

ILLINOIS POLLUTION CONTROL BOARD  
May 20, 1999

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Division of Legal Counsel  
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Environmental Protection Agency  
(Adjusted Standard - Air)

IN THE MATTER OF: )  
)  
PETITION OF SUN CHEMICAL )  
CORPORATION FOR ADJUSTED )  
STANDARD FROM 35 ILL. ADM. )  
CODE 218.626(b) )

CYNTHIA A. FAUR AND LORENA NEAL, OF SONNESCHEIN, NATH & ROSENTHAL, APPEARED ON BEHALF OF PETITIONER; and

DEBORAH WILLIAMS APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

OPINION AND ORDER OF THE BOARD (by R.C. Flemal):

This matter comes before the Board upon a "Petition for Adjusted Standard" (Pet.) filed on October 22, 1998, by Sun Chemical Corporation (Sun). Sun requests an adjusted standard from 35 Ill. Adm. Code 218.626(b), as it applies to 17<sup>1</sup> resin storage tanks at its Northlake, Cook County, Illinois facility (facility).

The Board's responsibility in this matter arises from the Environmental Protection Act (Act) (415 ILCS 5/1 *et seq.* (1996)). The Board is charged to "determine, define and implement the environmental control standards applicable in the State of Illinois" (415 ILCS 5/5(b) (1996)), and to "grant . . . an adjusted standard for persons who can justify such an adjustment" (415 ILCS 5/28.1(a) (1996)). More generally, the Board's responsibility in this matter is based on the checks and balances integral to Illinois environmental governance: the Board is charged with the rulemaking and principal adjudicatory functions, and the Illinois Environmental Protection Agency (Agency) is responsible for carrying out the principal administrative duties.

The Act also provides that "[t]he Agency shall participate in [adjusted standard] proceedings." 415 ILCS 5/28.1(d)(3) (1996). On January 29, 1999, the Agency filed a response (Resp.) and recommended that the instant requested adjusted standard be granted with conditions. Resp. at 16-17.

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<sup>1</sup> Sun originally requested an adjusted standard for 19 resin storage tanks; however, following submittal of the initial petition for adjusted standard, Sun brought 2 of the 19 tanks into compliance with the regulations at issue. In the amended petition for adjusted standard dated April 13, 1999, Sun modified its petition for adjusted standard to include only the remaining 17 resin storage tanks.

Based upon the record before it and upon review of the factors involved in the consideration of adjusted standards, the Board finds that Sun has demonstrated that granting an adjusted standard in the instant matter is warranted. The Board will accordingly grant the adjusted standard, subject to conditions as discussed herein.

### PROCEDURAL HISTORY

This matter initially came before the Board upon a petition for adjusted standard filed by Sun on August 20, 1998. The Board assigned docket number AS 99-2 to that petition. On October 1, 1998, the Board issued an order noting that Sun had not filed proof of publication, as required under Section 28.1(d)(1) of the Act.<sup>2</sup> On October 15, 1998, the Board issued a second order in which it dismissed the AS 99-2 petition, noting that it lacked jurisdiction to hear the case because the statutory and procedural deadlines for filing the notice of publication had by then lapsed. See In re Petition of Sun Chemical Corporation for an Adjusted Standard from 35 Ill. Adm. Code 218.626(b) (October 15, 1998), AS 99-2.

On October 22, 1998, Sun filed the instant petition, which the Board docketed as AS 99-4. Sun provided proof of publication by filing of November 12, 1998.

The Agency filed its response to the petition on January 29, 1999. Although the Agency recommended granting of the adjusted standard with conditions different from those in Sun's October 22, 1998 petition, it also represented that Sun was in agreement with the Agency's proposed conditions (Resp. at 5). On April 13, 1999, Sun filed an amended petition (Amended Pet.), in which it provided various updated facts.

A hearing was held in this matter on April 15, 1999, at the Board's hearing room in Chicago before Hearing Officer John Knittle. Sun affirmed at the hearing that it wished to modify its requested adjusted standard to conform with the that recommended by the Agency in the Agency's January 29, 1999 response. Tr. at 11-12. The proposed adjusted standard as found in the Agency's January 29, 1999 response accordingly constitutes the request now before the Board.

### NATURE OF THE FACILITY AND DISCHARGE

Sun's facility, located at 135 West Lake Street, Northlake, Cook County, Illinois, manufactures printing inks. Pet. at 4. The facility was built in 1962. Pet. at 4. Most of the plant's operations are batch operations involving the mixing or blending of resins, solvents, pigments, and varnishes to make finished inks and bases. Pet. at 4.

