ILLINOIS POLLUTION CONTROL BOARD
August 26, 1991

STATE OIL COMPANY,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 90-102
	)	(Water Well Setback Exception)
	)	
DR. AND MRS. JAMES KRONE and the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Respondents.	)	

JOHN QUINN AND JOHN C. BAUMGARTNER (CHURCHILL, BAUMGARTNER & PHILLIPS, LTD.) APPEARED ON BEHALF OF PETITIONER;

JULENE M. PERBOHNER APPEARED ON BEHALF OF DR. & MRS. JAMES KRONE; AND

BOBELLA B. GLATZ AND STEPHEN C. EWART APPEARED ON BEHALF OF THE ENVIRONMENTAL PROTECTION AGENCY.

OPINION AND ORDER OF THE BOARD (by J. Theodore Meyer):

PROCEDURAL HISTORY

This matter comes before the Board on the petition of State Oil Company (State Oil) filed May 23, 1990 as amended July 20, 1990. This case is one of first impression before the Board, as State Oil is the first person to request a well water setback exception pursuant to Section 14.2(c) of the Environmental Protection Act (Act) and 35 Ill. Adm. Code 106.601 et seq. State Oil seeks permission to install gasoline storage tanks within 200 feet of the drinking water well of Dr. and Mrs. James Krone (the Krones) whose property is located at the southeast corner of U.S. Route 31 and Terra Cotta Road near Crystal Lake, McHenry County. State Oil had sought, but had not received, a waiver of the 200 feet setback requirement from the Krones, although it had received the concurrence of the Illinois Environmental Protection Agency (Agency) with its request for waiver.

On June 13, 1990 the Krones filed a response in opposition to the petition. On June 27, 1990 the Agency filed a response in

opposition to the petition, notwithstanding its earlier concurrence. Hearing was held on June 30, 1990. In addition to the testimony presented by the parties, a statement in opposition to the petition was presented at hearing on behalf of the McHenry County Defenders, who had filed written objections on June 12. Pursuant to schedule, briefs were filed by State Oil on September 11 and October 4, 1990, and by the Agency on September 26, 1990.

On February 7, 1991 the Board granted State Oil's January 31, 1991,motion for expedited decision noting that the Board would "act on this case as soon as possible, consistent with the Board's workload and resources". However, also on January 31, 1991, the Board received an unverified letter from the Krones noting that a new well had been dug. This fact was the subject of an affidavit filed instanter by State Oil on April 22, 1991. By Order of June 20, 1991 the Board allowed the filing of the affidavit by State Oil, but disallowed the filing of a response by the Agency. The Order also noted that neither the Krones' letter nor State Oil's affidavit "state where the new well is in relation to the old well which was the subject of testimony at hearing, so that it is impossible to determine whether this petition for exception to the Section 14.2 200 feet setback requirement is now moot". The Board directed the parties to address this issue, which State Oil did by affidavit filed July 3, 1991 and which the Agency did by filing of July 9, 1991.

WELL WATER SETBACK EXCEPTION PROCEDURES

The 200 feet minimum setback distance at issue here was added to the Environmental Protection Act as part of the Illinois Groundwater Protection Act, P.A. 86-125, effective September 24, 1987. (See also Ill. Rev. Stat. ch. 111 1/2, par. 7451 et seq.) Section 14.2(a) of the Act provides that:

> 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. [1]

[1] The term "potential route" is defined at Section 3.58 of the Act, "potential primary source" at Section 3.59, and "potential secondary source" at Section 3.60. The parties have not argued which of these terms are specifically applicable to State Oil's planned installation of three underground gasoline storage tanks, although it would appear that this would qualify as a "potential secondary source" as defined at Section 3.60(3).

