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BILL ANALYSIS

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Senate Bill 891 (as enrolled) **PUBLIC ACT 182 of 1996**
House Bill 5650 (as enrolled) **PUBLIC ACT 168 of 1996**
Sponsor: Senator Loren Bennett (S.B. 891)
Representative Gregory E. Pitoniak (H.B. 5650)
Senate Committee: Natural Resources and Environmental Affairs
House Committee: Conservation, Environment and Great Lakes (H.B. 5650)

Date Completed: 4-3-96

RATIONALE

Injection wells have been used for years in Michigan as an alternative to landfills for the disposal of liquid industrial and chemical waste. Injection wells used for the disposal of nonhazardous waste, such as those at the Heinz Foods company in Holland and the Pinconning Cheese Company in Pinconning, are regulated under the former Mineral Well Act, which is now Part 625 of the Natural Resources and Environmental Protection Act (NREPA). Wells used for the injection of hazardous waste, such as those at the Upjohn Company in Kalamazoo and the Detroit Coke Corporation in Detroit, are regulated under both Part 625 and Part 111, which specifies the hazardous waste management provisions.

Currently, Part 625 prohibits a person from drilling or beginning the drilling of any brine, storage, or waste disposal well, or converting any well for such use, until the owner files a written application to drill or convert a well together with a site survey, a $50 filing fee, and an approved surety or security bond. To drill a test well, the person must submit a written application, a $1 fee, and an approved surety or security bond. Within 10 days of receiving an application and fee and upon inspection, investigation and approval, the Supervisor of Mineral Wells is required to issue a construction permit. After the well has been constructed or converted and the necessary testing to ensure the environmental soundness of the well has been completed, the Supervisor is required to approve and regulate the well. If the well site is not to be used for the storage and disposal of hazardous materials, no additional permits are required.

If, however, the well site is to be used for hazardous materials, the owner must comply with the more extensive permitting process prescribed in Part 111 of the Act. For example, the application must include a determination of existing hydrogeological characteristics specified in a hydrogeological report and monitoring program, an environmental assessment, an engineering plan, and the procedures for closure and monitoring. Further, the application must include a complete disclosure statement including a list of all State, Federal, or Canadian environmental permits or licenses held by each person required to be listed in the application that were permanently revoked because of noncompliance and all convictions for criminal violations of any environmental statute for each person required to be listed. Moreover, a public hearing must be conducted before an application is referred to a site review board for a comprehensive environmental review. In addition to an application fee, a $25,000 deposit must be made by an applicant to cover any expenses incurred by site review board members. Reportedly, this application process can take up to two years, yet the companies that currently inject hazardous waste into injection disposal wells have complied with the requirements of Part 111.

Recently, however, a company that constructed an injection disposal well in Romulus, Michigan, under Part 625 expressed its desire to convert the well to a hazardous waste injection well without obtaining a permit under Part 111. The company proposed to collect hazardous waste from multiple sources by tanker truck and then inject the waste directly into the well without testing, storing, and treating it.

Since Part 111 regulates storage, treatment, and testing facilities, the company apparently believed that it did not have to obtain a permit under Part 111 for the injection well, even though it would be disposing of hazardous waste, because it would not be storing or testing the material. Others, however, feel that all hazardous waste should be tested and treated before it is injected into disposal wells, especially if the waste is going to come from several different sources, to ensure that no adverse chemical reaction is going to occur in the well or in the geological formation. It has been suggested, therefore, that the Act be amended to specify that all multisource commercial hazardous waste disposal wells must comply with Part 111 and that the wells maintain storage and treatment facilities on-site.

CONTENT

Senate Bill 891 would amend Part 111 of the Natural Resources and Environmental Protection Act to require a multisource commercial hazardous waste disposal well to maintain on site a treatment facility and a storage facility that obtained a construction permit and an operating license as required by the Act. House Bill 5650 (H-1) would amend Part 625 of the Act to require a person, including a governmental entity, to obtain a construction permit for an on-site treatment facility and storage facility before drilling a multisource commercial hazardous waste disposal well or converting a well to a multisource commercial hazardous waste disposal well. House Bill 5650 (H-1) specifies that nothing in it could be construed to abrogate common law. "Multisource commercial hazardous waste disposal well" would mean a disposal well that received hazardous waste that was generated by more than one person. It would not include a disposal well that received hazardous waste generated from a subsidiary of the person who owned or operated a hazardous waste disposal well.

The bills are tie-barred to each other.

