

Perham Resource Recovery Facility Expansion Project

**FINAL ENVIRONMENTAL IMPACT STATEMENT
MARCH 2013**



Prairie Lakes Municipal Solid Waste Authority



**Minnesota Pollution
Control Agency**

520 Lafayette Road North, St. Paul, Minnesota 55155



Minnesota Pollution Control Agency

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March 1, 2013

TO: INTERESTED PARTIES

RE: Perham Resource Recovery Expansion Project
Final Environmental Impact Statement

Enclosed for your information is a copy of the Minnesota Pollution Control Agency (MPCA) Final Environmental Impact Statement (EIS) for the Perham Resource Recovery Expansion Project (Project), Otter Tail County. This document contains the MPCA's response to timely substantive comments submitted to the MPCA on the Draft EIS for the Project, as required by Minn. R. 44110.2700, subp. 1.

The Draft EIS document that was mailed out to interested parties on December 8, 2012, is a part of the Final EIS on the Project.

A public notice of the availability of the Final EIS is being published in the Environmental Quality Board Monitor on March 4, 2013, pursuant to Minn. R. 4410.2700, subps. 4-6. Pursuant to Minn. R. 4410.2800, subp. 2, publication of the public notice begins a 10-day public review period, during which time any person may submit comments on the adequacy of the Final EIS to the MPCA. This comment period will begin March 4, 2013, and expires after the required 10-day comment period on March 18, 2013. If you have further questions regarding this Project, please contact Kevin Kain at 651-757-2482.

Sincerely,

A handwritten signature in black ink, reading "Craig Affeldt", followed by a stylized arrow pointing to the right.

Craig Affeldt
Supervisor
Environmental Review Unit
Resource Management & Assistance Division

CA:bt

Enclosure

PERHAM RESOURCE RECOVERY FACILITY
EXPANSION FACILITY
Final Environmental Impact Statement

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INTRODUCTION

This Environmental Impact Statement (EIS) was prepared by Prairie Lakes Municipal Solid Waste Authority (PLMSWA) with oversight, review, and approval by the Minnesota Pollution Control Agency (MPCA) as the Responsible Governmental Unit (RGU). Minn. R. 4410.4400, subps. 1 and 13, Solid Waste, Item C, require that an EIS be prepared for the construction or expansion of a mixed municipal solid waste (MSW) energy recovery facility or incinerator with a capacity of 250 or more tons per day (tpd) of input. The proposed project does not meet or exceed this EIS threshold. PLMSWA chose to voluntarily prepare an EIS.

The Final Environmental Impact Statement (Final EIS) for the Perham Resource Recovery Expansion Project (Project), Otter Tail County, contains the MPCA's response to timely substantive comments submitted to the MPCA on the Draft EIS for the Project. The Final EIS also includes additional information regarding the Material Recovery Facility, the Steam and Electricity Generation,- and Wastewater, as required by Minn. R 4410.2700, subp. 1.

The MPCA distributed copies of the Final EIS on March 1, 2013, in a manner consistent with Minn. R. 4410.2700, subp. 3. Copies were provided to all persons receiving copies of the Draft EIS, all parties who submitted comments on the Draft EIS, and all persons requesting copies of the Final EIS. The public comment period for the Final EIS ends at 4:30 p.m. on March 18, 2013.

A notice of availability of the Final EIS was published in the *EQB Monitor* on March 4, 2013, and a press release was issued to newspapers in Becker, Otter Tail, Todd, and Wadena Counties on March 4, 2013. These notices indicated the locations at which copies of the Final EIS were available for review as required by Minn. R. 4410.2700 subp. 4 and 5.

PERMITS AND APPROVALS

The EIS provides information and evaluation on potential environmental impacts resulting from the proposed Project, as well as identifies possible need for additional mitigation measures. In this case the EIS examines air emissions and air quality, water use, wastewater, traffic, noise, and solid waste. The EIS is not a decision-making document, but is to be used by governmental units as information for the permitting process. No permits or approvals can be issued until environmental review is completed, including an EIS Determination of Adequacy by the MPCA Citizens' Board. The permits and approvals required for the proposed Project are listed in Table 1-2.

