

ILLINOIS POLLUTION CONTROL BOARD
August 6, 2015

VILLAGE OF CARLOCK,)
)
 Petitioner,)
)
 v.) PCB 15-110
) (Water Well Setback Exception)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

PATRICK B. McGRATH, McGRATH LAW OFFICE, P.C., APPEARED ON BEHALF OF PETITIONER; and

JOANNE M. OLSON, ASSISTANT COUNSEL, APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by J.D. O’Leary):

On December 12, 2014, the Village of Carlock (Village) filed a petition requesting an exception from the water well setback requirement at Section 14.2(a) of the Environmental Protection Act (Act). *See* 415 ILCS 5/14.2(a) (2014); 35 Ill. Adm. Code 106.Subpart C (Water Well Setback Exception Procedures). The Village requests an exception so that it may construct and operate a septic system to serve a new water treatment plant at 300 South Perry Street, Carlock, McLean County. The septic system is within the minimum setback from two community water supply wells. The Illinois Environmental Protection Agency (Agency or IEPA) originally recommended that the Board deny the Village’s petition. After receiving additional information from the Village, however, the Agency reconsidered that position and now recommends that the Board grant the petition.

Based on the record before it, the Board finds that the Village has met its burden of proof under Section 14.2(c) of the Act and has justified its request for an exception from the statutory water well setback for the construction of a septic system. Accordingly, the Board today grants the Village’s requested exception from the minimum setback for two of the Village’s community water supply wells, subject to the conditions contained below in the Board’s order.

In this opinion, the Board first provides the procedural history and background of the case and applicable statutes and regulations. Next, the Board summarizes the Village’s petition, the Agency’s response, the Village’s reply, and the Agency’s response to that reply. The Board then discusses the issues presented, reaches its conclusion, and issues its order.

PROCEDURAL HISTORY

On December 12, 2014, the Village filed a petition for an exception from the water well setback requirement (Pet.). Attached to the petition were four exhibits:

Site Plan (Exh. A);

Illinois State Geological Survey drilling log for Village Well No. 1 (Exh. B);

Illinois State Geological Survey drilling log for Village Well No. 2 (Exh. C); and

Summary of Raw Water Pumped per Village Well (Exh. D).

On December 31, 2014, the Agency filed its response including its recommendation (Resp). On February 2, 2015, the Village filed its reply to the Agency's response (Reply). Attached to the reply were two exhibits:

Preliminary Opinion of Probable Project Costs to Purchase Property and Relocate Septic System (Exh. 1), and

Preliminary Opinion of Probable Project Costs for New Well Near Existing Well No. 3 (Exh. 2).

On February 6, 2015, the Agency filed its response to the Village's Reply (Resp. 2), including a reconsideration of its earlier recommendation.

On March 5, 2015, the Board adopted an order accepting the Village's petition for hearing. In an order on May 6, 2015, the hearing officer submitted written questions (Board Questions) to the Village and directed the Village to submit written answers by a deadline to be later determined. In an order on May 13, 2015, the hearing officer set a deadline of May 29, 2015, to file written answers. On May 18, 2015, the hearing officer issued an order scheduling a hearing on July 14, 2015, in Carlock. On May 29, 2015, the Village filed written responses to the Board's questions (Vill. Resps.).

On July 14, 2015, the hearing took place as scheduled, and the Board received the transcript (Tr.) on July 17, 2015. One witness testified on behalf of the Village: Mr. Mike Burris of Crawford, Murphy and Tillis Engineers, the Village Engineer. Tr. at 7. One person, Mr. Doug Geshiwl, offered a public comment. Tr. at 15-16. Also on July 14, 2015, the Village filed answers to the Board's hearing questions (Vill. Resps. 2).

BACKGROUND

The Village is constructing a new water treatment plant and a new septic system to serve the plant on property it owns at 300 South Perry Street, Carlock, McLean County. Pet. at 1; Tr. at 7. The new septic system will also serve a new maintenance building and office located on adjacent property. Pet. at 1; *see* Tr. at 7-8. The new plant addresses violations of the maximum

contaminant level (MCL) for arsenic and complies with an administrative order issued by the United States Environmental Protection Agency. *Id.*; Tr. at 7. Mr. Burris testified that the approximate total cost of the plant construction project is \$1.4 million. Tr. at 10.

The Village does not have a public sanitary sewer system. Pet. at 1. The new septic system consists of “a 1,000 gallon septic tank and a 216 square foot seepage bed with perimeter curtain drain.” *Id.* at 2. The system will receive sewage from the water treatment plant and a restroom in the maintenance building and office. *Id.* Estimated discharge to the system is 85 gallons per day. *Id.*; see Vill. Resps. 2 at 4.

The Village has two community water supply wells located on the South Perry Street property. Pet. at 1; *see* Exh. A (Site Plan). Well No. 1 is located approximately 116 feet from the perimeter of the septic system, and Well No. 2 is located approximately 142 from the perimeter. Pet. at 1; *see* Exh. A. “These two wells are the only wells potentially impacted by the construction of the Septic System.” Pet. at 1-2. Well No. 1 was installed to a depth of 250 feet in 1961 and Well No. 2 to a depth of 245 feet in 1977. Both Well No. 1 and Well No. 2 have an 8” diameter steel casing pipe. Pet. at 2, 4; Exhs. B, C.

The Village also owns a Well No. 3, which is located 1.3 miles southeast of the Village. Pet. at 1-2. Well No. 3 “supplies approximately 91% (15,119,100 gallons) of the Village’s annual potable water consumption.” Pet. at 2; *see* Exh. D. In the first half of 2014, the Village obtained 98.3% of total gallons pumped from Well No. 3. Pet. at 2; *see* Exh. D.

