ILLINOIS POLLUTION CONTROL BOARD
December 21, 2006

SANGAMON VALLEY FARM SUPPLY,	)	
Petitioner,	)	
v.	)	PCB 06-43
	)	(Water Well Setback Exception)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY and VILLAGE OF SAYBROOK, ILLINOIS,	)	
Respondents.	)	

CHARLES J. NORTHRUP, SORLING, NORTHRUP, HANNA, CULLEN and COCHRAN, LTD., APPEARED ON BEHALF OF PETITIONER; and

JOEY LOGAN-WILKEY, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, APPEARED ON BEHALF OF RESPONDENT ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

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

On September 19, 2005, petitioner Sangamon Valley Farm Supply (SVFS) filed a petition pursuant to Section 14.2(c) of the Environmental Protection Act (Act) (415 ILCS 5/1 (2004)) seeking an exception from the Act and the Board's water well setback regulations. 415 ILCS 5/14.2(c), (d) (2004); 35 Ill. Adm. Code 106.300. SVFS requests the exception so that it may lawfully use "direct push" technology (also known as "Geoprobe") for in-situ remediation of hydrocarbon contamination within the 400-foot minimum setback zones of three community water supply wells. *See* 415 ILCS 5/14.2 (2004); 35 Ill. Adm. Code 106.300 *et seq*. The petitioner seeks to remediate contamination of a shallow aquifer at its site, formerly operated as a service station, in the Village of Saybrook, McLean County. Pet. at 3. The petition identifies the owner of the affected water wells as the Village of Saybrook (Saybrook) and states that the affected wells are community water supply wells. Today the Board grants the petitioner's requested relief subject to the conditions contained in this order.

The Board accepted the matter for hearing on October 6, 2005, simultaneously granting the petitioner's motion for expedited review. *See* Pet. at 13. On October 11, 2005, the Illinois Environmental Protection Agency (Agency) responded that the Board grant SVFS' requested relief contingent on SVFS clarifying its request and submitting additional information (Resp.). Most significantly, the Agency noted that a 400 foot, rather than 200 foot, setback zone applies to Saybrook's community water supply wells. Because the greater setback zones apply, the entire SVFS site falls within the minimum setback zones of three, rather than one, Saybrook

wells, and the SVFS' groundwater cleanup objective will be meeting the Class I groundwater standards.

In response to the Agency's recommendation, SVFS filed an amended petition on March 31, 2006. On April 24, 2006, the Agency filed an amended recommendation. The Agency stated at SVFS had made a sufficient showing under Section 14.2(c) of the Act and supported SVFS' proposed use of injected oxygen release compound (ORC) within Saybrook's minimum setback zones of wells #1, #2, and #3.

Board Hearing Officer Carol Webb held hearing on August 9, 2006, in Bloomington, Illinois.[1] The petitioner presented one witness, Mr. Jerry L. Wilson, of Ideal Environmental Engineering, Inc. (Ideal), SVFS' environmental consultant. Mr. Lynn Dunaway, a geologist with the division of public water supplies groundwater unit, testified on behalf of the Agency regarding his technical review of the SVFS petition for the Agency. No one was present on behalf of Saybrook. The hearing officer found all witnesses credible and admitted seven exhibits into the record.

SVFS filed a post-hearing brief on September 27, 2006 (SVFS P.H. Br.) and the Agency filed a post-hearing brief on November 8, 2006 (Agency P.H. Br.).

BACKGROUND

SVFS states that it operated a service station at the site until 1996. Am. Pet. at 3. SVFS owned and operated several underground storage tanks (USTs) used for storing fuel and heating oil. Upon removal of five USTs in 1998, SVFS states it discovered that one of them had leaked. *Id*. SVFS asserts it subsequently entered into the Leaking Underground Storage Tank program with the Agency under which it is currently remediating soil and groundwater. 35 Ill. Adm. Code 742. During the site classification stage of the cleanup, SVFS states that groundwater contamination was identified at the property line, making the site classification "high priority." *Id*.

