

ILLINOIS POLLUTION CONTROL BOARD
May 15, 1997

IN MATTER OF:)
)
PETITION OF SHELL WOOD RIVER) AS 97-3
REFINING COMPANY FOR ADJUSTED) (Adjusted Standard - RCRA)
STANDARD FROM 35 Ill. Adm. Code)
725.213 and 725.321)

OPINION AND ORDER OF THE BOARD (by J. Yi):

This matter comes before the Board on a petition for adjusted standard filed September 3, 1996, by Shell Wood River Refining Company (Shell or petitioner) located near Roxana Illinois, Madison County. Shell filed an amended petition on January 10, 1997.¹ Shell is requesting an adjusted standard from the closure and design provisions of 35 Ill. Adm. Code 725.213 and 725.321 respectively; petitioner seeks to delay closure of certain wastewater treatment ponds at its Wood River facility so as to use the ponds to treat nonhazardous waste and maintain compliance with its National Pollution Discharge Elimination System (NPDES) permit. In accordance with 35 Ill. Adm. Code 106.712, Shell notified the Board on October 2, 1996, that it caused notice to be timely published in the Alton Telegraph. The Agency filed a response to the Shell's amended petition on February 3, 1997.²

For the reasons stated below the Board grants Shell's request subject to certain conditions.

BACKGROUND

Shell owns and operates a petroleum refinery in Roxana, Illinois. As part of the facility Shell operates a wastewater treatment plant. (A.Pet. at 3.) Shell's wastewater treatment plant, on the average, discharges 7.9 million gallons per day (MGD) of treated process, sanitary, and stormwater through Outfall 001 into the Mississippi River. (A.Pet. at 3-4.) Shell wastewater treatment plant also receives and treats both raw effluent from Cardox Corporation and treated sewage from the Village of Roxana Sewage Treatment Plant. (A.Pet. at 4.) These are combined with Shell's effluent and also discharged through Outfall 001. (Id.)

Shell states that its wastewater treatment systems consists of primary and secondary treatment. (Id.) The primary treatment facilities include neutralization, oil/water separation, dissolved air flotation and equalization all of which occur in Pond #1. (Id.) Pond #1 is the focus of Shell's requested relief in this matter. The wastewater treatment plant's secondary treatment facilities consist of an activated sludge aeration basin and clarifiers. (Id.) Shell states "[e]ffluent from the secondary treatment system is transferred through the Mississippi River levee by gravity flow to polishing lagoons for tertiary treatment and, ultimately, to outfall 001." (Id.) Shell

¹ The amended petition will be referenced to as "A.Pet. at ".

² The Agency's response will be referred to as "Resp. at ".

indicates that when the effluent flow through the gravity line exceeds its capacity, the local levee district authority is required to operate its pump station to prevent localized flooding. (Id.) Shell states that the levee district is not set up to run its pumps on a regular basis and that flow equalization in Pond #1 would eliminate most occurrences requiring use of the levee district pumps. (Id.)

Shell states that the USEPA's revised Toxicity Characteristic Leaching Procedure (TCLP) which became effective on September 25, 1990 (55 Fed. Reg. 11850) resulted in measurement of certain of Shell's waste material at concentrations considered to be hazardous. (Id.) Pond #1 became part of a hazardous waste management facility due to this change by USEPA. (A.Pet. at 4-5.) Shell asserts that Pond #1 was a hazardous waste management unit because the concentration of benzene in the wastewater entering the pond can exceed the regulatory limit of 0.5 milligrams per liter (mg/l) as measured by the TCLP. (A.Pet. at 5.) Shell also states that "effective May 2, 1991, the petroleum refinery sludge rule (55 Fed. Reg. 46354) resulted in the reclassification of additional wastes in Pond #1 as listed hazardous wastes F037 and F038." (Id.)

Shell states that "[o]n March 22, 1991, Shell submitted a RCRA Part A & B application for Pond #1 and one other pond as a Class three modification to the existing RCRA Part B permit (ILD-080012305), which was granted November 3, 1989." (Id.) Shell states that Pond #1 and the other pond are now operating under interim status regulations and that Shell submitted an amended RCRA Part A and B application with the intent to continue operating both ponds. (Id.)