The exception of Section 14.2(h) is not at issue here, as that relates solely to excavations for stone, sand, or gravel. Section 14.2(b) and (c) provide the mechanism for receipt by a facility operation of a waiver from the setback requirements from the owner of a drinking water well, or of an exception to the setback requirements from the Board. These subsections of Section 14.2 provides in pertinent part:

> (b) The owner of a new potential primary source or a potential route may secure a waiver for a potable water supply well other than a community water supply well. A written request for a waiver shall be made to the owner of the water well and the Agency. Such request shall identify the new or proposed potential source or potential route, shall generally describe the possible effect of such potential source or potential route upon the water well and any applicable technology-based controls which will be utilized to minimize the potential for contamination, and shall state whether, and under what conditions, the requestor will provide an alternative potable water supply. Waiver may be granted by the owner of the water well no less than 90 days after receipt of the request unless prior to such time the Agency notifies the well owner that it does not concur with the request.
>
> The Agency shall not concur with any such request which fails to accurately describe reasonably foreseeable effects of the potential source or potential route upon the water well or any applicable technology-based controls. Such notification by the Agency shall be in writing, and shall include a statement of reasons for the nonconcurrence.***If the owner of the water well has not granted a waiver within 120 days after receipt of the request or the Agency has notified the owner that it does not concur with the request, the owner of a potential source or potential route may file a petition for an exception with the Board and the Agency pursuant to subsection (c) of this Section.
> ***
>
> (c) The Board may grant an exception from the setback requirements of this Section***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***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.
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> 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.
> ***

The procedural rules adopted by the Board to implement Section 14.2 are codified at 35 Ill. Adm. Code 106.Subpart F. These generally track the statute, and additionally establish the rights of response and reply to a petition in addition to establishing hearing procedures.

AGENCY CONCURRENCE

In its March 23, 1990 letter to State Oil, the Agency stated:

> Based upon the information that you submitted to the Agency for review, your request accurately describes the reasonably foreseeable effects of the potential source upon the water well and accurately describes any applicable technology-based controls. Therefore, in accordance with Section 14.2(b) of the Act, the Agency concurs with your request for a waiver.
>
> Both the owner of the potential source and the owner of the water well must keep in mind that, by concurring with your request under Section 14.2(b) of the Act, the Agency is merely stating that your request accurately

describes the reasonably foreseeable effects of the potential source upon the water well and accurately describes any applicable technology-based controls. The Agency express no opinion on whether the potential source can or will contaminate the water well, or on whether installing the potential source in such close proximity is an environmentally sound idea. Installing this potential source is done at your own risk. (Am. Pet. Exh. C).

THE HEARING WITNESSES

This case reaches the Board in an unusual posture: the Krones' drinking water well, from which a setback exception was discussed at the July, 1990 hearing, is no longer in use. Evidence submitted into the record since that time reveals that a new well was installed on or about October 29, 1990. (Pet. Petition for Leave to File Affidavit, 4-22-91, p. 3). Illinois Department of Public Health documents submitted by the Agency indicate that the new well was completed by installation of a pump April 1, 1991, and that the old well was abandoned and sealed March 26, 1991. (Agency filing of July 9, 1991).

This petition itself is not moot, as the new information states that the Krone's new well is located within 146 feet of State Oil's proposed UST site. (Id.) However, much of the testimony presented at hearing concerned the nature of the old well. Consequently, rather than detailing the testimony of each witness, the Board will here present a broad outline of the nature of the witness testimony: once having resolved questions regarding the old well, there are few disputed facts in this case. The dispute centers around whether State Oil has presented the facts sufficient to carry its burden of proof.

State Oil presented three witnesses in support of its petition. The first was its operations manager, James Edward Peters, who has been employed by the company for 23 years. Mr. Peters' duties include the construction and installation of underground storage tanks (UST); he has been involved in the installation of about 100 USTs. (R. 8-9). His testimony related to the former and proposed use of the State Oil site, including the nature of State Oil's proposed USTs, the proposed leak detection system, and proposed contingency plan for providing the Krone's an alternative water source in the event of contamination of their well. (R. 8-35, 202-206).

