BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:	)	
OPERATING PERMIT CHLOROPRENE UNIT DUPONT DOW ELASTOMERS, L.L.C. LA PLACE, ST. JOHN THE BAPTIST PARISH, LOUISIANA	)	PETITION NO. 6-03-02
Part 70 Operating Permit 3000-VO	)	

ORDER DENYING PETITION FOR OBJECTION TO PERMIT

I. INTRODUCTION

On May 7, 2002, the Louisiana Department of Environmental Quality ("LDEQ") issued DuPont Dow Elastomers, L.L.C., ("DuPont Dow") a state operating permit for its Chloroprene Manufacturing Unit at its facility in La Place, St. John the Baptist Parish, Louisiana, pursuant to title V of the Clean Air Act, 42 U.S.C. §§ 7661-7661f, and its implementing regulations. *See* Permit 3000-VO ("title V Permit" or "permit"). The permit also constitutes a state preconstruction permit which authorized the replacement of a reactor system pursuant to the State's minor new source review program. The Louisiana Environmental Action Network ("Petitioner" or "LEAN") has requested that EPA object to the issuance of the title V permit pursuant to Section 505(b) of the Act and 40 C.F.R. § 70.8(d). Petition to Object (Nov. 13, 2001). Petitioner alleges that the permit is deficient on the ground that the emission limitations applicable to halogenated vent streams under 40 C.F.R. part 63, subpart G are not correctly determined in the permit.

II. STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act calls upon each state to develop and submit to EPA an operating permit program intended to meet the requirements of CAA title V. The State of Louisiana has a fully approved operating permit program which can be found at 40 C.F.R. part 70 Appendix A. Under these rules, 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 as are necessary to assure compliance with applicable requirements of the Act, including the applicable implementation plan. *See* CAA §§ 502(a) and 504(a).

The title V operating permit program does not generally impose new substantive air quality control requirements (referred to as "applicable requirements") on sources. The program does require permits to contain monitoring, recordkeeping, reporting, and other conditions necessary to assure compliance by sources with existing applicable requirements. *See* 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 permit program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to a facility's emission units in a single document, therefore enhancing compliance with the requirements of the Act.

Pursuant to Clean Air Act § 505(b)(2) and 40 C.F.R. § 70.8(d), if the EPA does not object to a facility's draft title V operating permit on its own initiative, members of the public may petition the Administrator, within 60 days of the expiration of EPA's 45-day review period, to object to the proposed permit. These sections also provide that a petition must be based only on

objections to the permit that were raised with reasonable specificity during the public comment period (unless the petitioner demonstrates that it was impracticable to raise such objections within that period or the grounds for such objections arose after that period).

Section 505(b)(2) of the Act requires the Administrator to issue a permit objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the Act, including the requirements of 40 C.F.R. part 70 and the applicable implementation plan. In this case, the applicable requirements include 40 C.F.R. part 63, subpart G, one of the hazardous air pollutant ("HAP") emission standards promulgated pursuant to Section 112(d) of the Act. If, in responding to a petition, EPA objects to a permit that has already been issued, EPA or the permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures in 40 C.F.R. § 70.7(g)(4) or (5)(i) and (ii) for reopening a permit for cause. A petition for review does not stay the effectiveness of the permit or its requirements if the permit was issued after the expiration of EPA's 45-day review period. *See* CAA § 505 (b)(2)-(b)(3); 40 C.F.R § 70.8(d).

III. BACKGROUND

On October 11, 1996, DuPont Dow submitted an application requesting a Part 70 operating permit for its Chloroprene Unit at the LaPlace, Louisiana facility. On November 14, 2000, DuPont Dow submitted a revision to the application to request authorization to replace the reactor system at the Chloroprene Unit with a new system that would have a higher conversion

rate and generate less waste.[1] The total amount of chloroprene produced per year would not increase due to the process modification. Title V Permit at 2.

The Chloroprene Unit has been in operation since before 1969. At the time of the application, it was covered by a state permit, Permit No. 3000, and several modifications thereto. The Chloroprene Unit is a Synthetic Organic Chemical Manufacturing Industry ("SOCMI") facility and is a major source of regulated toxic air pollutants covered by, *inter alia*, 40 C.F.R. part 63, subpart G and L.A.C. 33:III.Chapter 51.

LDEQ published the proposed permit for public comment on August 25, 2001. LEAN submitted comments requesting, among other things, that additional information be made available to the public and that the comment period be extended. LDEQ published a second public notice announcing extension of the public comment period through December 5, 2001, and the scheduling of a public hearing on the same date.[2] LEAN submitted additional comments during the extended comment period. On May 7, 2002, LDEQ issued the final title V and preconstruction permit.

