

May 21, 2004

TO: INTERESTED PARTIES

RE: Municipal Solid Waste Combustor Ash Disposal Area (MA001) at the Goodhue County/Red Wing Land Disposal Facility, SW-174

Enclosed is the Environmental Assessment Worksheet (EAW) for the proposed Municipal Solid Waste Combustor Ash Disposal Area (MA001) at the Goodhue County/Red Wing Land Disposal Facility, SW-174, Goodhue County. The EAW was prepared by the Minnesota Pollution Control Agency (MPCA) and is being distributed for a 30-day review and comment period pursuant to the Environmental Quality Board (EQB) rules. The comment period will begin the day the EAW availability notice is published in the EQB Monitor, which will likely occur in the May 24, 2004, issue.

Comments received on the EAW will be used by the MPCA in evaluating the potential for significant environmental effects from this project and deciding on the need for an Environmental Impact Statement (EIS).

A final decision on the need for an EIS will be made by the MPCA Commissioner after the end of the comment period. If a request for an EIS is received during the comment period, or if the Commissioner recommends the preparation of an EIS, the MPCA Citizens' Board (Board) will make the final decision. The final EIS need decision will also be made by the Board if so requested by the project proposer, other interested parties or MPCA staff and if this request is agreed to by one or more members of the Board or the MPCA Commissioner. The Board meets once a month, usually the fourth Tuesday of each month, at the MPCA office in St. Paul. Meetings are open to the public and interested persons may offer testimony on Board agenda items. A listing of Board members is available on request by calling (651) 296-7306.

Please note that comment letters submitted to the MPCA do become public documents and will be part of the official public record for this project.

If you have any questions on the EAW, please contact Dana Vanderbosch of my staff at (651) 297-1796.

Sincerely,

Beth G. Lockwood
Supervisor, Environmental Review Unit
Operations and Environmental Review Section
Regional Environmental Management Division

BGL:mln

Enclosure

ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to reviewers: The Environmental Assessment Worksheet (EAW) provides information about a project that may have the potential for significant environmental effects. This EAW was prepared by the Minnesota Pollution Control Agency (MPCA), acting as the Responsible Governmental Unit (RGU), to determine whether an Environmental Impact Statement (EIS) should be prepared. The project proposer supplied reasonably accessible data for, but did not complete the final worksheet. Comments on the EAW must be submitted to the MPCA during the 30-day comment period which begins with notice of the availability of the EAW in the *Minnesota Environmental Quality Board (EQB) Monitor*. Comments on the EAW should address the accuracy and completeness of information, potential impacts that are reasonably expected to occur that warrant further investigation, and the need for an EIS. A copy of the EAW may be obtained from the MPCA by calling (651) 296-7398. An electronic version of the completed EAW is available at the MPCA Web site <http://www.pca.state.mn.us/news/eaw/index.html#open-eaw>.

1. Project Title: Municipal Solid Waste Combustor Ash Disposal Area (MA001) at the Goodhue County/Red Wing Land Disposal Facility, SW-174

<p>2. Proposer: <u>City of Red Wing</u></p> <p>Contact Person <u>Mr. Denny Tebbe</u></p> <p>and Title <u>Public Works Director</u></p> <p>Address <u>229 Tyler Road</u></p> <p><u>Red Wing, Minnesota 55066</u></p> <p>Phone <u>(651) 385-3674</u></p> <p>Fax <u>(651) 385-5153</u></p>	<p>3. RGU: <u>Minnesota Pollution Control Agency</u></p> <p>Contact Person <u>Ms. Dana Vanderbosch</u></p> <p>and Title <u>Project Manager</u></p> <p>Address <u>520 Lafayette Road North</u></p> <p><u>St. Paul, Minnesota 55155</u></p> <p>Phone <u>(651) 297-1796</u></p> <p>Fax <u>(651) 296-7782</u></p>
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4. Reason for EAW Preparation:

EIS Scoping	<u> </u>	Mandatory EAW	<u> X </u>	Citizen Petition	<u> </u>	RGU Discretion	<u> </u>	Proposer Volunteered	<u> </u>
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If EAW or EIS is mandatory give EQB rule category subpart number and name: Minn. R.4410.4300, subp. 17 (G)

5. Project Location:

County	<u>Goodhue</u>	City	<u>Red Wing</u>
NW 1/4	<u>NW 1/4</u>	Section	<u>36</u>
		Township	<u>113N</u>
		Range	<u>15W</u>

Figures attached to the EAW:

- Figure 1. County map showing the location of Red Wing, Minnesota;
- Figure 2. Map showing the general location of project area;
- Figure 3. United States Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries;
- Figure 4. Map showing existing conditions;
- Figure 5. Liner details;
- Figure 6. Lysimeter details;
- Figure 7. Leachate and lysimeter collection pipe details;
- Figure 8. Existing leachate collection tank and loadout pad;
- Figure 9. Proposed leachate collection system (forcemain alignment) details;
- Figure 10. Ground-water monitoring well map;
- Figure 11. 2002 Ash Report;
- Figure 12. Closure details;
- Figure 13. Cross sections;
- Figure 14. Cross sections;
- Figure 15. Surface-water management plan;
- Figure 16. Copy of the Minnesota Department of Natural Resources (DNR) Natural Heritage Database Review letter; and
- Figure 17. Copy of letter from Minnesota Historical Society’s State Historic Preservation Office (SHPO).

6. Description:

- a. Provide a project summary of 50 words or less to be published in the *EQB Monitor*.

The city of Red Wing (City) operates a municipal solid waste (MSW) combustor ash disposal facility as a part of the Goodhue County/Red Wing Land Disposal Facility in Red Wing, Minnesota. The City is proposing a two-acre expansion of the ash disposal facility. The current capacity is 119,000 cubic yards. The expansion will provide an additional 93,000 cubic yards of capacity and is expected to prolong the life of the facility for 20 more years.

- b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.

Background

Facility History

The Goodhue County/Red Wing Land Disposal Facility is located one mile south of the intersection of U.S. Highway 61 and Bench Street in Red Wing, Minnesota. The facility consists of three distinct disposal areas. One disposal area that is 25 acres in size holds MSW and industrial waste. A second disposal area that is eight acres in size holds demolition debris. Both of these landfills were developed by the City. The MSW landfill began accepting waste in 1976 and the demolition debris landfill began accepting waste in 1983. They have a combined capacity of 731,111 cubic yards and both disposal cells are unlined.

