-available permit conditions that replace the trade secret conditions not incorporated into the initial Title V permit. These replacement permit conditions were issued on March 1, 2004, and became effective on that date. CBE has submitted comments going not only to the incorporation into the Title V permit, but also going to the substance of the replacement conditions. In the spirit of promoting the transparency of this process, the District responds to these comments below. However, in doing so, the District does not waive its rights in any subsequent legal proceeding to challenge the timeliness of these comments.

2. *"Permit Revisions: The revised permit addresses Dow's MACT requirements and throughput limit deletions and substitutions. In the original Statement of Basis, the District stated that it would "inform Dow in writing that it intends to release the information previously submitted as trade secret unless Dow establishes trade secret status pursuant to the procedures set forth in the District's Administrative Code." (SOB 2003, p. 34) The District still has not required Dow to establish the trade secret status of its limits. This is problematic because it seems that the District has gone out of its way to protect Dow at the expense of a sound Title V permit.*

   *The District's revisions largely represent an attempt by the District to: (1) delete throughput limits and rely solely on existing emissions limits on abatement devices, (2) delete throughput limits and replace them with emissions limits that control a limited set of pollutants, or (3) eliminate the throughput limits altogether by claiming they are redundant or unnecessary. The Statement of Basis does not explain how these changes are protective to the public. Thus, instead of ascertaining whether the throughput limits are trade secret, or replacing the throughput limits with the equivalent emissions limit, the District has bent over backward to accommodate the industrial polluter.*

   *<u>Requested Action</u>: Either include the deleted throughput limits in the permit or replace the throughput limits with the equivalent source emissions limits and provide an explanation of how the throughput limits are equivalent to source emission limits."*

**Response:** The District reads CBE comment as suggesting that the District should challenge Dow's claim to trade secret status. As the District has explained in the March 1, 2004, Engineering Evaluation, the need for the District to challenge Dow's trade secret assertions were obviated by the issuance of the replacement permit conditions that are publicly-available. It is understandable that a member of the public might wish to view the original trade secret conditions and compare them to the replacement conditions. The District's understanding is that the PRA affords the public a right to challenge trade secret claims. However, there is no obligation on the District to do so, and in this instance, challenging trade secret claims has not been a necessary step in the issuance of a Title V Permit that includes all applicable requirements. The possibility exists that Dow's claim to trade secret status would be sustained by a court. The District has followed a path that has resulted in all applicable requirements being publicly available while avoiding the effort and uncertainty associated with litigation over legitimacy of trade secret claims.

The District notes that although CBE submitted a request to the District for the release of the Dow trade secret information, it retracted that request in a July 21, 2004, letter.

The March 1, 2004, Engineering Evaluation explains that the replacement permit conditions are the functional equivalent of the throughput limits that are trade secret. The new throughput limits are based on the original permit applications. These are exactly the emission limits that would have been imposed at the time of permitting if the District had chosen to place emission limits in the permit instead of throughput limits. Thus they are protective to exactly the same extent as the original conditions. To understand the basis for replacing or deleting throughput limits, it is helpful to understand something about the District's New Source Review permitting program, which these conditions are primarily designed to serve. Some explanation is offered below.

3. *"Replacing Source Throughput Limits with Existing Abatement Device Emissions Limits: The District's decision to delete source throughput limits and rely solely on existing emissions limits from abatement devices is not supported. Any Title V permit that contains an alternative emissions limit equivalent to the limit already in the plan must contain provisions to ensure that the new limit "has been demonstrated to be quantifiable, accountable, enforceable and based on replicable procedures." See 40 C.F.R. 70.6(a)(iii)."*