During this process, SVFS learned that part of the shallow groundwater contamination migrated to within approximately 95 feet of the existing community water supply well for Saybrook, Illinois (Well #3), which is within Section 14.2 of the Act's setback zone of 400 feet. Tr. at 41. Saybrook's water supply serves approximately 400 people. Tr. at 15. One of the other two wells on SVFS' site is only used under emergency situations, and the third well is a test well. Tr. at 29-30. To remediate the site, SVFS submitted a Corrective Action Plan and Budget to the Agency, which set cleanup objectives for the site as those for Class I groundwater under the Tiered Approach to Corrective Action Objectives (TACO) (35 Ill. Adm. Code 742). Am. Pet. at 4. The Agency approved the plan and budget. Am. Pet., Exh. B.

To date, SVFS has removed approximately 330 cubic yards of impacted soil, applied 60 pounds of ORC to the base of the excavation, installed 7 monitoring wells in addition to the 6 wells installed during the classification stage, and applied 8,040 pounds of ORC to the shallow groundwater through a total of 317 injection points in the vicinity of the SVFS facility. *Id*. at 3-

[1] The Board cites to the August 9, 2006 hearing transcript as "Tr. at _."

4. To date, all of the injection points have fallen within the 400-foot setback zone. Tr. at 44. The first round consisted of 170 points of ORC injection, and the follow-up round consisted of 147 injection points. Tr. at 44. The nearest injection point to water well #3 at this point is approximately 95 feet, and approximately 175 feet to wells #1 and #2. Tr. at 41.

Upon completion of the initial follow-up injection, SVFS submitted an amendment to its Corrective Action Plan (CAP) that included a second follow-up round of injections to be completed 12 months after the first follow-up round. Am. Pet. at 5. SVFS notes that the Agency denied the CAP amendment indicating that injection activities had taken place within the setback zone of the community water well and some of the proposed second follow-up injection points were also within the well setback zone. *Id*.

SVFS states that the contaminant levels measured as total BETX (benzene, ethylbenzene, toluene and xylenes) have been reduced by approximately 50% from December 2001 until June 2004. Am. Pet. at 7, Exh. H-L. Additionally, testing shows that the ORC injections already performed at the site have had the desired effect and the groundwater contaminant zone is receding back toward the facility away from all three wells. Tr. at 29, 30; Tr. Exh. C, D, E. As of the date of the amended petition, states SVFS, the groundwater contaminant levels exceed the TACO groundwater objectives in two of the five monitoring wells at the facility. Am. Pet. at 7, Exh. N.

SVFS seeks to remediate the shallow groundwater contamination through enhanced natural attenuation using direct push technology. Am. Pet. at 11. The direct push method pumps ORC directly to the areas of contamination by using a Geoprobe to inject ORC and water directly into the plume of impacted groundwater. Tr. at 42. The ORC SVFS will use is a mixture of calcium oxyhydroxide ($CaO(OH)_2$), calcium hydroxide ($Ca(OH)_2$), and calcium carbonate ($CaCO_3$). Tr., Exh. F (Material Safety Data Sheet for Regenesis ORC). SVFS contends it has considered other remediation alternatives, but that "their respective negatives outweigh their respective benefits." Am. Pet. at 7.

SVFS states that to prevent lateral migration of the contaminant plume, remediation injections will be performed in a specific sequence proceeding from west to east around the perimeter of the hydrocarbon plume, and back toward the facility and away from the water wells. Tr. at 30. In addition, SVFS' remediation plan includes a hydraulic barrier beyond the west and southwest edges of the injection grid between the contaminant plume and Saybrook's water wells to treat possible hydrocarbon contaminants that migrated beyond the remediation area prior to migration towards the water wells. Tr. at 32. The barrier will be formed by two rows of injections at an ORC injection rate approximately one third of the injection rate used for the remediation injection points. Tr. at 31; Tr. Exh. B. SVFS states that because the County will not allow injections through the pavement, SVFS will perform two rows, one on either side, of injections at an angle of 10 to 15 degrees from vertical to treat contamination under Saybrook's Main Street. Tr. at 31.

Upon completion of each injection, the open borehole is backfilled with granular bentonite and hydrated. SVFS states this eliminates the risk of future pathways of contamination into the shallow groundwater zone. Am. Pet. at 2.