In 1982, the City began operation of a boiler facility, which uses MSW as fuel to generate steam for industrial purposes. After the combustor came on line, MSW bypass and combustor ash were sent to the MSW landfill. MSW bypass represents waste that cannot be burned because of planned and unplanned outages at the incinerator or when the waste volumes exceed the capacity of the incinerator. From 1,500 to 3,000 tons of bypass were sent to the MSW landfill on an annual basis.

In December 1990, the City began construction of the third disposal area – the MSW combustor ash disposal area. It is located in the northwest corner of the Goodhue County/Red Wing Land Disposal Facility. The MSW combustor ash disposal area was designed with two phases; each containing a lined cell. Phase 1 was constructed and began operation in 1990. Phase 2 was constructed in 1995. These two phases are approximately 3.6 acres in size and have a combined capacity of 119,000 cubic yards. Since December 1990, all combustor ash has been placed in the lined cells of the MSW combustor ash disposal area.

The demolition debris landfill was closed in 1995 and the MSW landfill was closed in 1997. Construction and certification of the final cover system was accomplished in 1997. Since 1997, operational activities on the closed landfills have consisted of post-closure maintenance of the cover and surface-water drainage features. Sampling of the ground-water monitoring system, landfill gas monitoring system and the sedimentation basins is ongoing. Ash from the combustor was once placed in the MSW landfill, but has been placed in the MSW combustor ash disposal area since 1990, as mentioned above. Since the MSW combustor ash disposal area only accepts combustor ash, all MSW bypass from the combustor was placed in the MSW landfill until its closure in 1997. Since 1997, MSW bypass has been sent to the Pine Bend Landfill in Inver Grove Heights, Minnesota for disposal.

Figures 1 through 3 show the location of Red Wing, Minnesota and the Goodhue County/Red Wing Land Disposal Facility. Figure 4 shows the locations of the MSW cell, the demolition debris cell and the MSW combustor ash disposal area.

MPCA Permit History

Permit SW-174 was issued to the City in 1976 for the operation of the MSW landfill. In March 1990, ownership of the MSW and demolition debris landfill portions of the site was transferred to Goodhue County. The Phase 1 MSW combustor ash disposal area became operational in December 1990 and, since it was also covered by permit SW-174, the City became a co-permit holder with Goodhue County. Permit SW-174 was reissued in November 1994 to Goodhue County and the City jointly for the continued operation of the Goodhue County/Red Wing Land Disposal Facility. The permit was again reissued in 2003 for the continued operation of the Goodhue County/Red Wing Land Disposal Facility.

Facility Design

Existing Conditions

The MSW combustor ash disposal area is located in the northwest corner of the Goodhue County/Red Wing Land Disposal Facility. The closed MSW landfill is located east of the MSW combustor ash disposal area and the closed demolition debris landfill is located to the south of the MSW combustor ash disposal area. The two lined cells of the MSW combustor ash disposal area are the only active areas of the Goodhue County/Red Wing Land Disposal Facility at this time and they are being filled simultaneously.

MSW Combustor Ash Disposal Area Capacity

The combined design capacity for Phases 1 and 2 of the MSW combustor ash disposal area is 119,000 cubic yards. Based on the most current survey, approximately 31,000 cubic yards of capacity remain for the disposal of ash, the placement of an operational cover and the placement of a final cover.

Proposed Project

The proposed project is the construction of an additional lined ash disposal cell termed the 'Phase 3' expansion. It will occupy approximately 1.8 acres and will result in the addition of approximately 93,000 cubic yards of capacity. This capacity should serve the MSW combustor ash disposal area for approximately 20 more years, at the current disposal rate.

Base Grades

The excavation for the Phase 1 base grade did not encounter bedrock. The excavation for Phase 2 abutted the western edge of Phase 1. The base liner for the two phases was tied in along this common edge. The western portion of Phase 2 extended into the adjacent hillside resulting in a substantial backcut into the slope. The excavation to slope the hillside west of Phase 2 required the removal of weathered bedrock. Phase 3 will abut the western edge of Phase 2. The base grade excavation for Phase 3 will require removal of the weathered bedrock. Where bedrock is found at proposed base grade elevation, a two-foot subcut will be excavated. The subcut will be backfilled with compacted soil prior to placement of the compacted clay liner.

The base grades for the three phases are designed with a herringbone contour pattern. The base grade slopes to the central leachate collection line are 3 and 10 percent in Phase 1, 6.2 and 10 percent in Phase 2, and will be 4 percent in Phase 3. The leachate collection lines are sloped two percent towards the collection manholes. The side slopes of each phase are established at a 3:1 ratio.

Liner Design - Phase 1

The base liner for Phase 1 meets the requirements of Minn. R. 7035.2915 (the Temporary Ash Storage Facility rules) that were in effect in 1989. The base liner consists of a composite liner system comprised of two feet of compacted low permeability clay and a 60 milliliter high density polyethylene (HDPE) geomembrane. A sand drainage layer and central leachate collection line completes the liner system. Please refer to Figure 5 for details on the liner.

Liner Design - Phase 2

The base liner in Phase 2 consists of a single composite liner of a flexible membrane over a three-foot layer of compacted clay soil. The barrier layer is a composite of 60 milliliter HDPE in intimate contact with the underlying clay layer. The 3-foot thick clay barrier layer has a hydraulic conductivity less than $1 \times 10E-7$ cm/sec. A one-foot sand drainage blanket covers the composite liner. The sand layer acts as a buffer between the liner and the overlying ash, as well as a means to convey leachate to the collection system.

Liner Design - Phase 3

The Phase 3 base liner design will consist of a single composite liner of a flexible membrane over a three-foot layer of compacted, low permeability soil. The barrier layer will be a composite of 60 milliliter HDPE in intimate contact with the underlying clay layer. The 3-foot thick clay barrier layer will be constructed to have a hydraulic conductivity less than $1 \times 10E-7$ cm/sec. A one-foot sand drainage layer will cover the composite liner. The sand layer will act as a buffer between the liner and the overlying ash, as well as a means to convey leachate to the collection system.