**Response:** CBE's specific comments regarding the District's action to replace or delete permit conditions is based on an incorrect assumption about relevant legal authority. 40 C.F.R. § 70.6(a)(iii) is an EPA regulatory requirement for approval of a state or local Title V permitting program. See, e.g., §70.1(a) ("These regulations define the minimum elements required by the Act for State operating permit program and the corresponding standard and procedure by which the [EPA] will approve, oversee, and withdraw approval of State operating permit programs"). §70.6(a)(iii) is an optional provision, and in fact there is no provision corresponding to § 70.6(a)(iii) in the District's Title V-implementing regulation (Regulation 2, Rule 6). Moreover, even if the District had adopted such a provision, it would not apply to changes to District permit conditions. Rather, as EPA's 1992 preamble discussion explains, § 70.6(a)(iii) was an innovative regulatory approach intended to apply to emission limitations (i.e., promulgated regulations) that are approved into the federal SIP. See 57 Fed. Reg. 32276 (July 21, 1992). This stands to reason. Because permit conditions are not approved by EPA into the SIP through a rulemaking process, it follows that they can be changed without formal EPA action. Thus the need for flexibility provided by § 70.6(a)(iii) does not exist with regard to permit conditions.

The issuance of emission limits to replace the trade secret throughput limitations and deletion of certain throughput limitations was not done pursuant to § 70.6(a)(iii) or any other Title V-related authority. These changes to District permit conditions were made pursuant to the authority in District Regulation 2-1-403, a District permitting regulation that pre-dated and stands apart from Title V. The action to replace and delete certain conditions was taken on March 1, 2004, and the legal sufficiency of those actions rests upon the rationale set forth in the accompanying Engineering Evaluation.

The validity of an action to change or delete a throughput limitation must be judged in relation to the purpose the limit was intended to serve. Throughput limits imposed in a District permit are typically imposed at the time an "authority to construct" permit (also known as a new source review or "NSR" permit) is issued pursuant to District Regulations 2-1 and 2-2, and serve to codify the permittee's representations as to the maximum capacity of the equipment or operation receiving the permit. If the information supporting the NSR permit is accurate, then exceedence of the throughput limit would be an indication that a modification has occurred (see definition of "modification" at 2-1-234), which in turn would require application for a new authorization (i.e., an NSR permit) from the District. As legally-binding limitations, throughput limits also tend to serve as the basis for permit fees and offset calculations, whether or not they are originally imposed for that purpose.

This background is important for purposes of understanding the District's rationale for establishing emissions limits replacing trade secret throughput conditions, and for deleting redundant throughput limitations. Specific to the March 1, 2004 change of conditions, any replacement limit, should serve the same purpose as the original, namely, to accurately delineate the maximum capacity of the relevant source. The publicly-available emission limits replacing the trade secret throughput limitations do this precisely, as they are set at the same levels as would have been set had the original throughput limits been expressed as emission limits.

Second, deletion of a throughput limit may occur in those situations where the limit does not advance the purposes of the NSR rule, as for instance where the throughput limit was imposed on a piece of equipment upstream from pollution controls that assure compliance with NSR requirements. For Dow (as for many other facilities in the District's jurisdiction), the issuance of the Title V permit may be the first comprehensive examination of the interrelationship of permit conditions and throughput limits that have been imposed sequentially over a period of years. Under such an examination, it may be apparent that some throughput limits are serving no useful purpose in light of other permitting actions wherein pollution controls were imposed downstream. Where such conclusions were reached in conjunction with the March 1, 2004, change of conditions, the basis for each conclusion was explained in the Engineering Evaluation.

a. *"The District fails to show that the emission limits on the abatement devices are as quantifiably effective in regulating pollutants as the throughput limits. For example, in the District's proposed revision to Permit Condition 4780, it asserts that existing emissions limits on abatement devices A-147 and A-149 provide alternative limits to the throughput limits for sources S-593, S-594, S-595 and S-596. The District argues that it can therefore delete the throughput limits for these sources because the abatement devices provide the equivalent emissions limit.*

   *But the proposed revision for Permit Condition 4780 does not quantifiably list the pollutants from these sources or the pollutants that the abatement devices are designed to regulate, as 40 C.F.R. 70.6(a)(iii) requires. Thus, the District cannot simply eliminate a throughput limit by arguing that a downstream abatement device will perform the*

