

ILLINOIS POLLUTION CONTROL BOARD
September 7, 1995

CITY OF ELGIN,)	
)	
Petitioner,)	
)	PCB 94-371
v.)	(Water-Well Setback
)	Exception)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

WILLIAM COGLEY APPEARED ON BEHALF OF THE PETITIONER;

CONNIE TONSOR APPEARED ON BEHALF OF THE RESPONDENT.

OPINION AND ORDER OF THE BOARD (By J. Yi):

This matter comes before the Illinois Pollution Control Board (Board) upon a petition filed by the City of Elgin (City) on December 2, 1994, and supplemented on March 3, 1995, for an exception to the water-well setback zone requirements. The City is requesting the exception to enable it to construct a new two-cell lime residue storage lagoon, which is within the water-well setback zone, at its Airlite Street Water Treatment Plant. Construction of this type is prohibited unless an exception has been granted by this Board.

The Board's responsibility and authority in this matter arises from the Illinois Environmental Protection Act (Act). The Act provides in Section 14.2 that a minimum setback zone is established for the location of each new potential source or new potential routes of contamination. (415 ILCS 5/14.2 (1994).) The Board is charged with granting exceptions from the setback requirements where the Board finds that the petitioner has demonstrated that the requirements will be satisfied.

The Illinois Environmental Protection Agency (Agency) is charged with the responsibility of investigating each petition for exception and making a recommendation to the Board as to the disposition of the petition. Further, the Agency is required to appear in hearings on petition for exceptions.

Hearing on this matter was held on May 9, 1995, 9:00 a.m., at the Kane County Courthouse in Geneva, Illinois, before hearing officer June Edvenson. In addition to Mr. Cogley and Ms. Tonsor, noted above as filing appearances of record, the following people testified on behalf of the Petitioner - Mr. Larry E. Deibert, the Director of Water Operations for the City; Mr. Paul T. Miller, the Chief Water Plant Operator for the City; and Mr. Lawrence J.

Almalch, Geotechnical/Disposal Consultant (Black & Veatch); and on behalf of the Respondent - Mr. William D. McMillan, representing the Planning Assessment Unit, Groundwater Section, Division of Public Water Supplies of the Agency.

At the hearing, petitioners submitted full copies of reports that were originally filed with the Clerk of the Board as partial copies attached to the petitions. The petitioner's witnesses each presented oral testimony at the hearing. Some of the testimonies of the witnesses were pre-filed. The respondent's witness, Mr. McMillan, presented, orally, a summary of his pre-filed testimony. All pre-filed testimonies and reports were marked into evidence.

BACKGROUND

The City's Airlite Street Water Treatment Plant, located at 74 north Airlite street, Elgin, Illinois has a capacity of eight million gallons per day and operates under Agency permit No. 0894380008. It is a lime-softening treatment plant. In addition to the five deep wells, the facility consists of pumping equipment, water treatment basins, finished water reservoirs and a two-celled residue storage lagoon. (Generally Amend. Pet. at 6 .)¹

Mr. Paul Miller, the Chief Water Plant Operator for the City for the past fourteen (14) years, testified at the hearing that the existing two-cell lime residue storage lagoon, which is classified as a surface impoundment, receives only the by-products of the water treatment softening and clarification reactions at the plant. (Tr. at 12.) The plant treats groundwater only, and the lime residue is classified as a "special waste". This material is presently permitted for land application under Agency permit No. 1993-90-3690. (Amend. Pet. at 2.) The lagoon is a necessary part of the facility since the land application can be accomplished only at specific times during the year whereas the water treatment process is continuous. (Amend. Pet. at 2.)

The Agency determined in 1987 that the minimum setback zone for all five of these wells is two hundred feet, as per criteria listed in the Illinois Groundwater Protection Act. Mr. Lawrence Deibert, the Director of the Water Operations for the City for the past seven years, testified at the hearing that during the process of applying for these minimum and maximum setback zones,

¹The amended petition filed by the City will be referenced as "Amend. Pet. at "; the Agency response will be referred to as "Resp. at " and the transcript of the hearing will be referenced as "Tr. at ".

the City became aware that the softening residue lagoon, constructed in the early 1960's was, in fact, in violation of current rules. (Tr. at 29.)