Table 1-2. Permits and Approvals for the Proposed Project

Unit of Government	Type of Application	Status
<i>Federal</i>		
Federal Aviation Administration (FAA)	FAA Notification Form 7460-1	To be obtained, if needed
<i>State of Minnesota</i>		
Minnesota Pollution Control Agency (MPCA)	National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Industrial Wastewater Permit	To be amended
	NPDES/SDS Stormwater Construction Permit	To be applied for
	Air Emissions Permit	To be amended
<i>Local</i>		
City of Perham	Building Permit and Zoning Certificate	To be obtained
	Conditional Use Permit	To be obtained

There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

1. PROJECT DESCRIPTION

Through a joint powers agreement between Otter Tail, Becker, Todd, and Wadena Counties, the Prairie Lakes Municipal Solid Waste Authority (PLMSWA) owns and operates a waste-to-energy facility in Perham, Minnesota. The Perham Resource Recovery Facility (PRRF) consists of four major components: 1) waste receiving, processing, and storage; 2) combustion; 3) energy generation (i.e., steam and electricity); and 4) air pollution control equipment. The PRRF receives municipal solid waste (MSW) on a regular basis from incoming trucks that unload in a tipping building. The delivered waste is inspected for removal of bulky waste and other unprocessable materials, as well as unacceptable waste.

The existing PRRF has two municipal waste combustion (MWC) units (the North Unit and the South Unit) that burn MSW and one gas-fired auxiliary boiler. Currently, the flue gases from both combustion units are tied together and first flow through a single waste heat boiler to generate steam, and then through air pollution control (APC) equipment. Each combustion unit has the capacity to operate individually at a rate up to 100 tons per day (tpd) expressed as an annual average. However, the existing waste heat boiler and APC equipment limit the total waste combustion capacity of both units to 116 tpd. The PRRF processes approximately 35,000 tons per year (tpy) of MSW, which is burned to produce steam. Approximately 300,000,000 pounds of steam is produced annually and sold to local industries.

PLMSWA is proposing to expand the facility by adding a second waste heat boiler, a second APC system train, and associated equipment, as well as adding a Materials Recovery Facility (MRF). This would increase PRRF's MSW processing capacity from 116 tpd to 200 tpd which would be equivalent to a design capacity of 73,000 tpy. The PRRF currently processes approximately 35,000 tpy. The proposed Project is anticipated to process approximately 55,000 tpy to produce 300,000,000 pounds of steam that is currently sold to local industries.

By adding a second waste heat boiler and associated APC system to the existing south combustion unit, each combustion unit would have the capacity to combust up to 100 tpd of waste. The APC system would include a lime injection system for sulfur dioxide (SO₂) and hydrogen chloride (HCl) control, activated carbon injection for mercury control, and a fabric filter baghouse for particulate control. The new boiler and APC system would be installed on the west side of the existing PRRF.

The PRRF does not currently have an MRF. The MRF would presort incoming material in an effort to remove certain undesirable waste and recyclable components prior to combustion of the remaining material. The MRF is expected to remove and recycle approximately five to eight percent of the incoming MSW in the form of old corrugated cardboard (OCC), ferrous metal, and aluminum. The fines are separated through a trommel screen and further processed through a screen and classifier to convey organics to the combustors and remaining fines to a dumpster for disposal. The middlings are sent to a belt magnet and the eddy current separator. The belt magnet would remove ferrous material, while the eddy current separator would remove non-ferrous metals, such as aluminum. Manual sorting could be used to recover OCC, and a baler would bail recovered material such as corrugated cardboard and aluminum cans for recycling. A new fence would be installed to the west and south of the proposed MRF building based on surveyed property boundaries.

1.1 Materials Recovery Facility

To enhance the effectiveness of the facility operations and the MRF, the following language has been included in the draft Air Emissions Permit:

All incoming MSW shall be processed, except for instances when the Permittee has determined by pre-approval that a hauler's specific loads do not need to be processed.

Definition of "processed mixed municipal solid waste"

"Processed mixed municipal solid waste" shall be defined as mixed municipal solid waste, as provided in Minn. Stat. section 115A.03, subdivision 21, which has been:

- 1) Evaluated by a trained inspector; and,
- 2) Any objectionable materials, as identified by a trained inspector, have been physically removed and shall not be combusted.

Definition of "objectionable material"

"Objectionable material" shall be defined as that material which is not conducive to the combustion process and set aside for further processing and/or disposal. This definition includes likely mercury-containing materials. Objectionable materials shall not be combusted.