Pond #1 was placed in service in 1957 and was constructed by excavation within a predominately clay unit. Pond #1 occupies approximately 1.25 acres at the facility, is approximately 12 feet deep, is lined with a three inch layer of asphalt and has a total holding capacity of 3.9 million gallons. (Id.) Its primary function is to provide hydraulic and organic load equalization for the influent wastewater stream to the biological treatment system. Shell states that it "took Pond #1 out of hazardous waste service to meet RCRA and benzene waste NESHAP's requirements in March, 1994, and the hazardous liquids and sludges were removed during 1994." (Id.) Shell intends to re-use Pond #1 as part of its nonhazardous wastewater treatment process. (Id.) Shell asserts that Pond #1 will provide diversion capacity for nonhazardous wastewater from the clarifiers in the event an NPDES control parameter exceeds certain limits; temporary storage of water that must be recycled to the refinery to meet water demands; hydraulic load equalization for the outfall lines to the polishing ponds and discharge to the Mississippi River. (A.Pet. at 5-6.) Shell states that it needs diversion capacity approximately 2 times per month to maintain compliance with NPDES limits and that hydraulic load equalization is needed several times per month to avoid excessive use of the levee district's pumping station which, as discussed above, can not be operated on a regular basis. (A.Pet. at 6.) Shell is requesting an adjusted standard from the closure requirements in order to use Pond #1 for diversion capacity for nonhazardous wastes. (Id.)

PROPOSED ADJUSTED STANDARD

Shell proposes the following adjusted standard:

The Shell Wood River Refining Company located near Roxana, Illinois, in Madison County is hereby granted an adjusted standard to the requirements of 35 Ill. Adm. Code 725.213 for its Treatment Pond #1 that will allow Pond #1 to operate as a post-treatment retention unit without closure, subject to the requirement that it implement the contingent corrective measures plan and file an adjusted standard petition with the Board within 35 days after a confirmed detection by the groundwater monitoring system of any release of a hazardous constituent from the pond. Shell Wood River Refining Company shall also file semi-annual reports with the Agency following a confirmed detection. If Shell Wood River Refining Company fails to file said adjusted standard petition with the Board and/or fails to implement the contingent corrective measures plan this adjusted standard will terminate and closure of Pond #1 shall begin pursuant to the terms of the Closure Plan. Finally, for one year following the issuance of this adjusted standard or for twelve (12) discrete diversion events, whichever is longer, Shell shall sample the diversion influent to Pond #1 for each diversion event, analyze for benzene using EPA Method 1311/8020 ("TCLP"), and record the results. In the event that the TCLP limit for benzene (0.5 mg/L) has not been exceeded during the initial sampling period, sampling shall no longer be required. If the TCLP limit for benzene is exceeded during the initial sampling period, the sampling period shall be extended for one year. (Id.)

The Agency states that Shell's proposed adjusted standard language in the amended petition "acceptable" but also states that "[t]he proposed adjusted standard should be read with the definition of 'discrete diversion event' as found in the Statement of Reasons for Shell Wood River Refining Company's Amended Petition for Adjusted Standard." (Resp. at 3-4.) The Agency states that Shell's statement of reasons defines discrete diversion event "as a continuous discharge of waters into Pond 1, regardless of duration." (Id.)

The Board notes that this matter has been captioned by petitioner as requesting relief from 35 Ill. Adm. Code 725.321 in addition to Section 725.213. Section 725.321, Design and Operating Requirements, sets forth the requirements for operating a hazardous wastes surface impoundment. The Board notes that adjusted standard relief from Section 725.321 is granted pursuant to Section 725.312(e) for the operating of a hazardous waste surface impoundment for the receipt of nonhazardous waste while it does not meet the requirements of Section 725.321. Therefore by granting relief under Section 725.213(e) Shell will be allowed to operate its hazardous waste surface impoundment for nonhazardous waste without meeting the requirements of Section 725.321.