The second witness, Ernest Varga, is one of State Oil's environmental consultants. Mr. Varga, who is licensed in Illinois as a professional engineer and a structural engineer, has operated his own business in McHenry County for 20 years. (R. 37-39). Mr. Vargas' testimony related to the surface and subsurface conditions at the State Oil site and the Krone

property, including characterization of the soil and aquifers and direction of groundwater flow. Given the nature of the proposed control equipment and the nature of the site, it was Mr. Vargas' professional opinion that any hazard to the Krones' well is "essentially non-existent". (R. 41, and generally R. 36-118).

State Oil's final witness, Dennis Roush, has been its construction coordination manager for 2 years. Based on this experience, as well as 20 years prior experience as a contractor, Mr. Roush presented testimony concerning costs and procedures for a hook up of the Krone property to a municipal water main. (R. 120-137).

The Agency presented two witnesses in opposition to the petition. The first was Richard Cobb, a certified professional geologist, who has been employed by the Agency for five years and who is the manager of the hydrogeology unit in its groundwater section. (R. 140). Mr. Cobb testified to his belief that State Oil's proposed UST placement would pose a hazard to the Krone's well, that State Oil's characterization of the groundwater is insufficient, and that its contingency plan for replacement of the Krones' water supply in the event of its contamination by the activities of State Oil is insufficient. (R. 153-155, and generally R. 140-161, 210-213).

The second witness was Patrick McNulty, an 11-year employee of the McHenry County Department of Health. (R. 165-166). As the County's Director of Environmental Health, Mr. McNulty provided testimony concerning results of some private well tests performed in the area, and explained what alternative water sources might be in compliance with the Department's standards. (R. 165-178).

Dr. James V. Krone presented testimony in his own behalf. Dr. Krone, a doctor of veterinary medicine, described the veterinary practice which he has conducted on the property which he has owned for 25 years. (R. 179). Dr. Krone also described his then existing well, and his concerns about State Oil's proposal. (R. 179-196). Jean Krone presented a statement of concern about the effect of water contamination on her husband's veterinary hospital. (R. 179-201).

A statement [2] was also presented at hearing by Robert Lonsdorf, who is employed by the McHenry County Defenders as its Groundwater Coordinator. Mr. Lonsdorf reiterated the earlier written comments that State Oil had provided insufficient site specific information in support of its position. (R. 208-209). The Agency has challenged the testimony of Mr. Varga on the grounds that he is not a geologist, as is the Agency's Mr. Cobb. The Board finds that Mr. Varga's credentials and 20 years experience as a registered structural engineer and professional engineer, amply qualify him to testify concerning the subjects which he addressed.

THE PROPERTIES AND PROPOSED SETBACK

The following facts are not in dispute.

Since about 1958, Dr. James Krone has owned a 2 story building located at 5606 South Route 31, near its junction with Route 176. Dr. Krone leases the second floor of the building as a rental apartment for 2 people, and operates a veterinary hospital for pets on the first floor. With the assistance of 3 employees, on average Dr. Krone treats between 15 and 20 pets during the day, and boards about 17 pets overnight. (R. 181). All of the water needs of the building, including for human and animal consumption, kennel cleaning, etc. have been served by a private drinking water well. Prior to the drilling of the new well, the exact depth, age, and composition of the well serving the property was unknown, as the well was drilled some 32 years ago, prior to enactment of the Water Well Code (R. 186, 144). [3] The Krones' new well is drilled to a depth of 130 feet, and has a steel casing. It draws water from a gravel layer at a depth of 120-130 feet. (Agency filing of July 9, 1991).

The State Oil property is located immediately north of the Krones' property. Dr. Krone testified that at some unspecified time, other gas stations have been located in the immediate

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[2] The Board notes that there was some dispute at hearing concerning the manner in which this statement could be made and its effect. (R. 206-207). Section 106.604(c) provides that hearings are to be conducted in these cases pursuant to 35 Ill. Adm. Code 102.Subpart J. Section 102.283 provides that all witnesses at hearing are to be sworn, as was Mr. Lonsdorf. This statement, as the Hearing Officer correctly noted, is "evidence" in this case which the Board will weigh and consider.

