ILLINOIS POLLUTION CONTROL BOARD

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

The following is the transcript of a hearing held in the above-captioned matter, taken stenographically by Gale G. Everhart, CSR-RPR, a notary public within and for the County of Peoria and State of Illinois, before Carol Webb, Hearing Officer, at 109 East Olive Street, Bloomington, Illinois, on the 9th day of August, A.D. 2006, commencing at 10:00 a.m.

PRESENT:

HEARING TAKEN BEFORE:
ILLINOIS POLLUTION CONTROL BOARD
1021 North Grand Avenue East
Springfield, Illinois 62794-9274
(217) 524-8509
BY: CAROL WEBB

APPEARANCES:

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On Behalf of the Petitioner.

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On Behalf of the Respondent the Illinois Environmental Protection Agency.

ALSO PRESENT:

LYNN E. DUNAWAY, P.G.
MATT MARCUM

I N D E X

HEARING OFFICER WEBB: Good morning. My name is Carol Webb. I'm a hearing officer with the Pollution Control Board. This is PCB 06-43, Sangamon Valley Farm Supply versus IEPA and the Village of Saybrook. It is August 9th, 2006, and we are beginning at 10:00 a.m.

I will note for the record that we have no members of the public present, although we do have an EPA intern with us. Welcome. And members of the public are allowed to provide public comment if they so choose.

At issue in this case is Petitioner's request for a water well setback exception for its site located at the corner of Main and Lincoln in the Village of Saybrook, McLean County. You should know that it is the Pollution Control Board and not me that will make the final decision in this case. My purpose is to conduct the hearing in a neutral and orderly manner so that we have a clear record of the proceeding. I will also assess the credibility of any witnesses on the record at the end of the hearing.

This hearing was noticed pursuant to the Act and the Board's rules, and will be conducted pursuant to sections 101.600 through 101.632 of the Board's procedural rules as well as section 106.308 which governs water well setback exception hearings. At this

time I will ask the parties to please make their appearances on the record.

MR. NORTHRUP: Charles Northrup for Petitioner Sangamon Valley Farm Service.

MS. LOGAN-WILKEY: Joey Logan-Wilkey for the Respondent, Illinois Environmental Protection Agency.

HEARING OFFICER WEBB: Okay. And we have nobody here from the Village of Saybrook so we will continue.

Mr. Northrup, would you like to make an opening statement?

MR. NORTHRUP: Yes, I would. I do have a brief opening statement that I would like to read into the record.

HEARING OFFICER WEBB: Okay.

MR. NORTHRUP: I do have a very brief and general opening statement. The petitioner in this matter, Sangamon Valley Farm Supply, has filed this petition pursuant to section 14.2 of the Act to obtain an exception from the community water supply well setback requirements of the Act.

The petitioner seeks this exception so that it can successfully complete a leaking underground storage tank remediation in the Village of Saybrook. The LUST of remediation will inject oxygen released

compound, referred to as ORC, directly into the plume of impacted groundwater. Some, if not all, of those injection points are within the community water supply well setback of the Village of Saybrook.

Sangamon Valley Farm Service believes strongly that its petition and exhibits -- actually an amended petition and their exhibits, together with the testimony and exhibits that it will present today, satisfies the elements necessary for the Board to grant the exception.

Today Sangamon Valley will present the testimony of Mr. Jerry Wilson of Ideal Environmental Engineering, the consultant for Sangamon Valley FS. His testimony will establish that compliance with the applicable setback requirements would pose an arbitrary and unreasonable hardship on Sangamon Valley FS. The best available technology controls economically achievable to minimize the likelihood of contamination to the water supply well will be utilized. The maximum feasible alternative setback will be utilized, and neither the location of the ORC injection points nor the ORC itself once injected into the contamination will constitute a significant hazard to the potable water supply.

I will also note that in addition to serving a copy of the petition and amended petition on the Village of Saybrook, Sangamon Valley FS has been in communication with representatives of the Village about the remediation and the petition. Also Sangamon Valley has met with the appropriate representatives of the Illinois EPA and is pleased to note that the Illinois EPA on April 24th, 2006, filing supports the amended petition.

So in light of the testimony and exhibits that will be introduced today and the support of the IEPA, Sangamon Valley FS respectfully requests that the Board grant this amended petition. That's all I have got.

HEARING OFFICER WEBB: Thank you.

Ms. Logan-Wilkey, would you like to make a --

MS. LOGAN-WILKEY: Yes. Very briefly.

HEARING OFFICER WEBB: Okay.

MS. LOGAN-WILKEY: Okay. Thank you. Pursuant to section 14.2C of the Environmental Protection Act, the Illinois EPA recommends that the Board grant a water well setback exception to the Sangamon Valley Farm Service. And Lynn Dunaway is here today to answer any questions the Board may have.

HEARING OFFICER WEBB: Thank you.

Mr. Northrup, you may present your case.

MR. NORTHRUP: Okay. I call Jerry Wilson.

HEARING OFFICER WEBB: Mr. Wilson, have a seat over here and the court reporter will swear you in.

(Witness sworn.)

JERRY L. WILSON, P.E.,

called as a witness, after being first duly sworn, was examined and testified upon his oath as follows:

DIRECT EXAMINATION

BY MR. NORTHRUP:

Q Okay. Mr. Wilson, can you spell your name and tell me where you work.

A It's J-e-r-r-y, W-i-l-s-o-n. I work for Ideal Environmental.