*equivalent function without documenting the differences in emissions levels between the throughput limits and the abatement device limits. A source with a throughput limit might emit several pollutants, while the abatement device to which it is attached might not be well designed to destroy or address all of those pollutants. Moreover, the abatement device might actually produce new chemicals. For instance, it might destroy H2S but create SOx, which the abatement device might not limit. In these cases, the emissions limit in an abatement device is not necessarily equivalent to the throughput limit or to an emissions limit on the source, directly.*

*The District's method also leaves the public with no way of knowing whether the abatement devices will be able to limit all the pollutants produced by the sources. The District needs to document that the abatement devices will reduce all the pollutants to the same extent as the throughput limits."*

**Response:** As noted above, 40 C.F.R. § 70.6(a)(iii) does not apply to a change of District permit conditions such as the March 1, 2004 change to the Dow permit. The comment is therefore inapplicable to that permitting action. The relevant test is whether the purposes of the District's NSR regulations are being as well served notwithstanding the deletion of the throughput limit. A throughput limit is intended to delineate the point at which the maximum capacity of a unit has at least presumptively been exceeded. It is not intended to be, as CBE suggests, a limit on all pollutants from that unit.

The District has already explained what pollutants are emitted from S-593 through S-596 (organics and ammonia: See March 1, 2004, Engineering Evaluation, page 25). Likewise, the District has explained that the existing Condition 4780 requires scrubbing at A-147 and A-149 whenever the sources are operating and also limits the emissions from the scrubbers. See Id., p. 4. That a downstream pollution control device may produce its own emissions is not relevant to a conclusion that an upstream throughput limit is redundant. Nevertheless, it should be noted here that a scrubber does not create additional emissions. Since all emissions are abated, and all abated emissions are directly limited to the permitted levels, a throughput limit is redundant.

b. *"The revised permit also is not clear that the emissions limits on the abatement devices limit enough of the source emissions. In Permit Condition 14438, the District proposes to eliminate the throughput limits for sources S-302, S-303, S-662, S-663 and S-664, reasoning that these sources are abated by A-192 and S-389 – devices that already contain emissions limits. The District claims that A-192 abates these sources, followed by S-389 "at least 89% of the plant operating time." See Appendix A, Evaluation of Application #8894, p. 10. However, the District neither indicates what will happen to the source emissions during the remaining 11% of the time, nor demonstrates that this alternative emissions limit is quantifiably equivalent to the throughput limits. Furthermore, the District argues that sources S-662, S-663 and S-664 "can" be operated as pressure tanks "with no emissions." Id. The District fails to provide how these sources will actually be operated as pressure tanks and enforced as such under C.F.R. 70.6(a)(iii)."*

**Response:** As noted, the comment incorrectly seeks to apply a federal permit program approval criterion (§ 70.6(a)(iii)) to a change of conditions in a District permit. However, the District responds here to clarify apparent misunderstandings and to reiterate its justification for why the March 1, 2004, change of conditions was valid. CBE has misread the condition 14438 and explanation on page 10 of the appendix to the Statement of Basis. Sources S-302 and S-303 are abated *at all times* by A-192. Likewise, the tanks, S-662, S-

663, and S-664 are *at all times* either abated by A-192, abated by S-389, or operated as pressure tanks, with no emissions to the atmosphere. Further, after abatement at A-192 the abated emissions are yet again abated at S-389 for at least 89% of the Dowicil Plant operating time. For 11% of the time, the Dowicil Plant emissions are only abated at A-192.

c. *"Replacing Throughput Limits with Existing Abatement Device Emissions Limits that Control a Limited Set of Pollutants: The Statement of Basis fails to demonstrate how the new emissions limits will control all of the pollutants once controlled by the deleted throughput limits. For example, in Permit Condition 8894, the District proposes to delete the throughput limits for sources S-647, S-648, S649, S-650, S-651 and S-652, and rely on the emissions limits for abatement device A-184. While the new emission limits on A-184 specify controls on precursor organic compounds (POC) and hydrochloric acid (HCl), the District fails to document whether the sources will emit other pollutants besides POC and HCl, or whether the abatement devices will as effectively regulate these pollutants as the throughput limits.*