APPLICABLE STATUTES AND REGULATIONS

Section 3.350 of the Act defined “potential route” to mean in pertinent part

abandoned and improperly plugged wells of all kinds, drainage wells, all injection wells, including closed loop heat pump wells, and any excavation for the discovery, development or production of stone, sand or gravel. This term does not include closed loop heat pump wells using USP food grade propylene glycol.

A new potential route is:

- (1) a potential route which is not in existence or for which construction has not commenced at its location as of January 1, 1988, or
- (2) a potential route which expands laterally beyond the currently permitted boundary or, if the potential route is not permitted, the boundary in existence as of January 1, 1988.

Construction shall be deemed commenced when all necessary federal, State and local approvals have been obtained, and work at the site has been initiated and proceeds in a reasonably continuous manner to completion. 415 ILCS 5/3.350 (2014).

Section 14.2 of the Act provides in pertinent part that

[a] minimum setback zone is established for the location of each new potential source or new potential route as follows:

- (a) Except as provided in subsections (b) [waiver], (c) [exception] and (h) [specified excavations for stone, sand, or gravel] of this Section, no new potential route or potential primary source or potential secondary source may be placed within 200 feet of any existing or permitted community water supply well or other potable water supply well.

* * *

- (c) The Board may grant an exception from the setback requirements of this Section . . . to the owner of a new potential route. . . . The owner seeking an exception with respect to a community water supply well shall file a petition with the Board and the Agency. . . . A petition shall be accompanied by proof that the owner of each potable water supply well for which setback requirements would be affected by the requested exception has been notified and been provided with a copy of the petition. A petition shall set forth such facts as may be required to support an exception, including a general description of the potential impacts of such . . . potential route upon groundwaters and the affected water well, and an explanation of the applicable technology-based controls which will be utilized to minimize the potential for contamination of the potable water supply well.

The Board shall grant an exception, whenever it is found upon presentation of adequate proof, that compliance with setback requirements of this Section would pose an arbitrary and unreasonable hardship upon the petitioner, that the petitioner will utilize the best available technology controls economically achievable to minimize the likelihood of contamination of the potable water supply well, that the maximum feasible alternative setback will be utilized, and that the location of such . . . potential route will not constitute a significant hazard to the potable water supply well. 415 ILCS 5/14.2 (2014).

Part 106, Subpart C, of the Board's procedural rules establishes requirements for water well setback exceptions under Section 14.2 of the Act. 35 Ill. Adm. Code 106.Subpart C (Water Well Setback Exception Procedures). Section 106.310 of Subpart C provides in its entirety that

The burden of proof is on the petitioner. The petitioner must demonstrate that:

- a) Compliance with the setback requirements of Section 14.2 or 14.3(e) of the Act would pose an arbitrary and unreasonable hardship;
- b) The petitioner will utilize the best available control technology economically achievable to minimize the likelihood of contamination of the potable water supply well;
- c) The maximum feasible alternative setback will be utilized; and
- d) The location of the potential route will not constitute a significant hazard to the potable water supply well. 35 Ill. Adm. Code 106.310.

SUMMARY OF VILLAGE'S PETITION FOR EXCEPTION

The petition describes the Village's need to construct the septic system and the measures the Village will take to protect the community water supply from it. In the following subsections of the opinion, the Board summarizes the Village's position on these issues.

Proof of Notice to Affected Well Owners

The petition states that Well No. 1 and Well No. 2 are the only wells potentially impacted by construction of the septic system. Pet. at 1-2; *see* 35 Ill. Adm. Code 106.302(b) (Initiation of Proceeding), 106.304 (Petition Content Requirements). The Board noted that Section 14.2(a) of the Act establishes a setback from both community water supply wells and other potable water supply wells. The Board asked the Village how it determined that there are no potable water supply wells within the 200-foot setback. The Village states that "Mr. Richard Atwood, the previous Water Superintendent, performed a site survey of the area to confirm there were no other potable water supply wells within 200 feet of the proposed septic system." Vill. Resps. 2 at 4.

Arbitrary and Unreasonable Hardship

The Village argues that, in the absence of a public sanitary sewer system, it has only two alternatives to a setback exception. The first is the purchase of additional property for construction of the septic system outside the 200-foot setback. Pet. at 3. The second is to abandon Wells No. 1 and 2 and construct a new Well No. 4 near Well No. 3. *Id.* The Village argues that both require "significant additional cost." *Id.*

The Village adds that its "customers are currently facing significant increases to their monthly water bills to repay the approximately \$1,100,000 low interest loan from the IEPA required to construct the new water treatment plant to address compliance with the arsenic MCL." Pet. at 3; *see* Tr. at 10-11. The Village argues that additional costs for compliance with the statutory 200 foot setback "would cause further increases in the monthly water bills for Village residents." Pet. at 3; *see* Tr. at 11. The Village concludes that compliance with the

statutory setback would pose an arbitrary and unreasonable hardship upon it. *Id.*; see 35 Ill. Adm. Code 106.304(a).

Best Available Technology Controls Economically Achievable

Background

The Board asked the Village to “indicate whether the proposed septic system is a conventional septic tank system or an aerobic treatment system.” Board Questions at 1. The Village responded that “[t]he proposed Septic System is a conventional septic tank system with seepage field.” The Village reported that, while it originally designed a septic tank followed by a sand filter, it changed to a conventional septic tank system with seepage field “based on discussions with the McLean County Health Department.” Vill. Resps. at 3.