SVFS states it has ceased operations, removed the source of contamination and, upon receipt of the no further remediation letter from the Agency, hopes to sell the SVFS facility. Pet. at 6; Tr. at 36.

APPLICABLE STATUTES AND REGULATIONS

Section 14.2 of the Act states in part:

> (c) The Board may grant an exception from the setback requirements of this Section . . . to the owner of a new potential route.
>
> (d) . . . no new potential route or potential primary source or potential secondary source may be placed within 400 feet of any existing or permitted community water supply well deriving water from an unconfined shallow fractured or highly permeable bedrock formation or from an unconsolidated and unconfined sand and gravel formation. 415 ILCS 5/14.2(c), (d) (2004).

Section 3.350 of the Act defines "potential route" as:

> [A]ll injection wells . . . . 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. 415 ILCS 5/3.350 (2004).

Pursuant to Section 14.2(c) of the Act, as a "new potential source or route" of contamination, SVFS must file a petition with the Board that includes: (1) a description of the potential impacts of the potential source or route on groundwater and the affected water well; and (2) an explanation of the applicable technology-based controls the petitioner will employ to minimize the potential for contamination of the potable water supply well. 415 ILCS 5/14.2(c) (2004).

The Board's rules for this proceeding are found at 35 Ill. Adm. Code 106.300 *et seq*.

STANDARD OF REVIEW

The Board will hold at least one hearing in an exception proceeding and the hearing officer will schedule the hearing. 35 Ill. Adm. Code 106.308. The Board will grant an exception where the petitioner has presented adequate proof:

> [T]hat compliance with the 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 source or potential route will not constitute a significant hazard to the potable water supply well. 415 ILCS 5/14.2(c) (2004).

SVFS' PETITION FOR EXCEPTION

SVFS states that in removing USTs from its site, SVFS discovered petroleum contamination at the site. SVFS determined that current contamination of shallow groundwater on the site extends within 75 feet of the existing community water supply for Saybrook. Am. Pet. at 4. SVFS proposes the use of enhanced natural attenuation using direct push technology to remediate the petroleum hydrocarbon contamination. Pursuant to Section 3.350 of the Act, the direct push remediation technique falls within the definition of a "new potential route" to groundwater. 415 ILCS 5/3.350 (2004). Because SVFS must install the remediation technology within 75 feet of the Saybrook community water supply wells to adequately remediate the contamination, SVFS requests an exception from the 400-foot water well setback rule.

Arbitrary and Unreasonable Hardship

SVFS provides two reasons why adherence to the setback requirements would be arbitrary and unreasonable in this case. Am. Pet. at 7-8. First, the purpose of using enhanced natural attenuation within the setback zone is to improve the water quality. According to SFVS, remediation activities already performed in at the SVFS site have already successfully reduced hydrocarbon concentrations in the shallow groundwater. Am. Pet. at 8. SVFS asserts that preventing SVFS from continuing to utilize enhanced natural attenuation to remediate shallow aquifer would delay cleanup and add significant and unnecessary costs. Am. Pet. at 7.

Second, SVFS states that the sole remaining shareholder of SVFS, Mrs. Margaret Gibbens-Stocker, wishes to remediate the site so that she can dissolve the corporation and sell the property. Am. Pet. at 8. SVFS states that because the most cost efficient remediation technology is the use of enhanced natural attenuation to remediate the shallow aquifer, adhering to the minimum setback requirement at the SVFS site would be arbitrary and unreasonable. *Id*.

Best Available Technology Controls Economically Achievable

SVFS contends that enhanced natural attenuation utilizing direct push technology to inject ORC is the best available technology economically achievable. Am. Pet. at 9. SVFS considered several factors in choosing the proper technology to remediate the site. In addition to in-situ remediation, SVFS' consultant, Ideal, evaluated the following three alternatives: (1) installing a pump-and-treat system; (2) air sparging with vapor extraction; and (3) relocating the community supply well to an area free of existing contamination. *Id*. As discussed below, SVFS determined that each of the alternatives presented technical, practical, or financial obstacles that eliminate them as the preferred approach.

