Minnesota Pollution Control Agency

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December 3, 2012

TO: INTERESTED PARTIES

RE: Becker Ash Landfill Expansion

The Minnesota Pollution Control Agency (MPCA) has approved the Findings of Fact, Conclusions of Law, and Order for a Negative Declaration on the need for an Environmental Impact Statement on the proposed Becker Ash Landfill Expansion project, Sherburne County. The Findings of Fact, Conclusions of Law, and Order document concludes that this project does not have the potential for significant environmental effects. The decision for a Negative Declaration completes the state environmental review process under the revised Environmental Quality Board rules, Minn. R. ch. 4410. Final governmental decisions on the granting of permits or approvals for the project may now be made.

These documents can be reviewed at the following locations: the MPCA offices in St. Paul and Brainerd; the Minneapolis Public Library at 300 Nicollet Mall, Minneapolis; and the Great River Regional Library at 1300 West St. Germain, St. Cloud. The document can be viewed on our MPCA website at http://www.pca.state.mn.us/news/eaw/index.html. Requests for copies of these documents may be made by contacting the St. Paul office at 651-757-2101.

We want to express our appreciation for comments submitted on the Environmental Assessment Worksheet. Comments and responses to them have been incorporated into the Findings of Fact, Conclusions of Law, and Order and have been considered by MPCA staff during the permit process for the proposed project.

Sincerely,

Craig Affeldt

Craig Affeldt
Supervisor, Environmental Review Unit
St. Paul Office
Resource Management and Assistance Division

CA:mbo

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

IN THE MATTER OF THE DECISION ON THE NEED FOR AN ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED BECKER ASH LANDFILL EXPANSION SHERBURNE COUNTY, MINNESOTA

FINDINGS OF FACT CONCLUSIONS OF LAW AND ORDER

FINDINGS OF FACT

Pursuant to Minn. R. ch. 4410, the Minnesota Pollution Control Agency (MPCA) staff prepared and distributed an Environmental Assessment Worksheet (EAW) for the proposed Becker Ash Landfill Expansion Project (Project). Based on the MPCA staff environmental review, the EAW, comments and information received during the comment period, and other information in the record of the MPCA, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order.

Project Description

Existing facility

1. The Becker Ash Landfill (BAL) is part of an integrated solid waste management system owned and operated by Great River Energy (GRE). The operations consist of the processing of mixed municipal solid waste (MSW) into refuse-derived fuel (RDF) at the Elk River Resource Recovery Facility in Elk River, Minnesota; combustion of the RDF for electrical generation at the Elk River Energy Recovery Station in Elk River, Minnesota; and disposal of the ash from the combustion process at BAL. BAL is permitted by the MPCA as a Municipal Solid Waste Combustor Ash Landfill. The facility is licensed by Sherburne County as an Energy Recovery Ash Landfill and operates under the terms of a Conditional Use Permit from the city of Becker. BAL is located in the city of Becker on Sherburne Avenue, south of US Highway 10. The currently-permitted BAL disposal facility occupies 19.6 acres within a 41.3-acre permitted area on an 85.8-acre parcel owned by GRE.

2. As of October 28, 2011, there were 214,596 cubic yards of volume available for ash disposal within the currently permitted landfill. GRE expects ash production rates of approximately 61,000 cubic yards per year through the year 2015. Based upon that rate, BAL had approximately 3.5 years of remaining disposal capacity as of October 28, 2011, and will be full in April 2015. In order to maintain uninterrupted disposal capacity, construction of the proposed expansion must occur during the summer of 2014. Ash production is currently limited by the rate of feedstock delivery to the Elk River Resource Recovery Facility. The processing and energy conversion facilities have the capacity to produce approximately 90,000 cubic yards of ash per year, so an increase in feedstock could shorten the remaining life of BAL by one year to April 2014. In that case, construction of the proposed expansion would have to occur in the summer of 2013.

Permitting history and previous environmental review

3. BAL was originally permitted by Northern States Power Company (NSP) and constructed in 1991. The 1991 permit authorized construction of Cells 1 through 3 with an airspace capacity, including waste and cover materials, of 720,000 cubic yards. An EAW was completed as part of the original

permitting process. The 1991 EAW process concluded with a negative declaration for an EIS (based on a conclusion that the project did not have the potential for significant environmental impacts that would require further study in an EIS prior to permitting).

4. In 1997, the permit was re-issued to NSP and NRG, an NSP subsidiary, as co-permittees and authorized construction of Cells 4 through 6 with a total facility airspace of 1,387,318 cubic yards on a footprint of 17.2 acres. A second EAW was completed in December 1999 as part of the permitting process for horizontal and vertical expansion of Cells 4 through 6, again resulting in a negative declaration for an EIS. The permit was re-issued in 2000 with a capacity of 1,725,900 cubic yards on a footprint of 19.6 acres.

5. In 2005, the ownership of BAL transferred from NRG to Resource Recovery Technologies, LLC. In 2006, a minor modification was made to the permit to change the liner design in Cell 6 to "Type N" (Minn. R. 7035.2885, subp. 11.N). In 2008, another minor modification was made to the permit to change the final cover slopes, which resulted in the total capacity decreasing to 1,717,300 cubic yards. In 2010, the permit was transferred to GRE. The permit was reissued in 2011 for a five-year period.

Project description

6. GRE proposes to expand the existing Becker Ash Landfill to provide additional disposal capacity for RDF ash generated at GRE's Elk River Energy Recovery Station power plant. The existing landfill is expected to reach its permitted capacity in early 2015, thereby creating a need for additional capacity to continue operation of the power plant. The expansion would increase the landfill's storage capacity from 1,717,300 to 6,313,300 cubic yards, providing approximately 51 years of additional site life at fill rates associated with peak production at the power plant.

7. The proposed expansion is a subsequent development of the existing Cells 1-6 of the landfill. Development of the facility has progressed serially by construction of new cells as previously constructed cells were filled and capped. Cells 1 through 4 have been filled to their permitted capacity. Cells 1-3 and approximately one-third of Cell 4 have received final cover. Cells 5 and 6 are being actively filled.

Procedural History

8. Pursuant to Minn. R. 4410.4300, subp 17.G, an EAW was prepared by MPCA staff on the proposed Project. Pursuant to Minn. R. 4410.1500, the EAW was distributed to the Environmental Quality Board (EQB) mailing list and other interested parties on August 20, 2012.

9. The MPCA notified the public of the availability of the EAW for public comment. A news release was provided to media in Benton, Cass, Crow Wing, Stearns, Kanabec, Morrison, Wadena, Todd, Mille Lacs, Pine, and Sherburne Counties, as well as other interested parties, on August 20, 2012. The notice of the availability of the EAW was published in the *EQB Monitor* on August 20, 2012, and the EAW was made available for review on the MPCA website at http://www.pca.state.mn.us/news/eaw/index.html.

10. The comment period for the EAW began on August 20, 2012, and ended on September 19, 2012. The MPCA received comment letters from the Minnesota Department of Natural Resources, the Minnesota Historical Society, and Sherburne County. No letters were received from citizens. A list of the comment letters received, written responses to those comments, and copies of the letters are included as Appendices to these Findings.

