

ILLINOIS POLLUTION CONTROL BOARD

October 7, 2010

IN THE MATTER OF:)
)
PETITION OF CABOT CORPORATION) AS 07-6
FOR AN ADJUSTED STANDARD FROM) (Adjusted Standard – Land)
35 ILL. ADM. CODE PART 738.)
SUBPART B)

OPINION AND ORDER OF THE BOARD (by C.K. Zalewski):

This matter comes before the Board upon a petition for reissuance of a previous adjusted standard filed by Cabot Corporation (Cabot) for its inorganic chemical manufacturing facility, located in Tuscola, Douglas County (Tuscola facility). Cabot manufactures fumed silica dioxide (SiO₂) in its Tuscola facility. Resulting process wastes include acidic wastewater, unsalable by-product hydrochloric acid (HCl), spent acetone, and leachate. Cabot's previous adjusted standard, AS 96-3, is from the Board's restrictions on underground injection of hazardous wastes codified at 35 Ill. Adm. Code 738.Subpart B.¹ The AS 96-3 adjusted standard allowed Cabot to dispose of hazardous wastes into three underground injection control (UIC) wells at the Tuscola facility (Well #1, #2, and #3). Cabot now seeks to inject the same hazardous wastes, but this time only into Wells #2 and #3, and only through December 31, 2027 (at which time the adjusted standard would terminate).

Cabot has previously petitioned for, and received, similar relief from federal UIC rules adopted by the United States Environmental Protection Agency (USEPA) concerning underground injection of prohibited wastes at 40 CFR 148.Subpart C. Such federal relief is called an "exemption" from federal rules, rather than an "adjusted standard" as in Illinois. On June 1, 2010 (75 Fed. Reg. 30392), USEPA granted Cabot a federal exemption, subject to conditions, similar to the adjusted standard relief Cabot requests from the Board. The Illinois Environmental Protection Agency (IEPA) has recommended that the Board grant Cabot the relief it requests.

Based upon the record before the Board and review of the factors involved in the consideration of adjusted standards, the Board grants the adjusted standard subject to conditions, including some similar to those set out by USEPA. Below, the Board details the procedural history and legal framework of the case before discussing the grounds for the Board's findings.

¹ See Petition of the Cabot Corporation for an Adjusted Standard from 35 Ill. Adm. Code 738.Subpart B, AS 96-3 (March 7, 1996); see also Petition of the Cabot Corporation for an Adjusted Standard from 35 Ill. Adm. Code 738.Subpart B, AS 92-8 (September 7, 1995).

PROCEDURAL BACKGROUND

Cabot's Original May 29, 2007 Petition

This is the third adjusted standard Cabot has sought for its UIC wells. Cabot first petitioned the Board for an adjusted standard for Wells #1 and #2 in 1992 (AS 92-8), and later for Wells #1, #2, and #3 in 1995 (AS 96-8). The corresponding federal "exemptions" were initially granted by USEPA in 1990 / 1991 for Wells #1 and #2² and then again in 1996 for Wells #1, #2, and #3³. Following the federal approvals, the Board granted Cabot's adjusted standards in 1994 and 1996. The requests for exemption, including the instant petition, were based on the "no-migration" provisions found under both federal and State law.

On May 29, 2007, Cabot Corporation filed a Petition for Reissuance of Adjusted Standard, a Motion for Incorporation of Documents, and a Motion for Relief from Filing Requirements, and a Motion to Stay Proceedings pending decision by the USEPA of Cabot's request for similar relief. Cabot waived hearing on the petition. On June 6, 2007, Cabot timely filed the certificate of publication required by Section 28.1(d)(1) of the Environmental Protection Act (Act) (415 ILCS 5/28.1 (2008)) and Section 104.408(a) of the Board's procedural rules (35 Ill. Adm. Code 104.408(a)).

On June 21, 2007, the Board granted the motions for incorporation of documents and relief from filing requirements, however, the Board denied the motion for relief from the requirement to serve the Agency with a copy of the petition at 35 Ill. Adm. Code 104.402. The Board reserved ruling on the motion for stay. Cabot filed proof of service on the Agency on June 28, 2007.

On July 2, 2007, the Agency filed a request for extension of time to file its Recommendation. In the extension request, the Agency asked that, if any stay were to be granted in response to Cabot's request, the Recommendation be due only after any USEPA ruling on Cabot's March 8, 2007 application, to allow Agency review of the USEPA ruling. The Agency did not respond to the motion to stay, and so was deemed to have waived any objection to its grant under 35 Ill. Adm. Code 101.500(c).

On August 9, 2007, the Board granted the Agency's motion for extension of time and Cabot's motion to stay the request for adjusted standard pending the outcome of USEPA action through February 9, 2008. Although hearing was waived, the Board assigned a hearing officer to manage the case, including handling any future motions to extend the stay or Agency extensions of time in which to file the Recommendation.⁴

² See 55 Fed. Reg. 49340 (November 27, 1990) for Well #2, and 56 Fed. Reg. 5826 (Feb.13, 1991) for Well #1.

