BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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| IN THE MATTER OF: | ) | |
| OPERATING PERMIT<br>ENGAGE PLANT MODIFICATION<br>DOW CHEMICAL COMPANY<br>PLAQUEMINE<br>IBERVILLE PARISH<br>LOUISIANA | ) | PETITION NO. 6-02-03 |
| PERMIT NO. 2179-V2<br>(AUGUST 9, 2001) | ) | |

**ORDER DENYING PETITION FOR OBJECTION TO PERMIT**

## I. INTRODUCTION

On August 9, 2001, the Louisiana Department of Environmental Quality ("LDEQ") issued the Dow Chemical Company (Dow) Permit 2179-V2 (the Dow Permit Modification) for construction of a new production train – the "Engage" train – at its existing facilities in Plaquemine, Iberville Parish, Louisiana, pursuant to state regulatory provisions implementing the Clean Air Act, 42 U.S.C. §§ 7401, *et seq.*. The Dow Permit Modification constituted both a preconstruction permit issued pursuant to the Nonattainment New Source Review (NNSR) requirements of the Act and a significant modification to Dow's State operating permit issued pursuant to Title V of the Act. The Engage project constituted a major modification under the NNSR regulations because of the estimated increase in emissions of volatile organic chemicals (VOCs) from the project. As a result, Dow was required to offset these VOC increases and relied

on 70.72 tons per year of internal offsets generated from emission reductions from prior projects at Dow's facilities.[1]

Prior to the issuance of the Dow Permit Modification, on or about June 18, 2001, the Louisiana Environmental Action Network ("LEAN" or "Petitioner") petitioned the United States Environmental Protection Agency (EPA) to object to the issuance of the Dow Permit Modification proposed on February 1, 2001. *See* Letter from Eric Rochkind and Suzanne Dickey, Tulane Environmental Law Clinic, to Gregg Cooke, EPA (June 18, 2001) ("Petition"). The Petitioner requested that EPA object to the issuance of the proposed Dow Permit Modification pursuant to Section 505(b)(2) of the Act and 40 C.F.R. § 70.8(d), incorporating by reference public comments previously filed with LDEQ in support of the Petition.[2] This Petition is being considered as an objection to the final Dow Permit Modification, which was issued after additional proceedings on a revised proposal. For the reasons set forth below, I deny the Petition.

## II. STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act requires each State to develop and submit to EPA an operating permit program which meets the requirements of Title V. The State of Louisiana submitted a Title V program governing the issuance of operating permits on November 15, 1993,

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[1] Basis of Decision, Approval of VOC Emission Reduction Credits from Application VOC-4 and Modification of Dow Title V Operating Permit, at 4 (August 9, 2001) ("Basis of Decision").

[2] The petition incorporates by reference four attachments: Comments on behalf of LEAN and Inez Cooper, March 7, 2001 (Exhibit A); Comments on behalf of LEAN and Albertha Hasten, March 1, 2001 (Exhibit B); LEAN and EPA's Joint Motion for Partial Voluntary Remand and Stay of All Proceedings in *LEAN v. U.S. EPA*, No. 99-60570 (5th Cir. Oct. 6, 2000) (Exhibit C); and LEAN's Reply to Dow's Supplemental Information on the Proposed Permit Modification and Emission Reduction Credits for the "Engage Project," undated (Exhibit D). LEAN also submitted a letter dated October 22, 2002, in support of its petition ("Supplement to Petition").

and subsequently revised this program on November 10, 1994. 40 C.F.R. Part 70, Appendix A. In September of 1995, EPA granted full approval to the Louisiana Title V operating permits program. 60 *Fed. Reg.* 47296 (September 12, 1995); 40 C.F.R. Part 70, Appendix A.[3] Major stationary sources of air pollution and other sources covered by Title V are required to obtain an operating permit that includes emission limitations and such other conditions necessary to assure compliance with all applicable requirements of the Act, in accordance with 40 C.F.R. Part 70. 42 U.S.C. §§ 7661a(a) and 7661c(a).

The Title V operating permit program does not generally impose new substantive air quality control requirements (which are referred to as "applicable requirements"), but does require permits to contain monitoring, recordkeeping, reporting, and other requirements to assure compliance by sources with existing applicable requirements. 57 *Fed. Reg.* 32250, 32251 (July 21, 1992). One purpose of the Title V program is to "enable the source, States, EPA, and the public to better understand the requirements to which the source is subject, and whether the source is meeting those requirements." *Id.* Thus, the Title V operating permits program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to facility emission units in a single document, and therefore enhance compliance with the requirements of the Act. *Id.*

Under Section 505(b), the Administrator is authorized to review state operating permits issued pursuant to Title V, and to object to permits that fail to comply with the applicable requirements of the Act, including the requirements of a State implementation plan (SIP), and 40

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[3] This program, which became effective on October 12, 1995, is codified in Louisiana Administrative Code (L.A.C.), Title 33, Part III, Chapter 5.

C.F.R. Part 70. In this case, the applicable requirements include relevant Louisiana Air Quality regulations, including its Nonattainment New Source Review (NNSR) Procedures, L.A.C. 33:III.504, and Emission Reduction Credits Banking regulations, L.A.C. 33:III.Chapter 6.[4]

When EPA declines to object to a Title V permit on its own initiative, Section 505(b)(2) of the Act provides that any person may petition the Administrator to object to the issuance of a permit by demonstrating that the permit is not in compliance with all applicable requirements. *See also* 40 C.F.R. § 70.8(d). These petitions "shall be based only on objections that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period)." 42 U.S.C. § 7661d(b)(2).

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[4] Sections 110(a)(2)(C) and 172(c) of the Act require each state implementation plan (SIP) to include a NNSR program. EPA approved L.A.C. 33:III.504 as a SIP revision on October 10, 1997. 62 *Fed. Reg.* 52948. After LDEQ issued the Dow Permit Modification, it amended L.A.C. 33:III:504, with changes not applicable here. EPA approved the revisions on September 30, 2002. 67 *Fed. Reg*. 61260.

Under 40 C.F.R. § 70.1(b), "all sources subject to [Title V must] have a permit to operate that assures compliance by the source with all applicable requirements." Applicable requirements are defined in 40 C.F.R. § 70.2 to include "(1) any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under Title I of the [Clean Air] Act that implements the relevant requirements of the Act, including any revisions to that plan promulgated in [40 C.F.R.] Part 52."

Louisiana defines "federally applicable requirement" to include "any standard or other requirement provided for in the Louisiana State Implementation Plan approved or promulgated by EPA through rulemaking under Title I of the Clean Air Act that implements the relevant requirements of the Clean Air Act, including any revisions to that plan promulgated in 40 CFR part 52, subpart T." L.A.C. 33:III.502. EPA approved Louisiana's Emission Reduction Credit Banking regulations on July 2, 1999. 64 *Fed. Reg.* 35930. LDEQ revised these regulations on February 20, 2002 (28 *La. Reg.* 301), and EPA approved the revisions on September 27, 2002. 67 *Fed. Reg.* 60871. All citations to Louisiana's Banking regulations are to the previous version.

## III. BACKGROUND

On March 17, 2000, Dow submitted an application requesting a modification to its Title V permit (Permit 2179-V1) and authorization to add the new Engage production train to produce low density polyethylene products used in the manufacture of automobile bumpers, shoes, household products, and other applications.[5] The Dow Permit Modification was proposed in August 2000, and February 2001.[6] LDEQ solicited public comment on those prior versions of the proposed permit modification. In May 2001, further revisions to the Dow Permit Modification were proposed for public comment. This public notice also set forth LDEQ's preliminary approval of Dow's related application for approval of emission reduction credits from Dow's Polyethylene B facility ("Poly B" or "VOC-4 project"), some of which were needed for the proposed Dow Permit Modification. LDEQ issued the final permit modification and approved the VOC-4 emission reduction credits on August 9, 2001.