Criteria for Determining the Potential for Significant Environmental Effects

11. Under Minn. R. 4410.1700, the MPCA must order an Environmental Impact Statement (EIS) for projects that have the potential for significant environmental effects. In deciding whether a project has the potential for significant environmental effects, the MPCA must compare the impacts that may be reasonably expected to occur from the project with the criteria set forth in Minn. R. 4410.1700, subp. 7. The following factors shall be considered:

    A. Type, extent, and reversibility of environmental effects.

    B. Cumulative potential effects. The responsible governmental unit (RGU) shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project.

    C. The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project.

    D. The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

The MPCA Findings with Respect to Each of These Criteria Are Set Forth Below

Type, extent, and reversibility of environmental effects

12. The first criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is the "type, extent, and reversibility of environmental effects" Minn. R. 4410.1700, subp. 7. A. The MPCA findings with respect to this criterion are set forth below.

13. The types of impacts that may reasonably be expected to occur from the Project include the following:
    - Water quality impacts related to stormwater runoff and wastewater treatment plant discharges
    - Groundwater impacts related to liner performance
    - Air quality impacts related to odors, noise, and dust

14. Written comments received during the comment period raised additional issues. The following comments have been addressed in the Response to Comments document.
    - Concerns related to wildlife impacts from erosion control mesh (Comment letter 1)
    - A request for an archaeological study on the site (Comment letter 2)
    - Concerns related to the possibility that the facility will accept ash from other sources in the future, including that leachate volume and chemical composition may change as a result (Comment letter 3)
    - Concerns that current containment practices will not be effective over a 75-year facility lifetime (Comment letter 3)

Water quality impacts related to stormwater runoff and wastewater treatment plant discharges

15. Landfills may be associated with potential impacts from stormwater and erosion, as well as from leachate.

16. Soils on the site are sandy, and noncontact stormwater runoff is directed via an engineered stormwater collection system to infiltration basins on the site. No stormwater is discharged overland from the facility.

17. All precipitation that comes into contact with waste is treated as leachate, which is collected, stored on site, and transported to the Becker wastewater treatment facility (WWTF) for final disposal.

18. The Becker WWTF imposes acceptance limits on pollutants in the leachate because the WWTF itself must itself meet discharge limits to the Elk River pursuant to its own NPDES/SDS permit. Enforcing these acceptance limits on BAL leachate assures the WWTF that it can meet its own discharge limits and thus minimize the effects of the leachate on the river. BAL also has contracts with the St. Cloud and Metropolitan Council Environmental Services WWTFs in case Becker cannot accept leachate for any reason.

19. Testing performed on the leachate shows that all pollutant concentrations are below the WWTF acceptance limits. This is illustrated in an updated table from the EAW, which is attached to these findings.

20. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to stormwater and WWTF discharges. The impacts from on surface waters from stormwater and WWTF discharges that are reasonably expected to occur from the proposed Project have been considered during the review process and appropriate mitigation measures are available and will be required to prevent significant adverse impacts.

21. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to stormwater and WWTF discharges that are reasonably expected to occur from the Project.

Groundwater impacts related to liner performance

22. The most likely spot for a leak in the liner is at the leachate sump. Groundwater monitoring wells have been purposely placed downgradient of the leachate sump. Also, the groundwater gradient at the proposed site is relatively flat. The plume would disperse under such conditions, and experience has shown that the current well spacing is adequate to detect it.

23. Leachate is collected on the liner and transported to a WWTF for final disposal. Over time, leachate pollutant concentrations should decrease as the pollutants are leached from the ash and disposed of with the leachate. Also, final capping of filled areas reduces infiltration, resulting in reduced leachate production. The end result would be diminished leachate production in the cell over time until it essentially ceases. Since the potential for environmental effects is directly proportional to leachate concentration and the leachate head on the liner, the potential for impacts gradually diminishes over time as well.

24. The liner system prescribed for the facility is MPCA's Type P, the most restrictive liner system in the Minnesota Rules.

25. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to groundwater impacts related to liner performance. The potential impacts on groundwater that are reasonably expected to occur from the proposed Project have been considered during the review process and appropriate mitigation measures are available and will be required to prevent significant adverse impacts.

26. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to liner leakage that are reasonably expected to occur from the Project.

Air quality impacts related to odors, noise, and dust

27. Landfills may be associated with impacts related to odor, noise, and dust.

28. The leachate produces a hydrogen sulfide odor, particularly when agitated or heated. However, the odor is not normally released to the atmosphere because the leachate is contained in a closed system (forcemain piping and storage tanks). The odor is noticeable only in the leachate load-out garage during loading operations when hydrogen peroxide pre-treatment is not used. Such odors are rapidly dispersed and are not noticeable outside the building.

29. For purposes of odor control, pretreatment of leachate with hydrogen peroxide is performed for leachate that is recycled as quench water at the GRE Elk River Energy Recovery Station. Hydrogen peroxide treatment has proven effective at controlling the hydrogen sulfide odor at the power plant.

30. Noise generation during construction and operation will not change from the current levels. The proposed Project will result in phased construction activities occurring every one to two years for berm, liner, and final cover construction. Noise impacts are not reversible as long as construction is going on; however, noise has not been found to be an issue at the facility.

31. Cell construction activity will occur in the summer months and last for two to three months, during which time large earth moving equipment would generate dust (from soil excavation and filling) and noise. Dust is controlled during construction by the use of water. Dust impacts are thus temporary and reversible.

32. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to odors, noise, and dust. The impacts from odors, noise, and dust that are reasonably expected to occur from the proposed Project have been considered during the review process and appropriate mitigation measures are available and will be required to prevent significant adverse impacts.

33. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to odors, noise, and dust that are reasonably expected to occur from the Project.

General concerns related to wildlife impacts from erosion control mesh

34. A comment from the Minnesota Department of Natural Resources requested that wildlife-friendly erosion control mesh be used at the facility. The operator has agreed to comply with this recommendation.

35. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to erosion control mesh. The impacts on wildlife due to erosion control materials that are reasonably expected to occur from the proposed Project have been considered during the review process and appropriate mitigation measures are available and will be required to prevent significant adverse impacts.

36. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to erosion control materials that are reasonably expected to occur from the Project.

Request for an archaeological study on the site

37. A comment from the Minnesota Historical Society recommended a survey of the site for archaeological artifacts and properties qualifying for the National Register.

38. The operator reports that this was done in 1990 on the current 40-acre landfill site, which directly adjoins the proposed expansion areas, and that very little of historical interest was found. This suggests that a survey of the adjoining expansion areas would yield similar results.

39. This finding has been confirmed by a new archaeological survey recently conducted on the expansion site at the request of the applicant. This survey found one minor artifact. No further work is indicated.

40. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to historical artifacts and properties. Little or no impacts on historical artifacts and properties that are reasonably expected to occur from the proposed Project are likely.

41. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to historical artifacts and properties that are reasonably expected to occur from the Project.