Pump and Treat

SVFS states that the pump and treat alternative would involve installing recovery wells, extracting groundwater, treating it, then reinjecting it into the aquifer or discharging it to a sanitary sewer system. Tr. at 16.

SVFS asserts that pump and treat technology is not feasible at the site because the shallow groundwater is at a depth of 30 feet and because much of the contamination is off-site. SVFS notes that the depth of the shallow aquifer hinders the removal of contaminated groundwater since a recovery trench cannot be used due to the depth. Am. Pet. at 9. SVFS states that a series of recovery wells with submersible pumps would be needed to remove groundwater. *Id*. Further, since the contamination extends off-site underneath Saybrook's Main Street, which the county would not allow SVFS to work through. Tr. at 16. Therefore, SVFS states it would have to find a way to pump the water from one side of Main Street to the other where the treatment equipment would be located on SVFS facility. Tr. at 17.

SVFS states the pump and treat method could take in excess of ten years to reach the cleanup objectives. SVFS contends that the installation costs would be cost prohibitive. SVFS contends that the installation costs would be cost prohibitive. SVFS estimates the cost to design and install the pump and treat system to be $150,000 to $200,000 with long-term maintenance costs of $400,000 to $500,000 over 20 years. Am. Pet. at 10.

Air Sparging with Soil Vapor Extraction

SVFS explains that air sparging involves the installation of a compressed air system that blows air into the contaminated groundwater. Tr. at 17. The contaminants are volatilized and becomes trapped in soil that are then collected through a soil vapor extraction system. *Id*. at 18; Am. Pet. at 10. The soil venting system is a series of pipes in the ground that pull the volatilized contaminants out of the soil and into the atmosphere. *Id*.

According to SVFS, air sparging is not feasible at the Saybrook site for many of the same reasons that the pump and treat alternative is not feasible. Tr. at 18. For the system to be effective, the soil venting (vapor extraction) system would have to be installed approximately 25 feet below the ground surface. Because of the types of soils at that depth, contends SVFS, installation would be almost impossible. *Id*. Additionally, cleanup would take five to ten years and involve maintenance costs during that time.

SVFS estimates that to complete remediation at the site using this technology, the design and installation would cost between $150,000 and $200,000, with long-term operations and maintenance costs of approximately $200,000 and $300,000, and take over ten years. Am. Pet. at 10. SVFS states that because of the high cost and length of time to achieve the desired results and installation limitations, air sparging is not the preferred alternative. Tr. at 19; Am. Pet. at 10.

Replacement and Relocation

SFVS estimates that relocating and replacing the two operating water wells and one test well would cost between $500,000 and $750,000. Am. Pet. at 10; Tr. at 20. SFVS states that in addition, there are several unknown factors involved. For example, SVFS would need to determine the number of test borings and pump tests to determine the sustainable yield of the aquifer, the distance required to connect the new well to the existing water supply network, the need to purchase property on which to install the well, and whether easements or condemning property will be necessary to locate the pipeline. Am. Pet. at 10. Further, SFVS would sill be required to minimize remediation under TACO or complete remediation to obtain closure. *Id*. at 10-11. SFVS states that replacing the municipal well is cost prohibitive and too uncertain. *Id*. at 11.

Enhanced Natural Attenuation

As noted earlier, enhanced natural attenuation uses direct push technology to deliver ORC directly to areas of contamination. Am. Pet. at 11. This method is not hindered by the depth of the shallow aquifer and has been shown to be effective at the site. *Id*. SVFS foresees beginning injections within 30 days of the Board's approval of this petition. Tr. at 39. SVFS asserts that each ORC injection will consist of approximately 70 pounds of ORC per point. Tr. at 31. SVFS states it will place ORC injection points to form a barrier around the edge of the plume in order to provide hydraulic control of the contaminated groundwater. Tr. at 32.

Installation is done using direct-push drilling equipment. Am. Pet., Exh. M at 4. The delivery method requires a drive rod to be pushed to the bottom of the contaminated zone, at which point ORC and water slurry is injected as the rod is withdrawn. *Id*.