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<sup>2</sup> Section 28.1(d)(1) of the Act provides that "petitioner shall submit to the Board proof that, within 14 days after the filing of the petition, it has published notice of the filing of the petition by advertisement in a newspaper of general circulation in the area likely to be affected . . . ." 415 ILCS 5/28.1(d)(1) (1996).

The ink-making process results in the emission of some volatile organic material (VOM). Pet at 4. Because the facility is located in the Chicago ozone nonattainment area, and because the volume of VOMs emitted at the facility is above the applicability threshold, the facility is subject to the organic emissions standards and limitations found at 35 Ill. Adm. Code 218. One of these provisions is that tanks that are used to store volatile organic liquids (VOL), and which have a storage capacity greater than 946 L (250 gal), are required pursuant to 35 Ill. Adm. Code 218.626(b) to be fitted with a submerged fill pipe or a bottom fill pipe. Fill pipes are the conduits through which liquids enter the tanks.

At issue are 17 liquid storage tanks in the facility located in close proximity with one another, some only a few feet apart. Amended Pet. at 1-2. The liquid storage tanks meet the 946 L capacity criterion, but are not fitted with either submerged fill pipes or bottom fill pipes. Pet. at 5. Rather, each of the tanks is currently filled via an overhead fill pipe, which allows for some splashing during loading and hence emissions of vapors to the atmosphere. Pet. at 5. Sun states that there is no odor nuisance as a result of this process and the Agency does not disagree with this characterization. Pet. at 10; Resp. at 9-10. Sun requests that it be granted an adjusted standard to allow continued use of the overhead fill pipe systems.

In 1997, Sun reported emitting 63 tons of VOM from its total facility. Pet at 4. However, only 0.0203 tons of the 63 tons of VOM were from the overhead fill pipe systems for the tanks at issue. Pet at 4. Except for the overhead fill pipe systems, the tanks are enclosed, and thus not subject to emissions except at filling. Pet. at 5. All the liquids now stored, or intended to be stored, in the tanks have a vapor pressure significantly less than 0.5 pounds per square inch absolute (psia). Most of the materials stored in the tanks have vapor pressures less than 0.005 psia. Pet. at 6. Materials with psia's this low have low volatility, and hence are not subject to rapid vaporization and easy escape of vapors to the surrounding air. Pet. at 11.

### STATUTORY AND REGULATORY FRAMEWORK

In determining whether to grant an adjusted standard, Section 28.1 of the Act (415 ILCS 5/28.1 (1996)) requires the Board to determine whether a petitioner has presented adequate proof that: factors relating to the petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulations applicable to that petition; the existence of these factors justifies an adjusted standard; the requested standard will not result in environmental or health effects substantially more adverse than the effects considered by the Board in adopting the rule of general applicability; and the adjusted standard is consistent with federal law. 415 ILCS 5/28.1(c) (1996). In granting an adjusted standard, the Board may impose such conditions as may be necessary to accomplish the purposes of the Act. 415 ILCS 5/28.1(a) (1996).

On July 25, 1991, in rulemaking docket R91-7 (see In the Matter of: RACT Deficiencies in the Chicago Area: Amendments to Part 215 and the Addition of Part 218 (July 25, 1991), R91-7), the Board adopted rules to satisfy deficiencies noted by the United States Environmental Protection Agency (USEPA) under the Federal Implementation Plan (FIP) (55

Fed. Reg. 26814, June 29, 1990). Resp. at 3. The Board added 35 Ill. Adm. Code 218, Subpart AA, which was taken directly from the FIP and applies specifically to paint and ink manufacturers. In the Matter of: RACT Deficiencies in the Chicago Area: Amendments to Part 215 and the Addition of Part 218, PCB 91-7, slip op. at 3; Resp. at 3.

Subpart AA applied to the facility on January 24, 1994, when the threshold applicability of the reasonably available control technology (RACT) regulations were lowered to include facilities that have the potential to emit (PTE) 25 tons or more of VOM per year. See RACT for Major Sources Emitting VOM in the Chicago Ozone Nonattainment Area: 25 Tons (Amendments to 35 Ill. Adm. Code Parts 211 and 218) (January 6, 1994), R93-14; 35 Ill. Adm. Code 218.620(b); Resp. at 3. Before 1994, the general Volatile Organic Liquid (VOL) storage tank rules applied to Sun's tanks, but the adoption of amendments in docket R93-14 mandated that Sun also come into compliance with 35 Ill. Adm. Code 218.626(b), which is part of 35 Ill. Adm. Code 218, Subpart AA, by March 15, 1995. Resp. at 3.