Q What do you do at Ideal?

A I'm the vice president of engineering and the consultant on this project.

Q What types of things do you do as the consultant on this project just in general?

A All of the tasks that have to do with this project, the fieldwork, the planning, the reporting and putting together the reimbursement requests.

Q And the reimbursement requests, what's that

for?

A That's for reimbursement for the underground storage tank for costs incurred during the remediation project.

Q Okay. Can you give me just a real brief background of your educational history, professional history.

A I received my bachelor of science in civil engineering in 1986 from the University of Wisconsin, Platteville. I have, for the past 14 years, been working on underground storage tank projects, Phase 1 Environmental Assessments. And for the last 11 years have been doing asbestos abatement design over in project management.

Q Are you a professional engineer?

A Yes. I'm registered in the State of Illinois and in Iowa.

Q How long have you been a PE?

A I have been a PE for -- it would be 16 years.

Q At Ideal, are you the person that's most familiar with this -- with the Sangamon Valley FS project?

A Yes, I am.

Q And are you familiar with the amended

petition for community wells setback exception that was filed in this case?

A Yes, I am.

Q What is it exactly that Sangamon Valley is trying to get by this exception?

A We are trying to achieve a "No further remediation" letter for the site. And to do that we have to clean up the ground water, contaminated ground water.

Q And that's under the LUST regulations?

A That's under the LUST, the regulations.

Q And what is the remedial technology that you want to use at the site?

A We want to use -- it's called enhanced bioremediation. We are using an oxygen release compound commonly called ORC to raise the dissolved oxygen level in the groundwater.

Q Okay. And some of those injection points are going to be within the setback?

A All of them are.

Q What happens -- assuming the Board grants the petition, what do you do next?

A We have to file a corrective action plan amendment and budget amendment to the Illinois EPA for

approval prior to doing any additional work at the site; otherwise, it would not be eligible for reimbursement. Then once that is approved, we would bring a drill rig on site to poke holes in the ground 30 feet -- roughly, 30 feet deep and pump a mixture of the ORC compound and water into the aquifer.

Q And assuming that the project is successful, what sort of a closing step?

A Closing step would be -- we would do a couple of rounds of groundwater sampling events to prove that the groundwater contamination levels have receded to within acceptable levels. And once that is approved, we would abandon the monitoring wells and file a request for no further remediation.

Q And then, ultimately, the goal is to get a "No further remediation" letter from the IEPA?

A Yes.

Q Is the Sangamon Valley FS gas station, is it still operating?

A No. The gas station closed in -- or the tanks were taken out in 1998. And it ceased operation at that point.

Q What I would like to do now is just focus on the four elements that Sangamon Valley must demonstrate

for the Board to grant its exception. Do you understand that one of the elements to be established before the exception can be granted is that Sangamon Valley must demonstrate the compliance with the 400-foot setback poses an arbitrary and unreasonable hardship?

A Yes, I do.

Q Do you know if the injection technology that you have proposed has been used before in remediation of petroleum contamination?

A Yes, it has.

Q Is it a common remedial technology?

A Yes, it is.

Q Used all over the state?

A Yes.

Q Do you have prior experience with it?

A I have prior experience at this site.

Q Do you know if this technology has ever been used within a water well setback?

A Yes. It has been used at this site.

Q Okay. So far has it proven successful?

A Yes, it has. The levels have gone down.

Q Now is it your understanding that unless the contamination of the site is remediated the IEPA will not issue a "No further remediation" letter?

A That's my understanding.

Q Does the Village stand to obtain any benefit by the remediation?

A Yes.

Q And what's that?

A They have clean water -- clean water supply in the vicinity of the water wells.

Q Are there disadvantages to the Village if the contamination can't be cleaned up?

A Yes.

Q What's that?

A They would have a new well -- or a new water source would have to be installed.

Q Do you know what kind of business entity the Sangamon Valley Farm Service is?

A It's a corporation.

Q And who is the president of that corporation?

A Mrs. Margaret Gibbens-Stocker.

Q Do you have any understanding as to what will happen to the corporation once the NFRL is received?

A The only reason the corporation is still in existence is this site. And once the "No further remediation" letter is achieved -- or received, the site will be sold and the corporation will be dissolved.

Q Based on your training and experience and your working knowledge of the Sangamon Valley site, in your opinion does this proposal -- if the proposal is not granted, would that pose an arbitrary and unreasonable hardship on Sangamon Valley?

A Yes. I believe it would.

Q Let me go back to, during the remediation, this whole process, have you been in communication with the representatives of the Village of Saybrook?

A Yes, I have.

Q Can you describe what kind of contacts you have had with them?

A Well, for one thing we had to get permission to actually do work in the village park. And on a regular basis every time I'm in the area, I stop by and talk to the head of the water department.

Q Do you know his name?

A His name is Geno Talley.

Q So he is aware of what you're planning?

A He is aware of everything that we have been doing.

Q Has he ever expressed any objection?

A No. There is more objection to harming the trees in the park than doing the injections themselves.

Q Do you know how big the Village of Saybrook is?

A The water supply serves about 400 people.

Q Let me move on to the next element. Do you understand that another one of the elements to be demonstrated before the Board can grant the water well setback exception is that the proposal utilizes the best available control technology economically achievable to minimize the likelihood of contamination to the water supply well?

A Yes.

Q Okay. And is Sangamon Valley's proposal going to achieve this?

A Yes, I believe so.

Q And, essentially, this is just a weighing of the cost and time and effectiveness of various remedial options, right?