SVFS does not anticipate additional rounds of ORC injections. However, if analytical data from groundwater samples shows the contaminant levels have slowed down or plateaued before reaching acceptable levels, SVFS will perform one or two additional rounds. Tr. at 34. Regarding a monitoring plan and schedule, SVFS plans to perform quarterly sampling at 12 of the 13 on-site monitoring wells continuously until the analytical results show no exceedences of groundwater quality standards for four consecutive quarters. Tr. at 35, 37. SVFS states it will also test well #3 quarterly. Tr. at 37. All of the samples will be analyzed for the contaminants of concern. *Id*.

SVFS estimates the remediation to cost a quarter to a third of the costs of other alternatives and take approximately one year to 18 months to complete. Tr. at 23. SVFS states that there may be follow-up injections, but no ongoing maintenance. *Id*.

Maximum Feasible Setback Will be Used

SVFS states that the edge of the plume closest to the community supply well is approximately 115 feet from well #3 and approximately 235 feet from wells #1 and #2. Tr. at 40. As of the date of the hearing, SVFS estimated that the closest injection point will fall approximately 75 feet from the community water supply, well #3, and approximately 175 feet from wells #1 and #2. Tr. at 24, 41. SVFS states it anticipates approximately 95 injection points for treatment and approximately 75 to generate a hydraulic barrier in front of the plume to stop

any migration beyond the treatment injections. Am. Pet. at 12. Locations of proposed injection points were provided in Exhibit B at hearing. Tr. Exh. B.

Location Will Cause No Significant Hazard

SVFS states that the proposed enhanced natural attenuation poses no hazard to Saybrook's wells. Tr. at 26. The ORC material is calcium based, states SVFS, which is "the equivalent of injecting antacid into the groundwater." *Id*.

SVFS states that if the petroleum contamination is identified in monitoring well #11, which is one of the wells between the contamination plume and water well #3, exceeding applicable remediation, drinking water, or groundwater quality standards, then SVFS will submit a corrective action plan and budget amendment that will include another round of ORC injections. Tr. at 47. The amendment will also include a contingency for construction of a new community water supply well if petroleum contamination above those same standards is identified in monitoring well #13. Tr. at 45, 47.

Proof of Notice to Affected Potable Well Supply Owners

SVFS states that, in accordance with Section 106.302(b) of the Board's rules regarding water well setback exception procedures, it has notified Mr. Ronald E. Stauffer, Mayor of the Village of Saybrook, about the petition. Am. Pet. at 13.

AGENCY RESPONSE

Original Response

The Agency responded to SVFS's original petition on October 11, 2005, then filed an amended response on April 24, 2006, after reviewing SVFS's amended petition. In the original response, the Agency stated that after reviewing SVFS's petition, the Agency determined that all three of Saybrook's community water supply wells have 400-foot minimum setback zones. The petition, according to the Agency, must request an exception from all three minimum setback zones. Resp. at 2.

Though the Agency notes that SVFS's original petition did not provide a concise statement regarding the potential impacts of the potential routes on groundwater and the potable wells, the petition infers that an impact to the aquifer could potentially impact the wells. Resp. at 5. The Agency states that because it had made estimates based on the wrong setback zone, SVFS's economic analysis was flawed. *Id*. at 6. The Agency maintains that SVFS must meet the Class I groundwater standards at 35 Ill. Adm. Code 620.410, which may require additional remedial activities than anticipated in SVFS's original petition. The Agency stated that SVFS should submit a new economic analysis before the Agency can determine whether denying the use of ORC in the minimum setback zone would impose an arbitrary or unreasonable hardship. *Id*.

The Agency states that SVFS's petition does not contain a monitoring program or schedule designed to show that the ORC injections are having the desired effects rather than causing negative ones. Resp. at 7. The Agency recommends that SVFS provide such a program and make sure that it includes monitoring of contaminants of concern, raw water from well #3, and other general water quality parameters. The Agency criticizes SVFS's monitoring data as more than a year old and asks SVFS to provide more recent results that show the effectiveness of previous ORC injections. *Id*. at 7, 9. The Agency also notes that SVFS should also include manganese in the monitoring program "because it is common in Illinois groundwater, and geochemically active in oxidation and reduction reactions." *Id*.