[3] The Board notes that in such instances, written records are typically sketchy or non-existent. As counsel correctly noted at hearing, information is usually available only from local well drillers. (R. 44-45).

vicinity of this property, including a property immediately north of the State Oil site across Route 176. (R. 184-185). State Oil purchased its property sometime in 1988 (R. 24).[4] In about 1959 or 1960, the parcel had been improved with a gas station and restaurant. (R. 183). The improvements included installation of three USTs (two of which were removed prior to State Oil's purchase of the property) and a drinking water well. (R. 25). It is unclear from the record how long ago the property ceased to be used as a gas station, but State Oil would propose to return the property to its former use by construction of a gas station and mini-mart; no repair garage is proposed. (R. 29). As part of this project, State Oil would propose to remove the old UST (located 77 feet from the Krones' old well) and to install two new USTs at a distance of 146 feet from the Krones' new well. (R. 18, & Pet. Ex. 1, State Oil Affidavit, July 3, 1991). It is undisputed that aside from the immediate northwest and northwest corners of the State Oil property, that there are no points more than 200 feet from the Krones' well, and that the corners are not large enough to contain the USTs. (Pet. Ex. 1).

The Board finds that State Oil has proposed to utilize the maximum feasible setback, a point which has not been disputed in this proceeding.

PROPOSED CONTROL TECHNOLOGY

Two of the three USTs which State Oil proposes to install are not new, but they are unused. They are single wall 12,000 gallon tanks which were never installed at another facility acquired by State Oil. The tanks have, however, been recertified by their maker. (R. 31-32). All tanks will be pressure tested in the presence of the State Fire Marshall before placement and at the time of backfilling. (Am. Pet. par. 8F). The tanks, which are about 8 feet high, will be buried at a depth to insure that there are 36 inches of earthen material between the top of the tank and the bottom of the concrete slab on which the gas pumps will sit. Steel, rather than fiberglass, piping will be used as "hold[ing] up better in this area because of the frost." (R. 34).

While the tanks will be buried and sitting in a sand and gravel layer located at a depth of 68 inches,[5] Mr. Peters believes that a single, rather than double, wall tank is sufficient due to the nature of the proposed leak detection system. (R. 32-33). No further mention of this matter was made

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[4] As earlier mentioned, the Groundwater Protection Act was approved and effective September 24, 1987, before State Oil's purchase of its property.

[5] A fuller discussion of soil layers and aquifers follows.

at or after hearing. After the tanks are buried, State Oil will backfill with pea gravel, and will install four monitoring sumps around the tank site. (R. 12). State Oil additionally proposes to install the D-TECH System I Monitor. (Pet. Ex. 2). The system is designed to sound an alarm in the event that any gasoline enters the sumps, in either liquid or vapor form. An alarm also sounds if any water enters the UST. The system also has a leak detection system for the piping. Among other things, the system also provides reports of any tank overfills, monitoring well events as described above, and an automated tank gauge which allows for "inventory control" of the amount of gasoline entering and leaving the UST.

No evidence was presented to contradict Mr. Peters opinion that the system is the most current available system for monitoring". (R. 14).

In the event of gasoline leakage, State Oil will immediately determine which tank is faulty and have the tank pumped out. If gas or vapor reaches the monitoring sumps, State Oil will contact its special waste hauler to have them pumped out. The waste hauler is located in Crystal Lake, some ten minutes away. (R. 16-17).

No evidence was presented challenging the adequacy of State Oil's proposed control technology, and the Agency has acknowledged that it is some of the best available. (Response of 7-27-90, p. 2). Accordingly, the Board finds that State Oil has demonstrated that it will utilize the best available technology controls economically achievable to minimize the likelihood of contamination of the Krone's well.