Sun requests an adjusted standard that would allow it to operate the existing 17 resin storage tanks at the facility in compliance with the general VOL storage tank requirements in 35 Ill. Adm. Code 218.122, instead of the storage tank requirements contained in 35 Ill. Adm. Code 218.626(b), which provides that:

Stationary VOL storage containers with a capacity greater than 946 l (250 gal) shall be equipped with a submerged-fill pipe or bottom fill. These controls shall be operated at all times. An alternative control system can be allowed only if approved by the Agency and approved by the USEPA as a SIP revision.

The general VOL storage tank requirements in 35 Ill. Adm. Code 218.122 provide that:

- a) No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is approved by the Agency according to the provisions of 35 Ill. Adm. Code 201, and further processed consistent with Section 218.108.
- b) No person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Agency according to the provisions of 35 Ill. Adm. Code 201, and further processed consistent with Section 218.108 of this Part, or unless such tank is a pressure tank as described in Section 218.121(a) of this Part or is fitted with a

recovery system as described in Section 218.121(b)(2) of this Part.

- c) Exception: If no odor nuisance exists the limitations of this Section shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F).

As in Section 218.626(b), Sun states that Section 218.122 requires storage tanks with a capacity of more than 250 gallons to be equipped with a submerged fill loading pipe or an equivalent control device. Pet. at 9. Unlike Section 218.626(b), however, Sun argues that Section 218.122 contains an exception for tanks used to store material for which there is no odor nuisance and the vapor pressure is less than 2.5 psia. Pet. at 9. Sun argues that the material stored in Sun's resin storage tanks satisfy both the exemption criteria, and Sun is currently in compliance with this rule. Pet. at 9.

## DISCUSSION

### Substantially Different Factors

Sun believes that the factors relating to its facility are substantially and significantly different from those factors relied upon by the Board in adopting 35 Ill. Adm. Code 218.626(b) in docket R91-7. Pet. at 14. The R91-7 rulemaking did not contemplate the applicability of the storage tank requirements contained in Section 218.626(b) to operations, such as Sun's, that use low vapor pressure materials. Pet. at 14. Sun maintains that use of these materials can have a dramatic impact on VOM emissions. Pet. at 14. Sun also argues that the R91-7 rulemaking did not consider the impact of the requirements of Section 218.626(b) on existing sources for which the costs to comply with the control requirements were more than a few thousand dollars per ton of VOM reduced. Pet. at 14. Therefore, Sun alleges the factors relating to its facility are substantially and significantly different from those factors contemplated by the Board in adopting Section 218.626(b).

The Agency agrees that the factors relating to control of VOM from Sun's 17 resin storage tanks are substantially and significantly different than those factors considered in adoption of Section 218.626(b). Resp. at 11.

### Justification

Sun believes an adjusted standard is necessary because its tank operations are different from the operations of other ink manufacturers. Pet. at 11. First, Sun's VOM emissions are small. Pet. at 11. Second, the tanks were installed in 1962, before the emission control equipment on tanks existed; and with only a few feet separating each tank, installing control equipment would be difficult and costly. Pet. at 11. Additionally, the substances stored in the tanks are thick and many are not pumpable at normal temperatures, so Sun would have to install bottom fill rather than submerged fill pipes.<sup>3</sup> Pet. at 7-8.

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<sup>3</sup> The raw materials would clog a submerged fill pipe and require frequent cleaning. Pet. at 8.

Sun maintains that bottom filling pipes on these tanks are more difficult and expensive because they require fully cleaning out the tanks and cutting into the tanks. Pet. at 8. Sun estimates that the cost to control the 0.0203 tons of emissions will be \$1,803,946 per ton of VOM removed. Amended Pet. at 7. Sun notes that this amount is over 360 times the cost considered reasonable by the Agency and the Board in adopting regulations in dockets R91-7 and R93-14. Amended Pet. at 7. For these reasons, Sun believes an adjusted standard is justified. Pet. at 12.

The Agency agrees that some of the materials stored in the tanks are unpumpable at normal temperatures, which would require Sun to install bottom fill pipes to comply with Section 218.626(b). Resp. at 7. The Agency also agrees that the close proximity of the tanks makes installation of bottom or submerged fill pipes more difficult and expensive. Resp. at 7. The Agency cost figures for installing such pipes range from \$285,960 to \$298,510. Resp. at 8. Since the emissions of the uncontrolled tanks is currently 0.0203 tons per year, the Agency estimates that the cost per ton of VOM emissions reduced by compliance with Section 218.626(b) is \$1,452,338.31 per ton. Resp. at 8. The Agency agrees that Sun would have to spend more than any cost that the USEPA, the Agency, or the Board considered reasonable for the control of VOM in the adoption of control requirements in dockets R91-7 and R93-14. Resp. at 11.