Noting that Well No. 1 and Well No. 2 are 116 feet and 142 feet, respectively, from the perimeter of the septic system, the Board also requested comment on “whether there would be any advantages to installing an aerobic treatment system.” Board Questions at 1, citing Pet. at 1. The Village notes that non-residential use of aerobic treatment includes a requirement that “[t]otal daily flows from the wastewater source into the plant are at least 75% of the rated hydraulic capacity of the plant.” 77 Ill. Adm. Code 905.100(j); see Vill. Resps. at 3. The Village states that the minimum rated treatment capacity for a residential aerobic unit is 400 gallons per day. Vill. Resps. at 3, see 77 Ill. Reg. 905.100(d). The Village argues that its estimated daily wastewater flow of 85 gallons per day “is far less” than the required 75% of the rated capacity of the unit. Vill. Resps. at 3; Vill. Resps. 2 at 3. The Village calculated that its projected daily wastewater flow of 85 gallons would be only 21.3% of the minimum rated treatment capacity and inadequate to maintain aerobic treatment. Vill. Resps. at 3; Vill. Resps. 2 at 3.

Proposed Technology Controls

Installation. The Village will perform installation of the septic system “under the direction of a licensed installer.” Pet. at 3. The Board asked the Village to “indicate whether McLean County regulations require the Village to have the system installed by an installer licensed by the county.” Board Questions at 1. The Village reported that, under McLean County health and sanitation regulations, “the installer of the septic system shall have a license approved by the Board of Health of the McLean County Health Department.” Vill. Resps. at 3 (citing § 28.63 of health and sanitation regulations). The Village stated that this requirement applies regardless of whether the Board grants a setback exception. Vill. Resps. 2 at 3. The Village added that, if the Board grants the requested exception, it does not object to the following condition:

[a]s a condition of the award of the requested setback exemption, the septic system at issue in this proceeding shall be installed by a septic system installer duly licensed by the McLean County Health Department. *Id.*

Maintenance and Inspection. The Village will have the septic system “maintained and inspected by a licensed wastewater operator on an annual basis.” Pet. at 3; *see* Tr. at 12-13. Responding to an Agency question, Mr. Burris testified that these reports of these inspections “can be submitted to the local health department by the village as they have been on an annual basis.” Tr. at 13.

The Board asked “whether McLean County regulations require this inspection and maintenance by a licensed operator.” Board Questions at 1. The Village reported that, under McLean County health and sanitation regulations, “the inspection of the septic system shall be performed by a McLean County licensed installer or authorized representative of the Board of Health.” Vill. Resps. at 3 (citing § 28.49 of health and sanitation regulations).

The Board also asked “whether the licensed wastewater operator is certified by the Agency in accordance with 35 Ill. Adm. Code 380 (Procedure for the Certification of Operators of Wastewater Treatment Works).” Board Questions at 1. The Village responded that “[t]he previous Village water superintendent was approached by the McLean County Health Department to perform such inspections since he was a licensed wastewater operator as certified by the Illinois Environmental Protection Agency (IEPA) in accordance with 35 Ill. Adm. Code 380.” Vill. Resps. at 4. The Village adds that “[c]urrent Water Superintendent James M. Larimore possesses a Class 4 wastewater operator license as certified by the IEPA.” *Id.*; *see* 35 Ill. Adm. Code 380.400(a) (Types of Wastewater Treatment Works); 380.415(d) (Certification Required by Group).

In addition, the Board asked, if county regulations do not require inspection by a licensed operator, “whether this requirement should be included as a condition of granting the exception.” Board Questions at 1. Although it had cited this requirement in county regulations, the Village recommended a condition “that the septic system shall be inspected by a licensed wastewater operator, contracted or employed by the Village of Carlock and approved by the McLean County Health Department, on an annual basis.” Vill. Resps. at 4.

Pumping. The Village will pump the septic tank component of the system every year. Pet. at 3; *see* Tr. at 12. The Board requested comment on “whether this pumping should be required as a condition of granting the exception.” Board Questions at 1. The Village responded that “[p]umping of the septic tank component of the Septic System should be an annual maintenance operation.” Vill. Resps. at 4. The Village added that including “this pumping as a condition of granting of the exception is acceptable to the Village.” *Id.* The Village proposed the following language:

[a]s a condition of the award of the requested setback exemption, the Village of Carlock shall, on an annual or more frequent basis, have the septic tank component of the septic system at issue in this proceeding pumped by a septic system pumper licensed by the McLean County Health Department. Vill. Resps. 2 at 4.

Testing. The Village states that “[m]onthly bacteriological testing of Well No. 1 and Well No. 2 will be performed as required by the IEPA as a control to insure contamination of

these wells does not occur.” Pet. at 3; *see* Tr. at 12. The Board requested clarification “whether the bacterial testing would be required in a permit issued by the IEPA for the wells.” Board Questions at 1. The Village responded that “[r]aw water monthly bacteriological testing of existing Well No. 1 and Well No. 2 are presently required by the IEPA per the Groundwater Rule.” Vill. Resps. at 4; *see* 35 Ill. Adm. Code 611.Subpart S.

Village Summary

The Board asked the Village to “indicate whether the proposed septic system and the technology controls constitute ‘the best available control technology economically achievable’ under Section 14.2(c) of the Environmental Protection Act and 35 Ill. Adm. Code 106.310(b).” *Id.*; *see* 35 Ill. Adm. Code 106.304(a). The Village responded that “[t]he proposed Septic System and bacteriological testing of Well No. 1 and Well No. 2 constitute ‘the best available technology economically achievable’ without creating an arbitrary and unreasonable hardship.” Vill. Resps. at 3. Mr. Burris testified that these measures “provide the best available control technology economically feasible to minimize the likelihood of contamination.” Tr. at 12-13. The Village argues that compliance with the 200-foot setback would require relocating the septic system or constructing a new well, which would impose significant financial burdens on Village residents. Vill. Resps. at 3.