LDEQ concluded that the VOC emissions increase of 54.40 tons per year (TPY) from the Engage project constituted a major modification with respect to NNSR procedures. Thus, according to the NNSR procedures approved in Louisiana's SIP, Dow needed to offset this proposed increase at a ratio of 1.2:1 with controls designed to achieve the Lowest Achievable Emission Rate (LAER), or 1.3:1 without LAER. *See* L.A.C.33:III.504.D.3 & Table 1; *see also* 42 U.S.C. § 7511a(c)(8) (LAER not required under certain circumstances if VOC increases are offset at 1.3:1 ratio). LDEQ concluded that Dow's previous VOC emissions reductions at its

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[5] Dow Air Permit Briefing Sheet, Title V Operating Permit 2179-V2, Plaquemine, Iberville Parish, Louisiana, at 1-2 (August 9, 2001) ("Permit Briefing Sheet").

[6] *Id*. at 5.

Poly B facility resulted in 248.49 TPY in emission reductions credits ("ERCs"). Dow proposed to offset the increased emissions from the Dow Engage project at the higher ratio of 1.3:1 without LAER, and thus use 70.72 (54.40 x 1.3) TPY of ERCs from the VOC-4 project to support the Dow Permit Modification.

LEAN's Petition raises several broad objections to the Dow Permit Modification: (1) The offset credits are not valid because the baseline used to calculate the credits was flawed; (2) The offset credits are not valid because the emission reductions at issue were not surplus to legally required reductions at the time of proposed use; (3) The offset credits are based on reductions previously used or relied upon by the State to meet SIP-approved 15% Rate of Progress requirements under Section 182(b)(1) of the Clean Air Act; (4) The offset credits were not identified with the specificity necessary to inform the public; (5) The offset credits are invalid because the Louisiana emission reduction credit bank has not required emission reductions to be surplus at the time of use and has not maintained an accurate accounting of credit balances; (6) LDEQ should confiscate the Louisiana emission reduction credit bank in implementing approved SIP contingency measures; (7) The VOC-4 emission reduction credit application is invalid because it fails to meet the requirements of the Louisiana emission reduction credit banking rules; (8) A new facility in the Baton Rouge nonattainment area will hinder reasonable further progress toward achieving the ozone standard; and (9) The Dow Permit Modification fails to meet the alternative sites analysis under Section 173(a)(5) of the Act and a similar analysis required under state law. EPA has performed an independent review of Petitioner's claims. Based on a review of all of the information before me, I hereby deny the Petition for the reasons set forth in this Order.

## IV. NONATTAINMENT NEW SOURCE REVIEW REQUIRES 70.72 TONS PER YEAR IN VOC OFFSETS FOR THE DOW ENGAGE PERMIT MODIFICATION

NNSR procedures apply to the construction of any new major stationary source or to any major modification at a major stationary source located within an area designated as nonattainment pursuant to the Clean Air Act if the source will emit a regulated pollutant for which it is major and for which the area is designated nonattainment. *See* L.A.C. 33:III.504.A. Pursuant to Section 107(d)(4)(A) of the Act, EPA designated the Baton Rouge area as nonattainment for the 1-hour ozone National Ambient Air Quality Standard (NAAQS) on November 6, 1991. *See* 56 *Fed. Reg.* 56694. Under Section 181(a)(1), the Baton Rouge area was classified by operation of law as a "serious" nonattainment area. *Id.*

The Dow facilities are in Plaquemine, Iberville Parish, Louisiana, which is in the Baton Rouge ozone nonattainment area. The proposed Dow Permit Modification sought authorization to add the Engage production facility to the Poly B, HPDE/EPDM plants, and Vector pilot facilities, which are collectively located within "Block 9" of the Dow Louisiana Operations Complex, and are currently operating under existing permit 2179-V1.[7] As such, LDEQ considered the permit modification related to the Dow Engage facility to be a modification of an existing major stationary source.

LDEQ further determined that the Dow Engage facility constituted a "major modification" subject to NNSR. A modification is major if, *inter alia,* there is "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emission increase, as listed in Table 1, of any regulated air pollutant for which the stationary

[7] Basis of Decision at 4.

source is already major." L.A.C. 33:III.504.G. That determination is made by first quantifying the increase of emissions of each regulated pollutant from the proposed project. If these emissions meet or exceed a trigger value stated in L.A.C. 33:III.504, Table 1, then for that particular pollutant, the source is required to perform a calculation of the net emissions increase over the contemporaneous period.[8] As the estimated emissions of VOCs from the Dow Engage project of 54.40 TPY exceeded the 5 TPY threshold, L.A.C. 33:III.504.A.4 dictated that Dow calculate the net emissions increase over the contemporaneous netting period. The contemporaneous netting period extended from January 1, 1999 until January 1, 2003, the time operations at the Dow Engage facility are to commence.[9] LDEQ concluded that the net emissions increase from the Dow facilities over the contemporaneous period was significant because it was greater than the 25 TPY threshold for major modifications (L.A.C. 33:III.504, Table 1), and thus construction of the Dow Engage project constituted a major modification with respect to NNSR procedures.[10] As a result, Dow was required to offset the increase in VOC emissions associated

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[8] A "net emissions increase" is defined as "any increase in actual emissions from a particular physical change or change in the method of operation at a stationary source and any other creditable increases and decreases in actual emissions at the major stationary source over a period including the calendar year of the proposed increase and the preceding four consecutive calendar years." L.A.C. 33:III.504.G.

[9] Dow Air Permit Briefing Sheet at 4.

[10] Petitioner alleges that Dow's permit application failed to provide information as to two emissions units in its netting analysis: an increase in VOC emissions of 119.91 TPY from its Power II plant and emissions from its Polyethylene C plant. Petition, Exhibit B at 5; *id.* Exhibit D at 15. In its response to comments, LDEQ explained that this omission was harmless error because "Dow's netting analysis already resulted in a net VOC increase above the 25 ton per year threshold. This project is a major modification and offsets are required." *Id.* Under LDEQ's NNSR rule (L.A.C. 33:III.504.D), the amount by which the net increase exceeds the 25 TPY threshold has no effect, other than to subject the source to NNSR requirements. Thus, EPA agrees that the omission from Dow's application was harmless error.

(continued...)

with the new Dow Engage project (54.40 TPY) at a ratio of 1.3:1 in the absence of LAER, as Dow chose to do.[11]

Having properly determined that the Dow Engage project was subject to NNSR, LDEQ then examined whether Dow had sufficient creditable reductions in actual VOC emissions at the Poly B facility (the VOC-4 project) to offset the 54.40 TPY in increases from the Engage project at the higher 1.3:1 ratio.[12] LDEQ found that between 1990 and 1992, Dow reduced actual VOC emissions at the Poly B facility, from 501.91 TPY (average actual emissions during 1989-1990) to a level less than the new collective allowable of 208.26 TPY.[13] As a result, LDEQ credited 248.49 TPY in reductions, representing the difference between the lesser of the average actual emissions for the Poly B facility (1989-1990) or permitted allowable limit.[14] Dow proposed to use 70.72 (54.40 x 1.3 offset ratio) TPY of VOC ERCs from the VOC-4 project. As will be discussed in greater detail below, EPA finds that at least 70.72 ERCs are valid and may be used to support the Dow Permit Modification.

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[10](...continued)
Petitioner's contention that reductions pre-dating 1995 were improperly included in the netting analysis appears to be an objection to the validity of the ERCs approved in the VOC-4 application (Supplement to Petition at 4 & note 3), and is addressed in Section IX. In any event, Dow did not include reductions pre-dating 1995 in its netting analysis. Dow Application Addendum at 4-5.

[11] Petitioner's contention that Dow has impermissibly omitted LAER is incorrect. *See* Petition, Exhibit B at 4, 6, 8. Consistent with Section 182(c)(8) of the Act, Louisiana does not require LAER if a source located in a serious nonattainment area offsets the VOC emissions increase at a ratio of 1.3:1. L.A.C. 33:III.504.D.3 & Table 1. As discussed in Section V, LDEQ properly concluded that Dow has a sufficient number of credits to meet the 1.3:1 offset ratio.

[12] Dow Air Permit Briefing Sheet at 4.

[13] Basis of Decision at 18.