#### Environmental Effect

Sun asserts there would only be a small difference in the amount of VOM emissions from the storage tanks if it complied with Section 218.626(b) rather than Section 218.122. Pet. at 10. Sun notes that in 1997, only 0.0203 tons of VOM emissions, or 0.036% of Sun's total VOM emissions were attributed to the tanks. Pet. at 10.

The Agency argues that Section 218.626 was intended to control the emissions from tanks at facilities like Sun. Resp. at 13. The Agency acknowledges, however, that Section 218.626 does not contain an exemption for the storage of low pressure VOL, although the vapor pressure of the liquids stored in a given VOL storage tank impacts the amount of emissions released from those tanks. Resp. at 13. Therefore, the Agency has imposed a condition on its recommendation of the adjusted standard, that Sun be required to store in the tanks only liquids with a vapor pressure of 0.5 psia or less on its uncontrolled storage tanks. Resp. at 13. The Agency contends that a 0.5 psia limit may result in Sun having fewer emissions than a facility that has installed submerged or bottom fill pipes, but stores higher vapor pressure liquids. Resp. at 13. The Agency believes that placing this condition on the adjusted standard will prevent any environmental harm. Resp. at 13.

#### Consistency with Federal Law

Sun maintains that the requested variance is consistent with applicable federal law. Specifically, Sun argues that Section 218.626 is consistent with the federal Clean Air Act. Pet. at 12. Sun notes that the Agency will be required to submit any adjustment, such as the one

requested by Sun, to the USEPA as a revision to the Illinois State Implementation Plan. Pet. at 12-13.

In its response, the Agency noted that, on June 1, 1998, the USEPA agreed that this adjusted standard was reasonable, so long as a condition was placed in the adjusted standard which limited the vapor pressure in Sun's storage tanks to no more than 0.5 psia. Resp. at 4.

### CONCLUSION

Based on its review of the record in this matter, the Board finds that granting the requested adjusted standard is warranted. This conclusion is based on the statutory factors, set forth at Section 28.1 of the Act, involved in the Board's consideration of adjusted standards as they apply to the instant case.

The Board gives particular weight to the parties' arguments that the factors relating to Sun's facility are substantially and significantly different from those factors relied upon by the Board in adopting 35 Ill. Adm. Code 218.626(b). The Board agrees that complying with Section 218.626(b) would impose a great economic hardship on Sun. The Board appreciates Sun's arguments that the expenses it would incur to bring the 17 tanks into compliance is greater than the cost considered reasonable for control of VOM in the adoption of control requirements in dockets R91-7 and R93-14.

The Board is also persuaded that Sun's storage of only low vapor pressure liquids in its 17 uncontrolled storage tanks will result in fewer emissions than a facility that has installed submerged or bottom fill pipes, but stores higher volatility VOL. The existence of the above-mentioned factors justify the requested adjusted standard.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

### ORDER

Sun Chemical Corporation (Sun) is hereby granted an adjusted standard, under which the control requirements of 35 Ill. Adm. Code 218.626(b) shall not apply to the 17 storage tanks at Sun's Northlake, Cook County, Illinois, facility, identified as tanks no. 26, 27, 35, 36, 37, 42, 43, 44, 47, 48, 49, 53, 54, 55, 59, 60, and 67 in Sun's October 22, 1998 petition and in the Illinois Environmental Protection Agency's January 29, 1999 response. This grant of an adjusted standard is subject to the following conditions:

1. The adjusted standard will remain in effect so long as:
  - a. no odor nuisance exists at the Sun's Northlake facility, and
  - b. the vapor pressures of materials stored in the 17 identified tanks remain less than 0.5 psia at 70 degrees Fahrenheit.

2. All sections of 35 Ill. Adm. Code 218, Subpart AA, Paint and Ink Manufacturing, except as explicitly provided for herein, continue to apply to Sun.
3. Any existing or new storage tanks not explicitly listed within this adjusted standard order remain subject to the control requirements of 35 Ill. Adm. Code 218.626(b).
4. Sun shall maintain all records necessary to establish that the vapor pressures of the materials stored in the 17 identified tanks are less than 0.5 psia at 70 degrees Fahrenheit. The records shall be maintained at Sun's Northlake, Cook County, Illinois, facility, and each record shall be retained at the facility for a period of no less than 3 years.

**IT IS SO ORDERED.**

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1996)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of service of this order. Illinois Supreme Court Rule 335 establishes such filing requirements. See 172 Ill. 2d R. 335; see also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 20th day of May 1999 by a vote of 7-0.



Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board