Maximum Feasible Alternative Setback

The Village states that the septic system will be situated at the southeast corner of its property “as far away from Well No. 1 and Well No. 2 as possible.” Pet. at 2. Mr. Burris testified that the septic system’s position on the property is “the farthest it could get away from the water treatment plant and the well.” Tr. at 10. The Village further states that “[t]he closest edge of the Septic System is approximately 116 feet from Well No. 1 and 142 feet from Well No. 2. The farthest edge of the Septic System is approximately 150 feet from Well No. 1 and 169 feet from Well No. 2.” *Id.* at 3. The Village concludes that the location of the septic system uses the maximum feasible setback. *Id.*; *see* 35 Ill. Adm. Code 106.304(a); Tr. at 10.

Location Not a Significant Hazard to Potable Water Supply Wells

Background

The Board asked the Village whether its new water treatment building and associated facilities might store or accumulate materials to an extent that would meet the statutory definition of “potential primary source” or “potential secondary source.” A “potential primary source” includes a unit at a facility or site that stores or accumulates specified weights of hazardous substances. 415 ILCS 5/3.345(4) (2014). A “potential secondary source” includes a unit at a facility or source that stores or accumulates specified volumes of petroleum. 415 ILCS 5/3.355(1), (2) (2014).

The Village calculated a weight of 6,493 pounds for treatment chemicals stored above ground at the wastewater treatment plant and concluded that this “does not meet the definition of a potential primary source or potential secondary source.” Vill. Resps. 2 at 5. The Village added

that its new maintenance building provides no gasoline storage and also does not meet the statutory definition of a potential primary source or potential secondary source. *Id.* at 6. In addition, the Village stated that its “standby generator uses natural gas so there is not diesel storage on the site.” *Id.* at 5.

In written questions, the Board noted that the Village’s proposed septic system consists of a 1,000 gallon septic tank. Board Questions at 1, citing Pet. at 2. The Board requested clarification of “the design capacity of the system to manage sewage in terms of gallons per day (gpd).” Board Questions at 1. The Village responded that the McLean County Department requires a minimum capacity of 750 gallons for flows of up to 500 gpd. Vill. Resps. at 4. The Village added that “[t]he installer placed a 1,000 gallon septic tank in lieu of the minimum sized septic tank of 750 gallons required.” *Id.*

The Board also noted that the Village estimated a discharge of sewage into the system of 85 gpd. *Id.*, citing Pet. at 2. The Board requested clarification of how this estimated flow was determined. Board Questions at 1. The Village responded that it estimated a discharge of 40 gpd from the water plant based on two persons and a rate per person of 20 gpd. Vill. Resps. at 4. The Village clarified that this estimate “is based on the flow for factories with toilets, no showers.” Vill. Resps. 2 at 4, citing 77 Ill. Adm. Code 905.ILLUSTRATION A. The Village estimated a discharge of 45 gpd from the maintenance shed bathroom based on three persons and a rate per person of 15 gpd. *Id.* The Village clarified that this estimate is based on flow for office and day workers. Vill. Resps. 2 at 4, citing 77 Ill. Adm. Code 905.ILLUSTRATION A.

If the Village is required to obtain a permit from the McLean County Health Department to install the proposed system, the Board requested “comment on whether the Village is required by the department to perform any additional soil or geologic investigation to demonstrate that the proposed system does not pose a threat to the community water supply wells.” Board Questions at 2. The Village responded that McLean County regulations provide that “the Board of Health may require soil classification information.” Vill. Resps. at 5. The Village attached “[a] copy of the soil classification information submitted with the permit application. . . .” *Id.*, Attachment (On-Site Soils Investigation for a Septic System dated July 21, 2014). The investigation included three borings and examined soil at the site of the seepage field to a depth of 36 inches. *Id.*

In addition, the Village notes that its property had previously included a septic system “that served the existing water treatment plant and the old maintenance and office building.” Pet. at 2. The Village reports that, while the previous system “was located much closer to Well No. 1 and Well No. 2,” it did not contaminate those wells. *Id.* The Village states that “the monthly bacteriological testing of these wells as required by the IEPA and performed by the Village’s Water Superintendent” confirmed this lack of contamination. *Id.* at 2-3. The Village reports that “the septic tank and seepage field were removed/abandoned in place as necessary for the construction of the new Water Plant and as required by the McLean County Health Department.” Vill. Resps. at 4; *see* Vill. Resps., Exh. A (revised site plan). The Village states that “[t]he McLean County Health Department does not issue certificates of closure or other similar documents on completion of the removal or abandonment of septic tanks and seepage fields.” Vill. Resps. 2 at 4.

The Board also asked whether the Village's proposed septic system would be subject to the Board rules applicable to Class V injection wells. Board Questions at 2. The Board's underground injection control regulations provide examples of Class V injection wells, including

[a] septic system well that is used to inject the waste or effluent from a multiple dwelling, business establishment, community, or regional business establishment septic tank. The UIC requirements do not apply to a single family residential septic system well, nor to a non-residential septic system well that is used solely for the disposal of sanitary waste and which has the capacity to serve fewer than 20 persons a day. 35 Ill. Adm. Code 704.281(i).