The emissions unit at issue in LEAN's petition is the CD Vent Condenser (Emission Point No. 1110-4), which has a permitted emission rate for chloroprene of 18.3 tpy. *See* Petition at 1, 4; *see also* Title V Permit, Emission Inventory Questionnaire for No. 1110-4. LDEQ determined that the chloroprene emissions constituted a halogenated vent stream subject to 40 C.F.R. part 63, subpart G and classified it as a "Group 2" process vent based on the equation and requirements in

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[1] DuPont Dow is awaiting issuance of a patent for the new reactor system before replacing the existing reactors. Title V Permit at 2.

[2] The hearing was adjourned when no public attendees were present.

40 C.F.R. § 63.115(d)(3) and the applicable coefficients listed in Table 1 to Subpart G. A Group 2 process vent is subject to the monitoring and reporting requirements set forth in 40 C.F.R. § 63.113(d) and (e), rather than the more stringent "Group 1" control requirements in § 63.113(a).

LEAN objects to the permit on the ground that LDEQ has misinterpreted 40 C.F.R. § 63.115(d)(3) and Table 1, and thus set the requirements for halogenated vent streams based on an incorrect Group 2 classification. Although LEAN styles its petition as raising five objections, all of the objections raise essentially this same issue. LEAN raised this issue in letters to EPA's Region 6 office and the Office of Enforcement and Compliance Assurance ("OECA") in 1996,[3] and received responses from both offices explaining the Agency's interpretation of 40 C.F.R. § 63.115(d)(3).[4] LEAN's five objections are: (1) LDEQ's interpretation of § 63.115 is inconsistent with the Clean Air Act's goal of protecting public health; (2) LDEQ's interpretation would result in increased discharges of halogenated organic HAPs, posing risks to human health;[5] (3) LDEQ's interpretation results in greater controls of nonhalogenated vent streams relative to halogenated vent streams; (4) a rational interpretation of § 63.115 must result in a Group 1 classification and the accompanying control requirements; and (5) LDEQ has misinterpreted §

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[3] *See* Letter from M. Orr, LEAN, to S. Herman, EPA OECA (Aug. 29, 1996); Letter from M. Orr, to J. Saginaw, EPA Region 6 (Aug. 19, 1996).

[4] *See* Letter from E. Stanley, EPA Office of Compliance, to M. Orr, LEAN (May 5, 1997) ("OECA Response Letter"); Letter from J. Luehrs, EPA Region 6, to M. Orr (Oct. 18, 1996) ("Region 6 Response Letter").

[5] Chloroprene is classified under State law as a Class II toxic air pollutant, and thus a "Suspected Human Carcinogen and Known or Suspected Human Reproductive Toxin." L.A.C. 33.III.5112 Table 51.1.

63.115. 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. EPA AGREES WITH LDEQ'S INTERPRETATION OF 40 C.F.R. § 63.115 AND FINDS IT CONSISTENT WITH SECTION 112 OF THE CLEAN AIR ACT.

Petitioner asserts that it is arbitrary and capricious for LDEQ to interpret 40 C.F.R. § 63.115 in a manner that allows halogenated organic HAPs such as chloroprene to avoid "Group 1" control requirements, and emphasizes the risk that this HAP poses to public health. However, the express terms of § 63.115(d)(3) govern and, in this case, result in a Group 2 classification. Petitioner's objection reflects a lack of understanding of the method by which air toxic standards are set under Section 112(d) of the Act.

Until 1990, the Clean Air Act required EPA to set risk-based air pollutant standards under Section 112 that would provide an "ample margin of safety to protect public health." *See Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855, 857 (D.C. Cir. 2001). To address problems with the implementation of risk-based regulation, Congress amended the Act in 1990 to require EPA to set technology-based standards, referred to as "maximum achievable control technology," or MACT standards. *Id.* at 858-59. EPA has implemented this requirement through a two-step process: the Agency first sets emission "floors" for HAP emissions from each source category, and then determines whether stricter standards are achievable in light of the factors listed in Section 112(d)(2), such as the cost-effectiveness of additional emissions reductions. *Id.* Congress recognized that risk to human health and the environment may remain under the technology-based approach, and reserved the development of standards where residual risk exists

for a second stage of regulation under Section 112(f), which is to occur "within 8 years" after Section 112(d) standards are promulgated.[6]