Pre-approved haulers

After initial start-up of the South Unit, as defined by this permit, a trained inspector may allow pre-approved waste loads to bypass processing upon the following conditions:

- 1) The source of the particular load is known by the trained inspector for consistent waste loads and is not likely to contain any objectionable materials.
- 2) Following startup of the South Unit, the trained inspector shall inspect an incoming load to verify that it is a known consistency waste load that is not likely to carry any objectionable materials.
- 3) At least annually, the trained inspector shall inspect an additional incoming load from that hauler to confirm that it remains a known, consistent waste load that is not likely to contain any objectionable materials.
- 4) The trained inspector shall record, at a minimum, the following information for each such inspected solid waste load:
 - the date of delivery
 - the source of the delivery
 - a reasonable estimate of the quantity of the delivery
 - a description of the load material
- 5) The inspection information shall be recorded and kept on-site and be available for inspection.

Operation and maintenance plan

Within the operation and maintenance plan (O&M) plan, the Permittee shall include a section that defines what objectionable materials have been identified, as well as specific criteria which shall be used to identify materials that may be added to the objectionable materials list. Within 180 days after permit issuance, the Permittee shall submit the O&M plan's objectionable material provisions to the Commissioner for approval. The Permittee shall, annually, update the O&M plan's objectionable material list, the pre-approved hauler list, and trained inspector list.

Recordkeeping of inspector training

As part of the operating record, the identity of all personnel who received training to inspect unprocessed MSW for the presence of objectionable materials shall be recorded along with date and duration of the training. The O&M plan shall contain the names for the trained inspectors.

1.2 PRRF Steam/Electricity Generation

Overall, the proposed Project would increase the amount of steam generated from the combustion of MSW by adding another waste heat boiler and associated APC equipment. However, the total amount of steam exported (i.e., sold to steam customers) would not change, and therefore remain at approximately 300,000,000 pounds per year. The amount of steam sold is driven by the demand of local consumers. The facility will be capable of generating additional steam which could be used to generate electricity.

The PRRF currently has three energy generation contracts. Two of the three contracts are steam provider contracts which require that PRRF provide 100 percent of customers' steam needs. In addition to the requirement to provide 100 percent of the customers' steam needs, these contracts further require that a total of 224,880,000 pounds of steam per year are available for these two customers from the waste heat recovery boilers. The third contract is with a regional electric energy provider. This contract provides that PRRF is a peaking energy provider, meaning that if at any given time the regional electric energy provider cannot meet its energy generating requirements, it can contact PRRF and PRRF is required to provide electric energy to the regional provider on an as needed basis. This contract has been in place since 2002 and PRRF has never been called upon to provide peaking energy. The steam powered electric generator is 4.2 megawatts in size.

Under the current conditions, PRRF generates an average of approximately 670,000 pounds per day of waste heat boiler generated steam. This equates to between approximately 208,000,000 and 220,000,000 pounds per year, assuming facility availability of approximately 85 – 90 percent of the time. Currently PRRF supplies steam customers with slightly in excess of 60 percent of their total steam needs with steam supplied by the waste heat boiler. Current customer steam needs are approximately between 95,000,000 and 107,000,000 pounds per year more than PRRF is currently capable of generating.

Under the expanded scenario, the total waste heat boiler steam generating capacity would not double but would instead be limited by the increased waste available for combustion from approximately 35,000 tpy to approximately 55,000 tpy or an increase of approximately 57 percent. Both waste heat boilers would have a similar steam generating capacity of approximately 28,000 pounds of steam per hour, the total increased waste heat boiler steam generating capacity of PRRF would increase from approximately 208,000,000 pounds of waste heat boiler steam per year to approximately 327,000,000 pounds per year.

PRRF has assumed, as a part of their facility pro-forma evaluations, that the 327,000,000 pounds of waste steam is available for sale or available for generating electricity. It should be noted that only the steam generated by the waste heat boilers would be available to generate electricity since the turbine generator requires super-heated steam and super-heated steam is not available from the auxiliary boiler. In addition, it is worthwhile to note that the cost of steam to the PRRF steam customers is based on a formula which is based on those customers purchasing natural gas and operating their own gas fired boilers. Because of these factors, the pro-forma scenario associated with the use of the waste heat boilers for generating electricity, combined with the use of the auxiliary boiler to supply steam customers on a daily basis, results in an unfavorable economic return. Since the PLMSWA's primary focus has been and continues to be the management of MSW, and since steam or electricity sold to any

of the three PRRF customers is primarily dependent on the purchase of either steam or electricity generated from the waste heat boilers, PLMSWA is not considering any scenario which would include supplying all three customer's needs on a daily basis.