³ See 61 Fed. Reg. 4996 (Feb. 9, 1996) for Wells #1, #2, and #3.

⁴ See hearing officer orders of February 7, 2008, July 22, 2008, January 2, 2009, July 20, 2009, and January 11, 2010. These orders also extended the stay of the proceeding, pursuant to authority granted by the Board.

Cabot's October 9, 2008 and June 14, 2010 Amended Petitions

On October 9, 2008, Cabot filed a motion to amend its petition to provide the Board with a copy of Cabot's October 1, 2008 response to USEPA's Notice of Deficiency (NOD) regarding its federal petition. On November 5, 2008, the Board granted the motion to amend, reserving ruling on the petition's sufficiency.

On July 15, 2010, the Board granted Cabot's June 14, 2010 motion to amend its petition again and to lift the stay of proceedings. Cabot reported that the USEPA had ruled on, and approved, Cabot's exemption request at 75 Fed. Reg. 30392 (June 1, 2010). Cabot asked leave to supplement the record with additional documents it had submitted to USEPA on December 2, 2008, which were also attached to the motion. In the July 15, 2010 order, the Board directed the Agency to file its Recommendation on or before August 30, 2010 and Cabot to file any response on or before September 13, 2010.

On August 16, 2010, the Agency filed its Recommendation (Rec.) to grant the adjusted standard subject to conditions. Pursuant to an August 26, 2010 hearing officer order, on the same day Cabot supplemented the record with a copy of USEPA's draft decision, fact sheet, and public notice that were issued on December 28, 2009. No additional documents have been filed by either party.

The Board has not received any public comments in this docket. As the Board received no requests for hearing, no hearings have been held. Consequently, the Board is deciding this matter solely on the information provided by the parties.

LEGAL FRAMEWORK FOR ADJUSTED STANDARD

The Environmental Protection Act (Act), 415 ILCS 5/1 *et seq.* (2008), and Board rules provide that a petitioner may request, and the Board may grant, an environmental standard that is different from the generally applicable standard that would otherwise apply to the petitioner. This is called an adjusted standard. The general procedures that govern an adjusted standard proceeding are found at Section 28.1 of the Act and Part 104.Subpart D of the Board's procedural rules. 415 ILCS 5/28.1(2008); 35 Ill. Adm. Code 104.400 *et seq.*

Section 28.1(b) of the Act provides that, "in adopting a rule of general applicability, the Board may specify the level of justification required of a petitioner for an adjusted standard consistent with this Section." In this case, the Board has adopted a specific level of justification. The Board's specific regulations for the instant adjusted standard petition are codified at 35 Ill. Adm. Code 738.Subpart B. These Board rules are "identical-in-substance", within the meaning of Section 7.2 of the Act, 415 ILCS 5/1 *et seq.* (2008), to the USEPA's UIC rules at 40 CFR 148.Subpart C.

The Board's procedural rules specify the required contents for the adjusted standard petition. *See* 35 Ill. Adm. Code 104.406, 104.416. Once a petition for an adjusted standard is filed, the Agency must file its recommendation with the Board. *See* 415 ILCS 5/28.1(d)(3)

(2008); 35 Ill. Adm. Code 104.416. The adjusted standard proceeding is adjudicatory in nature and therefore is not subject to the rulemaking provisions of the Act or the Illinois Administrative Procedure Act (5 ILCS 100/1-1 *et seq.* (2008)). *See* 415 ILCS 5/28.1(a) (2008); 35 Ill. Adm. Code 101.202 (defining “adjudicatory proceeding”).

Section 28.1(d)(1) of the Act (415 ILCS 5/28.1 (2008)) and Section 104.408(a) of the Board’s procedural rules (35 Ill. Adm. Code 104.408(a) (quoting the Act)) require the adjusted standard petitioner to publish notice of the petition’s filing by advertisement in a newspaper of general circulation in the area likely to be affected by the proposed adjusted standard. Under those provisions, publication must take place within 14 days after the petition is filed. The newspaper notice must indicate that any person may cause a public hearing to be held on the proposed adjusted standard by filing a hearing request with the Board within 21 days after publication. *See* 415 ILCS 5/28.1(d)(1) (2008); 35 Ill. Adm. Code 104.408(b).

The burden of proof in an adjusted standard proceeding is on the petitioner. *See* 415 ILCS 5/28.1(b), (c) (2008); 35 Ill. Adm. Code 104.426. Once granted, the adjusted standard, instead of the rule of general applicability, applies to the petitioner. *See* 415 ILCS 5/28.1(a) (2008); 35 Ill. Adm. Code 101.202, 104.400(a). In granting adjusted standards, the Board may impose conditions as may be necessary to accomplish the purposes of the Act. *See* 415 ILCS 5/28.1(a) (2008); 35 Ill. Adm. Code 104.428(a).

