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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

# FEB 1 9 1999

REPLY TO THE ATTENTION OF

SR-6J

Pat McCutcheon, Team Supervisor Wisconsin Department of Natural Resources 3911 Fish Hatchery Fitchburg, WI 53711

Re: Hechimovich Sanitary Landfill - Land and Gas Reclamation Landfill Five-Year Review Reports

Dear Mr. McCutcheon:

The U. S. Environmental Protection Agency (U.S. EPA) has reviewed the Five-Year Review Report dated January 1, 1999 developed by the Wisconsin Department of Natural Resources for the subject site. The report is hereby approved.

U.S. EPA appreciates the efforts of Mike Schmoller of your staff in conducting this review. Please feel free to contact me if you have any questions.

Sincerely,

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William E. Muno, Director Superfund Division

cc: Mark Giesfeldt

## FIVE-YEAR REVIEW REPORT LAND AND GAS RECLAMATION LANDFILL DODGE COUNTY, WISCONSIN

## Introduction

#### Purpose

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The Wisconsin Department of Natural Resources has conducted this five-year review for the Land and Gas Reclamation Landfill pursuant to CERCLA section 121(c) and NCP section 300.430(f)(4)(ii). The purpose of the five-year review is to ensure that the remedy remains protective of human health and the environment and is functioning as designed. This five-year review is being completed as a statutory requirement. This review will become part of the site file

## Site Characteristics

The Hechimovich Sanitary Landfill was listed on the National Priorities List (NPL) by the U.S. Environmental Protection Agency (USEPA) on March 31, 1989. The site, now known as the Land and Gas Reclamation Landfill (LGRL), does not include the active landfill ("the new Hechimovich Sanitary Landfill") which is located immediately to the north of the closed Land and Gas Reclamation Landfill. The new landfill meets current state design and operation requirements and is licensed to accept only nonhazardous waste. The site also does not include a licensed demolition debris landfill directly west of the Land and Gas Reclamation Landfill.

The Land and Gas Reclamation Landfill site is located in a rural area in the Town of Williamstown, approximately 2 miles south of the City of Mayville, and approximately 3.5 miles east of the City of Horicon, Wisconsin. This 24.3 acre closed landfill is located in the east one-half of the southwest quarter of Section 35, Township 12 North, Range 16 East, Town of Williamstown, Dodge County, Wisconsin. This site is unfenced and access is partially controlled.

The Land and Gas Reclamation Landfill was a licensed landfill, operated by the City of Mayville from 1959 to 1970 and then privately operated from 1970 to October 1986 when it ceased accepting waste. The Mayville landfill was a small open dump that now is part of the northern end of the closed landfill. A variety of waste disposal activities occurred at the Mayville site including open burning, battery recycling operations and solvent disposal. It appears these past activities are a significant contributor to the current groundwater problems as the highest groundwater contamination levels are directly down gradient and adjacent to the old dump site.

Beginning in 1970 the site was operated by George Hechimovich and the site was then called the Hechimovich Sanitary Landfill. The Mayville site was sold to and became part of the Hechimovich Sanitary Landfill in 1971. In March 1984 site ownership and operations were transferred to Land and Gas Reclamation, Inc. and the site name was subsequently changed to LGRL in July 1985. The site was closed in October 1986.

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During part of the 1970-1986 time period, the site was licensed to accept hazardous waste. Paint sludges and cutting oils from local industries, possibly containing lead, chromium and solvents, were disposed of in several lagoons on-site. It is estimated by USEPA that 53,000 gallons of liquid hazardous waste were disposed of at this site. In addition, the site accepted approximately one million cubic yards of nonhazardous household and commercial wastes. The landfill does not have a liner. An initial cover, consisting of 2 to 4 feet of local till soils and 6 inches of topsoil, was placed in 1987. A system of groundwater and surface water monitoring locations were included in a monitoring program required by the WDNR at site closure.

The area of known and expected future groundwater contamination has not impacted any existing water supply wells. The area of impact is a wetland and no future groundwater use is expected in this area. Because the probability of water use impacts are low, no land use restrictions were enacted for this area.

