

MINNESOTA DECISION DOCUMENT

SITE DESCRIPTION

Highway 96 Dump
White Bear Township, Ramsey County, Minnesota

STATEMENT OF PURPOSE

This Decision Document presents the selected remedial action and cleanup levels for the Highway 96 Dump (Site), and summarizes the facts and determinations made by the Minnesota Pollution Control Agency (MPCA) staff in approving the recommended response action alternative. The selected response actions are intended to (1) control the source of ground water contamination (source control) by removing hazardous substances from the fill (the source) at the Site, and then consolidating, compacting and covering the Site; (2) remove hazardous substances from the North Pond, fill it in, and create a new wetland; (3) control ground water flow with a ground water extraction/containment system with discharge to the sanitary sewer; and (4) provide a safe water supply for the residents of North Oaks impacted by hazardous substances from the Site.

The MPCA Commissioner or his delegate has determined that the response actions set forth in this Decision Document are reasonable and necessary to protect the public health and welfare and the environment from the release and threatened release of hazardous substances and/or pollutants and contaminants from the Site.

DESCRIPTION OF PROBLEM

The Site is a dump located at 935 East Highway 96, White Bear Township, Ramsey County. The Site was formerly used for disposal of household, commercial, industrial, demolition and institutional wastes. The ground water beneath and in the area of the Site is contaminated with volatile organic compounds, and this contamination has affected the drinking water of a residential area in the city of North Oaks, immediately west of the Site.

DOCUMENTS REVIEWED

The MPCA staff has based its decision primarily on information gathered during investigations at the Site, and on the following documents describing Site characteristics and the effectiveness and cost analysis of response action alternatives:

- ° Remedial Investigation/Interim Response Action Plan, White Bear Lake Township Dump Site, Conestoga-Rovers and Associates, Inc., March 1988.
- ° Detailed Analysis Report, Highway 96 Dump, Conestoga-Rovers and Associates, Inc., April 1989.
- ° Review of Remedial Alternatives, Highway 96 Site, Conestoga-Rovers and Associates, Inc., December 21, 1992.

DESCRIPTION OF RESPONSE ACTIONS ALREADY COMPLETED

The first Interim Response Action (IRA) involved a survey and identification of drums present within the fill at the Site. In 1987, 29 test pits were excavated

in the North Disposal Area (NDA), resulting in the removal of 36 drums. No drums were found in five test pits excavated in the South Disposal Area (SDA). In 1988, an additional 11 drums were found in and removed from the North Pond, when water levels receded to an unusually low level due to drought conditions.

The second IRA involved the installation of an extraction well in June 1989. The contaminated ground water pumped from this well is discharged to the sanitary sewer under a Metropolitan Waste Control Commission permit.

During a routine inspection, MPCA staff found drums at the surface of the SDA in the fall of 1992, resulting in a third IRA in May 1993. During this IRA, approximately 305 drums were excavated from the SDA.

ESTABLISHMENT OF RESPONSE ACTION OBJECTIVES AND CLEANUP LEVELS

Response Action Objectives

The response action objectives for the Site are:

1. To provide source control by reducing the area, volume and toxicity of the source;
2. To eliminate the contaminated North Pond, and establish a new wetland;
3. To prevent the migration of contaminated ground water from the Site;
4. To provide safe drinking water for the residents of North Oaks who have received drinking water advisories.

Ground Water

The ground water cleanup levels listed in Table 1 shall apply to all current and future ground water monitoring points at the Site. Ground water containment through extraction shall continue until such time that, based on ground water monitoring, it is shown that ground water contaminant concentrations are consistently below the ground water containment cleanup levels specified in Table 1. Consistently shall be defined here as a minimum of three regularly scheduled (annual or semiannual) sampling rounds; site monitoring and extraction wells are defined as all wells east of Robb Farm Road. This determination will require practical quantitation of analytical sampling results at levels equal to or below the ground water containment/cleanup levels specified in Table 1.

At such time that the above described conditions are fulfilled to the MPCA's satisfaction and the ground water containment/extraction is discontinued, the following precautionary steps shall be implemented:

1. Ground water monitoring frequency shall be increased to a quarterly basis in all MPCA-selected monitoring wells.
2. A minimum of four rounds of quarterly sampling as described above at practical laboratory quantitation levels equal to or below the levels listed in Table 1 shall be conducted.

If contaminant concentrations in ground water collected from any Site monitoring point reveal detections in excess of the cleanup levels specified in Table 1 or any exceedances of the most stringent applicable standards, the ground water containment/extraction system shall be placed back in operation. Any subsequent decreases in contaminant concentrations to levels consistently below those specified in Table 1 or the most stringent applicable standard will result in repeating precautionary steps 1 and 2 above.

With the issuance of this Decision Document, the nondegradation standard (Minnesota Rules pt. 7060.0550) will apply to all other areas around the source where ground water contamination exists at or below the cleanup levels established in Table 1. The MPCA staff employs the nondegradation rule to prevent the spread of ground water contamination at existing facilities.

Soils

During the screening and consolidation of the soil/fill (soil) from both disposal areas, a program shall be implemented to ensure that heavily contaminated soils are not redeposited in the final disposal area. The following soils shall be treated and/or disposed of off-site: (1) those with soil vapor headspace in excess of 40 parts per million (ppm); and (2) those visually contaminated and producing notable sheen when in contact with water. If the containment/extraction system is expanded to include the SDA, soils with a soil vapor headspace below 40 ppm can remain in the SDA. If the containment/extraction system is not expanded, soils with a soil vapor headspace below 40 ppm but above 10 ppm must be treated or moved to the NDA.

