

RECEIVED  
CLERK'S OFFICE

JAN 31 2005

STATE OF ILLINOIS  
Pollution Control Board

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PAUL JOHNSON, INC., )  
)  
Petitioner, )  
)  
v. )  
)  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY and )  
VILLAGE OF WATERMAN, ILLINOIS, )  
)  
Respondents. )

PCB No. 05-109

NOTICE OF FILING

To: Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board  
James R. Thompson Center, Suite 11-500  
100 West Randolph Street  
Chicago, Illinois 60601

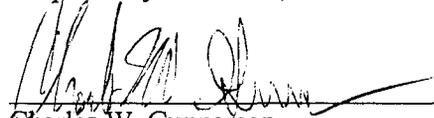
Bradley P. Halloran  
Hearing Officer  
Illinois Pollution Control Board  
James R. Thompson Center, Suite 11-500  
100 West Randolph Street  
Chicago, Illinois 60601  
(312) 814-8917

Richard M. Saines, Esq.  
Baker & McKenzie  
130 East Randolph Drive, Suite 3500  
Chicago, Illinois 60601  
(312) 861-8000

Kevin E. Buick, Esq.  
Cliffe, Foster, Corneille, Buick & Buick  
331 West State Street  
Sycamore, Illinois 60178  
(815) 895-7411

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the **Illinois EPA's Response to Petitioner's Petition for Community Well Setback Exception**, copies of which are herewith served upon you.

Respectfully submitted,



Charles W. Gunnarson  
Assistant Counsel

January 27, 2005

Charles W. Gunnarson  
Assistant Counsel  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East, Post Office Box 1976  
Springfield, Illinois 62794-9276  
(217) 782-5544

THIS FILING IS SUBMITTED ON RECYCLED PAPER

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

**RECEIVED**  
CLERK'S OFFICE

**JAN 31 2005**

STATE OF ILLINOIS  
Pollution Control Board

PAUL JOHNSON, INC. )  
Petitioner )  
)  
)  
v. )  
)  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY and, )  
VILLAGE OF WATERMAN, )  
Respondents. )

PCB No. 05-109  
(Petition for Water Well  
Setback Exception)

**ILLINOIS EPA RESPONSE TO PETITION FOR  
WATER WELL SETBACK EXCEPTION**

NOW COMES the Respondent, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY ("Illinois EPA"), by Charles W. Gunnarson, one of its attorneys, and respectfully submits its RESPONSE TO THE PETITION FOR A WATER WELL SETBACK EXCEPTION, ("Response") according to 35 Ill. Adm. Code 106.306(a). This Response is in reply to the Petition filed with the Illinois Pollution Control Board ("Board") on December 10, 2004, by Petitioner PAUL JOHNSON, INC., ("PJI") requesting a Water Well Setback Exception pursuant to Section 14.2 of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/14.2 (2002).

**INTRODUCTION**

1. The Illinois EPA received the Petition for the Water Well Setback Exception on December 15, 2004. It has been given Illinois EPA file number 18-05.

## **NOTIFICATION OF WATER SUPPLY**

2. A Proof of Service affidavit was included with the petition stating that the Respondent VILLAGE OF WATERMAN (“Waterman”) water supply, the only affected community water supply, has been provided with a copy of the petition.

## **RELIEF SOUGHT BY THE PETITIONER**

3. Petitioner requests a water well setback exception so that it may perform remedial actions to address the release of petroleum hydrocarbons to shallow groundwater at the former Paul Johnson, Inc. truck maintenance and leasing business, located at 340 West Adams Street, Waterman, DeKalb County, Illinois (“Facility”). PJI is no longer in operation at the Facility. Underground storage tanks (“USTs”) were utilized by PJI at the Facility while it was in operation to store fuel for its vehicles. Upon removal of the USTs, PJI discovered they had leaked. PJI subsequently entered the Leaking Underground Storage Tank (“LUST”) program with the Illinois EPA. PJI is currently conducting soil and groundwater remediation activities in pursuit of a no further remediation (“NFR”) letter from the Illinois EPA.