In July 1987, the Land and Gas Reclamation Landfill site was the subject of a WDNR state enforcement action, resulting in a Stipulation and Order signed by the Dodge County Circuit Court, which directed George Hechimovich, Hechimovich Sanitary Landfill, Inc., and Land and Gas Reclamation, Inc. to undertake certain actions at the landfill, including the installation of a clay cap and a gas collection system. The court ordered clay cap was installed, under WDNR supervision and approval, in 1991 and 1992. To date the cap has been satisfactorily installed and maintained. In addition, since March 1992 the active gas extraction system has been operating according to design specifications. The installation and operation of these measures were documented and approved as a source control interim action in a January 1994 Record of Decision signed by WDNR and concurred with by USEPA. The modification of this gas extraction system is the main activity in the final remedy for the site.

The WDNR nominated the Land and Gas Reclamation site for listing on the NPL in 1988. The site was listed on the NPL, as the Hechimovich Sanitary Landfill, in March 1989. Based on the information obtained from landfill records in the possession of Daniel and George Hechimovich, the WDNR issued special notice letters to fourteen potentially responsible parties ("PRPs") on August 15, 1990 and special notice letters to two additional PRPs on September 20, 1990.

The potentially responsible parties entered into an environmental repair contract with the WDNR, which became effective on September 28, 1990, to perform a remedial investigation/feasibility study ("RI/FS") pursuant to s. 144.442, Wisconsin Statutes.

After the environmental repair contract was signed, the WDNR decided that, due to the timing of the remedial actions, remediation at the site should be divided into two operable units; a source control (landfill closure) operable unit and a groundwater operable unit. The January 1994 Record of Decision documented successful completion of the source control operable unit. The final Record of Decision, signed by the state in September 6, 1995, establishes the final remedy for the site.

The final remedy is a continuation of the current source control measures. The current clay cap, installed in September 1991, will be maintained. The gas extraction system, which began operation in March 1992, will continue to operate. The modification of the existing gas extraction system will involve accelerating the gas extraction rate. By increasing the air flow rate through the existing well system in the northern portion of the site, the system will remove the VOCs in the landfill waste quicker. This will reduce the potential VOC loading to the groundwater. Consequently, there should be improvements in groundwater quality at an acceptable rate. Improvements are expected in groundwater quality over the next 5-7 years.

The modification of the gas system is targeted toward the northwest portion of the site. It appears, based on the groundwater quality data and site history, that the area around gas well 14 is the most significant VOC source in the waste fill. Increasing the VOC removal rate in this area should be the most productive in terms of groundwater quality improvement. Currently the gas system is operating at an average of 200 cfm and through 1997 it has removed approximately 74,100 pounds of VOCs from the landfill. By reducing the air flow through other portions of the landfill it has been. possible to increase the vacuum and air flow through the area around gas well 14. This is increasing the VOC removal rate and decreasing the contaminant mass moving to groundwater. This gas extraction system will continue to operate for as long as it effectively removes contaminant mass from the waste fill. Once the extraction system reaches its technical limit, it is expected that natural attenuation will address the remainder of the contaminant plume.

Groundwater monitoring at the site will be continued to document water quality. The groundwater quality north of the site is used to evaluate the success of the remedial system. Monitoring well nests MW-1, MW-3, MW-210 and MW-214 are the best indicators of environmental improvement and are being used to track remediation progress at the site.

## II. Discussion of Remedial Objectives

## **Remedy Performance**

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The long-term groundwater and gas system monitoring requirements are set in the Plan of Operation approval from the WDNR. Annual volatile organic chemical testing from well nests MW1, MW3, MW210 and MW214 will be used to evaluate remediation progress at the site. Based on groundwater quality results the site is not responding to

the source control measures as expected. The predicted improvement is water quality has not been seen in the site data. It is possible that additional active measures may be required at this site. However, because of the difficulty in designing and implementing an active groundwater remediation in this geologic setting, the WDNR has decided to allow the current system more time to show itseffectiveness. A summary report for 1998 operations is due in early 1999. At that time the groundwater data will be evaluated to determine if further remedial actions are needed.

## **ARARs Review**

The WDNR has reviewed potential new applicable or relevant and appropriate requirements(ARARs) and concluded that there are no new ARARs which would require a change in remedial action at the site. The current measures of gas extraction, leachate collection and groundwater monitoring will continue.

## III. Recommendations

The current remedy continues to function. There are concerns about the effectiveness of the current remediation. Analysis of future groundwater data is needed to determine if changes are necessary to make the site protective of human health and the environment.

## **IV.** Statement of Protectiveness

The remedy appears to remain protective of human health and the environment and compliant with Federal and State requirements that are legally applicable, relevant and appropriate to the site.

#### V. Next Review

The next review will be conducted by January 2004

Michael Schmoller

Wisconsin Department of Natural Resources

1<u>/21</u>/99 Date