Leachate Generation and Liner Efficiency

The anticipated efficiency of the liner and leachate collection system for the proposed expansion was determined using the Hydrogeologic Evaluation of Landfill Performance (HELP) model developed for the Environmental Protection Agency. During active filling periods, it is anticipated that leachate will be generated in the proposed expansion at a rate of 98,000 gallons per acre of uncapped ash on an annual basis. Based on a two-acre size for the proposed expansion, it is estimated that 196,000 gallons per year of leachate will be generated. Peak generation is expected to occur during operation of the proposed expansion and prior to the closure of Phase 2. The volume produced at that time will be approximately 349,000 gallons per year. After closure of the landfill, leachate generation will be approximately 85,000 gallons per year.

The leachate head build-up anticipated to be on the base liner during periods of open operation is estimated to be 3.8 inches. The HELP model also calculates the percolation of precipitation through the composite barrier layer. The analysis indicates that 0.02 percent of the total precipitation will percolate through the base liner of the closed landfill and into the environment. The efficiency of the liner is expected to be approximately 99.98 percent. The efficiency of the final cover system is expected to be approximately 97.7 percent.

Leachate Collection System

The leachate collection system is designed to convey leachate from the base liner of the site to the leachate storage tank by gravity drainage. The layout of the collection system provides for drainage of leachate to service manholes located outside the liner area. A leachate transmission header pipe connects the manholes to the leachate storage tank.

The central leachate collection pipe embedded in the sand drainage layer of both Phases 1 and 2 is perforated 6-inch Schedule 80 polyvinyl chloride (PVC) pipe. The pipe is bedded in three quarter-inch washed rock and all is wrapped in geotextile filter fabric.

The leachate transmission pipes transmit leachate from the point where the collection pipes penetrate the liner to the storage tank. All transmission lines are double-piped with a 6-inch Schedule 80 solid wall PVC pipe constructed inside a 10-inch Schedule 80 solid wall PVC pipe. This design provides for secondary containment, as well as, leak detection for the pipes. Manholes are constructed at the junctions of the transmission pipes from the liner and transmission pipes to the storage tank. The manholes are constructed using a reinforced precast base and six-foot diameter reinforced precast sections. Pipe openings are precast into the monolithic base section of the manholes. The openings are fitted with a watertight pipe boot.

Cleanout risers are constructed inside the manholes to enable cleaning of the leachate collection and transmission pipes by mechanical means or by high-pressure water flow. The design includes risers and pipe connections to enable cleanout access to both ends of the leachate collection pipe. Cleanouts on the southern edge of the liner construction enable two-way access to the central leachate collection lines. Details on the leachate collection system and on the lysimeter are found on Figures 6 and 7.

Leachate Storage Tank and Loadout Pad

Leachate is collected in an 8,000-gallon underground storage tank that was installed in 1990. The tank is a cathodically-protected, doubled-walled steel tank and is 8 feet in diameter and 21 feet long. A submersible pump is attached to the floor of the tank. The pump is controlled by a series of floats located in the tank. The floats stop the pump when low levels are reached in the tank. The high level float alerts the operator that the leachate tank is full.

The submersible pump delivers leachate to the discharge point at a rate of 100 gallons per minute. The elevated discharge point is centered over a 12 by 40-foot concrete loadout pad. The leachate hauling truck is positioned on the loadout pad under the discharge point and pumping starts. Any spillage is collected in the loadout pad drain, which is connected to the leachate storage tank. Details for the leachate tank and loadout pad can be found on Figure 8.

Leachate Disposal Forcemain

Currently, leachate is pumped from the leachate storage tank and trucked to the City's Bench Street activated sludge WWTF. Once the leachate receives pretreatment there, it is pumped with other wastewaters to the City's new WWTF for final treatment. The proposed project includes upgrading the offsite leachate disposal system. Leachate collected in the storage tank will be pumped via 1,680 feet of forcemain directly to the City's Bench Street WWTF; loadout and trucking of the leachate will no longer be necessary, although the ability to discharge leachate into a tanker truck via the overhead discharge pipe will be maintained as an emergency backup system.

The forcemain will be constructed along the centerline of the existing landfill access road. A plan view of the proposed forcemain alignment is shown on Figure 9. The forcemain will be double-walled, as required by the MPCA, to provide containment in case of rupture. The forcemain will be placed approximately three feet below the road surface and insulated to prevent freezing. The forcemain will connect to an existing stub in the manhole near the intersection of the landfill access road and Bench Street. The forcemain will be constructed of four-inch thick polyethylene (PE) pipe inside eight-inch thick PE pipe. The double piping system provides secondary containment for the leachate and a means of determining if the inner four-inch pipe is leaking. The volume of leachate pumped will be determined based on run time for the discharge pump in the leachate storage tank.

Leachate Treatment

Leachate currently receives pretreatment at the City's Bench Street activated sludge WWTF. Afterwards, it is pumped with other wastewaters to the City's new WWTF for final treatment. The leachate will continue to be treated through this process after the proposed project is completed. Leachate disposal is governed by a Leachate Treatment Agreement with the City, which is reviewed every five years during the permit renewal process to determine its compliance with the rules governing MSW combustor ash land disposal facilities. This Agreement establishes limits on the leachate volume and strength and also determines sampling methods and analytical protocol. The current Leachate Treatment Agreement has expired and it will be updated as a condition to the modified Solid Waste Permit

Environmental Monitoring

Leachate Sampling

The WWTF has the capacity to manage the quantity and quality of leachate generated at the MSW combustor ash disposal area through the Leachate Treatment Agreement. The leachate is tested and test results are reviewed quarterly. The WWTF operator is involved with sampling of leachate and an outside company performs the leachate analysis. Leachate quality and quantity results are reviewed with the City WWTF annually.

Leak Detection Systems – Lysimeters

The liner is designed to prohibit the travel of leachate from the MSW combustor ash disposal area to the underlying soil and ground water. The slope of the base grade promotes movement of the leachate to a collection point. A lysimeter is required by the MPCA and is constructed below this collection point to monitor the effectiveness of the base liner. In cross section, the lysimeter consists of 60 milliliter HDPE liner and a drainage layer of washed three quarter-inch rock and geonet. The lysimeter sidewalls slope to the center and the entire lysimeter slopes towards the outside of the cell. A four-inch perforated drainpipe collects any liquid in the lysimeter. A solid four-inch pipe conveys any liquids collected to the lysimeter collection well. The lysimeter collection well consists of a four-foot drop leg and standpipe reaching to above the ground surface, all constructed from solid four-inch pipe. The drop leg allows for convenient sampling of any liquids draining from the lysimeter. The leachate is sampled compositely and sent in for lab analysis quarterly. Details on the lysimeter are found on Figures 6 and 7.