4. During the process of attempting to obtain the NFR letter, PJI learned that a portion of the current contamination in the shallow groundwater is within approximately 150 feet of the existing community water supply well for the Respondent Waterman. In order to obtain an NFR letter, PJI must adequately remediate the petroleum hydrocarbon contamination in the shallow groundwater at the site. PJI proposes the use of direct push technology to inject microbes, nutrients and oxygen release compound (“ORC”) into the area of shallow groundwater contamination to remediate the petroleum hydrocarbon contamination.

5. The direct push remediation technique falls within the definition of a “new potential

route” to groundwater, pursuant to Section 3.350 of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/3.350 (2002). Pursuant to Section 14.2(a) of the Act, 415 ILCS 5/14.2(a) (2002), the installation of any “new potential route” to groundwater is prohibited within 200 feet of an existing community water supply well. Because a portion of the contamination lies within 150 feet of the existing community water supply for Waterman, PJI is requesting a water well setback exception from the Illinois Pollution Control Board (“Board”) for the use of direct push technology to remediate the shallow groundwater at the Facility, pursuant to Section 14.2(c) of the Act, 415 ILCS 5/14.2(c)(2002).

#### LAW

6. The Act provides for a minimum setback zone, and exceptions from such setback zones, at 415 ILCS 5/14.2 (2002). These provisions, in pertinent part, are as follows:

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

(a) Except as provided in subsections (b), (c) and (h) of this Section, no new potential route or potential primary source or potential secondary source may be placed within 200 feet of any existing or permitted community water supply well or other potable water supply well.

(c) The Board may grant an exception from the setback requirements of this Section and subsection (e) of Section 14.3 to the owner of a new potential route, a new potential primary source other than landfilling or land treating, or a new potential secondary source. The owner seeking an exception with respect to a community water supply well shall file a petition with the Board and the Agency. The owner seeking an exception with respect to a potable water supply well other than a community water supply well shall file a petition with the Board and the Agency, and set forth therein the circumstances under which a waiver has been sought but not obtained pursuant to subsection (b) of this Section. A petition shall be accompanied by proof that the owner of each potable water supply well for which setback requirements would be affected by the requested exception has been notified and been provided with a copy of the petition. A petition shall set forth such facts as may be required to support an exception, including a general

description of the potential impacts of such potential source or potential route upon groundwaters and the affected water well, and an explanation of the applicable technology-based controls which will be utilized to minimize the potential for contamination of the potable water supply well.

The Board shall grant an exception, whenever it is found upon presentation of adequate proof, that compliance with 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.

Not later than January 1, 1988, the Board shall adopt procedural rules governing requests for exceptions under this subsection. The rulemaking provisions of Title VII of this Act and of section 5-35 of the Illinois Administrative Procedure Act shall not apply to such rules. A decision made by the Board pursuant to this subsection shall constitute a final determination.

415 ILCS 5/14.2(a) and (c) (2002)

## INVESTIGATION

7. The Facility is located at 340 West Adams Street in the Village of Waterman, Illinois. The Site was previously used as a truck maintenance and leasing business. There were at least two USTs at the site.

8. PJI is attempting to remediate petroleum hydrocarbons in the shallow groundwater at the Facility so it might receive an NFR letter from the Illinois EPA's LUST section and ultimately divest itself of the property.

## GENERAL DESCRIPTION OF POTENTIAL IMPACTS

9. The description of potential impacts of the potential routes on groundwater and the potable well are intimately linked to the demonstration that the location within the setback zone

does not pose a significant hazard. See the Environmental Impact/Significant Hazards to the Potable Water Supply section of this response for further discussion.

### **ARBITRARY AND UNREASONABLE HARDSHIP**

10. After reviewing the Petition and supporting documents, it is the opinion of the Illinois EPA that PJI has adequately demonstrated the use of alternative remedial activities would pose an arbitrary and unreasonable hardship.