REGULATORY FRAMEWORK

Section 725.213 Closure; Time Allowed for Closure

- e) Surface impoundments. In addition to the requirements in subsection (d), above, an owner or operator of a hazardous waste surface impoundment which is not in compliance with the liner and leachate collection system requirements in Section 725.321(a) shall receive non-hazardous wastes only as authorized by an adjusted standard pursuant to this subsection.
- 1) The petition for adjusted standard must include:
 - A) A plan for removing hazardous wastes; and
 - B) A contingent corrective measure plan.
 - 2) The removal plan must provide for:
 - A) Removing all hazardous liquids; and
 - B) Removing all hazardous sludges to the extent practicable without impairing the integrity of the liner or liners, if any; and
 - C) Removal of hazardous wastes no later than 90 days after final receipt of hazardous wastes. The Board will allow a longer time, if the owner or operator demonstrates:
 - i) That the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete; and
 - ii) That an extension will not pose a threat to human health and the environment.
 - 3) The contingent corrective measures plan:
 - A) Must meet the requirements of a corrective action plan under Section 724.199, based upon the assumption that a release has been detected from the unit.
 - B) May be a portion of a corrective action plan previously submitted under Section 724.199.
 - C) May provide for continued receipt of non-hazardous wastes at the unit following a release only if the owner or operator demonstrates that continued receipt of wastes will not impede corrective action.
 - D) Must provide for implementation within one year after a release, or within one year after the grant of the adjusted standard, whichever is later.
 - 8) Adjusted standard procedures. The following procedures must be used in granting, modifying or terminating an adjusted standard pursuant to this subsection.
 - A) Except as otherwise provided, the owner or operator shall follow the procedures of 35 Ill. Adm. Code 106.Subpart G to petition the Board for an adjusted standard.
 - B) Initial justification. The Board will grant an adjusted standard pursuant to subsection (e)(1), above, if the owner or operator demonstrates that the removal plan and contingent corrective

measures plans meet the requirements of subsections (e)(2) and (3), above.

- C) The Board will include the following conditions in granting an adjusted standard pursuant to subsection (e)(1), above:
- i) A plan for removing hazardous wastes.
 - ii) A requirements that the owner or operator remove hazardous wastes in accordance with the plan.
 - iii) A contingent corrective measures plan.
 - iv) A requirement that, in the event of a release, the owner or operator shall: within 35 days, file with the Board a petition for adjusted standard; implement the corrective measures plan; and, file semi-annual reports with the Agency.
 - v) A condition that the adjusted standard will terminate if the owner or operator fails to: implement the removal plan; or, timely file a required petition for adjusted standard.
 - vi) A requirement that, in the event the adjusted standard is terminated, the owner or operator shall commence closure of the unit in accordance with the requirements of the closure plan and this Part.
- D) Justification in the event of a release. The Board will modify or terminate the adjusted standard pursuant to a petition filed under subsection (e)(5)(A), above, as provided in that subsection or in subsection (e)(7), above.

LEVEL OF JUSTIFICATION

Shell states that the level of justification is set forth in 35 Ill. Adm. Code 725.213(e)(8)(B). (A. Pet. at 2.) The Agency agrees with Shell that 35 Ill. Adm. Code 725.213(e) defines the level of justification and that the requirement is met upon the demonstration of the adequacy of the removal and contingent corrective measures plan. (Resp. at 2.) The Agency further states "that the removal of the hazardous wastes at the facility has been completed as indicated in a Certification Report, prepared by Woodward-Cycle Consultants in March 1995, documenting the removal of hazardous wastes." (Resp. at 2-3.) Since the Agency believes that removal has already been completed, the Agency states that the removal plan requirement of 35 Ill. Adm. Code 725.213(e)(1)(A) has been satisfied leaving only the corrective action measures plan requirements. (Resp. at 2.)

The Board agrees with the parties that the level of justification for granting an adjusted standards is set forth in Section 725.213(e)(8). This matter has been docketed as an "Adjusted Standard" and been brought pursuant to 35 Ill. Adm. Code 725.213 which states the level of justification necessary in order for the Board to grant relief. Therefore, pursuant to Section 28.1(C), the level of justification is as set forth in Section 725.213. As noted above, Shell must demonstrate that that the removal plan and contingent corrective measures plans meet the requirements of Sections 725.213(e)(2) and (3).

PARTIES' ARGUMENTS ON JUSTIFICATION FOR THE REQUESTED ADJUSTED
STANDARD

As noted above 35 Ill. Adm. Code 725.213(e)(8)(B) requires petitioners to demonstrate that the removal plan set forth in subsection (e)(2) of that Section and plans for contingent corrective measures (CCM) plan pursuant to subsection (e)(3) of that Section comply with Board regulations. Shell states that it "has already implemented many of the elements of these plans including groundwater monitoring, and amending its permit application to include a corrective action plan." (A. Pet. at 8.)