In relation to the discussion above, PLMSWA has considered several different operating scenarios. One operating scenario assumes continuing as has been done in the past and selling steam generated at PRRF to customers that use the steam in their production processes. An additional operating scenario assumes converting the steam to electricity and selling electricity to a regional electric energy provider. Currently, PLMSWA has dismissed the sale of electricity for two primary reasons: first, it costs PLMSWA additional time and effort to turn steam generated into electricity. Second and likely most important, is that the contracts for purchase of either steam or electricity are based on the current value of natural gas. In the case of the steam customers; if PRRF does not supply them with process steam those customers would need to generate their own steam and their boilers operate using natural gas. In the case of the regional electric energy provider; they compete on the open market as it relates to the sale of their electricity. Right now the price of natural gas is at all-time lows and outside of major electric generating plants; natural gas is the most competitive fuel source and is currently driving the market for small electrical generators. With that in mind, and based on PLMSWA's current contract negotiations, it is not economically feasible for PLMSWA to sell electricity rather than selling steam.

The air emissions analysis that was done for the EIS assumed that both waste to energy boilers and the auxiliary boiler were operating at full capacity 24 hours a day 7 days a week. In addition, wastewater generation from both domestic and industrial sources was calculated at maximum flow generation.

2. AIR QUALITY

2.1 Stationary Source Air Emissions

The construction of the new waste heat boiler requires the PRRF to meet emission limits required by New Source Performance Standards. The potential to emit emission levels are below prevention of significant deterioration significance levels.

Air emissions are mitigated at the source with APC equipment. The APC system includes:

- a dry lime injection system or equivalent for acid gas control
- a carbon injection system for mercury control
- a fabric filter baghouse for particulate control

The system ensures that actual emission levels remain below the permitted levels. The impact of the stationary source emissions was evaluated using air dispersion modeling to estimate air concentrations of emitted substances. PLMSWA used the MPCA's Air Emissions Risk Analysis (AERA) protocol and human health risk assessment (HHRA) to evaluate the impact of the PRRF on human health, and adverse impacts are unlikely.

2.2 Vehicle-Related Air Emissions

Emission levels from traffic would change, but the impacts were assessed using the AERA protocol and HHRA. Results show no significant adverse impact.

2.3 Air Quality Modeling and Risk Assessment

Proposed project: The modeled concentrations from the proposed Project did not exceed the significant impact levels (SILs) for SO₂, CO, and PM₁₀. Based on the modeling analyses performed, the contribution from these pollutants is considered to be insignificant.

Existing project plus proposed project: For NO₂, the total facility modeled concentrations after the proposed Project were above the significance level so a cumulative impacts analysis was performed to assure compliance with the National Ambient Air Quality Standards (NAAQS)/Minnesota Ambient Air Quality Standards (MAAQs). A refined analysis was warranted based on modeled PM_{2.5} concentrations from the total facility to assure compliance with the NAAQS/MAAQs. A cumulative impact analysis was also performed for lead (Pb) since there is no significance level established for this pollutant.

Since the predicted concentrations from the NO₂, PM_{2.5} and Pb refined analyses, including background concentrations, were below the NAAQS/MAAQs thresholds, the effects from the proposed project are acceptable and are not expected to have a detrimental effect on public health. No mitigation would be necessary for any criteria pollutants.

In response to the letter from the Minnesota Department of Health (Appendix A), the following changes (**in bold**) are made to the text of the Draft EIS as a result of comments received.