*Similarly, in the District's proposal to replace the throughput limits in Permit Condition 15944 with emission limits for the source's abatement device, A-193, it specifies that the new limit will regulate particulate emissions (PM10) only. The permit does not document what other pollutants S-684 emits that would not be covered by the new emission limit. Further, the permit does not detail whether the new emission limit on the abatement device will be less effective at converting PM10 than the throughput limit."*

**Response:** The District again notes that § 70.6(a)(iii) does not apply. The throughput limit serves no present purpose under the NSR program given that emissions are abated downstream. In fact, the District did explain what pollutants are emitted from these sources (Statement of Basis for the initial proposed permit, pages 10 and 14). The sources are required to be abated, and the abatement device emissions are limited and monitored. So, as in the response to (a) above, the throughput limits are redundant.

d. *If the throughput limits are replaced by existing limits on abatement devices, the permit should indicate that the source is attached to or abated by those devices. For instance, the District claims that S-647 will be abated by A-181, A-182 and A-184, but Table II(b) does not list S-647 as being abated by these devices. Although Part 3 states that S-647 "shall be vented to S-648" (which is abated by the abatement devices), the permit does not make clear that all pollutants emitted by S-647 are covered by the abatement devices through the venting process. Thus, the public cannot know that emissions from S-647 will be completely abated by these devices.*

**Response:** Table II-B lists for each abatement device the sources that vent directly to it. S-647 does not vent directly to A-181 and is therefore not listed in that table. It is not practical to construct the abatement train for a particular source by skimming through the abatement device table searching for a source, therefore, the permit has been written so that the abatement flow is clearly delineated at the source tables, for example see Tables IV-BZ and IV-CA for sources S-647 and S-648. Condition 8894 clearly indicates that S-647 emissions will be vented to S-648 and that S-648 is abated by a number of abatement devices in series.

e. *The District also argues that the "replacement emission limits will regulate the largest process emissions" from A-184. (See Proposed Major Facility Review Permit, p. 7.) But the permit does not specify what will occur to emissions that are not part of the "largest*

*process emissions." Apparently A-184 would not cover these smaller emissions. The District should explain what will happen to these smaller emissions, and how these replacement emission limits are equivalent to the source throughput limit. The District does not specify how the remaining abatement devices, A-181 and A-182, will regulate emissions compared to the current throughput limits. The permit should provide this information to the public."*

**Response:** Again, CBE misunderstands Condition 8894 and the explanation on page 7 of the appendix to the Statement of Basis. The process emissions are abated at all times by A-181 and A-182 in series. The abated emissions from A-182 are then routed to either A-184 or S-336 for further abatement. S-336 has a higher abatement efficiency than A-184, therefore the highest emissions will occur when the abated emissions from A-182 are routed for additional abatement to A-184. Therefore, by limiting the emissions from A-184, the condition limits the worst case emissions. Emissions from S-336 will be less.

f. *"Partial Replacement of Throughput Limits with Emission Limits: The District proposes emission limits that may only partially replace the throughput limits, in contrast to the requirements of 40 C.F.R. 70.6(a)(iii) to replace existing limits with equivalent ones. For example, in Permit Condition 15932, the District proposes to substitute the throughput limits for sources S-693, S-694 and S-695 with new emission limits that regulate the release of precursor organic compounds (POC) but does not specify what other pollutants the sources may emit that the emission limits would not cover."*

**Response:** The District again notes that § 70.6(a)(iii) does not apply. The AFTF Process produces organic compound emissions. Acid is produced as a byproduct and is absorbed into water and this stream is routed to S-693 for scrubbing with caustic. As long as there is excess caustic circulating in the scrubber, no acid will be emitted. This is ensured by the existing monitoring in the permit conditions. Therefore, only emissions of organic compounds were limited under the proposed changes. S-695 emits organic compounds only, which are required by existing permit conditions to be abated.