Concerns related to the possibility that the facility will accept ash from other sources in the future, including that leachate volume and chemical composition may change as a result

42. A comment from Sherburne County pointed out that the EAW did not evaluate the facility's stated intention to consider accepting ash from other sources than Elk River, and states that impacts from such an activity could be significant.

43. Except for a brief mention in the EAW, neither the EAW nor the permit addresses this possibility. This is because the Becker Ash Landfill has not formally applied for approval to accept wastes from other sources than the Elk River facility, nor have impacts been assessed. The permittee is planning to address the acceptance and disposal of MSW combustor ash from other sources in their Industrial Solid Waste Management Plan (ISWMP). The ISWMP will describe the process that will be used to evaluate the potential impacts to the landfill leachate if an MSW combustor ash were to be disposed of at the landfill. This ISWMP will be an approved, operating document under the reissued solid waste permit for the landfill. If a substantial change in the nature or operation of the facility was proposed, the project could be subject to discretionary environmental review and another EAW, depending on circumstances and the rules in effect at that time. Impact assessment would take place at that time.

44. BAL has stated that this issue arises from the possibility that the Hennepin Energy Recovery Center would request that BAL serve as a backup disposal site for its ash. Testing of HERC ash has shown that it differs little in chemical composition from Elk River ash, and the disposal of HERC ash at Becker would not be expected to result in impacts that are significantly different or greater than impacts related to the disposal of Elk River ash.

45. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to additional sources of ash. The impacts that are reasonably expected to occur from the proposed Project have been considered during the review process and appropriate mitigation measures are available and will be required to prevent significant adverse impacts.

46. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to additional sources of ash that are reasonably expected to occur from the Project.

Concerns that current containment practices will not be effective over a 75-year facility lifetime

47. A comment from Sherburne County raised the possibility of deterioration of the containment system over time and that current containment practices do not have sufficient history to support the EAW's inference that they will be effective over a 75-year facility lifetime.

48. Permits for the facility are issued for 10-year periods. The operator must thus apply for permit reissuance every 10 years. The performance of the leachate management system is monitored continuously, giving the MPCA and the operator the opportunity to reassess containment effectiveness at periodic intervals. Design technologies and requirements may change over time, and the periodic permit processes provide the opportunity to incorporate them into facility management.

49. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to liner system. The impacts on groundwater that are reasonably expected to occur from the proposed Project have been considered during the review process and appropriate mitigation measures are available and will be required to prevent significant adverse impacts. See also Findings 22-24.

50. The above findings illustrate why MPCA is confident that contaminants will be isolated from the groundwater for the long term. To the extent that any contaminants should be released to the groundwater, the effects are reversible to the extent that leachable pollutants will be reduced over time and that corrective action based on monitoring, as well as dilution, should minimize the impacts of a release.

51. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to performance of the containment system that are reasonably expected to occur from the Project.

Cumulative potential effects

52. The second criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is the "cumulative potential effects." In making this determination, the MPCA must consider "whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effects; and the efforts of the proposer to minimize the contributions from the project." Minn. R. 4410.1700 subp.7.b. The MPCA findings with respect to this criterion are set forth below.

53. The EAW, public comments, and MPCA follow-up evaluation did not disclose any related or anticipated future projects that may interact with this Project in such a way as to result in significant cumulative potential environmental effects.

54. The EAW considered the following areas for cumulative potential effects for the proposed Project.
    - Traffic
    - Erosion and sediment transport
    - Groundwater
    - WWTF discharge

55. The relevant local units of government were contacted to determine whether there were planned future projects that might have cumulative impacts with the proposed Project. None were identified.

56. There are several other waste management facilities located within a one-mile radius of the proposed BAL expansion. Other facilities include several coal ash management ponds located on the Xcel Energy Sherco Generating Plant site to the north and northwest of the BAL, and the Vonco II Landfill located southeast of the BAL. Potential cumulative effects resulting from the proximity of these facilities are discussed below.

57. Waste hauling trucks for both BAL and Vonco II travel on Sherburne Avenue. Sherburne Avenue is designed to accommodate this traffic. The proposed Project will not result in an increase in truck traffic; however, the existing 13 to 17 truck trips per day associated with the current operation of the BAL will continue for a longer period of time if the proposed Project is implemented. There is no truck traffic on public roads associated with operation of the Sherco ash management facilities because Sherco ash and related truck traffic are entirely managed on site.

58. The proposed expansion of the BAL includes provisions for stormwater management best management practices during construction and engineered stormwater control structures, including on-site infiltration ponds, for operations. The infiltration ponds are designed to fully contain the runoff volume from the 100-year, 24-hour rainfall event and do not discharge stormwater or sediment from the site. There is no overland stormwater discharge from the BAL site and, thus, no cumulative effect related to potential erosion and sediment transport impacts.

59. Waste management facilities present a potential for groundwater impacts if leaks from the facilities were to occur. This potential is mitigated for each individual facility by permit requirements imposed and enforced by public regulatory authorities. Such permit requirements include engineered containment systems to prevent leaks (liner systems, leak detection systems, leachate collection systems, final cover systems) that are facility-specific based upon the type of waste being managed; groundwater monitoring systems for early detection should a leak occur; contingency action plans for implementation of remedial actions should such a response be required; and, financial assurance requirements to ensure funds are immediately available for responding to a release.

60. The potential cumulative effect of several waste management facilities being located within a one-mile radius of the proposed BAL expansion include increased areal extent of potential impacts, co-mingling of groundwater impacts from different facilities, and co-mingling of impacts to the Mississippi River where groundwater discharges. This segment of the Mississippi River (Clearwater River to the Elk River) is listed by the MPCA as impaired for fecal coliform, fish bioassessments, and mercury.

61. The proposed BAL expansion would increase the footprint of the facility and, thus, increase the areal extent of liner from which leaks could occur. However, the likelihood of a leak from the lined area is remote given the controls imposed by public regulatory authorities as described above. In addition, the sequential development of new landfill cells, coupled with closure of previously-developed cells, results in a minimal increase in active liner area from which a leak could occur. When final cover is placed over filled areas of the landfill, the source of leachate is cut off (rainwater is diverted away from, rather than absorbed by, the landfill) and the potential for a leak from the lined area beneath the final cover is significantly reduced.

62. For this site, co-mingling of potential impacts in groundwater as a result of multiple facilities leaking into the same groundwater flow path, associated with potential for increased contaminant concentration that might be present from a single facility, is offset by the relative positions of the facilities with respect to groundwater flow direction. Groundwater flow direction is toward the Mississippi River from each of the facilities. Each facility has a separate groundwater flow path and, thus, co-mingling of impacts in groundwater is unlikely to occur. There is a slight overlap in flow paths between the existing BAL footprint and Sherco Pond No. 3; however, there is a ¼-mile separation of flow paths between the BAL expansion footprint and the Sherco facilities. The Xcel Energy Sherco Generating Plant and the Vonco II facilities are required to conduct routine groundwater monitoring under their respective permits. Groundwater monitoring data at Vonco II indicates no exceedances of state or federal drinking water standards. Groundwater monitoring data at the Xcel Energy Sherco Generating Plant shows exceedances for boron and sulfate, which are indicator parameters used to document the extent of coal/ash influence. The scrubber solids ponds, coal yard, and power house areas have been attributed as sources for the observed boron and sulfate concentrations.