A Correct.

Q And has the petition sort of laid that out?

A Yes, it has.

Q What remedial alternatives has Sangamon Valley looked at?

A We have looked at pump and treat and an air sparging system.

Q What's pump and treat?

A It's where you would install recovery wells and just extract groundwater and treat it and then reinject it -- either reinject it into the aquifer or discharge it to a sanitary sewer system.

Q Now is that a recognized remedial technology in the environmental field?

A Yes, it is.

Q Is the pump and treat technology feasible at this site?

A I don't believe so.

Q Why not?

A Groundwater at the site is roughly 30 feet below ground surface. And much of the groundwater contamination is actually off site. The installation costs themselves will be extremely prohibitive, and the county would not allow us to work actually in the pavement of the main -- it's called Main Street. It's a county road.

Q And Main Street would somehow have to be impacted in order to --

A In order to put the recovery wells in the park and then have the treatment, the actual treatment facility on the site, we would have to somehow pump the

water or get the water from one side of the street to the other. And it's kind of difficult to do that without digging up the street.

Q Using the pump and treat, how long would it take to remediate the site?

A I have seen sites go in excess of ten years and not get complete -- reach the cleanup objectives that they need to reach.

Q And I assume throughout that whole ten years there are maintenance costs involved?

A Yes.

Q Based upon your training and experience and your work and knowledge of the Sangamon Valley site, in your opinion is a pump and treat system the best available technology control economically achievable at this site?

A No.

Q The next technology that you looked at was air sparging?

A Yes.

Q Okay. What's that?

A You install a compressed air system where you would blow air into the contaminated groundwater. And the contamination bubbles out and gets trapped into the

soil. And then you put in a soil venting system to extract -- actually extract the contamination.

Q What's a soil venting system?

A Basically pipes in the ground to pull the contamination, the vapors out of the soil.

Q And are those vapors, are they just emitted into the ambient atmosphere, or --

A Yes, they are.

Q Is air sparging a recognized remedial technology in the environmental field?

A Yes.

Q Is it feasible at this site?

A No.

Q Why not?

A Basically the same reasons as the pump and treat, that you have got groundwater 30 feet below ground surface. So for the system to be effective the soil venting system would have to be installed approximately 25 feet below ground surface. And with the types of soils that are there, it would be almost impossible to achieve that.

Q How long would it -- any idea how long it would take to clean the site using that technology?

A Those systems typically take, again, five to

ten years.

Q And, again, there are maintenance costs?

A Maintenance costs throughout that period.

Q And I note with both the air sparging and the pump and treat in the amended petition you identify specific costs?

A Yes.

Q Those are accurate?

A Those are my best guess.

Q But they are a reasonable guess --

A They are a reasonable guess.

Q -- based upon your knowledge and experience?

Based upon your training and experience and your working knowledge of the Sangamon Valley site, in your opinion is air sparging -- is an air sparging system the best available technology control economically achievable at the site?

A No.

Q Did you also look at the replacement relocation of the municipal water wells?

A Yes, we did.

Q Essentially that is what it is, right?

A It's what it is. You find a new location for the water well. You have to do a certain amount of

research to find a suitable site, make sure there are no potential contaminating facilities within the -- in this case it would have to be 400 feet of the well, and hope that those -- hope that new site can make -- can generate groundwater, can generate water supply.

Q Do you have a reasonable estimate as to how much it would cost to close and relocate a new well?

A Oh, typically to do that it costs, roughly, 200, $250,000.

Q And there is actually more than one well?

A There are three wells there. One of them is only a test well.

Q What does that mean, it's only a test well?

A It was the original test well that was drilled prior to drilling the initial water well at the site, and it's directly adjacent to one of the two operating wells.

Q So you have got the test well in the Village of Saybrook?

A That's the two operating water wells. One they use most of the time. They only use the other one if water use exceeds the capacity of that well.

Q Based upon your training and experience and your working knowledge at the Sangamon Valley site, in

your opinion is the replacement and relocation of the water wells the best available technology control economically achievable at the site?

A No. We would have to clean up the site anyway.

Q And the last sort of technology that you have looked at and ultimately proposed is what you call the enhanced natural continuation; is that correct?

A Yes.

Q Is that the same thing as in-situ bioremediation?

A Yes, it is.

Q So this technology goes by different names?

A Yes, it does.

Q Based upon your training and experience and your work and knowledge of the Sangamon Valley site, is it your opinion that enhanced natural continuation is the best available technology control economically achievable at the site?

A Yes, I believe it is.

Q And why is that?

A It's -- the technology is injecting a compound that increases the dissolved oxygen in the groundwater, gives the naturally occurring

microorganisms one source of food. The other source of food that they use would be the contamination itself. And it actually reduces the contaminant levels to acceptable levels.

Q I think I asked this before, but I will ask it again. Is this technology a recognized remedial technology?

A Yes, it is.

Q And is this technology feasible -- well, why is this technology feasible?

A For the reasons that the pump and treat and the air sparging aren't. We are poking holes into the ground, pumping fluid down into the ground and then sealing up those holes. There are no -- there is no ongoing maintenance -- mechanical maintenance that we have to do on the cleanup site. We don't have to try and siphon water out of the ground to treat it. It treats in place. And cost is considerably less than the alternatives.

Q Before you had mentioned that the remedial plan, whatever it was, as well as a budget would be submitted to the IEPA; is that correct?

A Yes.