If the proposed septic system would be subject to these rules, the Board asked "how the Village will comply with 35 Ill. Adm. Code 704.283 (Notification of Class V Injection Well)." Board Questions at 2. That requirement provides in pertinent part that "[t]he owner or operator of a Class V injection well needs to provide basic 'inventory information' about its well to the Agency, if the owner or operator has not done so already." 35 Ill. Adm. Code 704.283. The Village responded that discussion with the Agency concluded that "the proposed Septic System would be subject to the requirements of 35 Ill. Adm. Code 704.281(i) since it serves multiple community buildings. Therefore the Village will be submitting the necessary inventory information to the IEPA." Vill. Resps. at 5, citing 35 Ill. Adm. Code 704.283.

Factors Minimizing Environmental Impact

Location. The Village states that "[t]he Septic System will be located as far away from Well No. 1 and Well No. 2 as possible on the farthest southeast corner" of its site. Pet. at 3, citing Exh. A (Site Plan); *see* Tr. at 10.

Clay Layers in Formation. The Village argues that "[t]he risk of contamination is low due to the existence of clay in the formation" where the wells were drilled. Pet. at 3, 4, citing Exhs. B, C (drilling logs). Mr. Burris testified that the permeability of the clay layers impedes septic system sewage from reaching the depth of the wells. Tr. at 11-12. The Village states that Well No. 1 was installed to a depth of 250 feet in 1961 and Well No. 2 to a depth of 245 feet in 1977. Pet. at 4. The Village further argues that "Well No. 1 and Well No. 2 supply water from the confined portion of the aquifer which reduces the risk of contamination from the Septic System." *Id.* at 2, 4. The Village adds that both Well No. 1 and Well No. 2 have an 8" diameter steel casing pipe. Pet. at 2, 4; *see* Exhs. B, C. The Village argues that "[s]teel casing is very resistant to water intrusion. Since the steel casing pipe was installed 17 feet and 21 feet respectively below the clay layers in the formation, the risk of contamination from seepage from the Septic System is very unlikely." Pet. at 2, 4; *see* Tr. at 12.

Technical Controls. The Village cites technical controls it has committed to employing. The Village will perform installation of the septic system "under the direction of a licensed installer." Pet. at 3, 4. The Village will also have the septic system "maintained and inspected by a licensed wastewater operator on an annual basis." *Id.* Also, the Village states that

“[m]onthly bacteriological testing of Well No. 1 and Well No. 2 will be performed as required by the IEPA as a control to insure contamination of these wells does not occur.” *Id.*

Well No. 3. The Village notes that “Well No. 3 was constructed in 2007 and supplies approximately 91% (15,119,100 gallons) of the Village’s annual potable water consumption.” Pet. at 2; *see* Exh. D (summary of water pumped in 2013). The Village states that, while it operates Well No. 1 and Well No. 2 monthly, for calendar year 2013 “they only provide 9% (1,481,100 gallons) of the Village’s annual water consumption.” Pet. at 2. The Board asked the Village to “indicate the average daily pumping rate in 2013 for Wells No. 1, 2, and 3.” Board Questions at 2. The Village responded that average daily pumping rates during 2013 were 198 gpd, 3,861 gpd, and 41,422 gpd, respectively. Vill. Resps. at 5. The Board also asked the Village to “indicate the maximum pumping rate in gallons per minute (gpm) for Wells No. 1, 2, and 3.” Board Questions at 2. The Village responded that the maximum rated capacity is 75, gpm, 75 gpm, and 150 gpm, respectively. Vill. Resps. at 5. The Village noted, however, that the actual capacity of Well No. 2 is 56 gpm. *Id.*

The Village states that pumping in the first half of 2014 showed even greater reliance on Well No. 3. Vill Resps. at 5; *see* Exh D (98.3% of total gallons pumped). The Village argues that this reliance on Well No. 3 “reduces the risk for contamination from the Septic System.” *Id.* The Board asked whether, based on the maximum pumping rate, “Well No. 3 is capable of meeting 100% of the Village’s water supply demand.” Board Questions at 2. The Village responded that “Well No. 3 is capable of meeting the Village’s water supply demand.” Vill. Resps. at 5. The Board asked the Village to “explain the need for keeping both Well No. 1 and Well No. 2 in service.” Board Questions at 2. The Village cited the 2012 edition of Recommended Standards for Water Works as the source of an Agency requirement “that the Village must be able to meet the Village’s water supply demand with the largest production well out of service.” Vill. Resps. at 5 (citation omitted). The Village stated that “Well No. 1 and Well No. 2 are required in the event the Well No. 3 is out of service.” *Id.*

Village Summary

Mr. Burris testified that, in his professional opinion, the new septic system would not “pose a significant hazard to the water supply wells.” Tr. at 11. He cited “a layer of clay, steel well casing pipe and regular well testing” as factors supporting this conclusion. *Id.*

SUMMARY OF AGENCY’S RESPONSE TO VILLAGE’S PETITION

Septic System

The Agency notes that the Village requests a setback exception for “construction and operation of a septic system which is not a private sewage disposal system and was deemed to have the capacity to serve more than 20 individuals per day.” Resp. at 1. The Agency concludes that “the septic system is an injection well, which is defined as a ‘potential route.’” *Id.*, citing 415 ILCS 5/3.350 (2014).

Proof of Notice to Affected Well Owners

The Agency states that the “Certificate of Service attached to the Petition indicates that the Village of Carlock, the only affected water supply, has been provided with a copy of the petition.” Resp. at 2.

Arbitrary and Unreasonable Hardship

The Agency first notes the Village’s position that denial of an exception would pose an arbitrary and unreasonable hardship. Resp. at 3; *see* Pet. at 3. The Agency also notes the Village’s argument that its only alternatives are to buy additional property or drill a new Well No. 4, both of which would be financially burdensome. Resp. at 3; *see* Pet. at 3. The Agency states that the Village “should provide cost estimates for the purchase of additional property or a discussion of the availability of such property proximate to the site, and the cost of a new well and associated infrastructure to support their assertion that denial of an exception will result in an arbitrary and unreasonable hardship on the Village.” Resp. at 4.