63. Co-mingling of potential impacts in the Mississippi River as a result of the proposed BAL expansion will not be significantly changed from current conditions in terms of potential mass loading of contaminants to the river. Due to sequential development of new landfill cells and closure of previously-developed cells as described above, the active liner area from which impacts could occur will shift in position but will not be significantly larger in size.

WWTF discharge

64. Since the volume of daily waste disposal is not expected to change, effects on the Becker WWTF discharge should also not change, unless leachate generation increases in the future due to acceptance of waste from additional sources. This, again, would require revisiting the permit and the possibility of additional environmental review. Therefore, as the Project is now proposed, significant cumulative effects on WWTF receiving waters are not expected.

65. Based on information on the proposed Project obtained from permit application processes and a site visit by MPCA staff and presented in the EAW, and in consideration of potential effects due to related or anticipated future projects, the MPCA does not expect significant cumulative effects from this Project.

The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority

66. The third criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is "the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project." Minn. R. 4410.1700, subp. 7.C. The MPCA findings with respect to this criterion are set forth below.

67. The following permits or approvals will be required for the Project:

Unit of Government	Permit or Approval Required
MPCA	Industrial Solid Waste Land Disposal Facility Permit Modification
MPCA	National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) General Construction Permit
MPCA	NPDES/SDS General Industrial Stormwater Permit Modification
Sherburne County	Solid Waste License Modification
City of Becker	Zoning change to "Mining" (for the 43.0 acres currently permitted for agricultural use)
City of Becker	Conditional Use Permit Modification

68. County Conditional Use Permit. The proposer is required to obtain all required building and conditional use permits required by local units of government to ensure compliance with local ordinances. The conditional use permit will address local zoning, environmental, regulatory, and other requirements that are needed to avoid adverse effects on adjacent land uses.

69. Industrial Solid Waste Land Disposal Facility Permit. The Project proposer is responsible for submitting engineering plans and for managing the facility in accordance to the final permit requirements which would regulate construction, operations, leachate management, monitoring, closure, post-closure, and emergency/contingency action plans, among other things.

70. NPDES/SDS Industrial Stormwater Permit and Spill Response Plan. The NPDES/SDS Industrial Stormwater Permit requires that specific conditions be adhered to for construction and operation of the facility, and for overall compliance with water quality requirements. The facility will need to prepare a Spill Response Plan and/or revise its Stormwater Pollution Prevention Plan.

71. NPDES Construction Stormwater Permit. A General NPDES Construction Stormwater Permit is required when a project disturbs one or more acres. It provides for the use of best management practices such as silt fences, bale checks, and prompt revegetation to prevent eroded sediment from leaving the construction site. The proposer must have a sediment and erosion control plan that will provide more detail as to the specific measures to be implemented and will also address: phased construction; vehicle tracking of sediment; inspection of erosion control measures implemented; and timeframes in which erosion control measures will be implemented. The general permit also require adequate stormwater treatment capacity be provided to assure that water quality will not be impacted by runoff once the project is constructed.

72. The above-listed permits include general and specific requirements for mitigation of environmental effects of the Project. The MPCA finds that the environmental effects of the Project are subject to mitigation by ongoing public regulatory authority.

The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs

73. The fourth criterion that the MPCA must consider is "the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs," Minn. R. 4410.1700, subp. 7. D. The MPCA findings with respect to this criterion are set forth below.

74. The following documents were reviewed by MPCA staff as part of the environmental impact analysis for the proposed Project.
    - Data presented in the EAW
    - Permit application(s)
    - Other reports and analysis as appropriate
    - Permits and environmental review of similar projects

75. This list is not intended to be exhaustive. The MPCA also relies on information provided by the Project proposer, persons commenting on the EAW, staff experience, and other available information obtained by staff.

76. The environmental effects of the Project have been addressed by the design and permit development processes, and by ensuring conformance with regional and local plans. There are no elements of the Project that pose the potential for significant environmental effects.

77. Based on the environmental review, previous environmental studies by public agencies or the Project proposer, and staff expertise and experience on similar projects, the MPCA finds that the environmental effects of the Project that are reasonably expected to occur can be anticipated and controlled.

78. The MPCA adopts the rationale stated in the attached Response to Comments as the basis for response to any issues not specifically addressed in these Findings.

CONCLUSIONS OF LAW

79. The MPCA has jurisdiction in determining the need for an EIS for this Project. The EAW, the permit development process, and the evidence in the record are adequate to support a reasoned decision regarding the potential significant environmental effects that are reasonably expected to occur from this Project.

80. Areas where the potential for significant environmental effects may have existed have been identified and appropriate mitigation measures have been incorporated into the Project design and permits. The Project is expected to comply with all MPCA standards.

81. Based on a comparison of the impacts that are reasonably expected to occur from the Project with the criteria established in Minn. R. 4410.1700, subp. 7, the Project does not have the potential for significant environmental effects.

82. An EIS is not required.

83. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency determines that there are no potential significant environmental effects reasonably expected to occur from the Becker Ash Landfill Expansion project and that there is no need for an Environmental Impact Statement.