[14] *Id.*

## V. EMISSION REDUCTION CREDITS UPON WHICH DOW RELIES TO OFFSET ENGAGE PROJECT EMISSION INCREASES WERE VALID

Petitioner raises several broad objections to the Dow Permit Modification based on the contention that the credited reductions were not surplus of all state and federal requirements. EPA finds that a sufficient number of credits from the VOC-4 application – specifically, the credits from the Powder Hopper (EIQ No. 3S) and Train 1 (EIQ No. 3T and 3U), totaling 78.08 TPY – were properly credited by LDEQ and support the Dow Permit Modification. LDEQ correctly determined the baseline to calculate creditable emission reductions as the lesser of actual or allowable emissions, and followed the proper methodology under state and federal law in determining creditable reductions from the VOC-4 project.

### A. The Emission Reductions Below the Previously Permitted, Grandfathered, or Actual Limits Were Not Required by the Clean Air Act

Emission reductions must be surplus, permanent, quantifiable, and enforceable. L.A.C. 33:III.607.F.1. "Surplus Emission Reductions" are defined in L.A.C. 33:III.605 as:

> emission reductions that are voluntarily created for an emissions unit and have not been required by any local, state or federal law, regulation, order, or requirement and are in excess of reductions used to demonstrate attainment of federal and state ambient air quality standards.

Thus, EPA evaluated whether at least 70.72 TPY of emission reductions from Dow's VOC-4 application were voluntarily created and not required by any local, state, or federal law, regulation, order, or requirement.

#### 1. The Baseline from which Reductions Were Credited Was Appropriate

In calculating ERCs for use as offsets, the appropriate "baseline" must first be set. EPA regulations require that each SIP provide that the baseline for determining credit for emission reductions is the lower of actual emissions or the allowable limit as reflected in the SIP or the

source's potential to emit. 40 C.F.R. § 51.165(a)(3)(i), (ii). Consistent therewith, Louisiana law provides the following procedures for calculating the quantity of creditable emission reductions:[15]

> (1) define the baseline period. The applicant shall first determine the two-year baseline period, as defined in LAC 33:III.605, over which the emission reductions are to be calculated;
>
> (2) quantify baseline emissions. The baseline emissions shall be calculated by determining the actual emissions during each year of the baseline period. The actual emissions for each year of the baseline period shall be averaged to determine the average baseline emission level;
>
> (3) calculate allowable future emissions. The applicant shall calculate the allowable future emissions for the source. The allowable emissions shall be based on the maximum emissions capacity of the source except that physical and operational limitations, including air pollution control equipment, restrictions on hours of operation or the type of material combusted, stored, or processed or other emission restrictions that will be included in a federally enforceable air permit or applicable rules and regulations may be considered in calculating the allowable future emissions; and
>
> (4) calculate the emission reduction credit. The ERC shall be calculated by subtracting the allowable future emissions from the baseline emission level.

L.A.C. 33:III.607.G. Thus, under state and federal regulations, the lower of actual emissions or the allowable limit, as reflected in the SIP or an approved air permit, would be the baseline for calculating creditable Dow reductions.

At the Poly B plant (the source of the VOC-4 project ERCs), Dow had grandfathered units "train 1" and "train 2." As "grandfathered facilities," under Louisiana law, the trains had no emission limit in a permit, nor were they in violation of any other emission limitation under the

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[15] LDEQ expressly incorporated 40 C.F.R. § 51.165 into the regulations in effect at the time the Dow Permit modification was issued. Specifically, L.A.C. 33:III.601.A provided that "this regulation [ERC banking regulations] does not alter new source review requirements nor exempt owners or operators from compliance with applicable preconstruction regulations in accord with 40 C.F.R. § 51.18 . . . [recodified as 40 C.F.R. § 51.165]."

Clean Air Act.[16] L.A.C. 33:III.501.A.6. Permit No. 160 (issued in 1973) authorized the construction of an additional train ("train 3") and Permit No. 437 (issued in 1975) authorized a fourth train ("train 4"). In 1984, Dow decommissioned and removed train 2 from service, but modernized train 1 and returned it to service in 1988.[17] In 1989, Dow submitted an application for the modernization of the Poly B facility and was issued Permit No. 2033 on September 20, 1990. Permit No. 2179, issued on February 16,1993, consolidated all emission points into a single permit. As authorized by Permit No. 2033, several projects were initiated at the Poly B Plant to reduce emissions: (1) The reaction medium was converted from hexane to isopentane; (2) The computer control system was upgraded: (3) A new chlorinated fluorocarbon refrigeration system was installed; and (4) API storage tanks were removed from service and replaced with a pressurized tank with vents being collected and controlled by a flare.[18] The reductions from the Poly B/VOC-4 project formed the basis for LDEQ's approval of 248.49 TPY in ERCs, from which Dow used 70.72 TPY to support the Dow Permit Modification.[19]

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[16] Where applicable, grandfathered units may be subject to reasonably available control technology (RACT) and reasonable further progress (RFP) requirements under Section 182 of the Act. EPA has not discerned any RACT or RFP requirements applicable to trains 1 and 2, and Petitioner has not alleged any.

[17] Public Comments Response Summary and Approval of VOC Emission Reduction Credits, Dow Application VOC-4, Part 70 Operating Permit Modification and Addition of Engage Train, at 2 (August 9, 2001) ("Public Comments Response Summary").

[18] Public Comments Response Summary at 2. LDEQ states at other points that Permit 2179, rather than Permit 2033, authorized construction of these projects. However, the correct reference is to Permit 2033. *Id.* at 2 ("It is Permit 2033 that authorized the modernization and debottlenecking project that resulted in the emission reductions"); *see also* Dow's VOC-4 Application at 1 (revised Oct. 20, 2000).

[19] Dow Air Permit Briefing Sheet at 4.

The Petitioner contends that Dow cannot receive credit for reducing emissions from Dow's proposed baseline of 559.56 TPY because Dow's emissions exceeded the limits specified in Permit 2033, the permit that authorized the reduction project. Petition, Exhibit D, at 2. However, Dow did not receive credit for exceeding the relevant permitted limits. First, as previously pointed out, some of the emissions points were permitted prior to the VOC-4 reduction project. For those Dow VOC-4 sources – such as the emissions from Train 1 (EIQ Nos. 3T and 3U) – LDEQ appropriately concluded that the baseline would be the lesser of actual emissions or the prior permit limit.[20] *See* 40 C.F.R. § 51.165(a)(3); *see also id.* 40 C.F.R. § 51.165(a)(1)(vi)(E)(i) (emphasizing in the netting context that the permit level to be used for comparison is "the *old* level of allowable emissions").

Additionally, some of the emissions limits which served as a baseline in calculating the creditable reductions – such as that for the Powder Hopper (EIQ No. 3S) – were based on that source's "grandfathered" status.[21] These grandfathered sources, by definition, would not have been subject to a prior permit limit. The baseline for the grandfathered emissions is actual emissions – the same as allowable emissions – before the emission reduction project. L.A.C. 33:III.501.A.6

[20] Basis of Decision at 18.

[21] Basis of Decision at 18.

### 2. LDEQ Applied Proper Methodology Under State and Federal Law in Determining Creditable Reductions

In applying Louisiana and federal law to calculate the baseline and creditable emission reductions, LDEQ concluded that the following Dow VOC-4 reductions were creditable:[22]

| Source | EIQ | 1989-1990 Baseline (Average) | Permitted Before VOC-4 Reduction Project | Permitted After VOC-4 Reduction Project | Creditable Change |
|---|---|---|---|---|---|
| Powder Hopper | 3S | 39.38 | grandfathered | 0.10 | -39.28 |
| AS-1A (Train 1) | 3T | 57.34 | 120.9 | 28.1 | -29.24 |
| AS-2A (Train 1) | 3U | 9.56 | 10.1 | 0 | -9.56 |
| AS-1B (Train 2) | 3V | 0 | 119.6 | NA | 0 |
| AS-2B (Train 2) | 3W | 0 | 2.37 | NA | 0 |
| AS-3 (Train 3) | 3Y | 95.48 | 84.5 | 61.3 | -23.2 |
| AS-4 (Train 4) | 3Z | 95.48 | 33.7 | 61.3 | 0 |
| D 1301Skim Tank | FO | 67.48 | grandfathered | 0 | -67.48 |
| D 2301 Skim Tank | FP | 67.48 | grandfathered | 0 | -67.48 |
| Flare | 3R | 25.4 | NA | 32.83 | +7.43 |
| Extruder Vent | LG | 1.31 | 2.0 | 0.2 | -1.11 |
| Fugitives | DJ | 43.0 | 43.0 | 24.43 | -18.57 |
| Totals | | 501.91 | 416.17 | 208.26 | -248.49 |

EPA finds that LDEQ generally applied the correct methodology in calculating creditable reductions in connection with these Dow VOC-4 sources. In each case, LDEQ compared average actual emissions over a two-year baseline period (1989-1990) to an allowable limit reflected in a permit, and used the lesser of those levels as the baseline for purposes of

[22] A more detailed version of this table is on page 18 of the Basis of Decision. "EIQ" refers to the emission unit number (*e.g.*, 3S, 3T) in an Emission Inventory Questionnaire.

determining creditable reductions. LDEQ then determined the allowable future emissions for the VOC-4 sources, based on maximum emissions capacities of the sources - taking into account physical and operational limitations or restrictions reflected in federally enforceable air permits or applicable rules and regulations. LDEQ then calculated the creditable emission reductions from the Dow VOC-4 application by subtracting the allowable future emissions from the baseline. Basis of Decision at 18.