Best Available Technology Controls Economically Achievable

After reviewing the controls the Village commits to employ, the Agency agrees that they “do represent best available control technology for a septic system.” Resp. at 4.

Maximum Feasible Alternative Setback

The Agency agrees that the Village “has utilized the maximum feasible setback distance considering the site configuration and well locations.” Resp. at 4.

Location Not a Significant Hazard to Potable Water Supply Wells

The Agency noted the Village’s position that “the risk from operation of the potential route is low.” Resp. at 3. The Agency concurs that “well logs demonstrate the presence [of] natural geologic materials located in the subsurface that will limit and slow the migration of sanitary septic effluent.” *Id.* The Agency also concurs that construction details in the logs show that the wells draw from a confined aquifer system, which is “not likely to be impacted by near surface disposal activities.” *Id.*

However, the Agency notes that the new water treatment plant “is for the treatment of arsenic in drinking water and the treatment plant is served by the new septic system.” Resp. at 3. The Agency argues that the petition did not clearly indicate “whether the septic system will receive only sanitary waste, or will also receive plant waste with concentrated arsenic.” *Id.*; *see id.* at 4. The Agency states that, since biological treatment in a septic system “would not effectively treat arsenic, which could then pose a danger to shallow groundwater resources,” the Village should clarify this issue. *Id.*

Recommendation

The Agency recommended that the Board deny the petition because the Village “failed to provide adequate proof that compliance with the setback zone would pose an arbitrary and unreasonable hardship and that the location of the septic system would not constitute a significant hazard to the community water supply well.” Resp. at 5. However, the Agency requested that the Village provide information regarding the cost of additional property outside the setback, the cost of a new well, and the discharge into the septic system. *Id.* at 5. The Agency added that, after receiving this information, it would re-evaluate its recommendation. *Id.*

SUMMARY OF VILLAGE’S REPLY TO AGENCY’S RESPONSE

On February 2, 2015, the Village filed its Reply to the Agency’s response. *See* 35 Ill. Adm. Code 106.306(b). Mr. Burris testified that he assisted in preparing the Village’s reply. Tr. at 9.

The Village first addresses the Agency’s request for additional information regarding the cost of purchasing additional property. The Village states that it identified a property at 304 South Perry Street that it would be necessary to buy if it is denied a setback exception. Reply at 2. The assessed fair market value of that property is \$99,000. Exh. A at 1 (probable project costs). Because the property was not currently listed for sale, the Village includes legal fees associated with acquisition through eminent domain. Reply at 2. The Village also included \$8,000 in costs associated with the demolition of the residence and garage on the property. Exh. A at 1; *see* Reply at 2. In addition, the Village estimates costs of \$12,000 to relocate the septic system outside the setback zone. Exh. A at 5-6; Reply at 2. The Village argues that the total cost of this option is \$136,000. Reply at 2. Mr. Burris agreed that this is “the minimum cost” of this option. Tr. at 10. The Village further argues that this option requires “the Village to displace residents and would lead to the removal from the tax rolls of real estate generating revenue for the Village of Carlock and other taxing districts.” Reply at 2; *see* Exh. A at 4 (taxing bodies).

The Village also addresses the Agency’s request for additional information regarding the cost of a new well outside the setback zone. Assuming that the new well had the same size as existing Well No. 3, Village engineers concur with an estimate that the total project costs would be \$260,000. Reply at 2-3; *see* Exh. B (probable project costs); Tr. at 10. The Village emphasizes that this is in addition to costs for construction of the new wastewater treatment plant. Reply at 3; *see* Tr. at 11.

Finally, the Village addresses the Agency’s request for additional information about discharges into the septic system. The Village states that “[w]ater with concentrated arsenic will not be discharged into the proposed system.” Reply at 3. The Agency further states that “[t]he proposed septic system will serve the restroom facilities in the Village’s maintenance building, the restroom facilities in the water plant and the floor drains in the water plant.” *Id.* The Village indicates that “[t]he floor drains do not serve as a drainage source for wastewater with concentrated arsenic.” *Id.* The Village adds that, as required by the Agency, water with

concentrated arsenic “is discharged through the Village’s red water filter into an existing storm sewer and discharged in accordance with the Village’s NPDES permit.” *Id.*

The Village concludes by requesting that the Agency reconsider its recommendation to deny its petition for a setback exception. Reply at 3.

SUMMARY OF AGENCY’S RESPONSE TO VILLAGE’S REPLY

On February 6, 2015, the Agency filed its response to the Village’s reply. The Agency states that, based on the additional information submitted in the reply, it had reconsidered its previous recommendation. Resp. 2 at 2. The Agency states that it “now recommends the Board grant the petition because the Petitioner has provided adequate proof” under the Act and the Board’s regulations. *Id.*, citing 415 ILCS 5/14.2(c) (2014); 35 Ill. Adm. Code 106.310.

BOARD DISCUSSION

As an initial matter, the Board agrees with the Agency’s description of the Village’s proposed septic system as an injection well. *See* Resp. at 1, citing 415 ILCS 5/3.350 (2014). As an injection well, the system falls within the definition of a “new potential route” pursuant to Section 3.350 of the Act (415 ILCS 5/3.350(1) (2014)). The Village persuasively states that its new water treatment building and associated facilities will not fall within the statutory definition of either a “potential primary source” or a “potential secondary source.” 415 ILCS 5/3.345(4), 3.355(1), (2) (2014); *see* Vill. Reps. 2 at 5-6.