### **BEST AVAILABLE TECHNOLOGY CONTROLS**

11. PJI does not provide a monitoring plan or schedule in its Petition to demonstrate that the remedial injections made at the Facility to date beyond the 200-foot setback are having the desired effects. Section III of the petition indicates that some areas have already been treated with ORC. Data is provided in the petition that shows bioremediation to be the least expensive remedial method. No data has been provided in the petition confirming the effectiveness of bioremediation at this site. The Illinois subsequently reviewed data provided by Clayton Group Services ("Clayton"), that was not part of this petition, demonstrating the effectiveness of this remediation technique. The Illinois EPA would support bioremediation using injected ORC and specific bacteria within the minimum setback zone of Waterman well #2, provided this data is entered into the record of this proceeding and made available to the Board and other concerned parties for review prior to the Board's final order in this matter.

## **MAXIMUM FEASIBLE ALTERNATIVE SETBACK**

12. Typically in the setback zone exception process, the maximum feasible setback is considered to assure that the greatest possible distance between a potential source or potential route, and a potable well, is maintained. Increased distance is proportional to the time it takes a contaminant to move through groundwater from its source to a well. In the case of injection wells used for remediation, the maximum feasible distance is, by necessity, the same proximity as the contaminants in the groundwater to be remediated. In this matter, the Illinois EPA believes the distance between the remedial injection wells and the community water supply well is not as important as assuring that the petroleum hydrocarbons are fully remediated within the minimum setback zone. The Illinois EPA supports the use of ORC and bacteria as close to Waterman well #2 as is necessary to fully remediate the petroleum hydrocarbons.

## **ENVIRONMENTAL IMPACT/SIGNIFICANT HAZARD TO THE POTABLE WATER SUPPLY WELL**

13. Section 14.2(c) of the Act states that the petitioner must make a demonstration to the Board that the potential route is not a significant hazard to the potable well. Closely related to this demonstration is the required description of the possible impacts that the potential route may have on the potable well. The petition contains geologic data demonstrating the existence of low permeability geologic materials between the upper contaminated zone, which is the focus of the bioremediation, and the lower aquifer utilized by the potable well. Waterman well #2 and Waterman well #3, approximately 1,000 feet east southeast of well #2, are the only data points on the cross section, as shown in Figure 3 of PJI's Petition. Review of publicly available well records indicate limited data along or near the transect of the cross section. No additional data is

provided in the petition that illustrates the shale zones are laterally continuous beyond the points at Waterman wells #2 and #3.

14. In Section I, Page 4, and Section V of PJI's Petition it is stated that the groundwater flow direction is predominantly to the northeast, with some influence created by the sewer system in the vicinity of Adams Street. However, Figure 2 indicates the bulk of the excavated soil was to the west and north of the leaking tanks (incident numbers 20021711 and 951920). The presence of the contaminated soil to the west and north of the leaking tanks indicates that groundwater flow is sometimes to the west and the north. The area of leaking tank incident number 892298 to the west might account for some of the petroleum hydrocarbons to the west of the area of incident numbers 20021711 and 951920, assuming a northeasterly flow.

15. However, extensive soil excavation contiguous and to the northeast of 892298 is not indicated. Therefore, the area of incident numbers 20021711 and 951920, coupled with periodic northerly flow, appear to be the main source of petroleum hydrocarbon contaminants. The most recent groundwater monitoring data provided by Clayton indicates that the highest concentration of benzene as of September 14, 2004 was in monitoring well MW-10. This monitoring well is located north-northwest of the area of leaking tank incident numbers 20021711 and 951920 on the north side of Adams Street. Monitoring well MW-15, which is almost directly north of the area of leaking tank incident numbers 20021711 and 951920, had the second highest benzene concentration reported on September 14, 2004. Section I, Page 3 indicates that Clayton has recently installed additional monitoring points indicating more extensive groundwater contamination.

16. The discussion above illustrates there are some unknowns that exist at this site. The petroleum hydrocarbons pose a threat that is greater than the remedial chemicals being applied.

However, allowing the injection of potential contaminants within the minimum setback zone of a community water supply well should be coupled with assurances that the risk posed by injection provides a greater benefit in remediation.