Subpart G, including 40 C.F.R. § 63.115, is a technology-based MACT standard promulgated under Section 112(d). Halogenated streams from process vents have certain treatment requirements according to whether they are determined to be a Group 1 or Group 2 stream under 40 C.F.R. § 63.111 and 40 C.F.R. § 63.115. The Group 1 or Group 2 classification depends, in part, on the Total Resource Effectiveness ("TRE") index value, which is determined by the formula in § 63.115.[7] The TRE index value serves as a measure of the supplemental total resource requirement per unit reduction of organic HAP emissions associated with the vent stream. *See* 40 C.F.R. § 63.111. In other words, "[t]he TRE is a decision tool that is used to determine if control of a process vent is required. The TRE is a standardized calculation that compares the annual cost of controlling a given vent stream with the emission reduction achieved." *See* OECA Response Letter at 2. A process vent is classified as Group 1 if the TRE value is less than or equal to 1.0, and is classified as Group 2 if the TRE value is greater than 1.0

Section 63.115(d)(3) sets forth the formula for calculating the TRE. It further provides that the applicable coefficients from Table 1 of Subpart G shall be used in the formula as follows:

> The owner or operator of a halogenated vent stream shall calculate the TRE index value based on the use of a *thermal incinerator with 0 percent heat recovery, and a scrubber*. The owner or operator shall use *the applicable coefficients in table 1 of this subpart for halogenated vent streams* located within existing sources. . . . .

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[6] EPA is in the process of conducting the Section 112(f) review for the Synthetic Organic Chemical Manufacturing Industry standards.

[7] The classification also depends on the vent stream flow rate and the total organic HAP concentration by volume. *See* 40 C.F.R. § 63.111. Those factors are not at issue in this petition.

Id. (emphasis added). Table 1 separates the appropriate coefficients for nonhalogenated vent streams from halogenated vent streams. The table, as it appears in the rule, is reprinted below, with the exception of the coefficients not at issue in this petition:

Type of Stream	Control Device Basis	Value of Coefficients			
		a	b	c	d
Nonhalogenated . .	Flare	1.935			
	Thermal Incinerator 0 Percent Heat Recovery	1.492			
	Thermal Incinerator 70 Percent Heat Recovery	2.519			
Halogenated	Thermal Incinerator and Scrubber	3.995			

The correct coefficient to use when determining the TRE for a halogenated stream is the coefficient listed under the heading "halogenated" for "Thermal Incinerator and Scrubber." *See* OECA Response Letter at 2; Region 6 Response Letter at 1. This result is required by § 63.115(d)(3) which directs the source to use the "applicable coefficients in table 1 . . . for halogenated vent streams" and to use the coefficient based on the use of a "thermal incinerator with 0 percent heat recovery, and a scrubber." There is only one entry for halogenated streams, and the control device basis listed for that stream, "Thermal Incinerator and Scrubber" plainly encompasses "a thermal incinerator with 0 percent heat recovery, and a scrubber."[8]

This reading is consistent with the other provisions in 40 C.F.R. § 63.115(d). Section 63.115(d)(3)(ii) addresses the calculation of TRE index values for nonhalogenated streams. This

[8] The Agency has previously explained that: "This equation for thermal incinerators with acid gas scrubbers was based on the 0 percent heat recovery scenario. This equation is based on the cost of controlling process vents using both a thermal incinerator and an acid gas scrubber used to remove acid gases created by combustion of the halogenated organic compound." OECA Response Letter at 3.

provision shows that the three coefficients listed in Table 1 for nonhalogenated streams are to be used in determining the TRE for nonhalogenated streams, contrary to LEAN's suggestion that nonhalogenated stream coefficients also apply to halogenated streams. Specifically, § 63.115(d)(3)(ii) provides: "The owner or operator of a nonhalogenated vent stream shall calculate the TRE index value based on the use of a flare, a thermal incinerator with 0 percent heat recovery, and a thermal incinerator with 70 percent heat recovery and shall select the lowest TRE index value." Under the entry for nonhalogenated streams, Table 1 contains coefficients for each of these three control device bases - a flare, a thermal incinerator with 0 percent heat recovery, and a thermal incinerator with 70 percent heat recovery.

LEAN, however, argues that the correct coefficient to use for halogenated vent streams is the one listed under "Nonhalogenated" for "thermal incinerator with 0 percent heat recovery." Petition at 6. LEAN contends that the table is ambiguous and that "the two descriptions in the middle of the table ("Thermal Incinerator 0% Heat Recovery" and "Thermal Incinerator 70% Heat Recovery") are not limited by 'Type of Stream'" and thus must be used for halogenated streams. To address the inconsistency this interpretation would create with the requirement to base the TRE index value on use of a "thermal incinerator. . . and a scrubber" (§ 63.115(d)(3)), LEAN contends that a source must then calculate the TRE a second time -- a "second post-treatment calculation of the TRE" -- using the "thermal incinerator and scrubber" coefficient listed for halogenated streams. Petition at 6.