g. *"In another example, the District proposes to delete the throughput limits in Permit Condition 18128 for sources S-454 and S-449 and replace them with an emissions limit. The District's proposed new limit regulates S-454's particulate emissions, which includes hydrochloric acid, hydrofluoric acid and sulfuryl fluoride. However, the permit fails to detail whether other pollutants from these sources will still be regulated by the new limits or whether the emissions limits will be as effective in lowering pollutants as the throughput limits.*

**Response:** CBE has misread Condition 18128 and the explanation on page 14 of the appendix to the Statement of Basis. The emissions consist of particulate matter and sulfur dioxide from S-454 and particulate matter from S-449, which was also explained in the Statement of Basis for the proposed initial permit, page 11. Both pollutants are limited in the proposed replacement condition for S-454 and particulate emissions are limited for S-449 to the same levels as evaluated in the original District permits.

4. *Finally, the District lists no capacity values for the sources in its Table II(a) including: S-593, S-594, S-595, S-596, S-604, S-647 and S-648, S-684, S-693, S-694, S-684, S-454 and S-712. The capacity boxes are simply left blank for each source. (See Proposed Major Facility Review Permit, p. 10-11). Source 606 is not listed at all. The District should indicate why each source's capacity limits in the capacity boxes is left blank."*

**Response:** The capacities are not listed because the capacities have been claimed as trade secret information, as noted by the District in the December 1, 2003, Title V issuance. The purpose of the March 1, 2004, permit change of conditions was to replace these capacity limits with emission limits that would function equally well for purposes of facilitating implementation of the NSR program. S-606 is an exempt tank and as such is not required to be listed in the Major Facility Review permit.

5. *"Permit Shields: The District indicates that the Title V permit is without permit shields but deletes some permit conditions, calling them "redundant." Title V permits may contain permit shields when the District finds certain requirements to be inapplicable to a facility and/or to subsume one set of requirements into another "more stringent" set of requirements for that facility. See 40 CFR 70.6(f).*

   *While CBE urges the District to exercise great caution in issuing permit shields because they insulate facilities from enforcement – even while those facilities are out of compliance with otherwise enforceable air quality standards – the District should not simply eliminate redundant or subsumed permit requirements as a short cut without explaining why a permit shield does not apply.*

   *In this permit, the District has eliminated permit requirements because they are made redundant by downstream emission limits, but it has not used permit shields for those eliminated requirements. If permit shields do apply, then the District must go through the procedure of creating them. If the District continues to submit that permit shields do not apply, then these conditions cannot be eliminated because the District would have no justification."*

**Response:** The comment refers to the deletion of certain District permit conditions that was accomplished on March 1, 2004, and equates this action with creation of a Title V permit shield. The March 1, 2004, action was made pursuant to authority provided by the NSR permit program. It was not a Title V action, and did not establish a Title V permit shield either in name or in substance. A Title V permit shield is generally used to either (1) document that a particular requirement does not apply, or (2) document the fact that multiple similar requirements do apply and specify that compliance with the most stringent will be considered compliance with the group. A change to an applicable requirement such as, in this instance, change to or deletion of a permit condition, is not the establishment of a shield.

6. *"Improper Tank Exemptions: The District has listed numerous storage tanks throughout the permit as exempt from Title V without offering an explanation as to which regulation exempts the storage unit and why the unit meets the criteria of the regulation. The public is left at an enormous disadvantage in trying to ascertain why these tanks are exempt from permitting and has difficulty verifying the exempt status of these units. Even when the District lists the regulation, (typically based on SIP Regulation 2-1-123, which governs storage of aqueous gases) the District fails to explain even briefly why the storage unit meets the regulation criteria. For example, in the Statement of Basis, the District lists Storage Tank T-10 as an exempt feed tank because it stores liquefied hydrofluoric (HF) acid (SOB at p. 12). However, Regulation 2-1-123(2.5) only exempts storage of HF with an acid strength over 30% by weight. The District fails to document or even state that T-10 stores HF with an acid strength of over 30% by weight, leaving the public in the dark. Dow stores deadly chemicals, and HF is one of them. It is critical, therefore, that Dow's Statement of Basis explain why these chemicals, or the tanks that hold them, are exempt.*