IT IS SO ORDERED

John Linc Stine, Commissioner
Minnesota Pollution Control Agency

12/3/12
Date

Table 1
Leachate Quality Summary
GRE Becker Ash Landfill Expansion EAW

Parameter	Units	2009 Loading Station Sample Results				2010 Loading Station Sample Results				2011 Loading Station Sample Results				MLCLs (mg/L)	Discharge Limits* (mg/L)			Median	Max.	Min.
		1/27/2009	4/21/2009	7/21/2009	10/7/2009	1/18/2010	4/14/2010	7/13/2010	10/13/2010	1/17/2011	4/14/2011	7/6/2011	10/20/2011		Becker WWTF	St. Cloud WWTF	MCES	(1992-2011)		
Alkalinity	mg/L CaCO3	145				163						127						182	328	89.2
Aluminum	mg/L	2.79				0.775						2.48						0.08	4.4	ND
Ammonia	mg/L	23				30						25.8						23	45	0.5
Arsenic	mg/L	ND (<0.1)	ND (<0.1)	0.005	ND (<0.0125)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	0.006	0.75	0.13	0.13		ND	0.18	ND
Barium	mg/L	17.1	11.2	18	6.16	16.1	27.6	17.8	8.4	18.3	12	14.4	14.6	30.00				14	153	3.3
Beryllium	mg/L																	ND	0.01	ND
BOD	mg/L O2	ND (<6)				ND (<1200)						140						57	630	ND
Boron	mg/L	1.32				0.36				ND (<0.8)	0.298	<0.75	ND (<0.8)	9				0.19	2.18	ND
Cadmium	mg/L	ND (<0.005)	ND (<0.005)	ND (<0.02)	ND (<0.005)	ND (<0.001)	ND (<0.01)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.001)	ND (<0.005)	ND (<0.01)	0.06	0.2	0.2	1	0.004	0.05	ND
Calcium	mg/L	9330				8480						6.69						10958	23400	6.7
Chloride	mg/L	37800	34300	41100	16700	38600	47400	31500	20700	38300	33700	33400	41100					33051	69739	5500
Chromium	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.2)	ND (<0.05)	ND (<0.01)	ND (<0.1)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.01)	ND (<0.05)	ND (<0.1)	1.5	3.94	3.94	6	0.01	0.08	ND
COD	mg/L O2	3450	1560	1490	658	1860	1710	1680	3670	1350	1310	998	1760					1630	21760	80
CBOD	mg/L														200			NA - began testing in 2012		
Copper	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.2)	ND (<0.05)	ND (<0.01)	ND (<0.1)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.01)	ND (<0.05)	ND (<0.1)	15	2.76	2.76	4	0.006	0.16	ND
Cyanide	mg/L	ND (<0.12)	ND (<0.02)		ND (<0.02)	ND (<0.02)	0.01	0.032	ND (<0.01)	0.036	0.0223	ND (<0.01)	ND (<0.01)		3.11	3.11	4	ND	0.15	ND
Iron	mg/L	2.15		1.08		2.16						1.67						5.1	55.7	ND
Lead	mg/L	ND (<0.015)	ND (<0.015)	ND (<0.06)	ND (<0.015)	ND (<0.003)	ND (<0.03)	ND (<0.015)	ND (<0.015)	ND (<0.015)	ND (<0.03)	ND (<0.015)	ND (<0.03)	0.3	1.25	1.25	1	0.0004	0.18	ND
Magnesium	mg/L	18.8				15.4						3.8						16	310	3.8
Manganese	mg/L	8.78	10.6	10.3	3.21	6.4	16.6	4.62	7.3	6.77	4.59	3.7	8.59	9				18	250	0.0
Mercury	mg/L	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)	0.03	0.0002	0.0002	0.002	ND	0.01	ND
Nickel	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.4)	ND (<0.1)	ND (<0.02)	ND (<0.2)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.02)	ND (<0.1)	ND (<0.2)	2.1	0.75	0.75	6	0.02	0.17	ND
Nitrate + Nitrite	mg/L	ND (<10)				ND (<0.1)						ND (<0.2)						0.13	1.6	ND
pH, Lab	Std. Units	6.90	7.10	6.80	7.20	6.70	6.70	7.30	6.90	7.00	7.00	7.00	6.60		6 - 9	5 - 12	5 - 11	6.9	8.6	6.3
Potassium	mg/L	5790				6230						4810						3898	7930	5.8
Selenium	mg/L	ND (<0.1)	ND (<0.1)	0.02	ND (<0.0125)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.0005)	0.3	0.23	0.23		0.005	0.43	ND
Silver	mg/L	0.05	ND (<0.05)	ND (<0.2)	ND (<0.05)	ND (<0.01)	ND (<0.1)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.01)	ND (<0.05)	ND (<0.1)	0.3	0.56	0.56		0.05	0.26	ND
Sodium	mg/L	ND (<5)	ND (<5)	10800	5310	12800	14000	ND (<5)	5910	ND (<5)	9370	9740	10400					7710	16800	1128
TDS	mg/L	65600	53700	65000	26300	66000	82500	52500	34700	63100	54900	55400	69400		Monitor only			63050	122000	302
TSS	mg/L	34.5	67.1	48.2	24.9	174	197	62.8	36.5	76.4	23	164	68.9		260			41	200	ND
Specific Conductance	umhos/cm	86600	72200	89100	40800	95700	106000	70900	51600	86900	76400	683	80800					73689	115600	683
Sulfate	mg/L	77.9	152	56.3	90.5	35.6	47.2	69.2	55.3	39	75.4	96.9	58.9					91	1025	ND
Sulfide	mg/L											ND (<1)	ND (<5)		Monitor only			ND	ND	ND
Temperature, Field	Degrees C	8.8	11.7	16.3	13.02	11.4	15.5	20.2	17.5	11.8	12.9	18.3	15.8					15	23.5	3.0
Tin	mg/L	ND (<0.4)				ND (<0.08)						ND (<0.4)		60				0.0002	1.09	ND
Zinc	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.4)	ND (<0.1)	ND (<0.02)	ND (<0.2)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.02)	ND (<0.1)	ND (<0.2)	21		4.23	6	0.01	0.54	ND
Molybdenum	mg/L	0.11	0.1	ND (<0.30)	ND (<0.075)	0.051	ND (<0.15)	0.191	0.147	ND (<0.075)	0.0996	0.096	ND (<0.15)		0.11	0.11		0.1	867.7	0.02
Phosphorus	mg/L	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.4)	0.072	0.058	ND (<0.05)	ND (<0.05)	0.05	0.054		5	6		0.07	0.16	0.05

ND Not detected above laboratory reporting limit (reporting limit shown in parentheses)

* Refers to leachate parameter concentration limits for discharge to specific disposal facility

Minnesota Pollution Control Agency (MPCA)

Becker Ash Landfill Expansion (Project)
Environmental Assessment Worksheet (EAW)

LIST OF COMMENT LETTERS RECEIVED

1. Melissa Doperalski, Minnesota Department of Natural Resources (DNR). E-mail sent September 18, 2012.
2. Mary Ann Heidemann, Minnesota Historical Society. Letter received September 21, 2012.
3. David Katzner, Sherburne County Zoning Administration Department. Letter received September 24, 2012.

RESPONSES TO COMMENTS ON THE EAW

1. Comments by Melissa Doperalski, DNR. E-mail sent September 18, 2012.

Comment 1-1: The DNR recommends use of wildlife friendly erosion control mesh, since other materials pose a risk of injury or mortality to wildlife utilizing the area.

Response: The Project proposer agrees that use of wildlife-friendly erosion control products reduces the risk of injury or mortality for wildlife utilizing the area, and will incorporate such products in the erosion control design for the Project.

Comment 1-2: The DNR recommends replanting of native vegetation from local sources when feasible.

Response: Seed mixtures used on the final cover system need to be shallow rooted. Use of deep rooted vegetation could prejudice the integrity of the final cover system. Native vegetation may work well on the external sideslopes of the liner berm and the facility buffer area surrounding the landfill. The Project proposer agrees to use native vegetation for site restoration where feasible and allowed by the MPCA Solid Waste Facility Permit.

2. Comments by Mary Ann Heideman, Minnesota Historical Society. Letter received September 19, 2012.

Comment 2-1: SHPO recommends that an archaeological survey of the site be completed. This survey must meet the requirements of the Secretary of the Interior's Standards for Identification and Evaluation and include an evaluation of National Register eligibility for any properties that are identified.

