BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

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| SANGAMON VALLEY FARM SUPPLY, | ) | |
| | ) | |
| Petitioner, | ) | |
| | ) | |
| v. | ) | PCB 06-43 |
| | ) | |
| ILLINOIS ENVIRONMENTAL PROTECTION AGENCY and VILLAGE OF SAYBROOK, ILLINOIS, | ) | |
| | ) | |
| Respondents. | ) | |

RESPONSE TO POLLUTION CONTROI, BOARD OUESTIONS

NOW COMES the petitioner, SANGAMON VALLEY FARM SUPPLY ("SVFS"), by and through its attorneys, Sorling, Northrup, Hanna, Cullen and Cochran, Ltd., Charles J. Northrup, of counsel, and hereby responds to the questions of the Hearing Officer, as outlined in the May 4, 2006, Hearing Officer Order. Each question posed by that Order will be repeated herein, with the response of the petitioner immediately following the question.

1. The Letter from the Agency dated February 7, 2003 **attached** to the amended petition as Exhibit E, shows that modifications were made to **SVFS's** High Priority Corrective Action Plan. Modifications required additional soil and groundwater sampling analysis prior to implementing another round of ORC **injections. "**These additional samples will demonstrate whether the contamination beneath the neighboring properties had been remediated beiow the Tier I Remediation Objectives.**" Exh.M,** Att. A. Has such additional sampling been done to show the status of contamination beneath **the** neighboring properties?

In April 2003, additional soil sampling was performed to determine if soil contamination was still present above current cleanup standards. Soil borings were performed in the vicinity of

MW-7 and in the County Right-of-way between the highway and the facility. Soil samples collected from these borings did not show soil contamination at concentrations exceeding 35 IAC 742 cleanup objectives. Groundwater sampling was performed on a quarterly basis following the injections. The status of the groundwater contamination has been shown on Exhibit A.

2. The amended petition indicates that the second corrective action plan amendment and budget included a second follow-up round of injections. Am. Pet. at 5-6

a. How may series of ORC injections are planned after the second follow-up round of injections?

It is our hope that no additional rounds of ORC injections will be needed after the second follow-up round. However, if analytical data collected from groundwater samples indicates the contaminant levels have not decreased to acceptable levels, one or two additional rounds of ORC injections will likely need to be performed.

b. How long is the waiting period before more follow-up injections would be planned?

The groundwater sample results will be reviewed and evaluated after each quarterly sampling event by Regenesis engineers. If Regenesis indicates an additional round of injections will likely be necessary, the Corrective Action Plan and Budget Amendment will be filed with IEPA for approval prior to proceeding.

c. What criteria would SVFS use to determine if additional rounds of injections were needed?

The criteria are simple – if the rate of contaminant concentration reduction is shown to slow down and the contaminant levels are shown to level off, the additional rounds of injections will be needed.

d. For how many consecutive quarters, with no exceedences of the groundwater standards or 35 IAC 742 remediation objectives, does SVFS plan to go before discontinuing groundwater remediation efforts?

Quarterly groundwater sampling is planned at this facility until analytical results show no exccedences of the groundwater quality standards. Quarterly groundwater sampling will continue until four consecutive sampling events show no exceedcnces of the groundwater quality standards. At that time, SVFS will request to discontinue the groundwater monitoring and receive a "No Further Remediation" letter.

e. Please describe SVFS's monitoring plan to ensure adequate rounds of quarterly sampling to detect contaminant rebound which might occur several months or year after the injections?

The primary source of contamination (the leaking underground storage tank) has been removed from the site and is no longer contributing to groundwater contamination. The secondary source of contamination (the contaminated soils in the immediate vicinity of the former underground storage tank) has also been removed from the site. Soil samples collected on either side of the highway have shown that soil contamination is not present at levels above 35 IAC 742 remediation objectives. Based on groundwater sampling to date, it appears the groundwater moves rather quickly in this area (as shown by the rebound of contaminant concentrations in MW-7 due to movement of the groundwater from under the highway). If groundwater contamination above 35 IAC 742 remediation objectives is not identified in four quarterly sampling events, it is highly unlikely the contaminant concentrations will rebound in the future.

3. The Agency Recommendation states, "The BAT [Best Available Technology] to address concerns about ORC, is groundwater monitoring." Ag. Rec. at 7.

a. Could you please develop a monitoring plan and schedule for the continuing remediation?

Twelve monitoring wells (MW-1 through MW-5 and MW-7 through MW-13) will be sampled on a quarterly basis.

b. In your monitoring plan, could you include how you will demonstrate the ORC injections are having the desired effects and not creating unintentional negative impacts to the aquifer and CWS wells?