*The District repeats this omission again in listing T-11 as exempt without specifying how the storage tank meets the criteria of 2-1-123 besides describing the tank as an "aqueous storage" unit. Id., p. 14. The District also fails to list the reasons why it exempted S-231, S-232, S-234, S-236-8, S-240, S-243, S-245-53, S-260-6 (SOB at p. 15). In addition, it exempts tanks T-113 and T-103 without offering a regulatory basis for the exemption. Id., p. 19. The District exempts tanks S-515 and S-516 without documenting why the hydrochloric acid content meets the exemption requirement of 2-1-123 (SOB at p. 21-2). The District also lists tanks T-226, T-227, T-643, T-648, S-194, S-190, S-195, S-697, S-699 as exempt without sufficient information. (SOB at pp. 23-29).*

*Merely indicating that SIP Regulation 2-1-123 is the basis for exemption does not provide adequate information for public or regulatory reviewers since this rule allows exemptions on multiple physical and circumstantial grounds. These claimed exemptions should be included in the permit application with a clear factual basis for the requested exemptions before the permit is issued in order for the public and regulators to conduct a reasonable inquiry into the basis of such claimed exemptions. Moreover, if a tank is exempted, there should be a permit condition requiring the tank to comply with terms of the exemption. The District should also confirm in the permit that Dow needs to reapply for a permit if it uses the source for a different purpose."*

**Response:** This comment concerns the initial Title V issuance, not the present revision to the Title V permit. Nevertheless, the District offers a response. District regulatory exemptions, such as the tank exemptions discussed in this comment, demarcate a threshold below which equipment or activity is considered not significant enough for regulation. Exempt tanks are listed, but are treated in a summary manner that is commensurate with their regulatory significance. The treatment of these exempt tanks is consistent with Regulation 2, Rule 6. For information regarding exempt tanks, the District often depends upon representations made by the permit applicant in its application (which is certified for accuracy). A tank may be listed in the Title V permit as exempt because it was so listed in the application, which is available for review by the public. This listing in the application will often be the only information available to either the District or the public. In this case, the District made inquiries about the basis for the exemptions subsequent to submittal of the application and before proposal of the permit in 2003. Facilities are subject to enforcement if representations made in a permit application prove false based on an inspection or other reliable information. There is no requirement to impose permit conditions on sources exempt from permitting to enforce the terms of the exemption. If the equipment or activity is improperly claimed as exempt, then it follows that there is failure to comply with a requirement, which is grounds for enforcement. Imposing permit conditions that codify each of the many exemptions invoked at a facility on the scale of Dow would be redundant from a regulatory perspective, and would greatly expand the size and complexity of the Title V permit.

7. *"The Permit and the statement of basis fail to include monitoring, recordkeeping and reporting that will assure compliance with Permit Conditions: The District failed to add the monitoring, recordkeeping and reporting necessary for numerous emission sources in the Dow facility. The District attempts to justify not requiring additional monitoring as required by Title V by arguing that "although Title V calls for a re-examination of all [six factors in developing monitoring requirements], there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance" (SOB at p. 35). The District's presumption that the existing monitoring is adequate is authorized neither by Title V nor by Reg. 2-6-503. Title V creates a new requirement of sufficient monitoring to assure compliance with permit*

*conditions. The District admits that it failed to examine new monitoring based on this new requirement.*

*The District's determination that, in some cases, requiring additional monitoring is inappropriate where there is no monitoring, directly contradicts the mandate of Title V of the Act. "If an applicable State emission standard contains no monitoring requirement to ensure compliance, EPA's regulation requires the State permitting agency to impose on the stationary source some sort of 'periodic monitoring' as a condition in the permit or specify a reasonable frequency for any data collection mandate already specified in the applicable requirement." Appalachian Power Co. v. Environmental Protection Agency, 208 F.3d 1015, 1019 (D.C. Cir. 2000). By its own admission, the Air District has failed to place monitoring requirements on sources where historically there has been no monitoring.*