Removal Plan

Shell states that the "Illinois RCRA requires that '[t]he removal plan must provide for the removal of all hazardous liquids and sludges.'" (*Id.*) Shell also states that it removed the hazardous liquids and sludges from Pond #1 in accordance with the closure plan submitted in September, 1993. (*Id.*) The Agency asserts that Shell has already completed removal of all hazardous liquids, sludges in compliance with Section 725.213(e)(2). (Resp. at 2 and 4.)

Contingent Corrective Measures Plan

The CCM plan must contain the components which are described below.

1. Groundwater monitoring plan. (724.199(h)(2)(B))

Shell states that it "initiated a groundwater detection monitoring program, as required for interim status impoundments." (A.Pet. at 8.) Shell explains that the "program consists of 8 monitoring wells which are tested on a quarterly basis." (*Id.*) Shell claims that groundwater flow is determined annually and commits to follow this program for the period of this adjusted standard. (*Id.*)³

2. Notification and description of corrective action to Agency.

Shell maintains that its RCRA Part B permit contains a corrective action plan for releases from hazardous waste management units including the ponds. (A.Pet. at 8-9.) Shell asserts that it has demonstrated, through an alternate "Source Demonstration," that any groundwater contamination in the vicinity of the ponds came from other sources and has proposed a program of Corrective Measure Study to USEPA as a method of developing appropriate corrective measures for the contamination.⁴ (A.Pet. at 9.)

³ Details of the program that is being conducted at present are given in Attachment #9 to Shell's petition filed September 3, 1996, entitled "Response to Conditions Draft MTR Waiver for Pond 2."

⁴ See Attachment #10 to Shell's petition filed September 3, 1996.

Shell asserts that "[t]he only types of emergencies likely at the pond was (sic) determined to be leaks, and an evaluation of indicator parameters and hazardous constituents showed no evidence of leakage from the pond" and cites to Attachment #9 of its amended petition at page 2. (Id.) Additionally, Shell states that "[d]uring 1994 all hazardous sludges and liquids were removed from Pond #1" and that it submitted a description of corrective action for the pond to the Agency. (Id.) Shell further states that this corrective action plan was submitted as part of the its Part A and Part B Application which was updated in June 1995. (Id.)

The Agency states that the CCM plan requirement is satisfied due to the corrective action plan that is part of Shell's RCRA Part B permit that was updated in June 1995. (Resp. at 3.) The Agency asserts that "Shell is obligated under its RCRA Part B permit to comply with the requirements of 35 Ill. Adm. Code 724.199 and 35 Ill. Adm. Code 724.200" which require Shell to perform groundwater monitoring and corrective action as required. (Id.) The Agency also states that 35 Ill. Adm. Code 725.213(e)(5) & (8) require procedures if there is a release from the Pond #1. (Id.) The Agency states that the amended petition's proposed adjusted standard language requires compliance with these provisions and, therefore, satisfies this element. (Id.)

ENVIRONMENTAL IMPACT

Shell maintains that the continued use of the pond will be protective of health and the environment and will provide for the further treatment of recycled nonhazardous wastewater. (A.Pet. at 7.) Shell asserts that there have been no known unpermitted releases to surface waters from this pond, as discussed all hazardous sludges were removed from Pond #1, and that the area in which the Pond #1 is located is presently subject to groundwater monitoring. (Id.)

The Agency agrees with Shell to the extent that the proposed use of Pond #1 should have no substantial adverse impact on the environment. (Resp. at 4.) However, the Agency believes that the testing for benzene as noted in Shell's amended petition is necessary to monitor for the presence and level of contamination in the wastewaters in Pond #1. (Id.)

COMPLIANCE ALTERNATIVES

Shell states that the alternative would be to take Pond #1 out of service and completely close it by capping. (A.Pet. at 6.) Shell further states that it would require installing a tank with equivalent diversion capacity so that it is able to meet its NPDES permit limits. (Id.) Shell claims that it would cost approximately five million dollars, and could result in violation of Shell's NPDES permit limits during the construction and start-up/rerouting and construction of the tank. (Id.) In addition, installation of such a tank system would be physically impossible at the wastewater treatment plant due to the lack of available property. (Id.)

The Agency states that the compliance alternative would be to "complete RCRA closure of Pond #1 as described in the amended petition and find some other alternative for the occasional diversion of waste waters." (Resp. at 3.)

CONSISTENCY WITH FEDERAL LAW

Shell states Section 725.213 is based on 40 CFR §265.113, one of the regulations implementing the Resource Conservation Recovery Act which provides that upon approval an owner or operator may receive nonhazardous wastes in a landfill, land treatment, or surface impoundment. (A.Pet. at 2.) Shell asserts that the Board may grant such relief through this procedural mechanism consistent with federal law. (A.Pet. at 9.)