HAZARD TO THE KRONES' WELL

The issue of potential hazard to the Krone's well was the major issue discussed at hearing. State Oil has not made a site specific investigation of the subsurface soil and groundwater conditions on either its own or the Krone properties. Instead, it relied on a survey of the area by the Illinois State Geological Survey (ISGS) which itself stated that the maps and materials were intended for planning purposes only and not for site specific use. (R. 149-150). The closet boring in these materials to the Krone building is about 100 feet away. (R. 100).

However, the well construction report for the new well indicates that there is a 2 foot layer of topsoil, a 48 foot layer of sand and gravel, a 40 foot layer of sand and clay, a 30 foot layer of clay and a 10 foot layer of gravel; this total 130 feet, the depth of the new well. (Agency filing of July 9). Based on ISGS material, Mr. Varga testified that the surface material was a sand and gravel mixture about 35 feet thick.

Below this was a clay layer, composed of three clay types, about 70 feet thick. Beneath the clay layer was another layer of sand and gravel. (R. 44 and Pet. Ex. 5). This was based on a subsurface exploration of conditions about 400 feet south of Terra Cotta Road and about 300 feet east of Route 31. Water is present in both of the sand and gravel layers. The proposed USTs will be resting in the upper sand and gravel layer. Dr. Krone's new well draws it water from the sand and gravel layer beneath the clay layer, and the old well has been abandoned and sealed. (Agency filing of July 9, 1991). This eliminates a concern expressed by the Agency that any deterioration of the casing in Krone's old well itself could serve as a conduit for contamination from the upper sand and gravel layer to the deep aquifer. (R. 156).

Again, based on the ISGS material, Mr. Varga testified that he believed the flow of groundwater to be in a northeasterly direction. He further believes that if gasoline leakage were to occur, that the liquid would float on the water in the upper sand and gravel layer, and would not reach the deep aquifer. (R. 49).

State Oil argues that the historical experience at the site butresses this conclusion. Dr. Krone testified that in 1961, and on two other unspecified occasions, he had smelled gasoline in his old brick well pit. At that time, the USTs were located within 77 feet of the well, and there was a lesser degree of concern on the part of oil companies and the public about the overfilling of USTs. (R. 184). State Oil points out that Dr. Krone may have been smelling fumes coming from the gas station property, and not his well. State Oil also argues that Dr. Krone did not testify to there ever having been a problem with gasoline in his water over the course of the years, and did not testify to there ever having been any ill effects on humans or animals due to consumption of water from the well. (Reply Memorandum, pp. 4-7). For these reasons, State Oil does not believe that its proposed USTs pose a significant hazard to the well, particularly given the state-of-the-art leak detection system it proposes to install.

Mr. Cobb of the Agency, on the other hand, believes that a significant hazard exists whenever a UST with a capacity of more than 500 gallons is installed within 200 feet of a well (R. 159). Mr. Cobb stated that without site specific data, the groundwater was not accurately characterized. Mr. Cobb would not assume, as did Mr. Varga, that the groundwater flow in the upper sand and gravel layer would be the same as that in the deep aquifer. Mr. Cobb stated that he believed that any contamination would not move to the northeast, but would instead move to the Krones' well, given the fact that the "lateral area of influence is shown to be 4,000 times greater than in an unconfined water table". (R. 149, generally R. 142-148).

The Board cannot accept an interpretation of Section 14.2 which would label any installation within two hundred feet of a well to be a "significant hazard". The statute does not contain an absolute prohibition on location of any new potential source within 200 feet of an existing well. The legislature specifically provided for a site by site evaluation of risks in establishing the well water setback exception. The Board agrees with Mr. Cobb that data from three site specific groundwater elevation points would establish as a matter of certainty the exact direction of the flow of groundwater on the State Oil and Krone properties. (R. 145-146). However, given the leak detection system State Oil plans to install, the existence of the new Krone well and the plugging of the old well, in this case the Board finds the evidence submitted by State Oil on the issue of groundwater flow to be sufficient to meet the statutory requirement that the applicant provide a "general description of the potential impacts ... upon groundwaters and the affected water well".