*For instance, the District has decided not to require SO2 emissions monitoring at S-454 even though the District has deleted the throughput limits based on Dow's trade secret claim (SOB at p. 38-9) that would have limited the flow of SO2. The District states that S-454 has "very low emissions" and that the emissions level is "not significant," but the public has no means to confirm this statement due to the confidentiality claim. Id. Moreover, without monitoring, the District cannot ensure that these levels will remain insignificant. The District makes the same argument for S-44, S-446, S-489 and S-176-179 (SOB at pp. 44-52), without placing any minimal monitoring safeguards for the public in case emissions levels increase.*

*The District also exempts Dow's emergency generators, S-706, S-707, S-708, S-710 and S-711, from monitoring, stating that these sources are "used sporadically" and therefore are an "insignificant source of sulfur dioxide." But without any monitoring whatsoever, the District, and consequently the public, cannot ensure that the resulting pollution is insignificant, or even that its use will remain sporadic. The District should implement some degree of monitoring for these sources, rather than giving Dow an open-ended license to pollute.*

*Regulation 9-1-501 gives the APCO discretion to mandate compliance and monitoring for anyone subject to the emissions limits for sulfur dioxide. However, this discretion must be consistent with the mandate of Title V by placing a minimum monitoring system on these sources to assist the public in its efforts to monitor the pollutants from the facility and to ensure that emissions levels do not remain unchecked indefinitely."*

**Response:** Though it is no longer required under EPA's current interpretation of Part 70, the District does review existing monitoring in the Title V context. The presumption of adequacy discussed in the Statement of Basis and identified in the comment exists because the District believes it has employed the same considerations in adopting District regulations or establishing permit terms that it now uses in deciding whether to impose periodic monitoring in the Title V permit. The result is the same – existing monitoring is reviewed for sufficiency. The comment does not identify instances where the existing monitoring is believe to be inadequate, and so does not take issue with the District's review of existing monitoring as applied to this permit.

No monitoring may be justified where there is little or no capability for a requirement to be violated. This is acknowledged and supported by EPA in various publications such as the June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP," in which EPA has agreed that no monitoring is necessary where violations of the applicable regulation are unlikely. The Appalachian Power

case did not concern an instance where no monitoring had been imposed, and did not hold that a permitting agency lacks discretion to decide that no monitoring is appropriate, if supportable under the circumstances. Where the District has decided that no monitoring is appropriate, it has explained its decision.

It is unnecessary to impose monitoring on a particular activity or piece of equipment if adequate monitoring is occurring downstream. As explained in the Statement of Basis that accompanied the proposed initial permit, the SO2 emissions from S-454 are abated by scrubbers, which are subject to abatement efficiency requirements and monitoring. The maximum emissions from S-454 after this monitored abatement are less than 1% of the applicable emission limit. No monitoring of the source is the appropriate level of monitoring, since there is no possibility for the source to exceed this emission limit if the abatement devices are functioning. The abatement devices are monitored daily. Area monitoring was deemed unnecessary since maximum stack emissions are 100 times less than the applicable emission limit.

Likewise for the other potential sources of particulate emissions referenced, no monitoring was determined appropriate due to the large margin of compliance between the maximum emissions and the emission limits, as indicated in the Statement of Basis. The District has not 'exempted' those sources or the emergency diesel engines from monitoring; it has determined that additional monitoring is not necessary to assure compliance and has explained its reasoning for this determination.

8. *"The Reporting Requirements Must Be Specifically Delineated: The District has failed to include proper reporting requirements in Dow's Title Permit. In many Permit sections, the District requires Dow to maintain logs at the facility for five years, but the District fails to require every six months reporting of the data collected in these logs, as required by Title V. The District consistently states that these logs shall be kept on site and made available to District staff upon request. By itself, this is improper. The District needs to include the semi-annual reporting requirement in each place in the permit where the District requires the facility to make the log available to District staff upon request.*