Ground-water Monitoring

Ground water at the Goodhue County/Red Wing Land Disposal Facility is monitored under the current Environmental Monitoring System (EMS) approved by the MPCA. This EMS is defined by 14 ground-water monitoring wells (of which 3 are used to monitor water level only), 4 water supply wells (which are located off-site to the east near Hay Creek), and one methane gas probe.

Four of the ground-water monitoring wells mentioned previously are in place for the purpose of monitoring the MSW combustor ash disposal area: two upgradient monitoring points along the west (MW-10A) and northwest (MW-9A) site boundaries and two downgradient monitoring points (MW-2A and MW-3A) on the east side of the ash disposal area. MW-3A and MW-9A are utilized as static water level measuring points only. The ground-water monitoring sites are identified on Figure 10. Sampling from the monitoring wells occurs in spring, summer and fall. It is too cold and difficult to sample during the winter months effectively. A list of parameters analyzed is established in the Solid Waste Permit.

Monitoring well MW-9A will be protected during the construction of the Phase 3 expansion; however expansion of the MSW combustor ash disposal area will require the relocation of monitoring well MW-10A. Once the Phase 3 expansion has been approved, the process to relocate MW-10A will be initiated with the MPCA. The new well will be installed and the initial rounds of sampling obtained before ash placement in Phase 3 occurs. In addition, the MPCA is requesting the installation of additional ground-water monitoring wells to ensure appropriate characterization of the ground water for potential impacts from the MSW combustor ash disposal area. Discussions on this matter will continue and the City is expected to develop and submit a work plan for the installation of future wells within six months of the reissuance of the Solid Waste Permit.

The Goodhue County/Red Wing Land Disposal Facility implemented federal ground-water assessment monitoring in 1996 due to ground-water exceedences for volatile organic compounds (VOCs). As a result, the Goodhue County/Red Wing Land Disposal Facility closed and covered the MSW and demolition debris cells. These portions of the facility began post-closure activities in 1997. A Corrective Action Evaluation (CAE) was also initiated in April, 1999, in response to the ground-water exceedences. As a result of the CAE, 13 additional ground-water monitoring wells were placed off site in the wetland area east of the Goodhue County/Red Wing Land Disposal Facility. VOCs are not generally associated with ash landfills and this suggested that the presence of elevated levels of VOCs in the ground water was related to the unlined MSW and demolition debris cells and not to the lined MSW combustor ash disposal area. Since closure of the unlined cells, there has been a clear reduction of VOCs in the ground water. The federal ground-water assessment monitoring was suspended in June, 2002 because all of the requirements of the CAE were met and the assessment monitoring added a very limited amount of information to our knowledge of ground water contaminants associated with the site.

Ash Handling and Testing

The ash produced by the incineration of MSW is quenched in water at the incinerator facility and loaded via conveyor belt into dump trucks for transport to the MSW combustor ash disposal area. Each day the five to seven loads are leveled using a tracked dozer which is stored on site. The ash has a moisture content between 40 and 50 percent at the time of transport and during placement at the landfill. After dumping at the MSW combustor ash disposal area, the ash is allowed to stabilize before it is leveled at the working face. The frequent placement of new, moist ash generally keeps the ash surface from drying. If the ash actually dries before placement of the temporary cover, the surface forms a light crust. This crust can be broken if the ash is disturbed, but tends to minimize dusting potential until temporary cover placement. The City has no record of complaints regarding dust from the MSW combustor ash disposal area.

Samples of the ash are collected quarterly and a composite of the four ash samples is tested annually. The fly ash and the combined bottom-fly ash streams are both tested. A copy of the 2002 Ash Report is included in Figure 11. The first page of the report summarizes the trends of the ten parameters measured from 1996 to 2002 for each of the two ash streams (combined ash and fly ash) and for the leachate.

Closure Design

The cover system includes a barrier layer constructed with 40-millimeter linear low-density polyethylene (LLDPE) panels over a prepared subgrade after waste reaches its final elevations. A 12-inch thick sand drainage blanket will be placed over the LLDPE barrier layer. Six inches of general fill and six inches of topsoil layer will provide a rooting zone for vegetative cover that will be placed above the sand drainage layer.

An alternative closure design may be required if the ash analysis reveals exceedences of the maximum leachable contaminant levels set forth in Minn. R. 7035.2885, subp. 5. This alternative includes a composite barrier layer consisting of a 2-foot compacted clay layer with 48 inches of soil above the barrier. Figures 12-14 have more detail on the closure design.

Surface-water Control Features

Since the infiltration of precipitation into a landfill leads to the creation of more leachate, the surface water control features are constructed in a manner which routes runoff away from ash disposal cells. A series of perimeter ditches will be constructed to divert surface water from the ash disposal area; active ash cells are surrounded by a berm to contain stormwater runoff. The slope along the western edge of Phase 3 will be back-cut and a toe ditch will be constructed to eliminate the potential run-on of surface water to the ash cells. A surface-water management plan is attached as Figure 15.

As the ash reaches planned elevations, the final cover will be constructed to divert surface-water accumulation. The surface water on the cap will be routed by midslope drainage berms to the perimeter ditch system. The water collected in the perimeter ditch system will be routed to a sedimentation basin located to the northeast of the Goodhue County/Red Wing Land Disposal Facility, which is sized to accommodate a 25-year, 24-hour storm event. For Goodhue County, a 25-year, 24-hour storm event is between 4.8 and 4.9 inches. The water quality in the sedimentation basin is tested quarterly by Goodhue County with the other portions of the environmental monitoring system. The final surface of the landfill will have a slope of 4H:1V or 25 percent. With this slope, the midslope drainage berms will have been designed with a spacing no greater than 80 feet to provide soil-loss protection equivalent to that observed with the 200-foot spacing and a 20 percent slope.

During construction of the cap or other projects associated with ash disposal area operations, a series of sediment-control devices may be installed near the outlets of the drainage structures to prevent the migration of sediments from the site. The long-term use of these devices will not be necessary if vegetation becomes established in the ditches.