CURRENT APPLICABLE STANDARDS

The Illinois Rules at 35 Ill. Adm. Code Part 738.Subpart B

Cabot’s petition (Pet.) seeks an adjusted standard from the requirements of 35 Ill. Adm. Code Part 738.Subpart B which prohibit the underground injection of certain hazardous wastes. Several hazardous waste streams are generated at the Tuscola facility. The waste streams injected in Cabot’s UIC wells include:

- D002 Acidic waste water from air pollution control scrubbers, stack drains, fan drains, other equipment drains, and wash downs plus unsalable by-product HCl
 - F003 Spent acetone from the QC laboratory
 - F039 Surface water drainage, seepage, multi-source leachate from leachate collection system, groundwater and leachate purged from on-site monitoring wells
- Pet. at 2.

The specific regulations from which Cabot seeks an adjusted standard are 35 Ill. Adm. Code 738.110(a) and 738.116 (c)(1) and (c)(2). Pet. at 3.

SUBPART B: PROHIBITIONS ON INJECTION

Section 738.110 Waste Specific Prohibitions - Solvent Wastes

- a) The spent solvent wastes specified in 35 Ill. Adm. Code 721.131 by the following EPA Hazardous Waste numbers are prohibited from underground injection:

F001
F002
F003
F004
F005

Section 738.116 Waste Specific Prohibitions - Third Third Wastes

- c)
- 1) Effective May 8, 1992, the wastes specified in 35 Ill. Adm. Code 721.131 by the following EPA Hazardous Waste number are prohibited from underground injection:
F039 (nonwastewaters)⁵
 - 2) Effective May 8, 1992, the wastes specified in 35 Ill. Adm. Code 721.122, 721.123 or 721.124 as hazardous based on a characteristic alone and designated by the following EPA Hazardous Waste numbers are prohibited from underground injection:

D002 (wastewaters and nonwastewaters)
D003 (wastewaters and nonwastewaters)
D007 (wastewaters and nonwastewaters)
D009 (nonwastewaters)

Federal Rules at 40 CFR 148.Subpart C

Each of the Board's Part 738 sections above is identical-in-substance to the USEPA's UIC provisions, with the correspondence as follows:

<u>Board Regulation</u>	<u>USEPA Regulation</u>
35 Ill. Adm. Code 738.110(a)	40 CFR 148.10(a) (1992)
35 Ill. Adm. Code 738.116(c)(1)	40 CFR 148.16(f) (1991)
35 Ill. Adm. Code 738.116(c)(2)	40 CFR 148.16(f) (1991)

⁵ 35 Ill. Adm. Code 738.116(c)(1) contains a typographical error: "F039 (nonwastewaters)" should be "F039 (wastewaters)" per the corresponding federal regulation at 40 CFR 148.16(f). The reference to "F039 (nonwastewaters)" correctly appears in 35 Ill. Adm. Code 738.116(a)(1) per 40 CFR 148.16(c).

STANDARD OF REVIEW

The Board's requirements for adjusted standards for hazardous waste injections are found at 35 Ill. Adm. Code 738.Subpart C (738.120 – 738.124). These are identical in substance to the federal regulations at 40 CFR 148.Subpart C (148.20 – 148.24).

The corresponding federal sections are as follows:

<u>Board Regulation</u>	<u>USEPA Regulation</u>
35 Ill. Adm. Code 738.120	40 CFR 148.20 (1988)
35 Ill. Adm. Code 738.121	40 CFR 148.21 (1988)
35 Ill. Adm. Code 738.122	40 CFR 148.22 (1988)
35 Ill. Adm. Code 738.123	40 CFR 148.23 (1988)
35 Ill. Adm. Code 738.124	40 CFR 148.24 (1988)

Cabot's adjusted standard petition filings with the Board (May 29, 2007 petition (Pet.), October 9, 2008 amended petition (Am. Pet.), and June 14, 2010 amended petition (2d Am. Pet.)) rely on Cabot's filings with USEPA for extension of a federal exemption (March 8, 2007 application and October 1, 2008 and December 2, 2008 revisions). Using the federal parlance, Cabot states that it sought extension from USEPA of the facility's "no-migration exemption" until December 31, 2027. Cabot contends that its exemption petition as filed with USEPA makes the adjusted standard demonstration required by the Board's rules at 35 Ill. Adm. Code 738.120(a)(1)(A). Pet. at 5. Section 738.120(a)(1)(A) requires a demonstration that:

Section 738.120 Petitions to Allow Injection of a Prohibited Waste

(a)

- 1) The hydrogeological and geochemical conditions at the site(s) and the physiochemical nature of the waste stream(s) are such that reliable predictions can be made that:
 - A) Fluid movement conditions are such that the injected fluids will not migrate within 10,000 years:
 - i) Vertically upward out of the injection zone; or
 - ii) Laterally within the injection zone to a point of discharge or interface with an Underground Source of Drinking Water (USDW) as defined in 35 Ill. Adm. Code 730.

FACTUAL BACKGROUND

The Tuscola Facility

Cabot's Tuscola facility is located approximately three miles west of Tuscola on Route 36 in Douglas County. The Tuscola facility occupies approximately 92 acres of land. It has been operating since 1958, currently employing approximately 160 people. Pet. at 2. Cabot's Tuscola facility manufactures fumed metal oxides, including fumed silica (SiO₂), which serve as additives in products varying from paints and printing inks to pharmaceuticals and cosmetics. Pet. at 1.