In addition to correctly applying the methodology prescribed by L.A.C. 33:III.607.G., LDEQ also considered whether the reductions were "federally enforceable" (L.A.C. 33:III.504.F.3), as reflected in the "Permitted After" column of its analysis and accompanying footnotes thereto. *Id.* EPA finds that the current record clearly establishes that VOC reductions from the Powder Hopper (EIQ No. 3S) and Train 1 (EIQ No. 3T and 3U) are federally enforceable through limits established in the original version of Permit 2179, issued February 16, 1993. *See* Permit 2179, Air Quality Data Sheet at 3 (setting VOC limits of 0.10 TPY at 3S; 28.1 for 3T; and no authorization for 3U, which was subsumed by 3T). While the record is lacking information regarding whether certain reductions are federally enforceable at other emission points, or otherwise appropriately recognized as ERCs, EPA finds it unnecessary to reopen permit proceedings for further investigation on those emission points because a sufficient number of credits – 78.08 TPY from the Powder Hopper and Train 1 – have been identified by the Agency to support the 70.72 TPY in offsets needed for the Dow Permit Modification. However, EPA will work with LDEQ to determine whether the remaining reductions are federally enforceable and otherwise appropriately credited, and take appropriate action as necessary.

### B. Dow VOC-4 Reductions Were Surplus of Intervening State and Federal Laws, Including State Control Measures Implemented to Meet SIP Attainment Milestones

LEAN also alleges that some portion of the emission reductions were not creditable, either because they were not surplus of intervening state or federal law, or because they were "double dipped" or used more than once to justify emission increases or to attain a SIP attainment milestone. Petition, Exhibit A, at 2. After reviewing each of the control measures identified by Petitioner, EPA finds that those state control measures implementing the Act did not require the reductions that EPA finds support the Dow Permit Modification.

The control measures at issue are in the Louisiana SIP. Under Section 182(b) and (c) of the Act, the State was required to submit revisions to the SIP for the Baton Rouge area because of its nonattainment status. One required revision to the SIP was a 15% Rate of Progress (ROP) Plan for the Baton Rouge nonattainment area. Section 182(b)(1)(A)(i) of the Act mandated a 15 percent VOC emission reduction, net of growth, between 1990 and 1996 for each ozone nonattainment area classified as moderate or worse. Furthermore, Section 182(c)(2)(B)(i) required each State having one or more ozone nonattainment areas classified as serious or worse to submit a plan by November 15, 1994 that provides for additional actual VOC reductions from the 1990 baseline emissions of at least three percent per year, averaged over each consecutive three-year period, beginning six years after enactment of the Act, until the attainment date. This plan is referred to as the Post-1996 rate-of-progress (ROP) plan. *See* 57 *Fed. Reg.* 13498, 13509 (April 16, 1992). In order to satisfy this requirement, Louisiana's 15% ROP Plan SIP revision included certain control measures that would be implemented to meet the total required

reductions. EPA approved Louisiana's 15% ROP Plan on October 22, 1996. 61 *Fed. Reg.* 54737.

As Petitioner correctly points out, these 15% ROP control measures included the following: (1) vents to flare (L.A.C. 33:III.2115); (2) marine vapor recovery (L.A.C. 33:III.2108); (3) tank fitting controls (L.A.C. 33:III.2103); and (4) fugitive emission controls (L.A.C. 33:III.2122). Petition, Exhibit A, at 6. However, these state regulations did not require the VOC reductions from the Powder Hopper and Train 1. With one exception, they are not applicable to the VOC-4 project reductions at all. Public Comments Response Summary at 3-4.

The one exception is the reduction of fugitive emissions at emission point EIQ No. DJ. The record does not contain sufficient information to determine whether the VOC reductions at this emission point were required by the fugitive emission control regulation and claimed as ROP credit by the State. Because the ERCs from this emission point are not needed to support the Dow Permit Modification, however, it is unnecessary to resolve the issue at this time.

The Petitioner also contends that Dow sought credit for emission reductions otherwise required by the state regulation on "Limiting Volatile Organic Compound Emissions From Industrial Wastewater," L.A.C. 33:III.2153. However, the Dow offset credits do not rely on reductions required by this regulation, and, in fact, the reductions described by Petitioner – sought by Dow as credits in other applications not at issue in this permit – were not approved in the decision at issue. *See* Public Comments Response Summary at 4 ("Dow has applied for ERCs from several emission reduction projects. . . . Only ERC application VOC-4 is being acted on at this time.").

EPA has reviewed the reductions from the VOC-4 application approved by LDEQ, and found that at least 78.08 TPY of those 248.49 TPY ERCs are valid. This is enough to meet Dow's offset requirement of 70.72 TPY. Accordingly, EPA denies the claims in the Petition pertaining to whether the emission reduction credits relied upon in the Dow Permit Modification were surplus and creditable.

## VI. ADEQUACY OF PUBLIC PARTICIPATION

Petitioner contends that Dow cannot receive a permit without notifying the public of the specific 70.72 TPY in credits it is relying upon. Petition, Exhibit D at 10-11. The underlying issue raised by the Petition is whether the public participation requirements of the NNSR and Title V regulations have been met by Dow's designation of a larger pool of credits (369.7 TPY) in support of the permit where the permit relies on only a subset of that pool (70.72 TPY). LDEQ's position is that Dow's designation of a pool of 369.7 potential credits from one banking application satisfied public participation requirements. *See* Public Comments Response Summary at 5. EPA finds that, while the public notice and other information available to the public in this permit proceeding meet the minimal requirements of the Act and State regulations, LDEQ's response to Petitioner's comment on this issue was substantially inadequate. However, under the circumstances of this case, the lack of more specific information does not warrant reopening the permit for additional proceedings.

The requirement to provide public participation arises out of 40 C.F.R. § 51.161, which requires the State to provide public notice and an opportunity for public comment on an NSR permit application and the State's analysis. This public notice requirement is reflected in Louisiana's NNSR and banking regulations. *See* L.A.C. 33:III.531 (30 day notice and comment

period on Title V and NNSR permits); *id.* § 617 (30 day notice and comment period on LDEQ's preliminary decision to approve ERCs). Specifically, Louisiana law requires that the public notice include, in relevant part: "the activities involved in the permit action; the emissions change involved; [and contact information of an LDEQ employee] from whom additional information may be obtained, including copies of the proposed permit, the application, and all supporting materials." *Id.* § 531.A.3. The Dow public notice issued in May 2001 described those subjects, and, with respect to the underlying offsets, identified the VOC-4 banking application as the source of the offset credits, provided a general description of the emission reduction project that formed the basis of the VOC-4 application, and also explained how to obtain additional information. Thus, the public notice requirement was satisfied.