Regarding environmental impact, the Agency states that providing oxygen through the injection of ORC will create hydroxides, which are chemically basic, and react with a host of other chemicals. The reactions caused by the ORC injections may change the PH of water or alter its chemical composition. For these reasons, the Agency states that SVFS must address compliance with the Class I groundwater standards through the monitoring program. Resp. at 9. Finally, the Agency requests that SVFS provide a plan for regular meetings with Saybrook water supply personnel to discuss any complaints about water quality or treatment issues. Resp. at 10.

Amended Response

The Agency states that a review of the amended petition and supporting documents shows that ORC injection "is the fastest and most economical way to remove remaining petroleum hydrocarbons from the shallow aquifer." Am. Resp. at 3.

Regarding the maximum feasible alternative setback, the Agency states "[i]t appears that the largest practical distance between the remedial injection wells and the community water supply well has been maintained." Am. Resp. at 3.

The Agency concludes that the petroleum hydrocarbons already in the aquifer pose a greater threat to public health and the environment than the remediation technique being applied. The Agency states that SVFS' petition demonstrates that SVFS will take adequate safeguards to protect against risks to the community water supply. Am. Resp. at 4.

ISSUES DISCUSSED AT HEARING AND IN POST-HEARING BRIEFS

In its amended petition, SVFS provided updated monitoring results, showing data for manganese as well as PH, as requested by the Agency. Am. Pet., Exh. N; Tr. at 38. At hearing, SVFS declined to provide a schedule for injections, groundwater sampling, and compliance with groundwater quality standards and remediation objectives. Tr. at 38. SVFS reasoned that it would like to proceed with injections within 30 days of approval of the setback exception and approval of the corrective action plan and budget. Beyond that, contends SVFS, it is difficult to predict when the groundwater samples will show compliance with the standards and objectives. Tr. at 39.

SVFS maintains in its post-hearing brief that if the Board does not grant SVFS the exception, SVFS will not be able to obtain an NFR letter. SVFS adds that the Board has found n

the past that a failure to obtain an NFR letter constitutes an arbitrary and unreasonable hardship. SVFS P.H. Br. at 5; citing Johnson Controls, Inc. v. IEPA, *et al.*, PCB 05-109, slip op. at 10 (May 19, 2005). SVFS also contends that by granting the exception, Saybrook will secure clean water for its residents and avoid the cost of drilling a new well. SVFS P.H. Br. at 5.

SVFS emphasizes that enhanced natural attenuation is the best available technology economically achievable at the site. Regarding the feasible alternative setback, SVFS states it has demonstrated that it will use the maximum. SVFS asserts it will make injections approximately 75 feet from the wells, as far away from the wells as possible. SVFS P.H. Br. at 6. Further, the closest injection points will use lesser amounts of ORC in order to create a barrier. Finally, SVFS contends that it has demonstrated in the petition and at hearing that the proposal to remediate Saybrook's groundwater at the site will not create a significant hazard to the Village of Saybrook's water wells. For all of these reasons, SFVS asks the Board to grant the requested exception.

The Agency responded in its post-hearing brief in favor of the requested exception. The Agency asks that the Board grant the water well setback exception requests "on the condition that it continue the proposed remediation activities until such time as a minimum of two (2) consecutive quarters of sampling indicate no exceedence of a Class I groundwater standards or an applicable remedial objective. Agency P.H. at 3.

BOARD DISCUSSION

As noted above, Section 14.2 of the Act prohibits any new potential route from being placed within the maximum setback zone, 400 feet, of any community water supply well. 415 ILCS 5/14.2(d) (2004). Section 14.2, however, also gives the Board authority to grant exceptions from the setback requirements to owners of a new potential route. 415 ILCS 5/14.2(c) (2004). The owner of a new potential route seeking an exception must file with the Board and the Agency, show proof that each owner of an affected well was notified with a copy of the petition, generally describe the potential impacts of the potential route on groundwater and the affected well, and explain the technology that will be utilized to minimize the potential for contamination. *Id*. The Board finds that SVFS fulfilled these general requirements in the petition.