Post Closure

After closure of the MSW combustor ash disposal cells, only persons authorized by Goodhue County and the City will be permitted on the site to perform closure and post closure duties. Portions of the facility are fenced and the entrance gate is locked to restrict unauthorized access.

The closed cells will be inspected regularly during the 30-year-long post closure care period. Monthly inspections are performed during the first six months following closure. These inspections verify that erosion and drainage problems have not developed on the final closure area. Inspections are conducted twice a year for the remaining years of the post closure care period. After five years, the frequency of inspections is reviewed. Unscheduled inspections are also made. Events that trigger additional inspections include severe wind and excessive rainfall. During each inspection, the following items are observed:

- Cover soil - The soil layers are inspected for erosion, differential settlement, vegetation stability and any indication of vegetation stress from gas seepage. Signs of leachate seeps are noted.
- Surface-water control features - Drainage swales and sedimentation basins are inspected for erosion damage and blockage. Sediment accumulations are removed as needed to provide storage capacity and free flowing discharge.
- Monitoring wells - Monitoring wells are inspected for damage to casings, protective posts and presence of locked well caps.

An inspection checklist will be completed at the time of each inspection to document the findings. If inspection of the site reveals problems with the final cover or vegetative cover, corrective measures will be taken immediately. Any structures (i.e. buildings, security fencing, gates monitoring wells and runoff structures) found to be in need of repair will be serviced.

Security

Current operating procedures require the gate to remain closed and locked unless an operator is present on-site. The public is discouraged from entrance to the site by the partial perimeter fencing and the locked gate. Authorized personnel can obtain a key to the gate from the office of the Solid Waste Boiler Facility located south of the Land Disposal Facility on Bench Street.

- c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The MSW combustor ash disposal area is quickly reaching its design capacity. The project purpose is to add approximately 93,000 cubic yards of additional airspace volume. At current disposal rates, this would provide for approximately 20 years of site life.

The MSW combustor is the cornerstone of the City's solid waste management program. The Solid Waste Boiler Facility operated by the City incinerates large quantities of MSW and generates steam for SB Foot Tanning Company. SB Foot Tanning, in turn, provides leather for Red Wing Shoe Company, Incorporated. The beneficiaries of the proposed project will be the citizens and businesses in the City of Red Wing.

d. Are future stages of this development including development on any outlots planned or likely to happen?
 Yes No
 If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

e. Is this project a subsequent stage of an earlier project? Yes No
 If yes, briefly describe the past development, timeline and any past environmental review.

The original MSW combustor ash disposal area was designed with two phases. Phase 1 of the MSW combustor ash disposal area was constructed and began operation in 1990. Phase 2 was constructed in 1995. Neither phase was evaluated through environmental review. The proposed Phase 3 is described in this EAW.

7. Project Magnitude Data

Total Project Area (acres) ~three acres or Length (miles) _____
 Number of Residential Units: Unattached _____ Attached _____ maximum units per building _____
 Commercial/Industrial/Institutional Building Area (gross floor space): total square feet _____
 Indicate area of specific uses (in square feet): NA

Office _____	Manufacturing _____
Retail _____	Other Industrial _____
Warehouse _____	Institutional _____
Light Industrial _____	Agricultural _____
Other Commercial (specify) _____	

Building height _____ If over 2 stories, compare to heights of nearby buildings _____

8. Permits and approvals required. List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans, and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure.

Unit of Government	Type of Application	Status
MPCA	Modification of Permit No. SW-174	To be submitted
MPCA	National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activity	To be submitted
Goodhue County	Solid Waste License	Obtained
City of Red Wing	Leachate Treatment Agreement	To be updated

- 9. Land use.** Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

The MSW combustor ash disposal area lies in the northwest corner of the 50-acre Goodhue County/Red Wing Land Disposal Facility. The demolition and MSW landfills were closed in 1995 and 1997, respectively. Land to the southwest is owned by Northern States Power (NSP) doing business as Xcel Energy. NSP owns and operates a facility in which boilers combust refuse-derived fuel (RDF) for energy. Ash generated by this facility is disposed of in the Red Wing RDF Ash Disposal Facility, which NSP has constructed and operates on their property. The land to the northwest is currently owned by the City of Red Wing Port Authority. Plans for this site have not been finalized. Past uses have included pasture and open area. The land to the north is privately owned and includes one residence. This residence, approximately one-quarter mile away, is the nearest residence to the MSW combustor ash disposal area.

The lowlands of Hay Creek are located across Bench Street to the east of the Goodhue County/Red Wing Land Disposal Facility. To the south is privately-held, undeveloped wooded land. The land is zoned as agricultural.

A 200-foot strip along the western side of the MSW combustor ash disposal area will be purchased by the City from the Red Wing Port Authority and NSP. The property will be needed for environmental monitoring and setback requirements.

The Goodhue County/Red Wing Land Disposal Facility has been operating since 1976. There has been ground-water contamination identified with the operation of the unlined MSW and demolition debris cells. Monitoring of this area is ongoing, although the monitoring frequency has been reduced since the ground water is showing a decline in VOC levels. No adverse environmental impacts have been identified with the operation of the MSW combustor ash disposal area, which is lined and began operation in 1990. No changes are planned for the operation of the ash disposal area which would suggest adverse impacts to the environment to, or incompatibility with, adjacent land uses.

- 10. Cover Types.** Estimate the acreage of the site with each of the following cover types before and after development:

	Before	After		Before	After
Types 1-8 wetlands			Lawn/landscaping		
Wooded/forest	9	9	Impervious Surfaces		
Brush/grassland	3	0	Other (landfill)	38	41
Cropland					
			TOTAL	50	50

- 11. Fish, Wildlife, and Ecologically Sensitive Resources.**

- a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

Wildlife in the vicinity of the proposed construction site primarily consists of species native to southeastern Minnesota. Species include deer, squirrels, rabbits, small mammals, snakes, turkeys, songbirds, amphibians, raptors, fish and waterfowl.

Hay Creek, a DNR-designated trout stream, is located approximately one-third of a mile downstream from the Goodhue County/Red Wing Land Disposal Facility. Trout require a gravelly stream bottom for successful reproduction and they also require cold water temperatures. Shady, riparian vegetation provides cover for trout and shade which cools the water. Trout habitat is degraded when riparian vegetation is removed, when sediment-laden stormwater runoff flows into the trout stream and when high temperature surface-water discharges warm the stream.