Twelve monitoring wells (MW-1 through MW-5 and MW-7 through MW-13) will be sampled on a quarterly basis. In addition, a raw water sample will be collected from CSW Well #3. Village personnel will contact SVFS when either CWS Well #1 or Well #2 is brought on-line. If either well is brought on-line, a raw water sample will be collected and submitted for analysis. All samples will be analyzed for the contaminants of concern (benzene, ethylbenzene, toluene, total xylenes, and MTBE). The analytical results will be reviewed against previous analytical results.

c. Could you indicate your monitoring parameters for the monitoring wells and the CWS wells, such as: contaminants of concern, oxidation-reduction potential, pH, dissolved oxygen, nitrate, total and dissolved iron, sulfate, methane, chemical oxygen demand, and manganese?

All of the water samples collected will be analyzed for the contaminants of concern (benzene, ethylbeuzene, toluene, total xylenes, and MTBE), 5-day biological oxygen demand, chemical oxygen demand, total and dissolved iron, total and dissolved manganese, nitrate, sulfate and methane. On-site readings collected for each water sample will include temperature, dissolved oxygen concentration, pH, and oxidation-reduction potential.

d. Will your monitoring program also include quarterly raw water monitoring for the CWS wells as suggested by the Agency? Ag. Rec. at 10.

As stated previously, a raw water sample will be collected from CWS Well #3 during each quarterly sampling event. Groundwater samples will only be collected from CWS Wells #1 and #2 if they are brought on-line by Village personnel for temporary use.

e. In your schedule, could you show milestones such as timeframes for injections, groundwater sampling, and compliance with the grouudwater standards and 35 IAC 742 Remediation Objectives?

It is difficult to project when injections will be performed as all proposed work is contingent upon approval of this petition and approval of a Corrective Action Plan and Budget Amendment. We foresee performing the injections within 30 days of approval of this petition and approval of a Corrective Action Plan and Budget Amendment. In the interim and until the end of required remediation, quarterly groundwater samples will be collected for analysis. It is also difficult to project when groundwater sampling will show compliance with the groundwater standards and 35 IAC 742; however, we hope that the levels can be reached within 12 months of the next set of injections.

4. Once groundwater remediation efforts have achieved compliance with the groundwater standards and 35 IAC 742 remediation objectives, do you foresee any problems with having the setback exception expire?

If grouudwater sampling shows that remediation efforts have achieved compliance with the grouudwater standards, the only additional work projected in the area will be the eventual abandonment of the monitoring wells. Once the monitoring wells have been abandoned, the setback exception could expire.

5. Page **12** of the amended petition indicates, "The closest edge of the current contaminant plume to the community water supply well is approximately 115 feet east of the municipal well." (Pet. at 11.) The petition on page 3 also states, "...a portion of the current shallow groundwater contamination had migrated to within approximately 75 feet of the existing community water supply well... ."(Am. Pet. at 4.) Please clarify how close to all three CWS wells contamination was found.

During the sampling event on October 9, 2002, the leading edge of the groundwater contamination plume was extrapolated to be approximately 60 feet from CWS Well #3. The leading edge has since receded to approximately 115 feet from Well #3. During the sampling event on October 9, 2002, the edge of the groundwater contamination plume was extrapolated to be approximately 195 feet from CWS Wells #1 and #2. The edge of the plume has since receded to approximately 235 feet from Wells #1 and #2.

6. Will other products be injected along with the ORC?

The only material to be injected with the ORC is water. No microbes or additional nutrients will be added.

a. Besides the ORC, will microbes, nutrients and water also he injected?

The only material to be injected with the ORC is water.

b. Would you please provide an MSDS for ORC and identify what microhes and nutrients **will** he used?

A copy of the MSDS for the ORC to be used is provided as Exhibit F.

7. A Letter from the Agency dated **12-20-2004** attached to the amended petition as Exhibit G requires that **SVFS's** Corrective Action Plan include "documentation that injection of the chemical, or the impact of the treatment on existing soil and groundwater, will

not cause an exceedence of the primary drinking water regulations at 35 111. Adm. Code 611 during or after remediation... ." Exh. G, Att. A. Has such documentation been submitted yet to the Agency? Would you please provide a copy for the record here?

That specific documentation has not been provided. However, we do not believe we can make that assertion. We have designed the proposed injection points to limit the potential of impacting the CWS Wells to a point where concentrations exceed the primary drinking water regulations. The material being injected is a calcium-based material, for which there is no regulatory standard set.