The provision of this information in the public notice and the application does not end the inquiry. An inherent component of any meaningful notice and opportunity for public comment is a response by the regulatory authority to significant comments. Thus, the State also has an obligation to respond to significant public comments and adequately explain the basis of its decision. *See In the Matter of Rubicon, Inc.,* 670 So. 2d 475, 483 (La. 1996) (decisions of LDEQ must include "response to all reasonable public comments")*; In Re Steel Dynamics, Inc.*, No. 99-4, 2000 WL 833062 (EPA EAB June 22, 2000) (discussing duty of permitting authorities to respond to significant comments in the PSD permitting context). Petitioner's comment to LDEQ stating that Dow had not identified which part of the proposed 369.7 credits it relied upon was significant because it highlighted the potential problem of whether the public would know which subset of the credits it should comment on – an issue particularly significant here because each of the emissions units in the VOC-4 project raised different factual and legal issues. EPA

agrees that, in order for the opportunity to comment to be meaningful, under a banking system such as LDEQ's, the permit application should identify the offsets relied upon by identifying and describing the specific emissions units and records supporting the creditability of the reductions. Without such an identification, the public, the State and EPA may be impeded in their ability to determine whether the requirements of the Act have been satisfied.[23] While the Dow VOC-4 application listed emission units and the creditable change from each (a more detailed version of the table in Section V), public participation was potentially hindered because neither Dow nor LDEQ identified which of those eight emission units were the source of the 70.72 TPY in offsets. *See* L.A.C. 33:III.504.C. (requiring a source to submit "all information necessary to [LDEQ] in order to perform any analysis or make any determination required" for the NNSR program).

EPA finds, however, that under the circumstances of this case, the lack of this information in Dow's application, and the lack of an adequate response to Petitioner's comment, do not warrant reopening the permit for further proceedings. As previously indicated, EPA has reviewed the emission reductions which comprised the VOC-4 project, and has concluded that a sufficient number of emission reductions were surplus at the time of use, and otherwise valid. During the periods for EPA and public review, EPA worked closely with LDEQ and Dow during this

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[23] A source could otherwise identify a pool of thousands of credits as supporting an offset requirement of only 70 TPY in ERCs, as the second public notice for the Dow Permit Modification did. The public, the State, and EPA should not bear the burden of reviewing the validity of all of those credits, not knowing which 70 ERCs the source would claim to rely on. *See* Dow Engage Permit Modification Public Notice, Feb. 1, 2001. Likewise, if some of the reductions are not federally enforceable as required by 42 U.S.C. § 7503(a)(5), or a subset of ERCs become invalid after they have been approved (*e.g.*, non-creditable under 42 U.S.C. §7503(c)(2)), the public, the State, and EPA would have no way of determining whether the source was attempting to rely on that subset. In contrast, under banking systems where the criteria for determining the adequacy of ERCs are clearly satisfied at the time of banking, there may be circumstances where it is not necessary to revisit those issues when the credits are used.

particular permitting process to ensure that a sufficient number of credits were valid to support the proposed permit modification.[24] Additionally, Petitioner did, in fact, comment on the Dow VOC-4 application. Thus, Dow's failure to identify which of the emission units provided the ERCs used as offsets does not undermine the finding that the offset requirement has been met in this particular case. Therefore, the Petition is denied as to this issue.

It bears emphasizing that if Dow later claims that the credits identified in this Order as valid and supporting the Dow Permit Modification are being used to support other permits, such information would constitute grounds for reopening this permit modification to determine whether a sufficient number of valid credits still exists to support it. Additionally, EPA will work with LDEQ in gathering additional information to determine whether the other credits are valid, and take appropriate action as necessary.

## VII. GENERAL OBJECTIONS TO IMPLEMENTATION OF THE LOUISIANA EMISSION REDUCTION CREDIT BANK DO NOT PERTAIN TO THE OFFSET CREDITS SUPPORTING THE DOW PERMIT MODIFICATION.

### A. LDEQ Applied the "Surplus When Used" Interpretation of Section 173 in Evaluating the Validity of the Offset Credits, and Louisiana has Revised its Emission Reduction Banking Law to Cure Alleged Deficiencies.

The Petitioner next contends that the Dow Permit Modification is invalid because it relied on banked emission reductions credits (ERCs), and the Louisiana emission reduction credit bank

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[24] As a result of this regulatory review, Dow attempted to provide more specificity as to the offsets relief upon. In contrast to its first application which identified 16 banking applications totaling 2,572 TPY in ERCs as providing the then-71.85 TPY in offsets needed, Dow's amended application specified a single banking application that requested approval of 369.7 TPY in ERCs. Additionally, Dow submitted extensive materials to EPA in support of its VOC-4 application, in response to EPA inquiries. *See* Letter from David Wesson, Dow, to Bonnie Braganza, EPA Region 6 (May 16, 2001). Thus, Dow believed that it had provided all of the information necessary to support its permit application.

violates federal law for several reasons. Petition, Exhibit A, at 2. First, Petitioner contends that Dow should not be entitled to use ERCs in the bank because Louisiana has allowed use of credits that were "surplus when generated," without regard to whether the credits are also "surplus when used" as required by federal law. While EPA agrees that LDEQ has not adhered to the "surplus when used" requirement in the past, EPA finds that LDEQ did follow this requirement in evaluating the validity of the credits at issue in the Dow Permit Modification, and rejects Petitioner's argument.

Section 173(c)(2) of the Clean Air Act provides that "emission reductions otherwise required by [the Act] shall not be creditable as emission reductions for purposes of any such offset requirement." EPA has interpreted this section of the Act as requiring the amount of available credits resulting from an emission reduction project to reflect current requirements of the Act. *See* In the Matter of Operating Permit, Formaldehyde Plant, Borden Chemical, Inc., Geismar, Ascension Parish, Louisiana, Permit 2631-V0, Petition No. 6-01-1, at 18-23 (Dec. 22, 2000) ("Borden Order").[25] In other words, the amount of emission reductions which are creditable may need to be discounted to reflect intervening requirements of the Act arising after the reductions have taken place, but before use of the credits. *Id.* at 20-21. For example, EPA has explained that "reductions required to meet [reasonably available control technology] RACT and acid rain reductions pursuant to statutory authority are not creditable for emission offsets." 57 *Fed. Reg.* at 13498, 13552 (April 16, 1992). As to banked ERCs, this means that the use of ERCs which were surplus some years ago when they were banked, cannot be used as valid offsets if they are

[25] A copy of the Borden Order is available through the "Title V Petition Database" on the EPA web page: http://www.epa.gov/region07/program/artd/title5/petitiondb/petitiondb.htm

no longer surplus at the time of use because of other regulations enacted after the ERCs were banked. *See* 65 *Fed. Reg.* 76576, 76569 (Dec. 7, 2000) (limited disapproval of Ventura County, California's State Implementation Plan for failing "to ensure that ERCs are surplus to all requirements of the Act at the time they are used, even though they were discounted at the time of generation and even though [Ventura County] has not relied on the ERCs for its attainment demonstration."). The purpose of this requirement is to help ensure that emission reductions required under current law are not undermined by the use of outdated offsets that were placed in a bank before the emission control requirements became effective. This requirement also ensures that emissions from major new and modified sources in nonattainment areas are truly offset, such that construction of such sources will result in reasonable further progress towards attainment under Section 173(a)(1)(A) of the Act. This goal, which is implemented by the specific requirement of Section 173(c)(2), would be undermined by the use of outdated offsets.

The state regulation that implements Section 173(c)(2) of the Act is L.A.C. 33:III.504.F.10. This regulation states that "emission reductions otherwise required by the Federal Clean Air Act or by state regulations shall not be credited for purposes of satisfying the offset requirement." EPA stated that this provision satisfied Section 173(c)(2) of the Act when it approved Louisiana's NNSR rules. 62 *Fed. Reg.* at 52949. Petitioner correctly points out that, since EPA's approval, LDEQ has stated that it "interprets and has applied its ERC banking rule to prohibit a reduction in the quantity of emission reduction credits," and instead only required that credits be surplus when generated to be eligible for offset crediting.[26] Thus, Petitioner concludes

[26] Letter from Bliss Higgins, Assistant Secretary of LDEQ to Carl Edlund, Director of Multimedia Planning and Permitting Division, U.S. EPA Region 6, at 1 (October 5, 2000).

that the bank may not be used until it is revised to comply with Section 173(c)(2). Petition, Exhibit D, at 10. Although not specifically stated, the Petitioner implies that air permits that relied on credits from the bank are therefore categorically objectionable, and all permits relying on them should be vetoed.