Production Process

In its March 7, 1996 Board Opinion in AS 96-3, the Board summarized the production process based on the USEPA Notice of Intent to Reissue Exemption (1995) as follows:

The production process involves the hydrolysis/oxidation of a chlorosilane feedstock to produce SiO₂ and hydrochloric acid (HCl). [citing Cabot's August 17, 1995 Petition at 2.] The chlorosilane feedstocks include silicon tetrachloride (SiCl₄), methyl trichlorosilane (CH₃SiCl₂), and trichlorosilane (HSiCl₂). *Id.* The central reaction in the manufacturing process is combination of silicon tetrachloride with oxygen and hydrogen to produce both fumed silica and hydrogen chloride vapor. (USEPA Notice of Intent to Reissue Exemption, 60 FR 58623, 58624.) Separation results in fumed silica, product hydrochloric acid, and wastewaters contaminated with hydrochloric acid; the latter requires disposal. Cabot usually injects this waste, along with rainwater runoff and seepage into its UIC wells. (60 FR 58624.) AS 96-3, slip op. at 3 (Mar. 7, 1996).

Wastes Generated and Injected

Several hazardous waste streams are generated at the Tuscola facility. The waste streams injected into Cabot's UIC wells include:

- D002 Acidic waste water from air pollution control scrubbers, stack drains, fan drains, other equipment drains, and wash downs plus unsalable by-product HCl
 - F003 Spent acetone from the QC laboratory
 - F039 Surface water drainage, seepage, multi-source leachate from leachate collection system, groundwater and leachate purged from on-site monitoring wells
- Pet. at 2.

CABOT'S PROPOSED ADJUSTED STANDARD LANGUAGE

Cabot proposes the following language for the adjusted standard:

Cabot Corporation is hereby granted a reissuance of the adjusted standard from the requirements of 35 Ill. Adm. Code Part 738, Subpart B, for the underground injection control Wells Nos. 2 and 3 at its Tuscola, Illinois

facility. This adjusted standard constitutes an exemption from the prohibitions of Subpart B such as to allow the underground injection disposal of wastes classified as acidic water (D002), by-product hydrochloric (D002), spent acetone (F003) and multi-source leachate (F039). This adjusted standard is subject to all conditions imposed by U.S. EPA pursuant to its grant of Cabot's "Petition for Renewal of Exemption from the Land Disposal Restrictions." Pet. at 6-7.

CABOT'S DEMONSTRATION IN SUPPORT OF PROPOSED ADJUSTED STANDARD

Cabot explains that its demonstration here relies solely upon the petition Cabot filed with USEPA on March 8, 2007: "2007 Petition for Renewal of Exemption from the Land Disposal Restrictions". Pet. at 4. Subsequently, Cabot supplemented its petition to USEPA with an October 1, 2008 response to USEPA's Notice of Deficiency (NOD) regarding its federal petition. Cabot Mot. 10-9-08 at 2. Cabot provided the Board a full copy of the March 8, 2007 federal petition and October 1, 2008 supplemental information in support of the proposed adjusted standard.

Shortly after USEPA approved Cabot's exemption request on June 1, 2010, Cabot submitted a copy of USEPA's "Notice of final decision on petition" regarding Cabot's exemption request from the hazardous waste disposal injection restrictions that was published in the Federal Register on June 1, 2010 (75 Fed. Reg. 30392). In addition, Cabot filed supplemental documents that Cabot submitted to USEPA on December 2, 2008. Cabot subsequently supplemented the record on August 26, 2010 with the USEPA draft decision, fact sheet, and public notice that were issued on December 28, 2009, which contained USEPA's detailed reasons for granting the exemption.

Compliance Efforts and Alternatives

Section 104.406(e) of the Board's procedural rules for adjusted standards requires a description of the efforts that would be necessary if the petitioner was to comply with the regulation of general applicability. Cabot states that information required under 104.406(e) is "inapplicable and unduly burdensome." Cabot notes that the Board did not find this information necessary in granting AS 92-8 or AS 96-3. Pet. at 6.

Impact on Environment

Section 104.406(g) of the Board's procedural rules for adjusted standards requires a description of the impact of the petitioner's activity on the environment. Cabot relies upon all of the documents it has provided to USEPA. Cabot states that providing any other information required under 104.406(g) is "inapplicable and unduly burdensome." Cabot notes that the Board did not find this information necessary in granting AS 92-8 or AS 96-3. Pet. at 6.

Consistency with Federal Law

Cabot states that the Illinois UIC Program is identical-in-substance to the federal UIC Program. Quoting the Board's opinion in AS 92-8, Cabot notes that the Illinois UIC program is "intended to be no more (or less) stringent than the corresponding federal program." Pet. at 6, quoting AS 92-8, slip op. at 7 (Feb. 17, 1994). Cabot continues:

Accordingly, if U.S. EPA grants Cabot an extension of its 'no-migration exemption' under federal law, the Board should do the same. Pet. at 6.