Section 14.2(a) of the Act prohibits any new potential route from being placed within the minimum setback zone of 200 feet of any community water supply well or other potable water supply well. 415 ILCS 5/14.2(a) (2014). To proceed with the construction and operation of the septic system, the Village needs to obtain an exception from the minimum setback zones of Wells No. 1 and No. 2. Section 14.2(c) of the Act gives the Board authority to grant exceptions from the setback requirements to owners of a new potential route upon presentation of adequate proof. 415 ILCS 5/14.2(c) (2014). Below, the Board reviews the factors at Section 14.2(c) of the Act and 35 Ill. Adm. Code 106.310 to determine whether the Village has justified its requested setback exception.

The Board’s procedural rules require that the Village must notify “the owner of each potable water supply for which the setback requirements would be affected by the exception.” 35 Ill. Adm. Code 106.302(b); *see* 35 Ill. Adm. Code 106.304(c). The Village’s former water superintendent confirmed that there are no potable water supply wells other than Village’s own Wells No. 1 and No. 2 within the 200-foot setback from the proposed septic system. Vill. Resps. 2 at 4. The Agency agrees that the Village is the only water supply affected by the requested exception. Resp. at 2. Based on the record before it, the Board concludes that the Village has satisfied the notice requirement.

Arbitrary and Unreasonable Hardship

The Agency initially recommended that the Board deny the requested exception because the Village's petition "failed to provide adequate proof that the compliance with the setback zone would pose an arbitrary and unreasonable hardship. . . ." Resp. at 5. The Agency requested that the Village submit costs estimates for a new well and associated infrastructure and for additional property outside the setback zone for Wells No. 1 and No. 2 on which the Village might construct the septic system. *Id.*

The Village argues that one alternative to an exception from the setback requirement is the purchase of additional property for construction of a septic system outside the 200-foot setbacks from Wells No. 1 and No. 2. Pet. at 3. Based on a specific property near the new treatment plant, the Village estimates that this option would cost \$136,000. Reply at 2; Exh. A. The Village adds that the option would also displace residents and remove the property from its tax rolls. Reply at 2.

The Village argues that the one other alternative to a setback exception is to abandon Wells No. 1 and No. 2 and construct a new water supply well outside the 200-foot setback near existing Well No. 3. The Village estimates that construction of a well similar in size to Well No. 3 would cost \$260,000. Reply at 2-3; Exh. B.

The Village emphasizes that these alternatives involve additional costs "beyond that which the Village of Carlock has spent installing new infrastructure to comply with arsenic concentration standards." Reply at 2. The Village states that its water customers already "face significant increases to their monthly water bills" to repay loans of approximately \$1.1 million for construction of the new water treatment plant. Pet. at 3. The Village argues that the cost of either of these two alternatives would result in additional rate increases for its residents. *Id.*

After the Village replied with cost estimates for these two compliance options, the Agency stated that those estimates provide adequate proof that compliance with the statutory setback would pose an arbitrary and unreasonable hardship. Resp. 2 at 2.

Based on the record before it, the Board agrees with the Village and the Agency and finds that the Village has shown that compliance with the setback requirements of Section 14.2 of the Act would pose an arbitrary and unreasonable hardship for the Village. *See* 415 ILCS 5/14.2(c) (2014); 35 Ill. Adm. Code 106.310(a).

Best Available Technology Controls Economically Achievable

The Village commits to use various technology controls to address the risk that the septic system may contaminate Wells No. 1 and No. 2. The Village will install the septic system "under the direction of a licensed installer (Pet. at 3) and does not object to a condition requiring this installation (Vill. Resps. 2 at 3). The Village also commits to annual inspection and maintenance by a licensed operator (Pet. at 3) and recommended language for a condition requiring this (Vill. Resps. at 4). The Village also commits to pump the septic tank component of the system annually (Pet. at 3) and proposed language for a condition requiring this pumping

(Vill. Resps. 2 at 4). Finally, the Village commits to perform monthly bacteriological testing as required by the Agency. Pet. at 3. The Village concludes that these measures constitute the best available technology economically achievable. Vill. Resps. at 3

The Agency agrees that the Village's proposed actions "do represent best available control technology for a septic system." Resp. at 4.

Based on the record before it, the Board agrees with the Village and the Agency that the Village has proposed to use "the best available control technology economically achievable to minimize the likelihood of contamination of the potable water supply well[s]." See 415 ILCS 5/14.2(c) (2014); 35 Ill. Adm. Code 106.310(b). In its order below, the Board adopts conditions reflecting language proposed by the Village and requiring that the Village employ these controls.

Maximum Feasible Alternative Setback

The Village argues that the septic system will be located on the southeast corner of its property as far as possible from Wells No. 1 and No. 2. Pet. at 2; see Exh. A (site plan). The Village's petition states that "[t]he closest edge of the Septic System is approximately 116 feet from Well No. 1 and 142 feet from Well No. 2." Pet. at 3. Mr. Burris' testimony adds that this location is "the farthest it could get away from the water treatment plant and the well." Tr. at 10.

The Agency agrees that the Village "has utilized the maximum feasible setback distance considering the site configuration and well locations." Resp. at 4.

Based on the record before it, the Board agrees with the Village and the Agency that the Village proposes to use the maximum feasible alternative setback. See 415 ILCS 5/14.2(c) (2014); 35 Ill. Adm. Code 106.310(c).