Proposed MCL 324.11118a (S.B. 891)
Proposed MCL 324.62506a (HB. 5650)

BACKGROUND

According to "Facts About Deepwell Waste Disposal in Alberta" from the Energy Resources Conservation Board in Canada, disposal wells are designed to ensure that the deposited fluid reaches the disposal formations and stays there permanently. After a well is drilled, steel pipe called "casing" is run in the hole and cemented in place. The casing and cement prevent fluids in different zones from mixing with each other, or with the injected fluids. The cement and casing are then perforated in the disposal formation so only that formation will be in contact with the disposed-of waste.

To provide extra protection, a smaller diameter steel pipe called "tubing" is placed into the well so the waste fluid does not come in contact with the casing. A packer is then set at the end of the tubing to prevent the waste from entering the space between the casing and tubing. Injection then occurs only down the tubing, and special tests are run to ensure that the well is constructed and operating properly.

Injection operations are normally into bedded rock formations, sandstone or carbonate, that are porous and permeable enough to accept the injected fluid. According to "Hazardous Waste Injection Wells" by the Texas Water Commission, a typical operating injection well is over 3,500 feet deep and injects waste into an injection zone that lies anywhere from one-quarter mile to over one mile below the surface. The disposal formation is naturally bounded above by shales that are not permeable and therefore act as caprocks, sealing the injected fluids in the disposal formation.

Depending on the waste, the injection can actually provide a means of treatment. For example, wastes that are acidic can be neutralized when injected into certain types of formations. Pollutants and heavy metals can be removed from mobility or "tied-up" by absorption, filtration, and ion exchange mechanisms. Injected wastes move outward from the wellbore in the disposal zone in an irregular but roughly radial pattern, displacing the fluid already in the formation. As the waste moves outward from the point of injection it continually slows down, reducing to speeds of inches or centimeters per year over a relatively short distance.

ARGUMENTS

(Please note: The arguments contained in this analysis originate from sources outside the Senate Fiscal Agency. The Senate Fiscal Agency neither supports nor opposes legislation.)

Supporting Argument

By requiring multisource commercial hazardous waste injection wells to maintain on-site treatment and storage facilities and to be regulated under

Part 111 of the NREPA, the bills would help ensure that all hazardous wastes were properly tested and treated before being injected into geological formations. Without such testing and treatment, the hazardous wastes potentially could damage the well or the geological formation, especially if several different types of hazardous wastes were combined in a single well or formation, thus compromising the environment and the health and safety of the people living in the vicinity of the well and the formation. In addition, by requiring multisource commercial hazardous waste wells to have on-site treatment and storage facilities under Part 111, the bills would treat these facilities the same as aboveground hazardous waste facilities are treated. Fairness to the operators of aboveground facilities and protection of the public dictate at least the same level of scrutiny for hazardous waste wells, especially since substances cannot be recovered once they are injected into a well.

Supporting Argument

The bills would assure that members of a community in which a proposed waste disposal well was located would have the opportunity to comment in a public hearing. Too often, local officials and concerned citizens are frustrated in their attempts to assure that their views and concerns are heard and considered in the Department of Environmental Quality's permit process. The effect of a well on the health of local residents and on the area's air, water, and other natural resources is of vital importance to a community. Citizen concerns are especially crucial if a hazardous waste facility is to be located in a community, since homeowners whose residences are located near the site of a waste disposal well may have reason to fear that their homes will decrease in value, that hazardous wastes will leak into their groundwater, or that other health problems will result from the location of the facility. In addition, some Michigan residents have been alarmed by reports that hazardous waste from Canada and from other states is being transported to, and disposed of, in Michigan. It is particularly important, therefore, that Michigan citizens be given the opportunity to voice their concerns about hazardous waste injection wells--i.e., the kind of opportunity that they would receive if multisource commercial hazardous waste injection wells were regulated under Part 111 of the NREPA.

Supporting Argument

The bills would complement the regulation of hazardous waste injection wells that currently is performed by the U.S. Environmental Protection Agency (EPA). According to a letter from the EPA, facilities of this type are the highest priority of the Agency's Underground Injection Control Program. This program, however, regulates only the well itself, not every aspect of the facility. The State's hazardous waste program regulates surface facilities, such as tanks and pipes, as well as transportation of the waste.

Legislative Analyst: L. Burghardt

FISCAL IMPACT

The bills would have an indeterminate fiscal impact on State and local government, depending upon the number and complexity of multisource commercial hazardous waste disposal wells.

Requiring businesses to obtain a construction permit could generate an indeterminate amount of revenue to the State, depending upon the complexity of the permit requests. The State would incur costs associated with permit review, including meetings of the Site Review Board.

Fiscal Analyst: G. Cutler

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