The proposed project will not result in the discharge of high temperature water, nor will the proposed project require the removal of any riparian vegetation. Stormwater runoff from the ash disposal area will not discharge directly into Hay Creek. The ash disposal area site is now, and will continue to be, graded so that runoff first travels to a permanent sedimentation basin onsite, which provides an opportunity for sediment to settle out. Stormwater will then flow through a culvert under Bench Street and into the lowlands of Hay Creek, where it will be joined by discharges from other sources, and then eventually flow into Hay Creek.

The NPDES General Stormwater Permit for Construction Activity requires additional erosion and sedimentation measures during and after construction and while the ash disposal area is in operation. These measures are more fully described in Items 16 and 17.

- b. Are any state (endangered or threatened) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site? Yes No

If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number.

ERDB
19930010-006

Describe measures to minimize or avoid adverse impacts.

A search of the Minnesota Natural Heritage and Nongame Research database revealed 21 known occurrences of 17 rare species and natural communities within an approximate one-mile radius of the site. The DNR has designated one of these species as threatened and another as endangered.

The endangered species is Bladder Pod (*Lesquerella ludoviciana*). Bladder Pod is a native sand prairie plant with dozens of small, pale-yellow or purple-tinged flowers. The plant can be found on almost any native prairie, but seems to thrive best on dry, sandy or clayey soils. NSP and the DNR have previously surveyed the general area near the Goodhue County/Red Wing Land Disposal Facility for Bladder Pod. This survey work did not locate any plants within the proposed construction area and the habitat in this area is not of the type or quality typically associated with Bladder Pod.

The species designated as threatened is the Peregrine Falcon (*Falco peregrinus*). Peregrine Falcons are birds of open spaces and are usually associated with high cliffs and bluffs overlooking rivers and coasts. They lay eggs in abandoned birds' nests or they make a scrape on a cliff or on a building ledge and hunt for food in open areas. Although the construction site may support prey animals for the Peregrine Falcon, the disturbance of this land should not significantly impact falcon populations.

It is the DNR's opinion that, based on the location of the proposed project, these species and natural communities will not be affected by the construction or operation of the proposed site. A copy of the letter from the DNR is found in Figure 16.

- 12. Physical Impacts on Water Resources.** Will the project involve the physical or hydrologic alteration (dredging, filling, stream diversion, outfall structure, diking, and impoundment) of any surface waters such as a lake, pond, wetland, stream or drainage ditch? Yes No
If yes, identify water resource affected. Describe alternatives considered and proposed mitigation measures to minimize impacts. Give the DNR Protected Waters Inventory (PWI) number(s) if the water resources affected are on the PWI.
- 13. Water Use.** Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)? Yes No
If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.
- 14. Water-related land use management districts.** Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district? Yes No
If yes, identify the district and discuss project compatibility with district land use restrictions.
- 15. Water Surface Use.** Will the project change the number or type of watercraft on any water body? Yes No
If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.
- 16. Erosion and Sedimentation.** Give the acreage to be graded or excavated and the cubic yards of soil to be moved: 2.0 acres; 97,000 cubic yards. Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

The project proposer will be required to obtain a NPDES General Stormwater Permit for Construction Activity from the MPCA to control erosion and runoff during construction. This permit must be obtained prior to commencing any land disturbing activities (i.e., clearing, grading, filling and excavating) at the site. The Permit specifically requires implementation of Best Management Practice measures (BMPs). Construction plans will include BMPs, such as the following:

- Scarifying only those portions of the site actively under construction.
- Placing silt fencing, sediment traps and check bales down slope of any land that is graded.
- Seeding and re-vegetating and mulching disturbed areas as soon as possible.

All runoff from the construction area and from the operation of the new ash disposal cell will be routed through a permanent on-site sedimentation basin, which will be sized to accommodate flows from a 25-year, 24-hour storm event, to remove any silt that bypasses the erosion control devices. For Goodhue County, a 25-year, 24-hour storm event is between 4.8 and 4.9 inches. Minimizing disturbance and phasing of the project along with diligent temporary stabilization of all slopes and areas of exposed soil will be necessary to prevent erosion and the discharge of sediment to state waters. The cover placed on the closed portions of the ash disposal area will be planted with shallow rooted native prairie grasses and forbs that will serve to hold the soil in place and discourage wind erosion.

17. Water Quality – Surface-water Runoff.

- a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any storm-water pollution prevention plans.

Management of stormwater generated at the project site is required. The NPDES General Stormwater Construction Activity permit from the MPCA has specific requirements for the treatment and overall management of stormwater prior to discharge from the site. The Permit also requires that a Stormwater Pollution Prevention Plan (SWPPP) be developed to manage pollutants in stormwater runoff from the site that will occur during and after construction is complete. Temporary erosion control measures, such as silt fences and bale checks, will be utilized to prevent runoff and sedimentation. After construction is complete, disturbed areas will be seeded and mulched immediately. SWPPP and BMP implementation strategies must be prepared prior to submitting a permit application.

Precipitation falling into the open disposal area will seep through to the leachate collection system and will be treated with other sanitary sewer wastes. Once the ash disposal area is full, a cover will be placed over the disposal area. The cover will be constructed in a manner that will route stormwater away from the closed disposal area and into the on-site sedimentation basin. The change in quality of site runoff before and after the construction of the proposed project will be negligible, though quality of runoff may temporarily decrease during construction of the new cell and during final cover construction. The quantity of stormwater may increase as a result of the proposed project, but since the stormwater will be routed to a sedimentation basin the impacts to the receiving water should be minimal. The sedimentation basin has been sized to manage the complete volume generated by a 25-year, 24-hour storm event of 4.9 inches. Sedimentation basin overflow structures have been designed to allow for controlled discharges. The drainage ditch system and the midslope drainage berm will be lined with an erosion control blanket to help prevent erosion. Rip-rap will be placed at all culvert outlets to minimize erosion in these areas.

- b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

The receiving water is an intermittent stream that flows through the lowlands of Hay Creek and then into Hay Creek, a designated trout stream. Hay Creek is approximately one-third mile east of the site and ultimately discharges into the Mississippi River. Stormwater runoff does not directly discharge into Hay Creek; it travels to a permanent on-site sedimentation basin. Since runoff from the expanded ash disposal area will continue to receive treatment in the sedimentation basin before discharge to the intermittent stream and since the sedimentation basin will be sized appropriated to accept this flow, the proposed project is not anticipated to significantly impact the quantity or quality of the receiving waters.