Installation of new USTs will logically always pose a hazard to drinking water wells which would not exist if the USTs were not installed. Given all of the circumstances in this case, the Board cannot find that the hazard rises to the level of being "significant". In making this finding the Board notes that the affected persons, the Krones, have not communicated with the Board since January, 1991, when they advised the Board that the new well had been dug.

ARBITRARY OR UNREASONABLE HARDSHIP AND CONTINGENCY PLAN

Section 14.2 of the Act does not require a potential source to develop a contingency plan for replacement of a well owner's drinking water supply in the event of groundwater contamination by the proposed new potential source. However, another portion of the Groundwater Protection Act provides that:

> Section 6B. Assurance of potable water supply. Except as provided in Section 14.2 of the Environmental PRotection Act, the owner of every potable water supply well which has been contaminated due to the actions of the owner or operator of a potential primary or potential secondary source or potential route shall be provided an alternative source of potable water of sufficient quality and quantity, or treatment of the waters from such well to achieve a sufficient level of quality and quantity appropriate to protection of the public health, or such other remedy as may be mutually agreed upon by the well owner and the owner or operator of the potential source or potential route. For purposes of this Section, contamination shall mean such alteration of the physical, chemical or biological

> qualities of the water as to render it unfit for human consumption, or to otherwise render it unfit for use as potable water as measured by applicable groundwater quality standards which are adopted by the Pollution Control Board. All costs of providing alternative or treated potable water supplies under this Section shall be borne by the responsible owners or operators of the contamination source and route. This Section shall apply only to actions of an owner or operator which occur after the effective date of this Section and for which there is adequate reason to believe that a relationship exists between the potential source or potential route and the contaminated well. Ill. Rev. Stat., ch. 111 1/2, par. 116.116(b).

There was considerable discussion of the contingency plan issue in this record.

There is no information in this record concerning the existing well on State Oil's property. While Mr. Varga testified that State Oil proposes to abandon the old well and drill a new one (R. 102), Mr. Roush testified that State Oil was going to tap back into the existing well. (R. 124). It was also unclear as to whether State Oil can develop a well with sufficient water pressure to serve the needs of both its facility and the Krone's human tenants and animal patients. (R. 31, 173). Neither Mr. Varga nor Mr. Roush knew any specifics about the existing well, although Mr. Roush believes that the well has been tested by either the County of the State during the previous operation of a restaurant on the site from an unspecified time until about May of 1989. (R. 102-103, 124-125). [6] Assuming, however, that the State Oil well would remain uncontaminated at a time when the Krone well was contaminated by a release from State Oil, State Oil's general plan would be to "hook [Dr. Krone] up to our well or drill a new well for [him] or hook him to city water". (R. 17). More specifically, on an emergency basis, State Oil would plan to run a garden hose from its property to the Krones' property. (R. 19). Mr. McNulty from the McHenry County Health Department testified that this could be an acceptable plan provided food grade materials were used, weather conditions were favorable, and the duration of the hose arrangement were limited to "just a few days". (R. 169). A suggestion made by State Oil for the use of a canvas holding tank with liner in which the water would be chlorinated was not satisfactory to Mr. McNulty,

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[6] The Board notes that before and at the time of hearing the Agency believed that the existing State Oil well could serve as a potential source of contamination to any proposed new well. Dr. Krone testified that he had been advised that he could not replace his then-existing well. (R. 186, 213). There has apparently been a change of Agency position on this subject.

due to in part to potential problems of over-chlorinating the water. (R. 169-171).

Mr. Peters testified that a connection between State Oil property could be made permanent within "a couple of days" by force-running a pipe underneath the blacktop of its station from its well to the Krone facility. (R. 20). Mr. Varga stated that this option would be preferable to laying pipe prior to the pouring of the blacktop, because whether left dry, or filled with water, the system would need to be flushed and checked to verify that the piping system had not been contaminated. (R. 55).

As the Agency correctly notes, there is little evidence in this record concerning costs and logistics of drilling a new well on the Krone property. (Agency Brief, p. 3). Mr. Peters stated that such information could not be provided, as the location of a new well would be dependent upon borings taken to determine the path of the migration of the contamination. (R. 21).