Response: An archaeological survey was performed in 1990 by Stemper and Associates on the current 40-acre landfill site. The results of the survey are contained in a report entitled "A Phase I Archaeological Reconnaissance Survey for the Proposed Becker Ash Storage Facility Site; Sherburne County, Minnesota, 1990; Stemper and Associates Archaeological Survey, August 27, 1990" (Minnesota Historical Society Referral Number 90-1443). The report indicated the presence of two camp sites, and noted that for both sites, "The condition of the site is poor, clearly the affects *(sic)* of erosional action over the surface can

be seen, and, of course, generations of agricultural impacts throughout the site area." The report also indicated that the sites contained "sparse artifact content and limited potential for the presence of diagnostic artifacts or non-artifactual cultural features. Due to the documented alteration of all potential cultural-bearing soil horizons by long-term agricultural cultivation, it does not appear that either site retains enough research potential to warrant further consideration."

The proposed expansion site is located south and immediately adjacent to the current site for which the above-referenced survey was conducted. The expansion site is of similar condition as the current site in terms of erosional and agricultural impacts. The expansion site thus may be considered "disturbed" based upon the apparent effect that erosional and agricultural action has had on potential cultural-bearing soil horizons for the current site.

The Project proposer will further discuss the status of the expansion site with the State Historic Preservation Office (SHPO). If the SHPO determines that an archaeological survey is in fact warranted, the Project proposer will conduct the survey.

3. <u>Comments by David Katzner, Sherburne County. Letter received September 24, 2012.</u>

Comment 3-1: The EAW does not evaluate the potential impacts of the landfill's stated intention to consider accepting ash from sources other than the Elk River RDF facility. The county believes such impacts may be significant for the facility and the environment. Does MPCA believe such impacts will be minimized through the permitting process?

Response: The permit application indicates the following waste types will be accepted for disposal.

1. municipal solid waste (MSW) ash from Great River Energy (GRE) in Elk River, Minnesota
2. ash contaminated waste such as paper suites, dust masks, gloves and boot covers from GRE
3. lime grit from GRE
4. spent baghouse bags from GRE
5. ash contaminated concrete generated at the Elk River Station

There is no mention in the permit application of other sources of combustor ash proposed for disposal. However, GRE indicates that there is the possibility that the Becker landfill may become the back-up disposal location for HERC ash. Hennepin County currently has a contract with the Serona Landfill to use it as an emergency back-up. This contract is about up and the GRE Becker Ash Landfill may become their new back-up landfill. GRE understands that to do this they would need to revise their permit application (Operations Plan and Industrial Solid Waste Management Plan) to indicate that other sources of MSW combustor ash may be accepted for disposal. The possibility that additional environmental review will be required will also be evaluated at that time according to rules then in effect. Approval for accepting ash from other sources is not included in the currently proposed permit, nor is it analyzed in the current EAW. Any such approvals and analysis by the MPCA must await further review by the agency upon receipt of a specific formal proposal by GRE, which does not currently exist.

That said, GRE has performed testing of HERC ash and even though its leachate characteristics differ slightly from the Becker ash leachate, it is MSW combustor ash and should not have a significant effect on the landfill's leachate characteristics.

The liner design is a Type P, as defined by Minn. R. 7035.2885, which is the most conservative liner design prescribed by Minnesota rules. Unlike lesser liner systems, the Type P system is not limited as to the leachate strength it may contain. Based on Minnesota rule requirements, the Type P liner will provide adequate environmental protection of combustor ash from sources that may have varying leachate concentrations.

The permitting process is the means by which mitigation techniques identified in the EAW process are made binding and enforceable.

Comment 3-2: The EAW states that the proposal would increase site life by 75 years. The EAW further indicates that the current lack of identified impacts makes it feasible to assume that continuation of current controls and practices will continue to minimize impacts over this very long time frame. However, the landfill has been in existence for only 21 years, and experience in the industry is that their control systems, no matter how well designed, will deteriorate over time and their effectiveness will diminish as a result. Further, contamination may escape as fingerlike plumes that would escape detection by monitoring equipment. Is it MPCA's position that 21 years of experience is sufficient to judge long term effectiveness of the control systems described in the EAW? Can MPCA provide historical information showing that the current engineering controls will prevent environmental impacts over the next 75 years?

Response: If the MPCA issues a permit for the proposed Facility, the permit would be for a 10-year period. The Project proposer would be required to apply for a permit reissuance to continue disposal operations beyond that initial 10-year term. Subsequent permit renewals, if granted, would be effective for a term prescribed by MPCA rules at that time. Factors considered by the MPCA in renewing a permit include compliance history, environmental effects, and current design technologies. A future permit renewal would be conditioned upon then-current MPCA rules and requirements for design and operation of the facility.

The most likely spot for a leak in the liner is at the leachate sump. Groundwater monitoring wells have been purposely placed downgradient of the leachate sump. Also, the groundwater gradient at the proposed site is relatively flat. The plume would disperse under such conditions, and experience has shown that the current well spacing is adequate.

Leachate constituent concentrations should decrease over time as constituents are leached from the waste and disposed of with the leachate. Leachate volumes would be controlled in part by development of the landfill in three-year phases, each of which is to be capped when filled. The end result would be diminished leachate production in the cell over time until it essentially ceases. Since the potential for environmental effects is directly proportional to the leachate head on the liner, the potential for impacts gradually diminishes as well.

Practical experience with High Density Polyethelene liners in landfills is limited to 25-30 years. In the technical world, the lifetime of a geomembrane liner has been estimated to be several hundred years. These estimates are often based on accelerated laboratory tests conducted at varying temperatures intended to simulate varying landfill conditions.

The post closure care period for the landfill is at least 20 years. At the end of the 20 year post closure period, the MPCA will evaluate what, if any, continued operation and maintenance and monitoring activities are appropriate for the facility based on the condition of the landfill and historical monitoring data.

Comment 3-3: The EAW's statement that "neither the chemical composition nor volume of leachate will vary significantly from historical composition or volume" is prejudiced by the possibility that the project may allow the landfill to accept waste from other sources. This potential is not analyzed in the EAW, nor is the potential for leachate composition to change as a result of changes in waste disposal at the facility. If MPCA has information to the contrary, this information should be in the EAW.

Response: The Type P liner is the most conservative required by Minnesota rules and will provide adequate groundwater protection for combustor ash from other sources. The volume of leachate generated will fluctuate as new lined areas are built and other areas are closed. The facility needs to provide adequate storage on site to be able to comply with the requirement for less than one foot of head on liner systems and provide storage prior to shipping. The permittee has been asked to demonstrate that the storage tanks on site are of adequate volume to manage fluctuations in the leachate volume associated with the expansion area.

Comment 3-4: Another concern about leachate volume is that about half of the 20-acre site is open at the present time, and the proposed height increase would inhibit the ability to construct final cover as quickly as in the past, meaning there will be more open acres to collect precipitation. It seems likely that leachate will substantially increase as result of the project, contrary to what the EAW says.

Response: Leachate volumes are expected to fluctuate as new areas are constructed and existing areas are closed. The real question is whether there is adequate storage on site for leachate that is collected on the liner. The permittee needs to be able to comply with the requirement for less than one foot of leachate head requirement by providing adequate storage on site prior to hauling the leachate.