EPA disagrees with LEAN's interpretation. The table is not ambiguous. Under "Type of Stream" - "Nonhalogenated", there are three controls listed under "Control Device Basis." Under any rational reading of the table, the TRE coefficients apply only to the entry they follow --

nonhalogenated streams. Moreover, the regulation does not provide for a second "post-treatment" calculation of a TRE, and doing a post-treatment calculation makes no sense. The TRE index value is a measure of the cost-effectiveness of the potentially applicable control device – for halogenated streams, a thermal incinerator and scrubber – and is used to determine whether the stream must be controlled.[9] OECA Response Letter at 3; Region 6 Response Letter at 1. The Agency's response to comments in the Subpart G rulemaking reiterates this point. BID, Volume I, at 2-11 ("The TRE index value is a measure of cost-effectiveness of control and the TRE calculation for halogenated streams is based on application of a combustor followed by a scrubber.") Thus, as the Agency has previously explained:

> it is not correct to suggest that the halogenated category "thermal incinerator and scrubber" is for determining the TRE of a vent stream coming *out* of an incinerator . . . The purpose of the acid gas scrubbers is to remove any acid gases created in the combustion of the process vent stream and is not intended to achieve greater control of emissions from the process vents.

OECA Response Letter at 4.

LEAN complains that the coefficient for halogenated streams is unreasonably high, making a Group 2 classification more likely and thus allowing halogenated organic HAPs to avoid the more stringent Group 1 control requirements. Petition at 7. However, it would be expected that the coefficient for halogenated streams is higher because halogenated streams would be subject to both a thermal incinerator and scrubber, in contrast to nonhalogenated streams, which would be

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[9] The Agency's response to comments for the Subpart G rule reflect the function of the TRE index value in more detail: "The economic feasibility of controlling a vent stream is determined by the TRE calculation. The EPA has attempted to identify streams with high or 'unreasonable' cost-effectiveness through the establishment of a Group 1/Group 2 classification based either on TRE or on low flow and low concentration levels." Docket No. A-90-19, Background Information Document ("BID"), Volume I at 2-22 (Mar. 9, 1994) (available at: http://www.epa.gov/ttn/caaa/t3/reports/honbid1.pdf).

subject to only a single control device (flare or incinerator). Two control devices predictably affect the cost-effectiveness rating, resulting in a higher TRE.

To summarize, 40 C.F.R. § 63.115(d)(3)(iii) clearly requires the TRE index value for halogenated vent streams to be determined based on the use of a thermal incinerator with 0 percent heat recovery and a scrubber. The correct coefficient is that listed in Table 1 under "Type of Stream - Halogenated," across from "thermal incinerator and scrubber" – that is, 3.995. This results in a TRE value greater than 1.0 for the CD Vent Condenser.[10] Therefore, it is a "Group 2 process vent" under § 63.111. As LEAN acknowledges, Group 2 process vents are subject to monitoring and reporting requirements under § 63.113(d), but not the control requirements of § 63.115(a). Additionally, the title V permit imposes conditions on the operation of the CD Vent Condenser as a recovery device to limit the chloroprene emissions and maintain a TRE index value above 1.0. Title V Permit, Specific Condition No. 2 & EIQ Sheet No. 1110-4.

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[10] LEAN concedes that use of the 3.995 coefficient yields a TRE index value greater than 1.0. *See* Petition at 7; Public Comments Response Summary for the Title V Permit, at 6 (TRE is 2.110). EPA has reviewed the TRE calculations and reached substantially the same TRE number. Using the equation in § 63.115(d), the TRE index value for the CD vent condenser is calculated as follows:

$TRE = (1/E_{hap}) [a + b(Q_s) + c(H_t) + d(E_{toc})$
$TRE = 0.5249 [3.9950 + 0.0039 - 0.0089 + 0.0018]$
$TRE = 2.095$

Coefficients from Table 1 to 40 C.F.R. part 63, subpart G: a = 3.995; b = 0.052; c = -0.001769; d = 0.00097

Q_s	H_t	E_{toc}	E_{hap}
0.0748 Dry scm/min	5.0276 Mega Joules/scm	1.9056 Kilograms/hr	1.9053 Kilograms/hr

LEAN's real disagreement is with the merits of the standards set for process vents under 40 C.F.R. part 63, subpart G, and the exclusion of risk-based factors from Section 112(d). These are not valid grounds for objecting to a title V permit.

V. CONCLUSIONS

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.

/s/
Michael O. Leavitt
Administrator

Date: 11/20/03