The third option, connection of the Krone facility to a municipal water supply, is a feasible option, although it would not be a quick process. The nearest community water main is less than 100 feet away, but it is located across Route 31, which is a six lane highway at that point. (R. 84). State Oil estimates the cost of extending the water main to Dr. Krone's property and its site to be $180,000. (R. 120). However, this would require annexation of the properties to the City of Crystal Lake, the operation of the water supply system. That process, which has not been initiated, could take six to eight months or longer, assuming that the City is even interested. (R. 122). Additionally, permission of the Illinois Department of Transportation would be required to cross the highway, which would require one to two months preparation time for completion of engineering drawings, specifications, etc. (R. 122-123). A permit to extend the water main would also be required from the Agency, which has up to 90 days to act on the permit request. Section 39 of the Act. Consequently, connecting the Krone property to municipal water could easily take a year or more, assuming it is possible at all.

The Board agrees with the Agency that the information supplied by State Oil concerning its preferred contingency option-hook-up of the Krones to the State Oil well is less than complete, given the lack of data concerning the existing State Oil well. State Oil argues in response, however, that in the event of any contamination that it would be required to proceed with remedial clean-up action as required by the Agency and the State Fire Marshall pursuant to the UST regulations. State Oil further asserts that it has provided a plan for replacement of Dr. Krone's water given any eventuality, and that to the extent that there is any capacity problem with its well "Dr. Krone would have first call on the water produced by that well. If the well

could serve only one parcel, petitioner's parcel, being the one which caused the problem, would have to bear the burden of that problem...Dr. Krone would continue to operate, and petitioner would be shut down". (Reply Brief, p. 7-8).

In considering the issue of arbitrary or unreasonable hardship to State Oil in this case, the Board notes that the "equities" are fairly evenly balanced. While Dr. Krone's veterinary hospital was established prior to the installation of the first gas station at the junction of Route 31 and Terra Cotta Road, that intersection has been the site of one or more gas stations from time to time for about the last 30 years. All evidence indicates that State Oil purchased its "too small" property prior to enactment of the Groundwater Protection Act with its 200 foot setback requirement, so that the hardship it asserts cannot be considered self-imposed. It is also clear that the property cannot be returned to its former use as a gas station--the purpose for which it was purchased--unless a setback exception is granted. State Oil proposes to remove old, existing USTs and replace them with new tanks with state-of-the-art leak detection devices, which would be overall environmentally beneficial to the site and surrounding properties.

However, it is also a fact that the integrity of the Krones' water supply cannot be absolutely guaranteed if new USTs are installed, since any equipment may fail. The exact steps to be taken in the event of a contamination event also cannot be absolutely specified, since the nature and effects of a release dictate the nature of the response.

State Oil has produced evidence that it is taking all reasonable steps to minimize the likelihood of a release, and that it will take all necessary steps to remedy a release and to mitigate any damage to Dr. Krone's business activities as required by Ill. Rev. Stat., ch. 111 1/2, par. 116.116(b). As earlier noted, Dr. Krone has ceased to be an active participant in these proceedings since the installation of his new well. The Board finds that State Oil has fulfilled the requirements of Section. 14.2 of the Act.

For the foregoing reasons, the Board believes that, on balance, denial of a wellwater setback exception would pose and arbitrary or unreasonable hardship. The setback exception will be granted subject to conditions, including some similar to those suggested by the Agency in the event the Board granted the exception.