Lynott, William (MPCA)

From: Doperalski, Melissa (DNR)
Sent: Tuesday, September 18, 2012 9:44 AM
To: Lynott, William (MPCA)
Subject: RE: Becker Ash Landfill Expansion EAW - DNR Comments
Attachments: Wildlife Friendly erosion control.pdf

The Department of Natural Resources (DNR) has reviewed the EAW for the Becker Ash Landfill Expansion project and offers the following comments for your consideration.

Where erosion and sedimentation control is necessary, the DNR encourages the use of wildlife friendly erosion control mesh. Open textile weave, nylon mesh with large openings (3-4 inches) and unwoven, unbound rolled erosion control products reduce the risk of injury or mortality for wildlife utilizing the area. Attached is a fact sheet for your reference.

The DNR encourages the developer to consider replanting in native (from local seed sources) vegetation when feasible.

Thank you for the opportunity to review and comment.

-Melissa

Melissa Doperalski
Regional Environmental Assessment Ecologist
Department of Natural Resources, Central Region
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Wildlife Friendly Erosion Control

Wildlife entanglement in, and death from, plastic netting and other man-made plastic materials has been documented in birds (Johnson, 1990; Fuller-Perrine and Tobin, 1993), fish (Johnson, 1990), mammals (Derraik, 2002), and reptiles (Barton and Kinkead, 2005; Kapfer and Paloski, 2011). Yet the use of these materials continues in many cases, without consideration for wildlife impacts. Plastic netting is frequently used for erosion control during construction and landscape projects, and can negatively impact terrestrial and aquatic wildlife populations as well as snag in maintenance machinery resulting in costly repairs and delays. However, wildlife friendly erosion control materials do exist, and are sold by several large erosion control material companies. Below are a few key considerations before starting a project.

Know Your Options

- When erosion control is necessary, select products with biodegradable netting (Natural Fiber, Biodegradable Polyesters, etc.).
- DO NOT use products that require UV-light to biodegrade (also called, "photodegradable"). These do not biodegrade properly when shaded by vegetation.
- Use netting with rectangular shaped mesh (not square mesh).
- Use netting with flexible (non-welded) mesh.
- Wildlife friendly erosion netting costs are often similar to conventional plastic netting.

Know the Landscape

- It is especially important to use wildlife friendly erosion control around:
  - Wetlands, rivers, lakes, and other watercourses.
  - Habitat transition zones (Prairie – Woodland Edges, Rocky Outcrop –Woodland Edges, Steep Rocky Slopes, etc.).
  - Areas with threatened or endangered species.
- Use *plastic* erosion mesh wisely, not all areas with disturbed ground necessitate its use. Do not use *plastic* mesh unless it is absolutely necessary. Other erosion control options exist (open weave textile (OWT), rolled erosion control products (RECPs) with woven natural fiber netting).

Protect Wildlife

- Remember to consult with local natural resource authorities (DNR, USFWS, etc.) before starting a project. They can help you identify sensitive areas and rare species.
- Avoid erosion control materials with plastic netting where possible.
- Use only biodegradable materials, preferably those that biodegrade quickest.

Plains Garter Snake (*Thamnophis radix*) stuck in erosion mesh. Southern Minnesota.

Vole (*Microtus* sp.) found dead in erosion mesh. Southern Minnesota.

Literature Referenced

Barton, C. and K. Kinkead. 2005. Do Erosion Control and Snakes Mesh? *Soil and Water Conservation Society* 60:33A-35A.

Derraik, J.G.B. 2002. The Pollution of the Marine Environment by Plastic Debris: a Review. *Marine Pollution Bulletin* 44:842-852.

Fuller-Perrine, L.D., and M.E. Tobin. 1993. A Method for Applying and Removing Bird-Exclusion Netting in Commercial Vineyards. *Wildlife Society Bulletin* 21:47-51.

Johnson, S.W. 1990. Distribution, Abundance, and Source of Entanglement Debris and Other Plastics on Alaskan Beaches, 1982-1988. *Proceedings of the Second International Conference on Marine Debris* 331-348.

Kapfer, J. M., and R. A. Paloski. 2011. On the Threat to Snakes of Mesh Deployed for Erosion Control and Wildlife Exclusion. *Herpetological Conservation and Biology* 6:1-9.

Minnesota
Historical Society

STATE HISTORIC PRESERVATION OFFICE

September 19, 2012

Mr. William Lynott
Minnesota Pollution Control Agency
520 Lafayette Rd N
St. Paul, MN 55155-4194

RE: EAW – Becker Ash Landfill Expansion
T33 R28 S7 SW
Becker, Sherburne County
SHPO Number: 2012-2765

Dear Mr. Lynott:

Thank you for the opportunity to comment on the above project. It is being reviewed pursuant to the responsibilities given to the Minnesota Historical Society by the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

Due to the nature and location of the proposed project, we recommend that an archaeological survey be completed. The survey must meet the requirements of the Secretary of the Interior's Standards for Identification and Evaluation, and should include an evaluation of National Register eligibility for any properties that are identified. For your information, we have enclosed a list of consultants who have expressed an interest in undertaking such surveys.

We will reconsider the need for survey if the project area can be documented as previously surveyed or disturbed. Any previous survey work must meet contemporary standards. **Note:** plowed areas and right-of-way are not automatically considered disturbed. Archaeological sites can remain intact beneath the plow zone and in undisturbed portions of the right-of-way.

Please note that this comment letter does not address the requirements of Section 106 of the National Historic Preservation Act of 1966 and 36CFR800, procedures of the Advisory Council on Historic Preservation for the protection of historic properties. If this project is considered for federal assistance, or requires a federal license or permit, it should be submitted to our office by the responsible federal agency.

If you have any questions regarding our review of this project, please contact Kelly Gragg-Johnson at (651) 259-3455.

Sincerely,

Mary Ann Heidemann
Manager, Government Programs and Compliance

Enclosure: List of Consultants

MINNESOTA HISTORICAL SOCIETY
State Historic Preservation Office
Contract Archaeologists
Last Updated: 2/21/2012

This listing is comprised of individuals and firms who have expressed an interest in undertaking contract archaeology in the State of Minnesota. It is provided for informational purposes to those who may require the services of an archaeological consultant. Inclusion on the list does not constitute an endorsement of the consultant's professional qualifications or past performance. The SHPO may remove contractors from the list if no work is completed in Minnesota over a two year period. The SHPO reserves the right to reject contract reports if the principal investigator or other contract personnel do not meet certain minimal qualifications such as the Secretary of the Interior's professional qualifications standards (Federal Register 9/29/83).

It is recommended that work references be checked and multiple bids be obtained before initiating a contractual agreement. The SHPO will not recommend specific contractors, but may be able to comment on previous work reviewed pursuant to state and federal standards and guidelines. The SHPO can be contacted at the Minnesota History Center, 345 Kellogg Boulevard West, St. Paul, MN 55102, 651-259-3450.