Q So even with your proposal it's going to go

to the Agency. And I guess within the LUST program they will review it and make sure it satisfies them?

A Yes. We have had to do that over the course of this project.

Q How long would it take to remediate the site using this technology?

A There is no way to tell for sure. We are hoping that it takes 12 to 18 months.

Q And what's the cost of this in general terms?

A In general terms, roughly, a quarter to a third of the other alternatives.

Q Are there any maintenance -- or ongoing maintenance costs involved in producing this technology?

A None that you would not have with the pump and the other two systems. You would have to do quarterly groundwater monitoring for any system. And other than that, there are no ongoing maintenance. There may be follow-up injections, but no ongoing maintenance.

Q So as part of the plan you mention ongoing monitoring. You do that every quarter --

A Yes.

Q -- at this site?

Until the site is clean?

A Until the site is clean. And we would have to establish that it's going to stay clean. So we would have to do at least semiannual beyond when we get clean.

Q How long do you do that for? Is it a year after you reach --

A Probably a year, yes.

Q Moving on to the next element. Do you understand that another one of the elements to be demonstrated before the Board can grant a water well setback exception is that the proposal utilizes the maximum feasible alternative setback?

A Yes.

Q And what does that really mean in laymen's terms?

A It means that we stay as far away from the well as we can.

Q And does your proposal do that?

A Yes. At this point it doesn't look like we are going to have to get any closer than 75 feet.

Q And with respect to the various injection -- well, how many injection points will there be or do you anticipate? Roughly?

A Roughly, there were, I believe -- I believe there are about 75 for treatment, and we are also

proposing installing approximately 100 to generate a barrier.

Q What's the difference between the ones for treatment and the ones is for barrier?

A The ones for barrier would be actually put in front of the plume to stop any migration beyond the treatment injections.

Q And in those barriers, you are putting in the ORC, though, correct?

A Yes.

Q Are you --

A Just not at the same levels as we are for the treatment.

Q Lesser, or --

A Lesser.

Q Are you -- do you remain willing to work with the IEPA and the Village of Saybrook on the specific placement of these injection points?

A Oh, yes.

Q And the last element deals with whether or not the proposal will constitute a significant hazard to the potable water supply well. Do you understand that the final element necessary to be satisfied in the report and grant an exception is that the proposal, in

this case the enhanced natural continuation, will not cause a significant hazard to the potable water supply well?

A Yes. I understand that.

Q Based on your training and experience and your work and knowledge of the Sangamon Valley site, in your opinion would the proposed enhanced natural continuation constitute a significant hazard to the Village of Saybrook's wells?

A No.

Q Okay. Why not?

A The ORC material itself is a calcium base material. And we basically -- the equivalent of injecting antacid into the groundwater.

Q And what do you sort of base that opinion and that understanding on?

A That information I received from the MSDS, Material Safety Data Sheet for the ORC.

Q From the manufacturer?

A From the manufacturer.

Q Will there be any impact on the groundwater at the site?

A In my best opinion I do not believe so. I can't give any guarantees.

Q And that is your professional opinion --

A That's my professional opinion.

Q -- based on your training and experience?

A Yes.

MR. NORTHRUP: Your Honor, what I would -- Hearing Officer -- what I would like to do now is go through some questions that the Board posed in writing back in November. And what I would -- and the reason I would like to do that is because it's not clear from my file whether I responded to those questions. I couldn't find any indication that I had done so in my file. But then I got another set of questions from the Board, and they were the same questions, less, I think, five or six of the original which sort of added to my confusion as to whether or not the Board actually received, at least, some of the answers to the first set.

HEARING OFFICER WEBB: I believe the Board did receive that, but go ahead.

MR. NORTHRUP: Let me just run through those. And in any event there are some exhibits that were referenced that I don't think the Board got.

HEARING OFFICER WEBB: That's correct.

MR. NORTHRUP: So we will put those in, too.

BY MR. NORTHRUP:

Q Mr. Wilson, let me read these questions to you; then you can respond.

Since the Illinois Environmental Protection Agency in its recommendation has identified two additional well setbacks that are impacted by the petition, would you please provide a revised economic analysis for options designed to meet the Class 1 groundwater standards within the minimum setback zones?

A The economic analysis provided in the original petition remained valid for the revised setback information. The economic analysis was based on performing the remediation at the facility until contaminant concentrations in the shallow groundwater fell below the remediation objectives in 35 Illinois Administrative Code 742. And those are consistent with the groundwater quality standards in section 610 of the Illinois Administrative Code.

Q Do groundwater monitoring results indicate -- at the site, indicate the hydrocarbon plume is continuing to migrate closer to the community water supply well?

A Based upon the information we have gathered, it appears the ORC injections we performed at the site

to date have had the desired effect and the groundwater contaminant zone appears to have receded back toward the facility. And we showed that in the -- in some of the documentation that was provided with the petition actually, too.

Q Yeah. You reference Exhibit A, correct.

A Exhibit A to these questions.

MR. NORTHRUP: Your Honor, let me go ahead and give you and Counsel a copy. These are the attachments that Mr. Wilson is going to be referencing --

HEARING OFFICER WEBB: Okay.

MR. NORTHRUP: -- that should have been sent to the Board. And they are marked Exhibit A through G, I believe, previously marked.

HEARING OFFICER WEBB: Yes, I have them.

MR. NORTHRUP: Okay. So he will be referencing those.

BY MR. NORTHRUP:

Q Can you please describe how the plume is migrating in relation to the other two water supply wells?