Petitioner's argument does not warrant an objection to the Dow Permit Modification for several reasons. First, general objections to the validity of the State's ERC banking system are not grounds for objecting to a permit unless the alleged deficiencies result in the failure of a specific permit to comply with applicable requirements. *See* 42 U.S.C. § 7661d(b) (limiting authority to grant petitions to circumstances where "the permit is not in compliance with requirements of the Act"); *see also* 40 C.F.R. § 70.8(d) (requiring "reasonable specificity" in objections to individual permits). There has been no showing that the offset credits supporting this permit modification were not "surplus when used." As previously discussed, EPA has reviewed the emission reductions credited from the VOC-4 project, and concluded that at least 78.08 TPY of emission reductions were surplus of all state and federal requirements at the time of use, and otherwise valid. Second, LDEQ stated that in reviewing the credits at issue, it applied the requirement that reductions must be "surplus when used": "The Department has reviewed Dow's application to ensure that all offsets used for the [NNSR] Program meet the current EPA policy. The ERCs identified in VOC-4 resulting from the Poly B modernization and debottlenecking project are 'surplus when used.'" Public Comments Response Summary at 4.

Additionally, the state has modified its rule to expressly incorporate the "surplus when used" interpretation, which should prevent the recurrence of this issue. Unlike the previous version, the new Louisiana banking rule expressly provides that emission reductions must be

adjusted to ensure that they are surplus to reductions required by stated and federal regulations at the time they are used:

> allowable emissions shall be adjusted to account for all new or revised federal or state regulations adopted that will require, or would have required, all or a portion of the emission reductions that comprise the ERC application or ERC (in the case of a partial use of a previously approved ERC) at the time a permit application that relies upon the reductions as offsets is deemed administratively complete.

L.A.C. 33:III.607.C.3. EPA approved the new banking rule as a SIP revision on September 27, 2002. 67 *Fed. Reg*. 60871.

**B. Louisiana ERC Bank Accounting Difficulties Do Not Pertain to these Credits**

Next, Petitioner contends that Dow cannot affirmatively demonstrate that the ERCs relied upon for the Dow Permit Modification are valid on the ground that LDEQ has been unable to keep an accurate accounting of its emission reduction credit bank. Petition, Exhibit A, at 5. In support of this contention, Petitioner cites to a judicial filing in which EPA acknowledges that it is difficult to access data documenting the amount of valid CAA offset credits in Louisiana's bank. *See* Petition, Exhibit C at 4 (citing Joint Motion for Voluntary Remand, *LEAN v. U.S. EPA*, 99-60570 (5th Cir. Oct. 9, 2000)). As an example of LDEQ's failure to accurately account for the balances in the Louisiana ERC bank, Petitioner cites to a document LDEQ submitted to the 19th Judicial District Court entitled "VOC Emissions Reductions Credits Banked in the Baton Rouge Ozone Nonattainment Area as of March 13, 2000." In that document, LDEQ certified a total of 6,787.2 emission reduction credits as available for use, including 4,051.7 from Dow based on other banking applications not at issue here. According to the Petitioner, one day before LDEQ's submission of that document to the court, there were no Dow credits listed in the Louisiana emission reduction database. Petition, Exhibit A, at 4.

These claims of general accounting difficulties in LDEQ's administration of the ERC bank do not provide a basis for objecting to the Dow Permit Modification at issue, as there has been no showing that the credits supporting this particular permit are invalid. As previously discussed, EPA has reviewed the emission reductions which comprised the VOC-4 project, and has concluded that a sufficient number of emission reductions were surplus at time of use, and otherwise valid. Therefore, the EPA denies these claims in the Petition.

## VIII. THE DOW ERCS WERE NOT CONFISCATED

Petitioner next contends that "until contingency measures are implemented, no transactions should be allowed that affect the Louisiana Emission Reduction Credit Bank." Petition, Exhibit D, at 10-11. The EPA disagrees. Under Sections 172(c)(9) and 182(c)(9) of the Act, many states, including Louisiana, were required to submit contingency measures to be implemented if reasonable further progress toward attainment is not achieved or if the air quality standard is not attained by the applicable attainment date. Louisiana elected to develop a contingency measure plan using emission reduction credits held in escrow in the Louisiana ERC bank, established pursuant to Louisiana's Emission Banking Rule, set forth in Title 33 of the Louisiana Administrative Code, Chapter 6. EPA approved that designation as part of the Louisiana SIP in a rulemaking promulgated on July 2, 1999. 64 *Fed. Reg.* 35930. Pursuant to a settlement of litigation challenging that approval, the State submitted a revised contingency measure to EPA, which EPA recently approved.[27] 67 *Fed. Reg.* 60590 (September 26, 2002).

[27] The revised contingency measure consists of emission reductions from the Trunkline Gas Company - Patterson Compressor Station in St. Mary Parish.

While Section 172(c)(9) of the Act does provide that contingency measures should take effect without further action by the State or the Administrator, it also requires that the specific contingency measures be undertaken "if the area fails to make reasonable further progress, or to attain the national primary ambient air quality standard by the attainment date applicable under this part." At the time LDEQ granted the Dow Permit Modification, the EPA had taken no final action indicating that the area had failed to make RFP or to attain the National Ambient Air Quality Standards (NAAQS). Thus, the Dow VOC-4 credits were available for use at that time. Additionally, while EPA subsequently issued a final action finding that the Baton Rouge area did not attain the 1-hour ozone NAAQS by its attainment date of November 15, 1999, that action had a delayed effective date of October 4, 2002, and was withdrawn on September 24, 2002, when EPA granted an extension of the 1999 attainment date to November 15, 2005. *See* 67 *Fed. Reg.* 50391 (August 2, 2002); 67 *Fed. Reg*. 61786 (October 2, 2002). Therefore, EPA's finding that the Baton Rouge area did not attain the ozone NAAQS by its attainment date never took effect. Because the credits in the Louisiana ERC bank have not been confiscated to implement the contingency measure, this claim is rejected.

## IX. THE EMISSION REDUCTION CREDIT APPLICATION UPON WHICH THE DOW PERMIT MODIFICATION RELIED MEETS THE REQUIREMENTS OF THE LOUISIANA EMISSION REDUCTION BANKING RULES.

Petitioner next broadly argues that the VOC-4 reductions relied upon in the Dow Permit Modification fail to meet the procedural requirements of the Louisiana ERC banking regulations, and are therefore invalid. Petition, Exhibit A, at 9-10. Petitioner alleges that LDEQ improperly set the five-year baseline period from 1987 to 1992, arguing that the period should be June 1989 to June 1994, based on the presumption that the emission reductions occurred in June 1994.

Louisiana law provides that creditable emissions reductions come from a prescribed "baseline period," defined as "a time period of at least two consecutive years within the five years immediately preceding the date the emission reduction occurred." L.A.C. 33:III.605. In its response to comments, LDEQ states that the emission reductions which formed the basis for the Dow VOC-4 application were completed in 1991 and 1992, rather than 1994 as Petitioner alleges. *See* Public Comments Response Summary at 2. Information provided to EPA supports LDEQ's finding as to the 78.08 TPY in reductions from Powder Hopper and Train 1, discussed above in Section V. *See* Letter from David Wesson, Dow, to Bonnie Braganza, EPA, at 2 (May 16, 2001) (stating that the solvent change reductions were completed in the first quarter of 1992); Letter from Catherine Bilello, Dow, to Gus von Bodungen, LDEQ (March 19, 1992) (stating that train 1 reductions were complete); Permit No. 2179, at 1 (indicating that the modernization at Poly B, including the Powder Hopper and Train 1, had been completed at some time prior to issuance of the permit on February 16, 1993, with the exception of items listed therein). Accordingly EPA accepts LDEQ's finding that the baseline period was properly set as 1987-1992 for the Powder Hopper and Train 1. Information reviewed by EPA indicates that Dow used data from 1989 and 1990, well within the baseline period of 1987-1992.[28]

Petitioner also contends that the VOC-4 reductions cannot be used in a "netting" analysis of a Part 70 permit modification because the reductions occurred more than five years prior to the date of the application for the permit modification, March 17, 2000. Petition, Exhibit B, at 2; Supplement to Petition at 4 & note 3. Petitioner appears to confuse the rules on netting credits

[28] Assuming *arguendo* that Dow relied on data dating as far back as April 1987, as Petitioner alleges, this data also falls within the baseline period.

with the rules on offset credits. The Louisiana ERC banking rules in effect at the time LDEQ acted on the Dow Permit Modification placed this five-year limitation only on netting credits, not offset credits. L.A.C. 33:III.621.A. Dow used the VOC-4 credits as offset credits.