10,000 Lakes Archaeology, Inc.
220 9th Avenue South
South St. Paul, MN 55075
612/670-6431
gronhovd@10000lakesarchaeology.com
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AECOM Environment
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AMEC Earth and Environmental
109 Woodward Avenue
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AMEC Earth & Environmental
Kari Krause, RPA
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Anthropology Research
University of North Dakota
236 Centennial Drive Stop 7094
Dennis L. Toom
Grand Forks, ND 58202
701/777-2436

ARCH3, LLC
Daniel R. Pratt, M.A.
1386 Idaho Avenue West
St. Paul, MN 55108
651/308-8749
Fax 651/917-9291
arch3llc@gmail.com
www.arch3llc.com

Archaeological Research Services
1812 15th Avenue South
Minneapolis, MN 55404
612/870-9775

Archaeology Laboratory
Augustana College
2032 South Grange Avenue
Sioux Falls, SD 57105
605/274-5493

Bear Creek Archaeology, Inc.
P. O. Box 347
24091 Yellow Avenue
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563/547-4545 FAX 563/547-5403
www.bearcreekarcheology.com

Louis Berger and Associates, Inc.
Attn. Randall M. Withrow
950 50th Street
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Blondo Consulting, LLC
Steven J. Blondo
3939 Sand Hill Road
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Fax 952/890-8065
dalema@bolton-menk.com
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Commonwealth Cultural Resources
Kathryn C. Egan-Bruhy
PO Box 1061
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715/358-5686

Consulting Archaeological Services
PO Box 686
Creston, IA 50801
515/333-4607

Cultural Herage Consultants
Todd Kapler
PO Box 3836
Sioux City, IA 51102-3836
Phone 712/239-9085
Fax 712/239-9086

Duluth Archaeology Center
5910 Fremont Street, Suite 1
Duluth, MN 55807
218/624-5489
archcenter@aol.com
www.dulutharchaeologycenter.com

Florin Cultural Resource Services
N12902 273rd Street
Boyceville, WI 54725
715/643-2918

Foth and Van Dyke, Inc.
Curtis M. Hudak
Eagle Point II
8550 Hudson Boulevard North
Suite 100
Lake Elmo, MN 55042
651/288-8593
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www.foth.com

R.C. Goodwin and Associates
309 Jefferson Highway, Suite A
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HDR One Company
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Historic Preservation Associates
Contact: Timothy Klinger
P.O. Box 1064
Fayetteville, AR 72702
501/442-3779

Jeff Kinney and Associates
PO Box 43
Manvel, ND 58256
701/696-2289

Larson-Tibesar Assoc., Inc.
421 South Cedar Street
Laramie, WY 82070
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Leech Lake Heritage Sites Program
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Cass Lake, MN 56633
218/335-8095

McFarlane Consulting, LLC

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Metcalf Archaeological Consultants
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September 19, 2012

William Lynott
Minnesota Pollution Control Agency
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RE: Becker Ash Landfill EAW Comments

Dear William,

On behalf of Sherburne County (County), thank you for the opportunity to submit comments on the Becker Ash Landfill (Facility) Environmental Assessment Worksheet (EAW). As you may be aware, one scrubber pond facility and five landfill facilities are located in the County. The County currently licenses and regulates the Becker Ash Landfill, Elk River Landfill, Vonco Landfill (closed), and the Vonco II Landfill. In light of the number of solid waste landfills located in the County, it is the County's position that the review and permitting of solid waste landfills should be subject to strict scrutiny to ensure that potential impacts are addressed and minimized to the extent possible, so that the risks and costs associated with hosting solid waste landfills are not borne directly or indirectly by County residents, both in the short and long term.

It is stated or inferred on Page 3 and other parts of the EAW that, with increase in capacity, GRE will be able to consider accepting ash from other MSW energy recovery facilities. The EAW does not evaluate the potential impacts that a change in the waste accepted at the facility could have on the facility and the environment. It is the County's position that a change in waste accepted at the facility may have a significant impact on the facility and the environment. Is it the MPCA's position that the potential impacts to the facility and the environment due to the acceptance of a new waste stream will be minimized through the proposer's permitting process?

Page 4 of the EAW states "*at the expected average fill rate of 61,000 cubic yards annually, the site life would be increased by approximately 75 years*". The landfill has only been in operation for approximately 21 years and extending the life of the facility 75 years is 457 percent longer than its current 21-year operating life. Numerous statements throughout the EAW appear to justify the continuation of current engineering controls and practices because the facility doesn't appear to have impacted the environment yet including, but not limited to the following:

- The final cover currently in use at the facility "*has been shown to sufficiently restrict infiltration into the landfill*";

- *"The effectiveness of these features (double liner and composite cover, sump lysimeters, double-wall forcemains, and storage tanks) in preventing environmental impacts has been demonstrated throughout the BAL (Facility) operating history";*
- *"Monitoring systems and monitoring data, as contained in BAL annual reports to the MPCA, indicate that operation of the BAL has not resulted in any adverse environmental impacts*";
- *"There are no known environmental hazards associated with the proposed project site";* and
- *"The likelihood of a leak from the lined area is remote given the controls by public regulatory authorities as described above".*

These statements seem to imply that no significant environmental impacts have yet been identified at the facility and the MPCA has therefore concluded that there is no potential for environmental impacts over what would be an additional 75 year life-span of the facility. These statements are all problematic to the County since literature in the industry indicates that permitted landfill containment systems that are well-designed and placed may prevent leachate from entering the environment giving the appearance of protecting public health and the environment, but over time they will deteriorate and diminish their effectiveness. In addition, leachate may enter the groundwater as fingerlike plumes, and escape detection in the monitoring wells. Is it the MPCA's position that current engineering controls and practices at the facility eliminates the potential for environmental impacts over the next 75 years solely because other environmental impacts have not yet been detected at the facility? To the extent the MPCA can provide historical information or other data that the current engineering controls and practices will prevent environmental impacts at a solid waste facility over the next 75 years, it would be beneficial to include or reference that information in the final EAW.

It is stated on Page 14 in regards to leachate that "*it is anticipated that neither the chemical composition nor volume of leachate will vary significantly from historical composition or volume*". As discussed above, the EAW anticipates that as a result of the proposed project, the landfill will be able to accept waste from other MSW energy recovery facilities. Yet the EAW does not evaluate the potential impacts of a change in the waste accepted at the facility could have on the facility, specifically the composition of the leachate. This seems inconsistent. If it is the MPCA's position that a change in the waste stream for the facility does not have the potential to change the chemical composition of the leachate, it would be beneficial for the MPCA to reference that supporting information in the EAW. In addition, approximately half of the facility's 20 permitted acres are open right now and it would appear that the proposed height increase would inhibit the ability to construct final cover as quickly as in the past, creating more open acres to collect rainwater. It seems apparent that the volume of leachate will substantially increase as a result of the project. Again, to the extent the MPCA has information supporting its conclusion that expansion of the existing open area will not increase the volume of leachate, that information should be included in the EAW.

If you have any questions regarding this comment letter, please contact me directly at (763) 765-4465.

Regards,

David Katzner

David Katzner
Solid Waste Environmental Specialist