A The other two water supply wells, as I said, one is only a test well. It's only used under emergency situations. They are located south of the -- water well

number 3. And the groundwater contamination plume has been shown to have receded back toward the facility away from water well number 3. And so the -- it looks like the edge of the plume is also getting further away from those other two wells. And I think that's shown on Exhibit A as well.

Q What method will Sangamon Valley use to prevent the lateral migration of the contaminant plume during the injections?

A We will perform the remediation injections in a specific sequence. The injections will begin along the west side of the remediation area and will progress toward the east and back toward the facility and away from the water wells. The proposed layout of the injection wells along with the proposed ORC injection rates is shown on the second exhibit, Exhibit B.

Q Exhibit M to the amended petition, which is a letter from Regenesis, which is the manufacturer of the ORC, correct?

A Yes.

Q Suggests a barrier-based design along either side of the street. Can you describe how barriers will be created between well number 3 and the plume?

A Barrier was based upon -- proposed by

Regenesis was based on the assumption the County would not allow injections under the highway. The County will not allow injections through the pavement. However we can perform injections at an angle to allow us to actually treat the groundwater under the road. And to do this we would have perform the injections at an approximate angle of 10 to 15 degrees from vertical which would move -- and would move the injection location approximately five to eight feet from the edge of the road to provide two injection points approximately one third the width of the road.

Q Two rows of injections?

A Two rows of injections.

Q Okay.

A As we have shown on Exhibit B we are proposing a barrier, as I have previously stated, beyond the west and southwest edges of the injection grid. The barrier will be constructed using two rows of injections based on five feet on center and an ORC injection rate equal to approximately one third of the injection rate used for the remediation injection points, which the remediation injection points, I believe, are 70 pounds per point. The barrier will be installed prior to performing the injections in the remediation area. The

effect of this barrier will be to treat possible hydrocarbon contaminant that migrated beyond the remediation area prior to migration to the water well number 3.

Q Okay. Can you please describe if you have plans to use barriers between the plume and the other two community water supply wells?

A As was shown on an exhibit, the barrier will be extended around the southwest edge of the plume between the plume and the other two water wells.

Q Okay. And that's on Exhibit B?

A That is also on Exhibit B.

Q As mentioned on the Agency's recommendation which was filed with the Board to demonstrate the effectiveness of ORC injections, could you provide more recent monitoring results to demonstrate ORC injections that are effective at this site?

A The last set of groundwater samples collected at the site were collected on October 25th of 2005. Analytical results are summarized in Exhibit C. I have also provided a breakdown for well -- for the analytical results to date from monitoring well 7 which is located between the highway and water well 3, and monitoring well 2 which is located at the site of the initial

release. And those are provided as Exhibits D and E. These attachments shows that concentrations for the hydrocarbon contamination has steadily decreased due to our previous injections of the ORC. We believe a subsequent rise in the concentrations in monitoring well 7 can be attributed to contamination that has been migrating from under the road.

Q Exhibit E on the amended petition which is the letter from the Agency dated February 27th, 2003, shows that modifications were made to Sangamon Valley's --

COURT REPORTER: Can you speak up? I can't hear.

Q 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 below the tier 1 remediation objectives. Has such additional sampling been done to show the status of the contamination beneath the neighboring properties?

A In April of 2003 we took additional soil samples to determine if the soil contamination was still present above -- currently to look at this. So borings were performed in the vicinity of monitoring well 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 which exceed current cleanup objectives as outlined in section 742 of the Illinois Administrative Code. Groundwater sampling was performed on a quarterly basis following the injections and the status of the groundwater contamination has been shown on Exhibit A.

Q How many series of ORC injections are planned after the second follow-up round of injections?

A We are hoping that we won't have to do any additional rounds of ORC injections after this second follow-up round. However, if our analytical data from the groundwater samples indicate the contaminant levels have not decreased to acceptable levels, we may need to do one or two additional rounds of injections.

Q How long is the waiting period before more follow-up injections will be planned?

A The groundwater sample results will be reviewed and evaluated after each quarterly sampling event by the Regenesis engineers. If Regenesis indicates, an additional round of injections will likely be necessary. We will file a corrective action plan and budget amendment with the Illinois EPA for approval

prior to proceeding.

Q What criteria will Sangamon Valley use to determine if additional rounds of injections are needed?

A If the contaminant concentration reduction is shown to slow down and contaminant levels are shown to level off, additional rounds of injections will be needed.

Q For how many consecutive quarters with no exceedences of the groundwater standards or 35 Illinois Administrative Code 742 under the TACO objectives does Sangamon Valley plan to go before discontinuing groundwater remediation efforts?

A Quarterly groundwater sampling is planned at the facility until analytical results show no exceedences of groundwater quality standards. Quarterly groundwater sampling will continue until four consecutive sampling events show no exceedences of the groundwater quality standards. At that time Sangamon Valley Farm Supply will request to discontinue the groundwater monitoring and receive a "No further remediation" letter.

Q Please describe Sangamon Valley's monitoring plan to ensure adequate rounds of quarterly sampling to detect contaminant rebound which might occur several

months or years after the injections.

A The primary source of the contamination which was the leaking underground storage tank has been removed from the site. It is no longer contributing to -- a contributing factor to the groundwater contamination. In addition, the secondary source, which would be contaminated soils in the immediate vicinity of the former underground storage tank, have also been removed. So those can no longer continue to contribute to the contaminated groundwater.