AGENCY RECOMMENDATION TO GRANT AND CONCERNS

On August 16, 2010, after Cabot filed a copy of USEPA's final ruling on the federal exemption petition, the Agency filed a recommendation that the adjusted standard be granted, although the Agency voiced some concerns. The Agency stated that Cabot failed to address a description of compliance efforts and alternatives as well as the impact on the environment as required by 35 Ill. Adm. Code 104.406(e) and (g). Without such information, the Agency stated it was unable to provide an analysis of these criteria for the Board's consideration. Rec. at 10-11.

The Agency went on to say, however, that based on USEPA's approval, relief is appropriate. The Agency continued that since the Board's regulations are intended to be identical-in-substance to the federal regulations, the Board's approval would be consistent with the federal determination. Ag. Rec. at 12. The Agency suggested any Board Order granting the adjusted standard contain the following provisions:

- Expiration date;
- Citation to the Federal Register wherein Cabot's petition is approved;
- Requirement that Cabot modify its current UIC Permit No. UIC-011-CC to reflect USEPA's most recent approval of the exemption outlined in the Federal Register; and
- Requirement that Cabot continue to operate in accordance with the UIC permit issued by the Agency. Ag. Rec. at 11, 13.

The Agency noted that, as of the date of the Recommendation, the Agency had not received any citizen inquiries regarding Cabot's petition. Ag. Rec. at 3. Additionally, the Agency indicated that it is not requesting a hearing in this matter. Ag. Rec. at 12.

USEPA ECONOMIC IMPACT ANALYSIS

Following the Board's receipt of the Agency Recommendation noting the lack of documentation in support of the USEPA's June 2010 decision, the hearing officer ordered Cabot to provide the Board with USEPA's Draft Decision, as mentioned in the Federal Register notice of the final decision.

When USEPA granted Cabot's request on June 1, 2010, USEPA noted that it previously issued a draft decision, which described USEPA's reasons for granting this exemption in more detail. 75 Fed. Reg. 30393. Cabot supplemented the record with the USEPA draft decision, fact sheet, and public notice that were issued on December 28, 2009, which contained USEPA's detailed reasons for granting the exemption.⁶

USEPA's draft decision provides a comprehensive review of the federal petition and the supplemental materials leading to the determination that the March 8, 2007 petition, as revised on September 30, 2008, meets the requirements of 40 CFR 148.Subpart C. USEPA at 1. USEPA states:

Cabot's petition is based on a showing under 40 CFR 148.20(a)(1)(i) that any fluids injected will not migrate vertically out of the Injection Zone or laterally to a point of discharge or interface with an underground source of drinking water (USDW) within 10,000 years." *Id.*

USEPA stated Cabot's demonstration was based on a geological model showing the nearest point of discharge into a USDW is more than 40 miles from the Tuscola facility. *Id.* at 5, 8. USEPA explains that Cabot's UIC wells successfully passed mechanical integrity tests "to confirm that all injected fluids are entering the approved Injection Interval and not channeling up the well bore out of the injection zone", as required by 40 CFR 148.20(a)(2)(iv). *Id.* at 2-3.

Pertaining to the geology, USEPA stated, "[US]EPA's evaluation of the structural and stratigraphic geology of the local and regional area determined that the Cabot Corporation facility is located at a geologically suitable site." *Id.* at 3. USEPA affirmed that all other wells in the area of review within a 2-mile radius, as set out in 40 CFR 146.63, "were properly plugged and abandoned and pose no risk of vertical movement of fluid out of the Injection Zone" as required by 40 CFR 148.20(a)(2)(ii). *Id.* at 4-5. Accordingly, USEPA determined no corrective action plan is required under 40 CFR 148.20(a)(2)(ii). *Id.* at 5. USEPA concluded:

Therefore, Cabot Corporation has demonstrated that, to a reasonable degree of certainty, hazardous constituents will not migrate vertically out of the Injection Zone or laterally to a point of discharge in a 10,000 year period." *Id.* at 8.

BOARD DISCUSSION

This is the third adjusted standard Cabot has sought for its UIC wells. Cabot first petitioned for an adjusted standard for Wells #1 and #2 (AS 92-8), and later for Wells #1, #2, and #3 (AS 96-8). AS 96-3 does not expire by its own terms, however, some of the conditions under which Cabot sought AS 96-3 have changed. Mainly, the new exemption would apply to only two instead of three wells, remove reference to the Gunter Sandstone formation, and include several new USEPA requirements. For all of the reasons set forth below, the Board finds that Cabot has justified reissuance of its adjusted standard, subject to conditions.

⁶ The USEPA draft decision will be cited as "USEPA at ___."

Consistency with Federal Law

The Board finds that Cabot properly sought both federal and state relief, and further finds that the Board may grant Cabot the relief it seeks consistent with federal law.