CONDITIONS

The crafting of appropriate conditions in this case of first impression is somewhat problematic for a number of reasons, given the record in this proceeding. The language of the conditions

proposed by the agency was at no time the focus of discussion. The issue of the inter-relationship of the UST program and the Safe Drinking Water Act program briefly raised by State Oil was undeveloped in this record; both regulatory programs must, at the state level, be "identical in substance" to federal regulatory programs which are constantly changing. (See Sections 22.4 (e) and 17.5 of the Act). The UST program is especially volatile. The Board takes administrative notice of HB 1714, adopted by the General Assembly and awaiting signature by the Governor. This bill would change the division of currently existing regulatory authority between the Board and the Office of the State Fire Marshall (OSFM), limiting Board rulemaking to "corrective action".[7]

Additionally, this record makes clear that technology is rapidly evolving. For example, between the filing of its amended petition and the July, 1990 hearing, State Oil proposed to substitute a more advanced leak detection monitoring system for that originally contemplated (which the Board will require as a condition of this exception). It is possible that in the interim, for example, that State Oil may prefer, or be required by OSFM, to install double hulled tanks rather than the single hull tank discussed at hearing.

The Board will, accordingly, impose conditions of a general nature, the Board's intent being that State Oil installation constructed pursuant to this exception be no less protective of the environment than that discussed at hearing. In the event that the parties believe that the conditions need refinement, they are, as always, free to seek reconsideration pursuant to 35 Ill. Adm. Code 101.300.

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

ORDER

Pursuant to Section 14.2 of the Act, State Oil Company is hereby granted a well water setback exception for its gasoline station to be located at the intersection of Route 31 and Terra Cotta Road near Crystal Lake, McHenry County, subject to the following conditions:

1. The underground storage tanks (USTs) shall be installed no closer than 146 feet from the drinking water well of Dr. and Mrs. James Krone existing on the date of this

[7] The Board's underground storage tanks rules are codified at 35 Ill. Adm. Code 731 and the OSFM rules are codified at 41 1AC 170 and 400.

Order. Construction shall proceed in accordance with the plans and specifications presented by State Oil in its July 20, 1990 amended Petition for Exception, as modified at the July 30, 1990 hearing in this matter, provided they meet applicable requirements for USTs at 41 Ill. Adm. Code 170 and 400 and 35 Ill. Adm. Code 731. State Oil may, however, provide substitute plans which provide a greater degree of environmental protection than the 1990 plans.

2. Whenever a release of the contents from the storage tank is detected in accordance with the requirements of 35 Ill. Adm. Code 731 Subpart D or equivalent regulations adopted by the Office of the State Fire Marshall at 41 Ill. Adm. Code 170 or 400, State Oil shall meet the applicable Board or State Fire Marshall regulations triggered by such detections and monitor the Krones' well for volatile aromatics, including benzene, toluene, xylene, and ethylbenzene and any other constituent found in the gasoline being stored in the State Oil tanks. Such monitoring shall be carried out at least once every six months until the completion of any release response and corrective action undertaken by State Oil pursuant to 35 Ill. Adm. Code 731 Subpart E, or equivalent regulations adopted by the State Fire Marshall at 35 Ill. Adm. Code 170 or 400. The samples should be analyzed by a method providing test sensitivity which would detect quantity at the level meeting any requirements of 35 Ill. Adm. Code 601 et.seq.

3. If any chemical constituent monitored in accordance with condition #2 is detected in Krones' well, pursuant to Ill. Rev. Stat., ch. 116.116(b), State Oil Company shall develop and reduce to writing a contingency plan to provide an immediate source of water to the Krones, as well as a plan which would provide the Krones with a long-term source of water. As parts of such plan, the Company should ensure that, as a minimum, portable water service may be readily extended from its property to Dr. Krone's property as an interim measure pending extension of service from the community water supply. This plan shall be filed with:

Groundwater Section
Water Division
Illinois Environmental Protection Agency
2200 Churchilll Road
Springfield, IL 62706

4. This grant of exception pursuant to Section 14.2 of the Environmental Protection Act is not to be construed as affecting the enforceability of any provisions of this exception, Board regulations, the Environmental Protection Act, or any other applicable law or regulation.

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1987 ch. 111 1/2 par. 1041, provides for appeal of Final Orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

Board Member J.D. Dumelle dissented.

I Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 26th day of August, 1991, by a vote of 6-1.

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board