We have collected soil samples on either side of the highway to show that soil contamination is not present at levels above remediation objectives in the regulations. And based on the groundwater sampling to date, it appears the groundwater moves rather quickly in the area as shown by the rebound of the contaminant concentrations in monitoring well 7 due to the movement of groundwater from under the highway. If groundwater contamination above remediation objectives is not identified in four quarterly sampling events, it's highly unlikely contaminant concentrations will rebound in the future.

Q The Agency recommendation that was filed states the best available technology to address concerns

about ORC is groundwater monitoring. Could you please develop a monitoring plan and schedule for the continuing remediation?

A We have 13 on-site monitoring wells, 12 of those will be sampled on a quarterly basis.

Q In your monitoring plan, could you include how you would demonstrate the ORC injections having the desired effects not creating unintentional negative impacts to the aquifer and water supply wells?

A The 12 monitoring wells will be sampled on a quarterly basis. In addition, when we do that sampling we will also collect a sample of the -- from the community water well 3. And we will -- if water well 1 or 2 is going to be brought online, we will also collect a sample from that. All the samples will be analyzed for contaminants of concern for the site which are benzene, ethylbenzene, toluene, total xylenes and MTBE, that's methyl tert-butyl ethanol or something like that, that additive. The analytical results will be reviewed against the previous analytical results.

Q Could you indicate in your monitoring perimeters for the monitoring wells and the community water supply wells such as contaminants of concern, oxidation reduction potential, pH, dissolved oxygen,

nitrate, total undissolved iron, sulphate, methane, chemical oxygen demand and manganese?

A All the water samples collected will be analyzed with contaminants as concerned as previously stated. Also the five-day biological oxygen demand, chemical oxygen demand, total undissolved iron, total undissolved manganese, nitrate, sulphate and methane, on-site measurements will be collected from each water sample which well include temperature, dissolved oxygen concentration, pH, and oxidation reduction potential.

Q Would your monitoring program also include quarterly raw water monitoring from the community water supply wells as suggested by the Agency?

A As I previously stated, we will collect a raw water sample from water well number 3 during each quarterly sampling event. Groundwater samples will only be collected from wells 1 or 2 if they are brought online by Village personnel for temporary use.

Q In your schedule could you show milestones such as time frames for injections, groundwater sampling, and compliance with groundwater standards and remediation objectives?

A It's difficult to project when injections will be performed as all the proposed work is contingent

upon approval of our 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 the approval of the corrective action plan and budget amendment. In the interim and until the end of required remediation we will start taking quarterly groundwater samples and have them analyzed. It's also difficult to project when the groundwater sampling will show compliance with the groundwater quality standards. However, we hope the levels can be reached within 12 months of the next set of injections.

Q Once the groundwater remediation efforts have achieved compliance with the groundwater standards and the remediation objectives, do you foresee any problems with having a setback exception expire?

A If groundwater sampling shows that remediation effects have achieved compliance with the groundwater 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.

Q 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. The petition also, on a different page, states a portion of the current shallow groundwater contamination have migrated to within approximately 75 feet from the existing community water supply well. Can you please clarify how close to all three wells the contamination was found?

A During the sampling event on October 9th of 2002, the leading edge of the groundwater contamination plume was extrapolated to be approximately 60 feet from well number 3. The leading edge had since receded to approximately 115 feet from the well. During the sampling event on October 9th of 2002, the edge of the groundwater contamination plume was extrapolated to be approximately 195 feet from wells 1 and 2. The edge of the plume had since receded to approximately 235 feet from wells 1 and 2.

Q Regarding well number 3, the amended petition states that 55 to 60 injection locations appear to be within the setback of the municipal well. Are you going to provide -- could you please provide a similar diagram showing the possible locations for the second round of follow-up injections?

A Provided a diagram showing the proposed injection points as Exhibit B.

Q What will be the distance between the community water supply wells and the closest injection point?

A The closest injection point at this point to the community water supply wells is approximately 95 feet to well number 3 and approximately 175 feet to well numbers 1 and 2.

Q And in your testimony earlier you said that's actually 75 feet?

A I'm not sure. At this point this information is dated. We will have to take another set of water samples to get -- before we actually make our proposal.

Q Would you please indicate what maximum alternative setback would be utilized, i.e., how far from the community water supply wells would the nearest injection be located?

A The closest injection point to well number 3 was approximately 75 feet. No proposed injection points are closer than that -- than that previous injection point.

Q And, in fact, they could probably be -- potentially be further away than 75 feet?

A Yes.

Q Will other products be injected along with

the ORC?

A The only material being injected with the ORC is water. And the microbes or additional nutrients will be added.

Q Beside the ORC, will microbes, nutrients and water also be injected?

A No.

Q Would you please provide an MSDS for ORC and identify what microbes and nutrients will be used.

A As I previously stated, we are not using any microbes or nutrients. And we have provided a copy of the MSDS from Regenesis as Exhibit F.

Q Exhibit G to the amended petition was a letter from the Agency dated December 20th, 2004, requiring Sangamon Valley's corrective action plan to include documentation that injection of the chemical or the impact of the treatment on the existing soil and groundwater shall not cause an exceedence of the primary drinking water recommendations during or after the remediation. Has such documentation been submitted yet to the Agency? Would you please provide a copy for the record?

A The 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 community water supply wells to a point where concentrations exceed the primary drinking water standards. Material being injected is calcium based material for which there is no regulatory standard set.