17. The Illinois EPA has recently reviewed data provided by Clayton that was not part of PJI's Petition. The Illinois EPA would support bioremediation using injected ORC and specific bacteria within the minimum setback zone of Waterman well #2, provided this data is entered into the record of this proceeding and made available to the Board and other concerned parties for review prior to the Board's final order in this matter.

18. After reviewing the Petition, the supporting documentation, and the information subsequently provided by PJI to the Illinois EPA, the Illinois EPA believes a more definite demonstration that PJI's remedial actions have successfully removed petroleum hydrocarbons from the shallow groundwater to acceptable levels is necessary. The geology at the Facility is such that groundwater moves relatively slowly through the area. As a result, the Illinois EPA believes a longer period of sampling demonstrating petroleum hydrocarbons levels within acceptable concentrations is necessary to ensure the long-term safety of the Respondent Waterman's potable water supply. The Illinois EPA would support bioremediation using injected ORC and specific bacteria within the minimum setback zone of Waterman well #2, provided PJI continues its remediation efforts until petroleum hydrocarbon levels show no exceedence of a Class I: Potable Resource Groundwater standard, found at 35 Ill. Adm. Code 620.410, or an acceptable remedial objective pursuant to 35 Ill. Adm. Code 742, for a minimum of two (2) consecutive quarters.

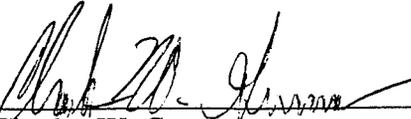
## CONCLUSION

19. Pursuant to Section 14.2(c) of the Act, 415 ILCS 5/14.2(c) (2002), the Illinois EPA recommends the Board grant a water well setback exception to PJI in this matter, but only under the following conditions:

- a) The data provided by PJI to the Illinois EPA subsequent to the filing of its Petition demonstrating the effectiveness of the direct push bioremediation technique is entered into the record of this proceeding and made available to the Board and other concerned parties for review prior to the Board's final order in this matter.
- b) The data provided by PJI to the Illinois EPA subsequent to the filing of its Petition addressing the environmental impact/hazard to the potable water supply well of the direct push bioremediation technique is entered into the record of this proceeding and made available to the Board and other concerned parties for review prior to the Board's final order in this matter.
- c) The Board orders PJI to continue groundwater remediation efforts for petroleum hydrocarbons for a minimum of two (2) consecutive quarters with no exceedence of a Class I: Potable Resource Groundwater standard (35 Ill. Adm. Code 620.410) or an applicable remedial objective pursuant to 35 Ill. Adm. Code 742, before bioremediation is considered complete.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By:   
Charles W. Gunnarson  
Assistant Counsel  
Division of Legal Counsel

Dated: January 27, 2005  
ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217/782-5544

**THIS FILING IS SUBMITTED ON RECYCLED PAPER**

**CERTIFICATE OF SERVICE**

I, Charles W. Gunnarson, certify that I have served the attached **Illinois EPA Response to Petition for Community Well Setback Exception**, by first class mail, upon the following persons:

Dorothy Gunn, Clerk  
Illinois Pollution Control Board  
James R. Thompson Center, Suite 11-500  
100 West Randolph Street  
Chicago, Illinois 60601

Bradley P. Halloran  
Hearing Officer  
Illinois Pollution Control Board  
James R. Thompson Center, Suite 11-500  
100 West Randolph Street  
Chicago, Illinois 60601  
(312) 814-8917

Richard M. Saines, Esq.  
Baker & McKenzie  
130 East Randolph Drive, Suite 3500  
Chicago, Illinois 60601  
(312) 861-8000

Kevin E. Buick, Esq.  
Cliffe, Foster, Corneille, Buick & Buick, LLC  
331 West State Street  
Sycamore, Illinois 60178  
(815) 895-7411



Charles W. Gunnarson  
Assistant Counsel  
Illinois Environmental Protection Agency

**THIS FILING IS SUBMITTED ON RECYCLED PAPER**