The Board's requirements for adjusted standards for hazardous waste injections are found at 35 Ill. Adm. Code 738.Subpart C (738.120 – 738.124). These are "identical in substance" to the federal regulations at 40 CFR.Subpart C (148.20 – 148.24). As the Board noted in its first opinion granting Cabot an adjusted standard in AS 92-8, the State has never sought primacy with respect to the provisions of the UIC land disposal prohibitions. Thus, although USEPA has authority to grant exemptions from the federal UIC rules, the authority to grant adjusted standards under the State UIC law lies with the Board. Therefore, Cabot must seek relief from both USEPA and the Board separately. *See* AS 92-8, slip op. at pp.4-5 (Feb.17, 1994.)

As previously, then, Cabot has petitioned for relief from the Board and USEPA. USEPA has provided both a technical review and approval at the federal level for the instant petition. USEPA has imposed specific conditions on the federal exemption. The most recent June 1, 2010 USEPA approval contains several new conditions that were not incorporated in the previous adjusted standard AS 96-3. Among the new conditions is an expiration date of December 31, 2027; a requirement for quarterly and annual reports; a requirement for compliance with the IEPA UIC Permit; and a provision for termination. The Board notes that the current IEPA "Hazardous Waste Class I Underground Injection Control" Permit No. UIC-011-CC was issued on September 13, 2001, became effective on October 18, 2001, and expires on September 13, 2011. Pet. Exh. C, Vol. 1, App. 1-2.

Regarding the Agency's Voiced Concerns

The Agency voiced concern regarding Cabot's omission of information to address compliance efforts, alternatives, and impact on the environment as required by the Board's procedural rules for adjusted standards at 35 Ill. Adm. Code 104.406(e) and (g). Without such information, the Agency noted that it was unable to provide an analysis of these criteria for the Board's consideration. Rec. at 10-11. The Agency went on to say, however, that based on USEPA's approval, relief is appropriate.

In granting both AS 92-8 and AS 96-3, the Board stated that it "placed weight both on the quality of USEPA's technical review and the need to keep Illinois' identical-in-substance environmental programs in conformity with the corresponding federal programs." AS 96-3, slip op. at 6 (Mar. 7, 1996). As to USEPA's technical review, the Board observes, as it did in AS 92-8 and AS 96-3, that any exemption for UIC wells requires a substantial demonstration on the part of an applicant. *Id.* USEPA's technical review for the instant petition is summarized above. The Board finds that the technical review of the environmental impact of Cabot's waste injection program persuades the Board that Cabot has justified reissuance of the adjusted standard.

The Board reiterates "that because the Illinois UIC-program is identical-in-substance with the federal UIC program, it is intended to be no more (or less) stringent than the federal program." *Id.* at 7, citing AS 92-8. As in AS 92-8 and AS 96-3, the Board again finds "that

withholding the exemption that Cabot here seeks would cause a more stringent State law to apply to Cabot, in contradistinction to the stringency principle.” See AS 92-8, slip op. at 6 (Feb. 17, 1994) and AS 96-3, slip op. at 6 (Mar. 7, 1996).

In summary, the Board finds that Cabot has made all the demonstrations required pursuant to the identical-in-substance regulations at 35 Ill. Adm. Code 738.Subpart C.

Adjusted Standard Language

The Agency suggested that four provisions should be included in any Board Order: an expiration date, a citation to the Federal Register, as well as a requirement for a modification of and compliance with Cabot’s UIC permit. The Board will include such provisions as conditions of the requested relief to the extent that they merely adapt the language to the State regulations and do not create conditions more stringent than the federal requirements.

The Board notes that Cabot’s proposed language in the petition on pages 6-7 does not mirror the structure of the previous Board order (AS 96-3) or the new June 1, 2010 federal approval. The previous order in AS 96-3 enumerated each of the conditions of the USEPA approval and specifically included a table of the concentrations of constituents allowed in the injected waste. Cabot’s proposed language here does not list the conditions of the federal approval or the constituents, but simply references the “conditions imposed by U.S. EPA” without a citation to the Federal Register where the conditions can be found. The June 1, 2010 USEPA approval of the exemption reads as follows:

This exemption is subject to the following conditions. Non-compliance with any of these conditions is grounds for termination of the exemption:

- (1) All regulatory requirements in 40 CFR 148.23 and 148.24 are incorporated by reference;
- (2) The exemption applies to two existing injection wells, Well #2 and Well #3 located at the Cabot Corporation facility at 700 E. U.S. Highway 36, in the City of Tuscola in Douglas County, Illinois;
- (3) Injection is limited to that part of Upper Franconia, Potosi, Eminence and Oneota formations at depths between 4,442 and 5,400 feet;
- (4) Only wastes denoted by the waste codes D002, F003 and F039 may be injected;
- (5) The concentrations of constituents of the injected waste will not exceed the amounts listed in Table 1-1 in the petition document;
- (6) The volume of wastes injected in any month through the wells must not exceed 17,280,000 gallons;