Q Okay. Not being able to make that assertion, is that really based upon sort of an engineering and scientific inability to make a 100 percent conclusion?

A Yes. There are no 100 percent guarantees in this business.

Q So based on your training and experience being out in the field, you reasonably believe that you are going to meet the requirements, correct?

A Yes, I do.

Q The petition refers to the 200-foot setback -- and this was the original petition, referred to the 200-foot setback of the community water supply well and focused its discussion on the activities inside a 200-foot radius from the well. Since it's actually a 400-foot setback that applies to all of the wells, please identify how many injection points are located within the 400-foot setback?

A Based on the location of the remediation site

relative to water well number 3, all injection points performed to date have been within the 400-foot setback zone. During the initial round of treatment, ORC was injected at 170 points. During the follow-up round, an additional 147 injection points were utilized. Neither of these rounds of treatment utilized a barrier between the contaminant zone and community water supply well. As part of the next round of injections, we are proposing at this point 97 injection points in the contaminant plume area and 60 injection points to form the barrier between the contaminant zone and the water supply wells.

Q Just as an aside, too, that was the purpose for the amended petition, correct? You changed it from the 200 to the 400?

A Yes.

Q Under the Illinois Water Well Construction Code, if a well is contaminated owners and operators of the contamination source are responsible for providing an alternative source of potable water. Based on these requirements, please discuss the contingency plan between Sangamon Valley and the Village of Saybrook. As suggested by the Agency, will you be providing a plan for regular meetings for Saybrook water supply

personnel?

A A copy of the analytical summary table for each groundwater sampling event will be forwarded to the Village water personnel. If the petroleum contamination is detected in monitoring well 11, which is located between the contaminant -- the contaminated monitoring -- well number 7 and the water supply well, the Village will be informed of the contaminant detection. If the contamination is identified in monitoring well 11 at levels above remediation objectives and the groundwater quality standards, the Village will be notified and an amendment will be prepared to the corrective action plan and budget which will include another round of ORC injections and contingency for construction of a new community water well positioned outside the 400-foot setback from the groundwater contamination plume. If the petroleum contamination exceeding section 735 Remediation Objectives and section 620 Groundwater Quality Standards is identified in monitoring well 13, that's when we will do the contingency for the additional -- or the water well.

Q Will Sangamon Valley work with the Village to do additional sampling of the community water supply

wells during the injection follow-up periods?

A The Village water personnel have agreed to allow testing the raw water from the community water wells during the quarterly groundwater monitoring events.

Q Okay. The Agency has expressed concern that the ORC might change the character of the potable groundwater before, during and after drinking water treatment. In order to detect potential impact, has Sangamon Valley made arrangements with the Village to monitor the wells for components that will be injected via the geoprobes or for changes in the groundwater quality?

A The Village water personnel have agreed to allow the testing of the well water from the community water wells during our quarterly sampling events. Based on the piping configuration of the well house, water can only be drawn from one well at a time. Since well number 3 is the closest to -- the closest well to the apparent contamination plume and is the primary well utilized by the Village, we propose to sample well number 3. The water samples collected from that well will be analyzed by the same perimeters as the monitoring wells.

Q If testing confirms injected materials, hydrocarbons or byproducts of the ORC injections are detected in the community water supply wells, what will be Sangamon Valley's course of action?

A The ORC materials which are proposed to be injected is a calcium based product. Calcium does not appear in the -- section 742 Remediation Objectives, in the 611 Primary Drinking Water Standards, nor the 620 Groundwater Quality Standards. The main byproduct of the ORC injections is increased dissolved oxygen. If the hydrocarbon contamination is identified in monitoring well 11, which is one of the wells between the contaminated plume and the water well number 3, at levels above the remediation objectives and 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 the new community water well if hydrocarbon contamination is identified in monitoring well 13 which is the closest well to number 3.

Q What is the population served by the community water supply well number 3?

A According to the water personnel, it serves

approximately 400 households.

Q Has Sangamon Valley consulted with the Village to determine if another water supply is available besides the wells 1, 2 and 3?

A According to the water personnel, the Village maintains only the three identified water wells, one of which is only a test well and only used under emergency situations.

Q The amended petition 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 A copy of the results of the water well survey is attached as Exhibit G. 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 the two wells and 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 within corporate village limits.

Q Please discuss if the County or Village have ordinances that might be more stringent than the prohibitions of section 14.2 of the act?

A I reviewed the McLean County Code which applies to water wells, and it showed that the County has no ordinances which deal with water well setbacks. The Village water personnel indicated the Village follows current state regulations relative to water wells.

Q The group of exhibits that I passed around, Exhibits A through G, some of those you created, correct?

A Yes.

Q And those were the diagrams?

A The diagrams and the summary tables.

Q Other of those documents did you get from government sources, like the water wells?

A The water well survey information provided in Exhibit G was obtained from the State water survey and the geologic survey. And the other exhibit would have

been the MSDS from Regenesis.

Q Okay. That was Exhibit F?

A I believe so, yes.

Q And you obtained that directly from them?

A Yes.

Q And, again, they are the manufacturer?

A They are the manufacturer.

Q You assembled all these documents?

A Yes, I did.

Q And have you relied on these documents in making your opinions and planning this remediation?

A Yes, I have.

Q Do you rely on these types of documents as a regular practice in your profession?

A Yes.

MR. NORTHRUP: At this point, Your Honor, I would ask that those exhibits, A through G, be admitted into the record.