8. Under the Illinois Water Well Construction Code, 415 ILCS 30/6b, if a well is contaminated, owners and operators of the contamination source or route are responsible for providing an alternative source of potable water. Based on these requirements, please discuss the contingency planning between SVFS and the Village of Saybrook. As suggested by the Agency, will you be providing a plan for regular meetings with Saybrook water supply personnel? Ag. Rec. at 10.

Copies the analytical summary table for each groundwater sampling event will be forwarded to Village water personnel. If hydrocarbon contamination is detected in MW-11 (located between the contaminated monitoring well MW-7 and CSW Well #3), the Village will be informed of the contaminant detection. If hydrocarbon contamination is identified in MW-I1 at levels above 35 IAC 742 remediation objectives and 35 IAC Groundwater Quality Standards, the Village will be notified that an amendment will be prepared to the Corrective Action Plan and Budget which will include another round of ORC injections and a contingency for construction of a new community water well positioned outside the 400-foot setback from the groundwater contamination plume, if hydrocarbon contamination exceeding 35 IAC 742 remediation

objectives and *35* IAC 620 Groundwater Quality Standards is identified in MW-13 (located between MW-I 1 and CSW Well #3).

9. a. The Agency expressed concern that the ORC might change the character of the potable groundwater before, during and after drinking water treatment. Ag. Rec. at 9.a. In order to detect potential impacts, has SVFS made arrangements with the Village to monitor the CWS wells for components that will be injected via the Geoprobes or for changes in groundwater quality?

Village water personnel have agreed to allow testing of the raw water from the community water wells during quarterly groundwater monitoring events. Based on the piping configuration in the well house, water can only be drawn from one well at a time. Since Well #3 is the closest CSW to the apparent groundwater contamination plume (and it is the primary well utilized by the Village), we propose only sampling Well #3. Water samples collected from CSW Well #3 will be analyzed for the same parameters as the monitoring wells.

b. If not, please explain how the Village's current monitoring would be sufficient.

Not applicable.

c. If testing confirms injected materials, hydrocarbons, or byproducts of the ORC injections are detected in the CWS wells, what will be course of action be?

The ORC material which is proposed to be injected is a calcium-based product. Calcium does not appear in the *35* IAC 742 remediation objectives, the 35 IAC 611 Primary Drinking Water Standards, nor the *35* IAC 620 Groundwater Quality Standards. The main byproduct of the ORC injection is increased dissolved oxygen. If hydrocarbon contamination is identified in MW-I 1 (located between the contaminated monitoring well MW-7 and CSW Well #3), al levels above *35* IAC 742 remediation objectives and *35* IAC Groundwater Quality Standards, an amendment

will be prepared to the Corrective Action Plan and Budget which will include another round of ORC injections. The Amendment will also include a contingency for construction of a new community water well positioned outside the 400-foot setback from the groundwater contamination plume, if hydrocarbon contamination exceeding 35 IAC 742 remediation objectives and 35 IAC 620 Groundwater Quality Standards is identified in MW-13 (located between MW-11 and CSW Well #3).

**10.** What is the population served by CWS Well #3?

According to water personnel, Well #3 serves approximately 400 households.

**11.** The amended petition at 13 indicates that a survey was conducted to identify all potable water supply well owners within the setback area of the proposed ORC injection wells. Please provide a copy of the survey, indicating the radius of the survey area from the injection locations, how the survey was conducted, and if any other potable wells were identified.

A copy of the results of the water well survey is attached as Exhibit G. The information includes the radius information from the remediation site. The survey included requests for information from the Illinois State Water Survey and the Illinois State Geological Survey regarding registered water wells within one mile of the remediation site. Village water personnel were interviewed as to the number of water wells it maintains (currently 2 wells plus the initial test well). No other water wells were identified within 400 feet of the remediation site. Additionally, the Village has an ordinance prohibiting installation of a new water well with the incorporated village limits.

12. Please discuss if the county or Village of Saybrook have ordinances that might be more stringent than the prohibitions of 415 ILCS 5/14.2.

A review of the McLean County Code which applies to water wells, showed the County has no ordinances which deal with water well setbaclts. Village water personnel indicated the Village follows the current State regulations relative to water wells.

Respectfully submitted

SANGAMON VALLEY FARM SUPPLY

By: _____
One of Its Attorneys

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**PROOF OF SERVICE**

The undersigned hereby certifies that a copy of the foregoing document was electronically filed with the Pollution Control Board:

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and served on the following by placing same in a sealed envelope addressed to:

Mr. Ronald E. Stauffer, Mayor
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and by depositing same in the United States mail in Springfield, Illinois, on the 28th day of July, 2006, with postage fully prepaid.