18. Water Quality – Wastewater.

- a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

The landfill produces leachate that is comprised of rain and snowmelt that percolates through the ash and travels to the leachate collection system. Currently, the leachate from the storage tank is pumped into tanker trucks and disposed of in the City's Bench Street WWTF for pretreatment, after which it is routed to the Red Wing WWTF for final treatment. The proposed project entails the construction of a forcemain that will connect the storage tank to the sewer system near the intersection of Bench Street and the landfill entrance road.

Peak generation of leachate is expected to occur during operation of the proposed expansion and prior to the closure of the Phase 2 ash disposal cell. The volume of leachate produced at that time will be approximately 349,000 gallons per year. After closure of all three ash disposal cells, leachate generation will be approximately 85,000 gallons per year.

- b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

N/A.

- c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.

Leachate generated at the MSW combustor ash disposal area is discharged to the City's Bench Street WWTF for pretreatment, after which it is routed to the new Red Wing WWTF for final treatment. Leachate handling and discharge are governed by the requirements of the MPCA permit (SW-174), MPCA-approved Leachate Management Plan and the Leachate Treatment Agreement held with the City. Under the current Leachate Treatment Agreement, the MSW combustor ash disposal area is allowed to discharge 30,000 gallons of leachate per day.

The leachate is tested quarterly to determine the concentrations of leachate constituents identified with limits in the SW-174 permit and to prevent the leachate discharge from adversely impacting the effectiveness of the City's WWTFs. If leachate concentrations are found above the allowable limits, the leachate discharge rate can be reduced to ease the impact the leachate may have on the WWTFs. To date, leachate concentrations have been below permitted limits and no discharge rate reductions have been required.

No WWTF improvements will be needed to accommodate the anticipated increase in leachate production as a result of this proposed project. The leachate can continue to be treated effectively at both of the City's WWTFs.

- d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

N/A.

19. Geologic hazards and soil conditions.

- a. Approximate depth (in feet) to Ground water: $\frac{77}{}$ minimum; $\frac{100}{}$ average.
Bedrock: $\frac{0}{}$ minimum; $\frac{80}{}$ average.

Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

There are no known geologic hazards, such as sinkholes or karst topography, on the proposed construction site. The EMS is in place to detect the presence of pollutants in levels that may cause impacts to the ground water. As mentioned in Item 6b, ground-water assessment monitoring associated with the unlined MSW and demolition debris cells detected elevated levels of VOCs in 1996. Since closure and coverage of the MSW and demolition debris cells, there has been a clear reduction of VOCs in the ground water.

- b. Describe the soils on the site, giving SCS classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

The soil profile on the west perimeter of the existing ash disposal area consists primarily of Kegonsa silty loam (zero to three percent slopes) topsoil above the bedrock. Beneath the existing ash disposal area, the soil profile consists of between 10 to 80 feet of unconsolidated sediments comprised of alluvial sand and silt with some clay lenses.

The local ground-water flows under unconfined conditions in the upper portion of the Franconia Formation. Ground-water flow in the water table is to the south and east towards Hay Creek. The gradient is flat under the ash disposal area, where the water table is in the sandstone and shale of the Franconia Formation. The gradient becomes steeper to the east of the MSW combustor ash disposal area where the water table flows through unconsolidated sediments consisting of sand, silt, and gravel with some silty clay lenses. The gradient in the eastern portion of the site is approximately 0.013 foot per foot. The gradient flattens out again east of Bench Street in the vicinity of Hay Creek.

The deeper flow system in the lower portions of the Franconia Formation exhibits a flow direction to the northeast, towards the Mississippi River. This flow direction is consistent with the regional flow in the Iron-ton-Galesville Formation. The relatively large downward flow gradients between the upper and lower aquifers of the Franconia Formations suggests that the lower members of the Franconia act as an aquitard (a layer of rock having low permeability that stores ground water and delays its flow) to the upper portions, but the aquitard will allow a limited amount of hydraulic connection to exist (probably through fractures). Metals are the contaminants of concern at an ash disposal site.

The uppermost bedrock unit at the site is the St. Lawrence Formation. The St. Lawrence is a well-cemented dolomitic limestone with interbedded shale. The St. Lawrence is found on the upper portions of the embankment on the west side of the ash landfill, generally above an elevation of 810.

Below the St. Lawrence is the Franconia Formation. The Franconia is made up of four members, the Mazomanie, Reno, Tomah and Birkmose. The Mazomanie member is a thin- or cross-bedded, essentially non-glaucanitic, dolomite, fine to coarse-grained quartzose sandstone. The Reno member is a glauconitic, worm-bored, fine-grained quartz sandstone. The Tomah member is very fine- to fine-grained, locally glauconitic, feldspathic, silty quartz sandstone with some interbedded greenish-grey micaceous shale and minor amounts of glauconitic dolomite. The Birkmose member is a glauconitic, worm-bored, fine-grained quartz sandstone containing some silt and some dolomitic layers. The Franconia Formation is approximately 170 feet thick in the vicinity of the site (Hickok, 1986). Below the Franconia Formation are the Iron-ton-Galseville Sandstone, Eau Claire and Mt. Simon Formations that complete the Paleozoic rock sequence in the area.

The unconsolidated sediments beneath the site are moderately permeable. To prevent contamination of these soils and the underlying ground water, the new ash cell will be constructed with impervious base and cover liners. The base liner is a composite of compacted low permeability clay soils and a high density polyethylene geomembrane. The efficiency of the liner system is expected to be approximately 99.98 percent. Once the ash disposal cells are full, they will be covered. The cover will be made of low permeability soils and will be constructed in a manner that will route precipitation away from the MSW combustor ash disposal area to minimize the generation of leachate.

Ground-water monitoring wells are in place now around the MSW combustor ash disposal cells and more will be added to ensure that key parameters found in ash leachate are not making their way into the soil and ground water in dangerous levels. Lastly, the forcemain that will convey the leachate to the sanitary sewer system will be double-walled, as required by the MPCA, to provide containment in case of rupture. The double piping system provides secondary containment for the leachate and a means of determining if the inner four-inch pipe is leaking.