Location Not a Significant Hazard to Potable Water Supply Well

The Agency initially recommended that the Board deny the requested exception because the Village's petition "failed to provide adequate proof that . . . the location of the septic system would not constitute a significant hazard to the community water supply well." Resp. at 5. The Agency requested that the Village submit "[a]n explanation of whether wastewater with concentrated arsenic will be discharged into the proposed septic system." *Id.*

The petition states that a number of factors minimize the risk that the septic system would contaminate potable water supply wells. See Pet. at 3-4. Drilling logs for Wells No. 1 and No. 2 show that they were drilled through clay formations. Pet., Exhs. B, C. The Agency agrees that these formations "will limit and slow the migration of sanitary septic effluent." Resp. at 3; see Pet., Exhs. B, C. In addition, Wells No. 1 and No. 2 were drilled to a depth of 250 feet and 270 feet, respectively. Pet., Exhs. B, C. The Agency agrees that the logs show the wells "utilize a confined aquifer system, not likely to be impacted by near surface disposal activities." Resp. at 3; see Pet., Exhs. B, C. Further, the Village notes that Wells No. 1 and No. 2 have a steel casing pipe installed to a depth of 250 feet and 245 feet, respectively. Pet. at 4. The Village argues

that, because the steel casing resists water intrusion and extends below clay layers in both wells, “the risk of contamination from the Septic System is very unlikely.” Pet. at 2, 4.

In addition, the Village argues that the location of the septic system on the southeast corner of its site minimizes the risk of impact to Wells No. 1 and No. 2. The Village also stresses that the technical controls it has committed to employ, including required annual inspections and monthly bacteriological testing, will help ensure that contamination of the wells does not occur. Pet. at 3-4.

The Village also notes that a previous septic system at the site was located closer to Wells No. 1 and No. 2 than its proposed system. Despite the location of the previous system, required testing of the wells confirmed that they were not contaminated. Pet. at 2-3. The Village suggests that the requested setback for its proposed new septic system would provide more protection from contamination of Wells No. 1 and No. 2. *See id.*

After the Agency questioned whether the proposed septic system would receive wastewater treatment plant waste containing concentrated arsenic (Resp. at 3), the Village submitted a response clarifying the source of discharges to the septic system (Reply at 3). The Village stated that “[w]ater with concentrated arsenic will not be discharged into the proposed system.” Reply at 3. The Village emphasized that the proposed septic system would serve restroom facilities in its water plant and maintenance building and floor drains in its water plant. *Id.* Further, the Village clarified that “[t]he floor drains do not serve as a drainage source for wastewater with concentrated arsenic.” *Id.* Based on that response, the Agency agrees that the Village has submitted adequate proof that the location of the septic system will not pose a significant hazard to the Wells No. 1 and No. 2. Resp. 2 at 2.

The Board agrees with the Village and the Agency and finds that the Village has proposed the location of a new potential route that “will not constitute a significant hazard to the potable water supply well[s].” 415 ILCS 5/14.2(c) (2014); 35 Ill. Adm. Code 106.310(d).

Summary

Based on its review of the record, the Board finds that the Village has met its burden of proving under Section 14.2(c) of the Act that: (1) compliance with the setback requirements of Section 14.2 would pose an arbitrary and unreasonable hardship upon the Village; (2) the Village will use the best available technology controls economically achievable to minimize the likelihood of contamination of the potable water supply well; (3) the Village will use the maximum feasible alternative setback; and (4) the location of the Village’s potential source or potential route will not constitute a significant hazard to the potable water supply well.

CONCLUSION

The Board finds that the Village has met its burden of proof under Section 14.2(c) of the Act and has justified its request for an exception from the statutory water well setback for the construction of a septic system to serve the Village’s new water treatment plant at 300 South Perry Street, Carlock, McLean County. The Board grants an exception from the minimum water

well setback for Well No. 1 and Well No. 2 subject to the conditions stated below in the order. The Village will be required to execute a certificate of acceptance of the conditions.

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

ORDER

Pursuant to Section 14.2(c) of the Act, the Board grants the Village of Carlock (Village) an exception from the water well setback requirements for community water supply Wells No. 1 and No. 2 for the construction of a septic system to serve the Village's new water treatment plant at the property owned by the Village located at 300 South Perry Street, Carlock, McLean County, subject to the following conditions:

- 1) The Village must install the septic system by a septic system installer duly licensed by the McLean County Health Department.
- 2) The septic system must be annually inspected by a licensed wastewater operator approved by the McLean County Health Department, and the Village must perform maintenance as directed by the by the licensed wastewater operator based on the annual inspection.
- 3) The Village must have the septic tank component of the septic system pumped by a septic system pumper licensed by the McLean County Health Department on an annual or more frequent basis.
- 4) The Village must perform monthly bacteriological testing of Wells No. 1 and No. 2 as required by Illinois Environmental Protection Agency.

IT IS SO ORDERED.

If the Village of Carlock accepts this exception subject to the above conditions, the Village must, within 45 days after the date of this opinion and order, file with the Board and serve on the Agency a certificate of acceptance and agreement to be bound by all the terms and conditions of the granted exception. The Village must forward the certificate to:

Joanne M. Olson
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

The certificate must be signed by an officer of the Village of Carlock authorized to bind the Village to all of the terms and conditions of the final Board order in this matter. The form of the certificate follows:

CERTIFICATE OF ACCEPTANCE

I (We), _____, having read the opinion and order of the Illinois Pollution Control Board in docket PCB 15-110, dated August 6, 2015, understand and accept the opinion and order, realizing that this acceptance renders all terms and conditions of the water well setback exception set forth in that order binding and enforceable.

Petitioner: Village of Carlock

By: _____
Authorized Agent

Title: _____

Date: _____

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) (2014); *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, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on August 6, 2015, by a vote of 5-0.



John T. Therriault, Clerk
Illinois Pollution Control Board