- (7) This exemption is approved for the 21-year modeled injection period, which ends on December 31, 2027. Cabot Corporation may petition [US]EPA for a reissuance of the exemption beyond that date, provided that a new and complete petition and no-migration demonstration is received at [US]EPA, Region 5, by July 1, 2027;
- (8) Cabot Corporation shall quarterly submit to [US]EPA a report containing a fluid analysis of the injected waste which shall indicate the chemical and physical properties upon which the no-migration petition was based, including the physical and chemical properties listed in Conditions 5 and 6 of this exemption approval;
- (9) Cabot Corporation shall annually submit to [US]EPA a report containing the results of a bottom hole pressure survey (fall-off test) performed on Well #2 and Well #3 (alternating years). The survey shall be performed after shutting in the well for a period of time sufficient to allow the pressure in the injection interval to reach equilibrium, in accordance with 40 CFR 146.68(e)(1). The annual report shall include a comparison of reservoir parameters determined from the fall-off test with parameters used in the approved no-migration petition;
- (10) The petitioner shall fully comply with all requirements set forth in Underground Injection Control Permit UIC-011-CC issued by the Illinois Environmental Protection Agency; and
- (11) Whenever [US]EPA determines that the basis for approval of a petition may no longer be valid, [US]EPA may terminate this exemption and will require a new demonstration in accordance with 40 CFR 148.20. 75 FR 30393 (June 1, 2010).

The list of concentrations of constituents of the injected waste referenced as Table 1-1 in USEPA condition #5 above was included in the conditions set forth in AS 96-3 and are listed in the instant petition. See Pet. Exh. C, Vol. 1, Table 1-1 at 1-31 to 1-32. Table 1-1 appears as follows:

Table 1-1
IEPA UIC Permit Waste Parameters Limits

Parameters	EPA Code Hazardous Waste	Maximum Permit Limit	Minimum
Hydrochloric Acid	D002	5.5%	
pH	D002	7	
Temperature	--	95°F	32°F
Specific Gravity	--	1.034	
Acetone	F003	47,000 mg/l	
Tetrachloroethylene	F039	1.66 mg/l	
Trichloroethylene	F039	1.66 mg/l	
1,1 Dichloroethylene	F039	2.33 mg/l	

1,2 Dichloroethylene	F039	0.33 mg/l	
Phenol	F039	12,000mg/l	
Methylene Chloride	F039	59 mg/l	
1,1 Dichloroethane	F039	0.33 mg/l	
1,2 Dichloroethane	F039	1.66 mg/l	
Trans 1,2 Dichloroethene	F039	16.5 mg/l	
Cis 1,2 Dichloroethene	F039	11.5 mg/l	
1,1,1 Trichloroethane	F039	33 mg/l	
1,1,2 Trichloroethane	F039	1.66 mg/l	
Vinyl Chloride	F039	0.66 mg/l	
Chloroethane	F039	3.33 mg/l	
Chloroform	F039	0.33 mg/l	
Ethylbenzene	F039	116.5 mg/l	
Xylene (Total)	F039	333.5 mg/l	
Toluene	F039	33 mg/l	
1,1,1,2 Tetrachloroethane	F039	0.33 mg/l	
1,1,2,2 Tetrachloroethane	F039	0.33 mg/l	
Cyanide (Total)	F039	33 mg/l	
Barium	F039	333 mg/l	
Cadmium	F039	1.66 mg/l	
Chromium	F039	16.5 mg/l	

Pet. Exh. C, Vol. 1, Table 1-1 at 1-31 to 1-32.

To be consistent with the format of conditions in the previous adjusted standards and to provide transparency, the Board will include conditions that mirror the federal conditions as well as a table listing the constituents and maximum concentrations. The Board has revised the reporting language to require that reports be submitted to IEPA rather than USEPA, and provides the IEPA address. As suggested by the Agency, the Board will also add a condition requiring Cabot to apply to the Agency to modify its current UIC permit to reflect USEPA's June 1, 2010 approval.

The Board reiterates that conditions of the requested relief merely adapt the language of the federal exemption to the State regulations and do not create conditions more stringent than the federal requirements. The Board does note, however, that the conditions 4(K) and (L), allowing for automatic reopening and termination of the adjusted standard, would not normally occur under Illinois law, except as provided in identical in substance rules.

CONCLUSION

The Board finds that Cabot has demonstrated that granting the requested adjusted standard is warranted under Section 28.1(b) of the Act and the Board's rules at 35 Ill. Adm. Code 738.Subpart C and 104.Subpart D.. The Board further finds that the conditions imposed by USEPA in the June 1, 2010 federal exemption are necessary limitations on the grant of this adjusted standard. As suggested by the Agency, the Board has crafted the conditions to adapt the language of the federal exemption to the State regulations.