HEARING OFFICER WEBB: There is no objection?

MS. LOGAN-WILKEY: No.

HEARING OFFICER WEBB: Exhibits A through G are admitted into the record.

MR. NORTHRUP: And that concludes my examination of Mr. Wilson.

HEARING OFFICER WEBB: Thank you. Any cross-exam?

MR. DUNAWAY: I have one question. Lynn Dunaway, Illinois EPA.

CROSS-EXAMINATION

BY MR. DUNAWAY:

Q When you were discussing the distance of the leading edge of the plume discussing the distance from the potable wells to -- from the plume to the potable wells, were you referring to the edge of nondetected hydrocarbon constituents or the edge that represents the level that is remedial objective?

A The edge of the contaminant plume was the extrapolated edge of where it exceeded the groundwater quality standards.

MR. DUNAWAY: Okay. Thank you.

REDIRECT EXAMINATION

BY MR. NORTHRUP:

Q If it would have been the other way, does that impact where you would put your injection points?

A I don't believe so. The injection points are based upon cleaning up the groundwater to acceptable levels in the groundwater quality standards.

MS. LOGAN-WILKEY: That's it.

HEARING OFFICER WEBB: Thank you, Mr. Wilson.

MR. NORTHRUP: And that's my case.

HEARING OFFICER WEBB: Okay. Thank you, Mr. Northrup.

MR. NORTHRUP: Thank you.

HEARING OFFICER WEBB: The IEPA may present its case.

MS. LOGAN-WILKEY: We don't have anything to present at this time. We would just like to make Lynn available for any questions that the Board may have.

HEARING OFFICER WEBB: Okay. The Board did have one question for you. And that relates to something Mr. Northrup had brought up regarding Sangamon Valley Farm Supply's answer to one of the questions. It was the letter from the Agency dated December 20th, 2004, requires that the petitioner's corrective action plan include documentation that the 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 Illinois Administrative Code 611 during or after remediation.

In its response the petitioner indicated that the specific documentation has not been provided and that it does not believe it can make such an assertion.

What are your comments on that, specifically

whether petitioner may proceed without providing this documentation?

MR. DUNAWAY: Well, my opinion they have -- the documentation they provide may not answer that question directly. But they -- as Mr. Wilson stated, it's not possible to give an absolute guarantee that it will not happen. However, the information they have provided shows that -- or they have committed to -- they will monitor their own wells. They have a stage approach. They have monitoring well 11 at which case they will -- it would be an early warning system such that they would know before contaminants that would exceed a drinking water level would ever reach the well. They would know when it reached monitoring well 11. They would know when it reached monitoring well 13.

Therefore, they would be able -- they would have time to install the new water supply which would eliminate the need for -- which would eliminate the chance that a violation occur.

Also as part of that, the primary drinking water standards under 611 are based on an average. So even if a detection of -- as an example, benzene in excess of the primary drinking water standards were detected in monitoring -- or, excuse me, not monitoring

well 3, community water supply well 3, there would still have to be subsequent detections in order for a violation of that standard to occur, which I'm not saying that it's good that it would be there, but there would be additional time to meet the letter of the law and not having a violation. Those are based on -- the 611 regulations are based on lifetime consumption as opposed to a one-time chronic detection.

HEARING OFFICER: Okay.

MR. DUNAWAY: So I believe the information that the petitioner has provided does indirectly answer that question, though it does not necessarily provide an absolute guarantee that it cannot happen. They have contingencies in place if it appears that that inevitability may be coming.

HEARING OFFICER WEBB: Thank you, Mr. Dunaway. Let's go off the record for a minute to discuss a briefing schedule.

(Discussion off the record.)

HEARING OFFICER WEBB: We have just had an off-the-record discussion regarding post hearing briefs. The parties have agreed to a briefing schedule as follows: The transcript of these proceedings will be available from the court reporter by August 21st, and

will be posted on the Board's web site. The public comment deadline is September 11th. Public comment must be filed in accordance with section 101.628 of the Board's procedural rules. The Petitioner's brief is due by September 21st. The Respondent's brief is due by October 20th, and Petitioner's reply, if any, is due by October 27th. And the mailbox rule will apply.

Mr. Northrup, would you like to make any closing remarks?

MR. NORTHRUP: No, thank you, Your Honor, I will include those in my post hearing brief.

HEARING OFFICER WEBB: Okay. Ms. Logan-Wilkey?

MS. LOGAN-WILKEY: No, thank you.

HEARING OFFICER WEBB: Okay. There are no members of the public present to make any statements on the record, so I will proceed to make a statement as to the credibility of witnesses testifying during this hearing. Based on my legal judgment and experience, I find all the witnesses testifying to be credible. At this time I will conclude the proceedings. We stand adjourned, and I thank you all for your participation.

(Whereupon, the proceedings concluded at 11:05 a.m.)

STATE OF ILLINOIS)
)
COUNTY OF PEORIA)

CERTIFICATE OF REPORTER

I, GALE G. EVERHART, CSR-RPR, Notary Public in and for the County of Peoria, State of Illinois, do hereby certify that the foregoing transcript, consisting of pages 1 through 55, both inclusive, constitutes a true and accurate transcript of the original stenographic notes recorded by me of the foregoing proceedings had before Hearing Officer Carol Webb, in Bloomington, Illinois, on the 9th of August, 2006.

Dated this 15th day of August, 2006.

Gale G. Everhart

GALE G. EVERHART, CSR-RPR
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