   *The District's failure to include semi-annual reporting requirements appears to be an improper policy: the Permit consistently requires Dow to maintain records at the facility, but does not require those records to be regularly submitted to the District. This policy defeats the purpose of Title V. A primary purpose of Title V is to allow the public to see if a facility was in compliance with its permit conditions. If all the records are maintained at the facility, the public has no access to them through the Public Records Act. Without access to the compliance information, the public remains in the dark despite adoption of the permit.*

   *General <u>Permit Condition F</u> fails to compensate for this problem; it states: "Reports of all required monitoring must be submitted to the District at least once every six months, except where an applicable requirement specifies more frequent reporting." (See Dow Title V Permit, p. 5) Even though this condition requires semi-annual reporting, the lack of specific directive with each record keeping requirement creates an ambiguity that may result in the facility arguing that very few items must be reported to the District and withholding of important information that must be publicly available under Title V. The District must add the following italicized language to <u>Permit</u> <u>Condition F</u>: "Reports of all required monitoring and reports of data from all logs maintained at the facility must be submitted to the District at least once every six months, except where an applicable*

*requirement specifies more frequent reporting." Until this change is incorporated into the permit, the permit is unacceptable in its current form."*

**Response:** The District has received this comment for other Title V permits and will restate its reponse here. The District's Title V regulations require the operator to submit a report of monitoring data every six months. A "report" of monitoring data is distinct from the data itself. The report is a summary of the data, and must identify deviations from applicable requirements. There is no requirement to submit actual data, and doing so for all Title V facilities would result in a quantity of data that is beyond the ability of the District to handle and store.

9. *"Devices with Changed Permit Status: The District has exempted S-355 because the source is now used for the sole purpose of collecting rainwater. (SOB p. 6) CBE requests that the District confirm that Dow will be required to reapply for a permit if this source is ever used for a different purpose."*

**Response:** See response to comment 6.

10. *"Corrections to Devices Shown in Application: The District has removed two sources from the equipment list, S-435 and T-126 because the District says that they are "part of" the N-Serve Plant. (SOB p. 7) This statement is unclear. It appears that these sources have been simply dropped from the permit; there is no indication from the permit that they exist or are regulated. A Title V permit should include all of the regulations that apply to source."*

**Response:** T-126, previously identified as S-435, is a reflux tank off of a column in the N-Serve Plant. As with many integral processes at Dow Chemical and other facilities, an entire process may be permitted under a single source number. The N-Serve Plant has been permitted in this manner as S-44. The N-Serve Plant consists of a number of process units and interconnected piping, which includes the reflux tank T-126. As T-126 is part of S-44, a separate source number was redundant and therefore deleted. S-44 requirements, including those for T-126, are listed on page 44 of the permit.

The Dow Chemical Company ("Dow") filed the following comments regarding the reopening of the Title V permit for Dow:

1. *The initial Title V Permit was approved on December 1, 2003. Neither the adoption of the initial Title V Permit nor the approval of this proposed modification to the Title V Permit have authorized or will authorize any change in operations or increase in emissions at the facility. Dow has not requested nor undertaken any such change in operations or increase in emissions.*

   *As explained in the Statement of Basis, the pre-existing state permits contained certain Throughput Limits that were omitted from the initial Title V Permit because they contained confidential information. The state permits were not terminated upon adoption of the Title V Permit, so the Throughput Limits remained in place, even though they were omitted from the initial Title V permit.*

**Response:** Dow shares the same understanding as the District. Because it was not necessary to delete trade secret permit conditions in order to replace them with equivalent publicly-available conditions, deletion did not occur. The District knows of no evidence suggesting that the trade secret throughput limits were exceeded. An exceedence would have been unlikely since those limits represented the maximum capacity of the subject sources. Exceedence of maximum capacity typically entails modification to equipment, which tends to occur in response to a business need, not (as was the case here) in response to the issuance of a Title V permit.

2. *The Air District and Dow have since developed proposed Emissions Limits that are equivalent to the Throughput Limits contained in the pre-existing state permits, except that the limits are expressed in terms of emissions rather than throughput, and thus do not contain confidential information. The Emissions Limits are not intended to and do not authorize any change in operation or increase in emissions at the facility.*

**Response:** This observation is consistent with the District's understanding.