The Board further agrees with the Agency that SVFS has met its burden of proving, under Section 14.2(c) of the Act, that: (1) compliance with the setback requirements of this Section would pose an arbitrary and unreasonable hardship upon the petitioner; (2) the petitioner will utilize the best available technology controls economically achievable to minimize the likelihood of contamination of the potable water supply well; (3) the maximum feasible alternative setback will be utilized; and (4) the location of such potential source or potential route will not constitute a significant hazard to the potable water supply well.

Based on the record, the Board finds that SVFS would suffer arbitrary and unreasonable hardship if it were not granted an exception from the water well setback requirements. SVFS discovered that petroleum hydrocarbon contamination exists in a shallow aquifer underlying SVFS' property and surrounding area, and lies within 115 feet of Saybrook's community water

supply. Further, SVFS cannot obtain an NFR letter from the Agency without remediating the contamination. For these reasons, the Board finds that not only would SVFS suffer hardship if it were not granted an exception, but Saybrook would benefit from the remediation, as well.

The Board finds that, out of the possible remediation technologies presented, enhanced natural attenuation is the best available technology economically achievable to both achieve SVFS' remediation goals and minimize the potential for contamination of the community water supply. Among the other possibilities that SVFS explored, the "pump and treat" and air sparging options are economically prohibitive. Moving the municipal well would cost at least three to four times the cost of enhanced natural attenuation, and SVFS would still have to remediate the site.

The Agency notes that "the maximum feasible distance is necessarily as close as the location of the contaminants of concern." Resp. at 8. The record indicates that the edge of the plume closest to the municipal well is approximately 115 feet away. SVFS plans to make injection points as close as 75 feet from water well #3 in order to establish a hydraulic barrier. The Board agrees with SVFS that this is the maximum feasible setback.

Finally, the Board finds that the "new potential route" required to remediate the site would not be a significant hazard to the community water supply. The Board agrees with the Agency that the petroleum hydrocarbons already in the aquifer pose a greater threat to public health and the environment than the ORC that is to be applied. The Board finds that SVFS has provided adequate safeguards that reduce the risks posed by the ORC injections.

Accordingly, the Board finds that SVFS has met its burden of proof under Section 14.2 of the Act and the Board grants the requested water well setback exception subject to the conditions stated in the order. SVFS 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

The Board grants Sangamon Valley Farm Supply (SVFS) a water well setback exception from Section 14.2 of the Environmental Protection Act to utilize enhanced natural attenuation utilizing the direct push technology to inject oxygen release compound (ORC) for the property located at the corner of Lincoln and Main Streets in the Village of Saybrook, McLean County, subject to the following conditions:

1. SVFS must continue bioremediation activities until groundwater sampling results show no exceedence of any Class I potable resource groundwater quality standard (35 Ill. Adm. Code 620.410) or applicable remedial objective pursuant to 35 Ill. Adm. Code Part 742, for a minimum of four consecutive quarters as provided in SVFS' groundwater monitoring plan.

2. SVFS must monitor the groundwater quality at community water supply well #3 for the presence of ORC, in addition to the contaminants monitored in accordance with the SVFS' groundwater monitoring plan. SVFS must submit the analytical results of groundwater sampling to the Environmental Protection Agency and the Village of Saybrook on a quarterly basis.

3. SVFS must maintain the maximum setback practicable between its bioremediation activities and the Village of Saybrook's well #3.

IT IS SO ORDERED.

If Sangamon Valley Farm Supply (SVFS) chooses to accept this exception subject to the above conditions, SVFS 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. SVFS must forward the certificate to:

Joey Logan-Wilkey
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 SVFS authorized to bind SVFS 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 06-43, dated December 21, 2006, 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: SANGAMON VALLEY FARM SUPPLY

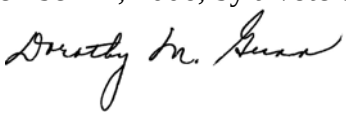
By: _____
Authorized Agent

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) (2004); *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, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on December 21, 2006, by a vote of 4-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board