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

ORDER

1. The Board grants Cabot Corporation an adjusted standard from the requirements of 35 Ill. Adm. Code 738.110(a) and 738.116 (c)(1) and (c)(2) for the underground injection control Wells # 2 and #3 at its Tuscola facility. This adjusted standard from the prohibitions of 35 Ill. Adm. Code 738.110(a) and 738.116 (c)(1) and (c)(2) allows the underground injection disposal of wastes denoted by the waste codes D002, F003, and F039.
2. This adjusted standard terminates on December 31, 2027, the end of the 21-year modeled injection period. Cabot Corporation may petition the Board for reissuance of the adjusted standard beyond that date, provided a new and complete petition and no-migration demonstration is filed with the Board by July 1, 2017;
3. The Board grants this adjusted standard consistent with the USEPA federal exemption approval published at 75 Fed. Reg. 30392-30393 (June 1, 2010).
4. The Board grants this adjusted standard subject to the following conditions. Non-compliance with any of these conditions is grounds for termination of the adjusted standard:
 - A. All regulatory requirements in 35 Ill. Adm. Code 738.123 and 738.124 are incorporated by reference;
 - B. The adjusted standard applies to two existing injection wells, Well #2 and Well #3 located at the Cabot Corporation facility at 700 E. U.S. Highway 36, in the City of Tuscola in Douglas County, Illinois;
 - C. Injection is limited to that part of Upper Franconia, Potosi, Eminence and Oneota formations at depths between 4,442 and 5,400 feet;
 - D. Only wastes denoted by the waste codes D002, F003 and F039 may be injected;
 - E. The concentrations of constituents of the injected waste may not exceed the amounts listed in Table 1-1 below;

Table 1-1
Waste Parameters Limits

Parameters	EPA Code Hazardous Waste	Maximum Permit Limit	Minimum
Hydrochloric Acid	D002	5.5%	

pH	D002	7	
Temperature	--	95°F	32°F
Specific Gravity	--	1.034	
Acetone	F003	47,000 mg/l	
Tetrachloroethylene	F039	1.66 mg/l	
Trichloroethylene	F039	1.66 mg/l	
1,1 Dichloroethylene	F039	2.33 mg/l	
1,2 Dichloroethylene	F039	0.33 mg/l	
Phenol	F039	12,000mg/l	
Methylene Chloride	F039	59 mg/l	
1,1 Dichloroethane	F039	0.33 mg/l	
1,2 Dichloroethane	F039	1.66 mg/l	
Trans 1,2 Dichloroethene	F039	16.5 mg/l	
Cis 1,2 Dichloroethene	F039	11.5 mg/l	
1,1,1 Trichloroethane	F039	33 mg/l	
1,1,2 Trichloroethane	F039	1.66 mg/l	
Vinyl Chloride	F039	0.66 mg/l	
Chloroethane	F039	3.33 mg/l	
Chloroform	F039	0.33 mg/l	
Ethylbenzene	F039	116.5 mg/l	
Xylene (Total)	F039	333.5 mg/l	
Toluene	F039	33 mg/l	
1,1,1,2 Tetrachloroethane	F039	0.33 mg/l	
1,1,2,2 Tetrachloroethane	F039	0.33 mg/l	
Cyanide (Total)	F039	33 mg/l	
Barium	F039	333 mg/l	
Cadmium	F039	1.66 mg/l	
Chromium	F039	16.5 mg/l	

- F. The volume of wastes injected in any month through the wells may not exceed 17,280,000 gallons;
- G. Beginning January 7, 2011, or such other date agreed upon by the IEPA and Cabot, Cabot Corporation shall quarterly submit to Illinois Environmental Protection Agency (IEPA) a report containing a fluid analysis of the injected waste which shall indicate the chemical and physical properties upon which the no-migration petition was based, including the physical and chemical properties listed in Conditions 5 and 6 of this exemption approval;
- H. Beginning January 7, 2011, or such other date agreed upon by the IEPA and Cabot, Cabot Corporation shall annually submit to IEPA a report containing the results of a bottom hole pressure survey (fall-off test) performed on Well #2 and Well #3 (alternating years). The survey shall be performed after shutting in the well for a period of time sufficient to allow

the pressure in the injection interval to reach equilibrium, in accordance with 35 Ill. Adm. Code 730.168(e)(1). The annual report shall include a comparison of reservoir parameters determined from the fall-off test with parameters used in the approved no-migration petition;

- I. Cabot Corporation shall fully comply with all requirements set forth in Underground Injection Control Permit UIC-011-CC issued by the Illinois Environmental Protection Agency. Cabot must expeditiously apply to the IEPA to modify its current UIC Permit No. UIC-011-CC to reflect USEPA's approval cited in 75 Fed. Reg. 30392-30393 (June 1, 2010) and this adjusted standard;
- J. Reports or other communications required by this adjusted standard must be addressed the IEPA at the address below:

 Illinois Environmental Protection Agency

 1021 North Grand Avenue East

 P.O. Box 19276

 Springfield, IL 62794-9276
- K. As provided in 35 Ill. Adm. Code 738.123(b), whenever the Board determines that the basis for approval of a petition may no longer be valid, the Board will require a new demonstration in accordance with 35 Ill. Adm. Code 738.120.
- L. In any action under subsection 35 Ill. Adm. Code 738.124(a)(1), if the Board finds a violation of the Act or Board regulations, the Board may terminate any adjusted standard granted under Section 738.120 as provided by Section 738.124.

IT IS SO ORDERED.

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2008); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on October 7, 2010, by a vote of 5-0.

A handwritten signature in black ink that reads "John T. Therriault". The signature is written in a cursive style with a long horizontal flourish extending to the right.

John T. Therriault, Assistant Clerk
Illinois Pollution Control Board