The Airlite Street Plant's five deep wells range from 1,350 feet to 1,378 feet deep and are supplied primarily by water from the Glenwood-St. Peter and Ironston-Galesville Aquifers within the Cambrian-Ordovician Aquifer System. The static water levels on the wells range from 460 feet to over 600 feet below the ground surface. (Tr. at 14-15.) Well No. 22165, which has the lime residue storage lagoon within its minimum setback zone, has a continuous steel pipe casing extending to a depth of 366 feet. (Tr. at 13, 19.) The other wells, within maximum setback zones, also have continuous steel pipe casings extending from 359 feet to 390 feet in depth. By review of the well driller's logs and geological formation information, it is clear that all the casings extend well into the layers of limestone and shale. The Airlite Street Plant wells were classified as "Groundwater NOT under the Direct Influence of Surface Water" with a special exception permit by the Agency in April, 1994. (Tr. at 12-13.)

The existing residue storage facility shall be closed so that a new residue storage facility can be constructed in its place that will meet the current requirements as contained in "Groundwater Protection Regulations for New Activities Setback Zone or Regulated Recharge Area" (35 Ill. Adm. Code Part 616.444) The new residue lagoon will be constructed utilizing today's technology. (Amend. Pet. at 2-6.)

Mr. Deibert further testified that it is the intention of the City to construct a new surface impoundment in the same location as the current residue lagoon. (Tr. at 30.) The existing non-conforming lagoon will be removed from service, one cell at a time, and the new facility will be constructed, one cell at a time, and put into service. (Tr. at 13.)

The City has engaged a professional engineering firm to oversee the design and construction of the new residue lagoon. Mr. Lawrence Almalch, the consultant, stated that the City will use the best available technology economically achievable to minimize the likelihood of contamination of the potable water supply wells as stated in Section 14.2(c) of the Act. (Tr. at 45.)

REGULATORY REQUIREMENTS

The Board, pursuant to Section 14.2(c), shall grant an exception whenever it is found upon presentation of adequate proof:

1. that compliance with setback requirements of the

statute would pose an arbitrary and unreasonable hardship on the petitioner,

2. that the petitioner will utilize the best available technology controls economically achievable to minimize the likelihood of contamination of the potable water supply well,
3. that the maximum feasible alternative setback will be utilized, and
4. that the location of such potential source or potential route will not constitute a significant hazard to the potable water supply well.

In addition, the guidelines specified in the New Activities in a Setback Zone or Regulated Recharge Area (35 Ill. Adm. Code Part 616) clearly outlines the procedures that will be followed during the design and construction periods. Section 616.444 of Subpart F: On-Site Surface Impoundment, describes the liners and leachate collection systems required for new surface impoundments located within a setback zone that contain special waste generated on site.

ARGUMENT

The City and the Agency presented evidence, as noted below, and contend that the necessary conditions for the grant of a water-well setback exception, as indicated, have been met.

Arbitrary and Unreasonable Hardship

Mr. Miller stated that to rebuild the lagoon on-site is the most economically feasible alternative available to the City. (Tr. at 13.) The Airlite Street Plant is landlocked; it is surrounded by an elementary school, a hospital, residential housing and private property that precludes adjacent relocation of the subject lagoon. (Amend. Pet. at 6-7.)

Mr. Miller also stated that as an alternative, the City considered the construction of a remote sludge storage facility to meet the requirements of Section 14.2(c). (Tr. at 23.) This alternative consists of constructing, in addition to the retention facility, a pumping station, a pipeline to transport the lime residue to the remote location and the necessary land access acquisitions. (Tr. at 20-21.) The City alleges that the construction estimates, generated by the Consultant, indicates that the costs involved would be prohibitive; would pose an unreasonable financial hardship on the City. (Amend. Pet. at 11-13.)

The Agency states that the City has presented the least costly alternative and that arbitrary and unreasonable hardship would result if the exception were not granted. (Resp. at 13, Tr. at 60, 62.)

Best Available Technology

Mr. Deibert testified that it is the intention of the City to replace the current surface impoundment, at the same location, using the best available technology. The existing residue lagoon consists of a single liner retention system with no monitoring capabilities. Currently, any liquids, solids and dissolved chemicals that are put into the lagoon may percolate into the groundwater systems with no provisions for detection or remedy.