SUMMARY OF RESPONSE ACTION ALTERNATIVES

The MPCA staff considered several response action alternatives for this Site. These were:

- Alternative 1) o Pump out ground water and discharge to the sanitary sewer;
o Institutional controls.
- Alternative 2) o Excavate all wastes and place in a sanitary landfill off site.
- Alternative 3) o Cap the NDA and SDA separately;
o Pump out ground water and discharge to the sanitary sewer.
- Alternative 4) o Relocate the SDA to the NDA, and then cap the NDA;
o Pump out ground water and discharge to the sanitary sewer.
- Alternative 5) o Relocate the SDA to the NDA, decrease size of area by consolidation of the waste, and cap the NDA;
o Pump out ground water and discharge to the sanitary sewer.
- Alternative 6) o Relocate the SDA to the NDA, search through the waste to remove hazardous substances, consolidate and cover the NDA;
o Pump out ground water and discharge to the sanitary sewer.
- Alternative 7) o Relocate the SDA to the NDA, search through the waste to remove hazardous substances, consolidate and cover the NDA;
o Pump out ground water and discharge to the sanitary sewer;
o Construct a municipal water system for the residents of North Oaks with drinking water advisories.

In all alternatives, the North Pond would be drained, searched for hazardous substances and filled in with suitable material. Because the North Pond, which is a wetland, will be destroyed, a new wetland must be created to replace it. This is called compensatory wetland mitigation.

DESCRIPTION OF SELECTED RESPONSE ACTIONS

The selected response actions for the Site must address:

- 1) the reduction of volume and toxicity of hazardous substances, which are the source of the ground water contamination;

- 2) the removal of hazardous substances from surface waters of the North Pond;
- 3) the off-site migration of contaminated ground water; and
- 4) an alternate residential drinking water supply.

The media to be addressed in the selected remedial actions include the source, surface water and ground water. The response actions which address the source will be the removal of hazardous substances, and the consolidation, compaction and covering of the fill. With respect to surface water, response actions will include the removal of hazardous substances from the North Pond, filling it in, and the creation of a new wetland. Ground water response actions will consist of extraction and discharge of the ground water to the sanitary sewer, and construction of a residential drinking water supply.

The selected response actions for the three operable units are:

Source Control Operable Unit:

- 1) All filled areas will be delineated and searched for drummed hazardous wastes. Drummed wastes, and heavily contaminated soil in the vicinity of the drums, will be removed from the fill and treated or disposed of off-site. A detailed description of the methods and technologies to be used shall be included in the Remedial Design. Records will be kept of the types and locations of wastes before and after excavation.
- 2) The NDA will be reduced in area through consolidation, and the SDA will be excavated and moved to the NDA.
- 3) All fill material will be compacted, covered with a minimum of two feet of suitable soil and seeded. A final grade must be established to promote surface water runoff without excessive erosion. Surface water drainage will be diverted around and away from the fill area.
- 4) The North Pond will be drained, and any drummed wastes removed. Fill material surrounding the pond will be investigated for additional drums and heavily contaminated soil. The pond will be filled in with clean material, and as a result, compensatory wetland mitigation will be necessary.
- 5) Institutional controls specific to the Site, such as deed restrictions, will be implemented.

Ground Water Operable Unit:

- 1) The NDA ground water extraction well (EW-1) will continue to operate until ground water cleanup levels are met, for all current and future monitoring points at the Site.
- 2) A ground water monitoring plan will be developed for the Site to ensure long-term effectiveness of the pumpout system. It will contain the following: analytical parameter list, laboratory detection levels, well monitoring network, sampling schedule and reporting plan.

- 3) Evaluation of ground water at the Site will include installation of any additional monitoring wells necessary to provide sufficient monitoring of the ground water from the SDA, and within the residential areas. Contaminated ground water in excess of the cleanup levels (listed on Table 1) or any other applicable standards, which originates from the SDA and is outside the capture zone of the existing extraction well, shall be contained by an additional extraction well.

Residential Drinking Water Operable Unit:


- 1) Municipal water connections will be provided to residents of North Oaks who have been issued drinking water advisories by the Minnesota Department of Health as a result of release of hazardous substances from the Site. The water system will be of sufficient design capacity for the entire affected area (Figure 1). In the future, any wells with drinking water advisories must also be connected to the water system.
- 2) All wells with drinking water advisories must be properly sealed once the residences have been connected to municipal water. It is recommended that all other wells within the affected area be sealed once the residences are connected to municipal water.
- 3) Wells of residences in the affected area who are not on municipal water will be monitored using low-level volatile organic compound analysis capable of attaining practical quantitation levels at or below the Recommended Allowable Limit. The residential monitoring program will be re-evaluated after four quarterly sampling rounds.

RESPONSIVENESS SUMMARY

A Proposed Plan was distributed to residents in the affected area of North Oaks, and the public comment period set from August 2 to August 31, 1993. A public meeting was held on August 24, 1993, to discuss the Proposed Plan and take public comment. The Proposed Plan generated considerable public interest because of water supply issues associated with the Site. Approximately 150 comment letters were received during the public comment period. The Responsiveness Summary, Appendix A, replies to the comments received during the public comment period.

STATUTORY DETERMINATIONS

The selected response actions are consistent with the Minnesota Environmental Response and Liability Act of 1983 and are not inconsistent with the Federal Comprehensive Environmental Response, Compensation and Liability Act (October 1988 Interim Final) and the National Contingency Plan, 40 C.F.R. Part 300. I have determined that the selected response actions are protective of public health and welfare and the environment. The response actions have been selected in accordance with the criteria set forth in the Request for Response Action dated July 22, 1986.


James L. Warner, P.E.
Division Manager
Ground Water and Solid Waste Division

October 7, 1993
Date

Post-It® Fax Note	7671	Date	9/23/05	# of pages	6
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