20. Solid Wastes, Hazardous Wastes, Storage Tanks.

- a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

N/A.

- b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

Fuel oil and lubricants for the operating equipment are present at the site. The lubricants are kept in the vehicle garage near the northwest corner of the site. The amount of lubricants stored at any time is small. The equipment is fueled from a tanker truck that is not stored on-site.

- c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

One 8,000-gallon, double walled steel underground tank is currently used to store leachate generated by the operation of the ash landfill. The leachate is currently pumped into a tanker truck for off-site disposal. A concrete pad is located under the discharge point to catch any leachate spilled while loading the tanker truck. A drain connects the concrete pad to the leachate storage tank.

The leachate storage tank is double-walled. If a leak forms in the inner tank, liquid collects in the space between the inner and outer walls. This liquid is detected by the interstitial monitoring device and a light in the leachate collection system control panel is lit. All pipelines carrying leachate on the landfill site are double-walled. This includes the pipelines carrying leachate from the cells to the collection tank and the proposed force main from the collection tank to the sanitary sewer connection point. Leachate in the inner carrier pipe is monitored by observing liquid in the outer casing pipe. If leaks are found in the interstitial areas of the tank or pipelines, the location of the leak will be determined and repaired.

As part of the MSW combustor ash disposal area expansion, the storage tank will be connected to the sanitary sewer system by means of a forcemain. The ability to load tanker trucks for leachate transport will be maintained for emergency situations. The forcemain that will convey the leachate to the sanitary sewer system will be double-walled to provide containment in case of rupture. The double piping system provides secondary containment for the leachate and a means of determining if the inner four-inch pipe is leaking.

- 21. Traffic.** Parking spaces added: 0 Existing spaces (if project involves expansion): 0
Estimated total average daily traffic generated: Five to seven trips/day
Estimated maximum peak hour traffic generated (if known) and its timing: Not more than three trips per hour.
Provide an estimate of the impact on traffic congestion affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.

Trips to the site for leachate hauling will be eliminated (except during emergencies) as the proposed project entails the construction of forcemain that will connect the leachate storage tank directly to the sanitary sewer system. As such, an overall decrease in truck traffic to the site will be observed as a result of the project proposal.

- 22. Vehicle-related Air Emissions.** Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

Construction-related exhaust will result in increased vehicle-related air emissions, but they will be temporary in nature. The proposed project entails the construction of forcemain that will connect the leachate storage tank directly to the sanitary sewer system. Because of this, a slight decrease in vehicle-related air emissions is expected once construction is complete.

- 23. Stationary Source Air Emissions.** Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing), any greenhouse gases (such as carbon dioxide, methane, and nitrous oxides), and ozone-depleting chemicals (chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.

No stationary air emissions will be generated by the project.

- 24. Odors, noise and dust.** Will the project generate odors, noise or dust during construction or during operation? Yes No
If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

Odors

The construction phase of the expansion may create temporary odors due to construction equipment. Once construction is complete, the operation of the ash landfill should not generate odors because there will be minimal amounts of organic material available for decomposition.

Noise

Increased noise levels are likely to occur during construction, but these noises will be temporary. Heavy equipment is used now during the operation of the ash disposal area and this equipment will continue to be used in the same manner and to the same extent to spread and cover the ash once construction is complete. The ash disposal area will continue to operate during daylight hours only.

Dust

Dust generated from the roadways leading to the site is controlled by watering on an as-needed basis. Operational procedures and inherent ash characteristics will prevent dusting from becoming a serious problem. The ash produced by the Solid Waste Boiler Facility is quenched in water before loadout to the MSW combustor ash disposal area and it has the consistency of wet sand when it is transported and dumped at the ash disposal site. Ash sampling data indicates that the ash has a moisture content between 40 percent and 50 percent. Continual placement of moist ash in the working area minimizes the amount of ash allowed to dry out. If the ash actually dries before placement of the temporary cover, the surface forms a light crust which minimizes dusting potential. Further, site operations will be restricted during windy weather to prevent the creation of significant fugitive dust. Once an ash cell is closed, the cover or cap placed on the cell will completely prevent dusting of ash. The cover itself will be seeded with grasses and forbs to prevent wind erosion of the cover. The City has no record of complaints regarding fugitive dust from the MSW combustor ash disposal area.

25. Nearby resources. Are any of the following resources on or in proximity to the site?

- a. Archaeological, historical, or architectural resources? Yes No
- b. Prime or unique farmlands or land within an agricultural preserve? Yes No
- c. Designated parks, recreation areas, or trails? Yes No
- d. Scenic views and vistas? Yes No
- e. Other unique resources? Yes No

If yes, describe the resource and identify any project-related impacts on the resources. Describe any measures to minimize or avoid adverse impacts.

The Minnesota Historical Society's SHPO has been contacted regarding this proposed project. They have concluded that there are no known or suspected archeological properties or properties listed on the National or State Registers of Historic Places that will be affected by the proposed project. A copy of the letter sent from SHPO is attached as Figure 17.

26. Visual impacts. Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? Yes No

If yes, explain.

27. Compatibility with plans and land use regulations. Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency? Yes No

If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.

The property is zoned agricultural and residential by the City and the landfill conforms to the present zoning.

28. Impact on infrastructure and public services. Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project? Yes No

If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)

29. Cumulative impacts. Minn. R. 4410.1700, subp. 7, item B requires that the RGU consider the "cumulative potential effects of related or anticipated future projects" when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (or discuss each cumulative impact under appropriate item(s) elsewhere on this form).

The proposed expansion will extend the life of the ash disposal area, but not materially change the operation of the site, except for the manner in which leachate is managed. Existing concerns, if any, related to ash disposal operations such as traffic, noise and dust, will continue, but are not expected to be cumulative. In fact, the change in leachate management will lead to a reduction of traffic to and from the site and environmental concerns associated with leachate handling should be eased.

30. Other Potential Environmental Impacts. If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

None.

31. Summary of issues. List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

None.

RGU CERTIFICATION.

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minn. R. 4410.0200, subps. 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Name and Title of Signer:

**Beth G. Lockwood, Supervisor, Environmental Review Unit
Operations and Environmental Review Section
Regional Environmental Management Division**

Date:

The format of the Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or at their Web site <http://www.mnplan.state.mn.us>.