The Illinois EPA agrees with Shell that the adjusted standard as requested would be consistent with federal law. (Resp. at 4.)

DISCUSSION

As stated previously Shell's level of justification is set forth by 35 Ill. Adm. Code 725.213(e)(B)(8). The Board finds that Shell has met its burden in demonstrating that level of justification. Specifically, we find that Shell has already removed all hazardous liquids and sludges to the extent practicable without impairing the integrity of the liner and has developed a CCM plan that meets the requirements of 35 Ill. Adm. Code 724.199. Having found that Shell has met the level of justification pursuant to Section 725.213(e)(B)(8) requires the Board to include in its order the following conditions:

- 1) A plan for removing hazardous wastes;
- 2) A requirement that the owner or operator remove hazardous wastes in accordance with the plan;
- 3) A contingent corrective measures plan;
- 4) A requirement that, in the event of a release, the owner or operator shall: within 35 days, file with the Board a petition for adjusted standard; implement the corrective measures plan; and, file semi-annual reports with the Agency;
- 5) A condition that the adjusted standard will terminate if the owner or operator fails to: implement the removal plan; or, timely file a required petition for adjusted standard; and
- 6) A requirement that, in the event the adjusted standard is terminated, the owner or operator shall commence closure of the unit in accordance with the requirements of the closure plan and this Part.

Since Shell has already removed the hazardous liquids and sludges the first two conditions are not necessary and will not be placed as conditions to the Board's grant of the requested relief from 35 Ill. Adm. Code 725.321. However, the remaining conditions will be included.

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

ORDER

Pursuant to the Board's authority granted in Section 28.1 of the Act and the procedures set forth in 35 Ill. Adm. Code 213.312(e) the Board grants Shell's request for an adjusted standard so that it can operate Pond #1 as part of its wastewater treatment system for post-treatment retention

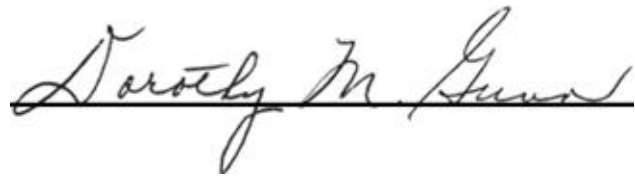
of nonhazardous waste without meeting the requirements of 35 Ill. Adm. Code 725.321. The Board's grant of an adjusted standard is subject to the following conditions:

- 1) This adjusted standard applies to the Shell Wood River Refining Company (Shell) located near Roxana, Illinois, in Madison County for its Treatment Pond #1;
- 2) The adjusted standard acknowledges and requires:
 - a) A corrective action plan as set forth in Shell's Resource Conservation Recovery Act (RCRA) Part B permit;
 - b) In the event of a release, Shell shall: within 35 days, file with the Board a petition for adjusted standard; implement the corrective measures plan included in its RCRA Part B permit; and file semi-annual reports with the Agency;
 - c) The adjusted standard granted by today's action will terminate if Shell fails to: implement the removal plan; timely file a required petition for adjusted standard; or for any reason for terminating the adjusted standard found at 35 Ill. Adm. Code 213(e)(7)(a); and
 - d) In the event the adjusted standard granted by today's action is terminated, the owner or operator shall commence closure of the unit in accordance with the requirements of the closure plan and 35 Ill. Adm. Code 725; and
- 3) For one year following the issuance of this adjusted standard or for twelve (12) discrete diversion events, whichever is longer, Shell shall sample the diversion influent to Pond #1 for each diversion event, analyze for benzene using EPA Method 1311/8020 (TCLP), and record the results. In the event that the TCLP limit for benzene (0.5 mg/L) has not been exceeded during the initial sampling period, sampling shall no longer be required. If the TCLP limit for benzene is exceeded during the initial sampling period, the sampling period shall be extended for a total of one year. For the purposes of this condition "discrete diversion events" is defined to be continuous discharges into Pond #1, regardless of duration.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1994)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of the date of service of this order. The Rules of the Supreme Court of Illinois establish filing requirements. (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 15th day of May, 1997, by a vote of 6-0.

A handwritten signature in cursive script, reading "Dorothy M. Gunn", written over a solid horizontal line.

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board