Additionally, Dow met the timing requirements for banking its VOC-4 credits. The banking rules further provided that "all bank balance sheets for banking emission reductions where the emission reductions occurred prior to adoption of the final rule shall be submitted within six months after adoption of the final rule." L.A.C. 33:III.615.B. The Dow VOC-4 reductions occurred in March 1992. Louisiana finalized its emission banking rule on August 20, 1994. Dow submitted the VOC-4 ERC application to LDEQ within six months thereof, on February 20, 1995.[29]

Petitioner further argues that because the ERC certificate was not issued prior to Dow's request to use them, the ERCs may not support the permit modification. Petition, Exhibit B, at 2. The regulations cited by Petitioner, L.A.C. 33:III.605 and 607, do not contain a requirement that the ERCs be approved in advance of permit issuance. Additionally, as noted before, LDEQ approved the ERCs from the VOC-4 application the same date that it approved the Dow Permit Modification. Thus, there were approved ERCs available for use at the time the Dow Permit Modification was approved. This claim in the Petition is denied.

## X. REASONABLE FURTHER PROGRESS

The Petitioner also challenges the Dow Permit Modification on the ground that a new facility in the Baton Rouge area will hinder reasonable further progress (RFP) in achieving the National Ambient Air Quality Standard (NAAQS) for ozone, and contends that the Dow Permit

[29] Public Comments Response Summary at 3.

Modification should be denied until such time as LDEQ has provided for reductions sufficient to achieve such progress. Petition, Exhibit B, at 2; *id.* Exhibit D, at 12.

For the reasons discussed below, Petitioner's claim is denied. The RFP requirements of Sections 172 and 182 of the Act are not "applicable requirements" as to a source receiving an operating permit under Title V. Furthermore, the Act does not provide for the remedy the Petitioner seeks, namely, a freezing of air permits until the ozone standard is achieved. Regarding the RFP requirement of Section 173, Petitioner is correct that this requirement does run to individual sources that are subject to NNSR. However, Dow satisfied this requirement by obtaining the requisite offset credits.

**A. Reasonable Further Progress under Sections 172 and 182**

As previously stated, to justify an objection by EPA to a Title V permit pursuant to Section 505(b)(2) of the Act, the Petitioner must demonstrate that the permit is not in compliance with the applicable requirements of the Act, including the requirements of the Louisiana SIP. However, the general issue of whether the Dow Permit Modification should be denied on the ground that the Baton Rouge ozone nonattainment area is not making RFP under Sections 172 or 182 cannot be addressed here because the requirement that the State develop and submit a SIP that provides for RFP is not, as to any individual source, an applicable requirement of the Act for purposes of an NNSR permit or an operating permit issued under Title V.[30] Borden Order at 30.

[30] The Act defines RFP as "such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date." 42 U.S.C. § 7501(1).

Under the Act, States are required to develop SIPs for nonattainment areas that provide a pathway for achieving the NAAQS. The SIP generally will include planning documents, such as an RFP demonstration applicable to the state. *See* 42 U.S.C. §§ 7502(c)(2) and 7511a(c)(2)(B). The SIP will also include control requirements that are directly applicable to sources. Although such control requirements may be adopted by the state to satisfy the state's planning obligation to achieve RFP, this does not change the fact that planning obligations such as the RFP provisions of Sections 172 and 182 are requirements applicable to States, not sources. These requirements do not have any direct application to sources even where the RFP plan or attainment plan relies on specific control requirements that are applicable to the source and that are adopted into the SIP. Therefore, it is only the underlying control requirements, if any, not the general obligation of the State to achieve a certain level of reduction, that can be reflected in (and are, therefore enforceable under) a source-specific operating permit issued under Title V. Since planning obligations of the State, such as the requirements of Section 172 and 182, cannot be directly implemented by a specific source through a Title V permit, they are not applicable requirements under Title V of the Act. 57 *Fed. Reg.* 32250, 32276 (July 21, 1992) (regarding relationship between SIPs and Title V, noting that "[u]nder the Act, NAAQS implementation is a requirement imposed on States in the SIP; it is not imposed directly on a source"); 40 C.F.R. § 70.2 (definition of applicable requirement).

In sum, the Petitioner's request that EPA object to the Dow Permit Modification on these grounds is denied because the general issue of whether the Baton Rouge ozone nonattainment area as a whole is making RFP toward attainment in accordance with Sections 172 or 182 of the

Act is a SIP obligation applicable to the State, not to individual sources. As such, it is not an "applicable requirement" for a source receiving an operating permit under a Title V program.

**B. Reasonable Further Progress under Section 173**

The Petitioner also contends that under Section 173(a)(1)(A) of the Act, Title V permits cannot be issued unless sufficient offsetting emissions reductions have been obtained to achieve RFP. The Petitioner argues that the Dow Permit Modification could not be issued because total emissions in Baton Rouge were not sufficiently offset to "present reasonable further progress toward attainment." Petition, Exhibit B, at 2; Petition, Exhibit D, at 12.

EPA's long-standing interpretation is that the RFP requirement of Section 173(a)(1)(A) of the Act is satisfied as long as the source meets the more specific offset requirements established under Section 182(c) of the Act. *See* Borden Order at 33-34. Specifically, EPA stated in 1992 that the Agency:

> interprets section 173(a)(1)(A) to ratify current EPA regulations requiring the emissions baseline for offset purposes be calculated in a manner consistent with the emission baseline used to demonstrate RFP. Regarding the amount that is necessary to show noninterference with RFP, EPA will presume that so long as a new source obtains offsets in an amount equal to or greater than the amount specified in the applicable offset ratio..., the new source will represent RFP.

57 *Fed. Reg.* at 13552. This interpretation is consistent with the legislative history explaining that the specific emission reductions required under Section 182 of the Act provide "a concrete translation of how much an area must do to achieve 'reasonable further progress.'" House Report No. 101-490(I) at 236.

As previously discussed, Dow submitted the offset credits at the 1.3:1 ratio required for a serious ozone nonattainment area consistent with Section 182(c)(8), and EPA finds that a

sufficient number of these credits are valid to satisfy Dow's offset requirement. Accordingly, the Petitioner's objection to the Dow Permit Modification on this ground is denied.

## XI. THE ALTERNATIVE SITES ANALYSIS SUPPORTING THE DOW PERMIT MODIFICATION SATISFIED FEDERAL AND STATE REQUIREMENTS

The Petitioner alleges that the Dow Permit Modification failed to comply with the requirements of the Louisiana Constitution because it contained a flawed analysis of the state "IT" requirements and an inadequate alternative sites analysis under Section 173(a)(5).[31] Petition, Exhibit B, at 3-5, 9. At the outset, it bears noting that Petitioner's allegations fail to take into account the Application Addendum submitted by Dow on or about May 1, 2001 (after Petitioner's comment on this issue) which sets forth a comprehensive alternative sites/IT analysis and provides further information in support of its application to address many of Petitioner's comments.[32] EPA will address those issues that were not mooted by the Addendum.

### A. The Alternative Sites Analysis Required by Section 173(a)(5) of the Act, as Implemented in Louisiana

The Clean Air Act requires states to observe certain requirements in developing state implementations plans (SIPs). Section 173(a)(5) requires that the NNSR provisions in the SIP include, *inter alia*, provisions requiring that the state has determined that:

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[31] The Louisiana Supreme Court articulated its interpretation of the requirement of Article IX, Section 1 of the Louisiana Constitution that the natural resources of the state, including air and water, be "protected, conserved, and replenished insofar as possible," in *Save Ourselves, Inc. v. Environmental Control Commission*, 452 So. 2d 1152 (La. 1984). That interpretation provided that the Secretary of LDEQ, as primary public trustee of the environment, must examine the interrelationship of constitutional, statutory, and regulatory requirements, rather than simply its own regulations, in making permitting determinations. This balancing of factors is referred to as the IT analysis, named after the IT Corporation at issue in *Save Ourselves.*

[32] Based on information in the Addendum, public notice with more detailed information in support of the proposed Dow Permit Modification was published in May 2001.