Mr. Deibert continued that the construction of the new residue lagoon will be in accordance to the requirements of Title 35 (Environmental Protection), Subtitle F (Public Water Supply), Part 616 (New Activities in a Setback Zone or Regulated Recharge Area), Subpart F: On-Site Surface Impoundments, Section 616.444 (Design Requirements), Section 616.445 (Inspection Requirements) and Section 616.446 (Operating Requirements). (Tr. at 40.) The City shall install, in addition to the two liners, a leachate collection system. Any liquid that would pass the liners will be collected by the leachate collection system and be re-directed to the head of the treatment plant for treatment recycling. (Tr. at 39.)

Maximum Feasible Alternative Setback

The new facility will not be closer to Well #22165 than the existing facility. The Agency notes that the City has presented evidence that the lagoon is located in the most feasible site but does not comment further. (Resp. at 13.) The Agency at hearing concludes that the City has presented evidence on all of the four issues that the location of the new lagoons will not pose a significant increase in the risk to the groundwater. (Tr. at 60, 62.)

Significant Hazard to the Potable Water Supply Wells

Mr. Miller testified that even though the lime residue is classified as a "special waste," the residue lagoon will receive only the by-products of the water softening reactions at the plant. (Tr. at 12.) The residue is primarily nonharmful calcium and magnesium carbonates which do not pose a hazard to the potable water supply wells. (Tr. at 12.)

In addition to the by-products being harmless, the construction of the new facility, utilizing the best available technology, will insure that the new facility will be no less-protective than the current situation. Even with the existing

facility, there have been no incidence of problems.

In summarizing his testimony, Mr. McMillan stated that the Agency has evaluated the information submitted and testimonies presented at the hearing, related to this replacement of the retention lagoon and concluded that the proposed lime residue lagoon will not pose a significant increased risk of groundwater contamination. (Tr. at 58-60.)

Finally, Ms. Tonsor noted that the Agency believes that evidence has been presented on all of the four issues which the Board must consider in reaching its determination, and that evidence presented indicates that the location of the new lagoon, at the site of the old lagoon, would not pose a significant increase in the risk to the groundwater at the site. (Tr. at 62.)

CONCLUSION

The issue before the Board is whether the City's petition for setback zone exception should be granted thereby allowing the City to construct and operate the new residue storage lagoon within the minimum setback zone at its Airlite Street Water Treatment Plant.

The Board, pursuant to Section 14.2(c) of the Act shall grant an exception whenever it is found upon presentation of adequate proof that the four requirements, as enumerated in the Regulatory Requirements Section of this opinion, were met.

To fulfill the requirements of these criteria, the City has submitted an original petition, a supplemental petition and a response to the Agency's comments to the petitions. In addition to the material pre-filed with the Board, the City presented testimony at the hearing through two City employees and an engineering consultant. The Agency also presented testimony at the hearing; the Agency is not opposed to the petition.

In addition, the City has a contingency plan should contamination occur. During the period that the Airlite Plant would be shut down for remediation, the City's water needs will be fulfilled by the increase output at the City's Riverside Water Treatment Plant, which utilizes the Fox River as a source water, that currently provides 90% of the water used by the City.

The City of Elgin and the Agency both present evidence and contend that the necessary conditions established in Section 14.2 of the Act for the grant of a water-well setback exception have been met. The Board agrees and accordingly grants the requested setback exception.

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

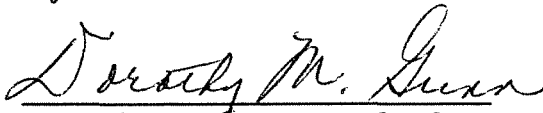
ORDER

The City of Elgin is hereby granted, pursuant to Section 14.2(c) of the Environmental Protection Act (415 ILCS 5/14.2(c)(1994)), an exception to the setback zone requirements of a community water supply well. The exception applies to the two-cell lime residue storage lagoon at its Airlite Street Water Treatment Plant.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act, (415 ILCS 5/41 (1994)), provides for appeal of final orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements. (See also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.)

I, Dorothy Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 7th day of September, 1995, by a vote of 7-0.


Dorothy M. Gunn, Clerk
Illinois Pollution Control Board