> an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction or modification.

This requirement is referred to as the alternative sites analysis.

On October 10, 1997, EPA approved the State of Louisiana's NNSR program. In so doing, EPA found that L.A.C. 33:III.504.D.7 was consistent with Section 173(a)(5). 62 *Fed. Reg.* 52948, 52949 (October 10, 1997).[33] EPA has also found that the IT framework, established by Louisiana court decisions for a broader category of LDEQ actions, also satisfies Section 173(a)(5) of the Act. *See* Borden Order at 36-38.

Under the IT requirements, LDEQ must address whether:

1. the potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible;

2. a cost benefit analysis of the environment impact costs balanced against the social and economic benefits of the project demonstrate that the latter outweighs the former;

3. there are alternative projects or alternative sites or mitigating measures which would offer more protection to the environment than the proposed project without unduly curtailing nonenvironmental benefits to the extent applicable.

*In the Matter of Rubicon Inc.*, 670 So.2d 475, 483 (La. App. 1 Cir. 1996). Thus, we must evaluate whether LDEQ adequately evaluated and balanced each of these factors consistent with the statutory and regulatory framework.

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[33] L.A.C. 33:III.504.D.7 provides that "as a condition for issuing a permit to construct a major stationary source or major modification in a nonattainment area, the public record must contain an analysis, provided by the applicant, of alternate sites, sizes, production processes, and environmental control techniques and demonstrate that the benefits of locating the source in a nonattainment area significantly outweigh the environmental and social costs imposed."

### B. LDEQ's Alternatives Analysis Satisfies Section 173(a)(5) of the Act

The Petitioner alleges that the IT analysis is flawed because Dow failed to properly conduct a site assessment, weigh environmental impacts of the Engage project against its social and economic benefit, and consider the adverse environmental effects of the Engage project. Petition, Exhibit B at 3-4. In support of its claim, Petitioner contends that Dow did not consider whether potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible. *Id.* at 4. In addition, Petitioner contends that Dow neither provided a basis for LDEQ's conclusion that social and economic benefits outweighed impact costs, nor provided a consideration of alternative sites. *Id.* at 5. EPA disagrees. LDEQ's Basis of Decision shows that it reasonably determined that the IT requirements had been met. The three IT requirements and a summary of LDEQ's analysis of the requirements are as follows.

#### 1. Whether the potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible.

As part of the permitting process, LDEQ considered potential and real adverse environmental impacts of pollutant emissions from the Dow Permit Modification to ensure that they are minimized. Basis of Decision at 9-11. Although Dow's original application did not provide information regarding chemicals and hazardous wastes at the Engage facility, pathways of exposure, and other related matters, as Petitioner contends (Petition, Exhibit B, at 4-5), this flaw was cured by Dow's submission of supplemental information providing this information. S*ee* Dow Title V Application Addendum, Appendix B, at 1-6 (expanded environmental effects analysis).

With this additional information, LDEQ considered emission controls, equipment, design standards, construction practices and training in analyzing this requirement. LDEQ found that the

planned emission control technology for the proposed facility would meet the requirements of all applicable regulations and defined permit conditions. Basis of Decision at 9. Planned emission control technology includes venting emissions from new storage tanks, sieves, marine unloading and vacuum area vents to existing flares for combustion. LDEQ also found that using existing support facilities will further mitigate adverse environmental impacts. *Id.* In addition, LDEQ found that the Dow Permit Modification will not have an impact on the wastewater treatment system, and the facility will continue to operate under an existing National Pollutant Discharge Elimination System (NPDES) permit.

Solid and hazardous waste generated at the Dow Engage facility will be stored in the plants and transported internally to a rotary kiln incinerator. Incinerator ash will be disposed of in a hazardous waste landfill at the Dow facility. Any solid waste produced by the project will be disposed of in accordance with all applicable federal, state, and local laws and regulations in a solid waste landfill at the Dow facility. Potential impacts on other environmental receptors, such as soils and wetlands, are expected to be minimal. *Id.* at 10.

**2. Whether a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the project demonstrate that the latter outweighs the former.**

LDEQ found that the social and economic benefits of the project will greatly outweigh its environmental impact costs. *Id.* at 11; *see also* Dow Title V Application Addendum, Appendix B, at 6-11. LDEQ concluded that Dow will meet the primary and secondary NAAQS and the Louisiana Ambient Air Standards (AAS) for toxics at the property line and will not cause air quality impacts that would adversely affect human health or the environment in Iberville or West Baton Rouge Parish.

LDEQ noted that the proposed facility will be located in an area of property zoned for industrial development and previously used for industrial purposes. LDEQ also found that:

> construction and operation of the new plant will create 25 permanent on-site full time manufacturing process jobs and more than 25 additional permanent full time contractor jobs associated with packaging, storing, and transporting the product material. The expected annual payroll and income tax base is $2.5 million for all of these jobs. Dow proposes to hire as many of its employees from residences as close to the facility as possible according their hiring policy . . . The project will increase personal income for Louisiana residents and increase tax revenues for Iberville and West Baton Rouge Parishes, surrounding parishes and the state of Louisiana. These benefits are major, significant, and tangible. They far outweigh the minor environmental impact costs by the proposed modification.

Basis of Decision at 12.

**3. Whether there are alternative projects or alternative sites or mitigating measures which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits to the extent applicable.**

Contrary to Petitioner's contention that other locations were not considered, LDEQ determined that the Dow Chemical Company had the following potential plant sites within North America: Plaquemine, LA; Freeport, TX; Beaumont, TX; Deepwater, NJ; Louisville, KY; LaPlace, LA; and Wilmington, DE. Basis of Decision at 5; *see also* Dow Title V Application Addendum, Appendix B, at 15-16. All sites were considered, and Plaquemine and Freeport were determined to be the best choices. Plaquemine and Freeport are the only two sites in the United States where the new project can be integrated into existing Dow Chemical sites. Dow has ethylene production facilities and personnel to support the technology. At other sites, non-Dow ethylene would have to be imported and has higher levels of impurities, such as carbon dioxide, which could deactivate the process catalyst. Basis of Decision at 5.

The Plaquemine and Freeport sites were compared with one another based on the following criteria: (1) ability to achieve Dow performance standards; (2) ability to minimize environmental impacts, including Environmental Justice; (3) proximity to Dow facilities, to maximize synergy of services and personnel; (4) qualified local workforce; (5) adequate space available to allow optimal layout of the new facility; (6) supply of high quality ethylene at competitive pricing; and (7) access to other critical raw materials, supplies, and utilities. LDEQ concluded that Plaquemine was preferable due to: (1) the ability to share laboratory facilities with other DuPont Dow units; (2) the existing packaging building and other DuPont Dow units can share new control room and office space; and (3) less cost for piping to connect utilities at the Plaquemine facility. In addition, Freeport is in a "severe" nonattainment area for ozone, and potentially involves environmentally sensitive habitat. Finally, construction at any other site would involve construction of a new independent "stand alone" facility. *Id.* at 6.

LDEQ considered the history of violations and compliance for the facility and the qualifications of the applicant, in accordance with Louisiana law, and concluded that neither is such that it demonstrated to LDEQ an unwillingness or inability to achieve and maintain compliance with the permit for which the application is being made. La.R.S. 30:2014.A(4) and 30:2014.2. For those reasons, LDEQ concluded that there are no alternative sites or projects that would offer more protection to the environment than the proposed Dow Plaquemine site without curtailing nonenvironmental benefits. Basis of Decision at 6.

The alternative sites/IT analysis supporting the Dow Permit Modification satisfies the statutory requirements of Section 173(a)(5) of the Act. In short, LDEQ reasonably concluded that the site selected by Dow and the controls imposed by LDEQ under the Title V permit

maximize the social, economic and environmental benefits to the local community while minimizing the potential adverse impacts. As a result, the petition to object to the Dow Permit Modification on this ground is denied.

## XII. CONCLUSION

For the reasons set forth above and pursuant to Section 505(b) of the Act and 40 C.F.R. § 70.8(d), I deny the petition submitted by the Louisiana Environmental Action Network.

Date: 10/30/02

/s/
Christine Todd Whitman
Administrator