- a. Add the bold text to the following sentence in Item 29 on page 373 of the Draft EIS. "The toxicity values used for dioxins and furans include an incorporation of early childhood exposure, and therefore the 1.6 scalar is not appropriate." It should say "The toxicity values used for dioxins and furans already **includes a consideration** of incorporating an early childhood exposure, and the 1.6 scalar is not appropriate."
- b. Add the bold text to the following statement located in the first paragraph on page 179 of the Draft EIS. "As noted in MPCA's AERA-26 form text, when following the hierarchy, early-life sensitivity adjustments are already made for some pollutants when developing the toxicity values. **If the toxicity value for a linear carcinogen was developed without considering early-life sensitivity and it is a risk driver (with the EPA's default adjustment of 1.6), then MDH would be asked for guidance on whether to include and adjustment or not. None of the risk drivers in the Perham analysis met this criteria.**"
- c. Add the bold text to the following paragraph located in Item 9.1.6 on page 185 of the Draft EIS. "According to the Human Health Risk Assessment Protocol (September 2005), the total concentration of chlorine in waste is important in the amount of PCDD/PCDF that will form in combustion. PCDD/PCDF emission rates varied by more than 284-fold between different facilities according to a 1996 study cited in the HHRAP. Also, HHRAP notes that fly ash can catalyze the reactions to form PCDD/PCDF. The projected project will feature a MRF that is designed to remove fines, which could reduce the amount of fly ash produced per ton of MSW burned. This would further reduce PCDD/PCDF production at the facility. The production mechanisms of PCDD/PCDF are uncertain so estimating future emissions is difficult." One PCDD/PCDF uncertainty that may affect the variability of PCDD/PCDF formation and subsequent emission is the impact of copper (and to a lesser extent other metals) on PCDD/PCDF formation. Copper and other metals have been shown to promote the formation of PCDD/PCDFs. Therefore, incineration of large amounts of chromium copper arsenate (CCA), **alkaline copper**

quaternary preservations (ACQ), and other metal-treated woods at different times may facilitate formation of greater amounts of PCDD/PCDFs or modify the formation profile. The significance of this impact is not known.

3. WATER USE AND WASTEWATER

3.1 Water Use

Water used at the PRRF comes from the Perham municipal water supply. The city of Perham (City) pumps water in compliance with its Water Appropriations Permit issued by the Minnesota Department of Natural Resources (MDNR). This permit allows the City to pump up to 500 million gallons (MG) per year. Over the past two years (i.e., 2010 and 2011), the average water pumped each year was approximately 410 MG.

The proposed project would not cause the City to exceed their allowed maximum under their MDNR Water Appropriations Permit limits. Additionally, there is no permit required for water use from the City. The PRRF is billed monthly for its municipal water use. However, the City is required to comply with an MDNR Water Appropriations Permit, which regulates the maximum amount of water that the City can pump each year for its municipal wells.

There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

3.2 Wastewater

The PRRF generates two types of wastewater, domestic and industrial.

Domestic wastewater is made up primarily of drinking water, water used for sanitary use, and water for maintenance activities at PRRF. This water is collected and sent to the City's wastewater treatment plant. There were no changes to the Draft EIS regarding domestic wastewater. No comments were received and no corrections needed to be made.

3.2.1 City Wastewater Treatment Facility

The City is in the process of expanding its wastewater treatment facility. The planned increase in design would be more than adequate to handle the additional wastewater that will be generated as result of the proposed expansion project. There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

3.2.2 Industrial Wastewater

The second type of wastewater that is generated is industrial wastewater. Incoming water from the City is run through a purification system, which includes a reverse osmosis system and a water softening system, before being used in the steam production process.

The reject water from the reverse osmosis system is considered industrial wastewater. The industrial wastewater is discharged to the City's stormwater sewer system and is regulated by the MPCA through

its National Pollutant Discharge Elimination System (NPDES) Permit. The industrial wastewater discharge from PRRF will continue to be regulated by the MPCA after the expansion. The City's stormwater system discharges to the Otter Tail River where the river crosses under Minnesota Highway 10 on the east side of town. The river flows south to Rush Lake.

The bold language below has been added to this paragraph located on page 44 and 45 of the Draft EIS.

"Persistent bioaccumulative toxic chemicals (PBTs) may be emitted. Therefore, nearby fishable water bodies need to be evaluated. Figure 13 shows fishable water bodies in the area. MPCA considers a water body "fishable" if it contains water year-round in a year receiving at least 75 percent of normal annual precipitation. There are two such water bodies within a 3 km radius of the Facility: the Otter Tail River and Little Pine Lake. The Otter Tail River, while declared fishable due to its open water, is not accessible for sport fishing within 3 km of the facility. **According to the Department of Natural Resources the Otter Tail River is a diverse tributary for both fish species and mussels.** The southernmost tip of Little Pine Lake is within 3 km of PRRF and is fished, especially for walleye. Therefore, mercury effects on Little Pine Lake were evaluated as the potentially most impacted water body."

Please see examples of the discharge monitoring reports, Attachments 1 through 3.

Please see examples of the quarterly testing reports, Attachments 4 through 9.

According to MPCA records, there are two National Pollutant Discharge Elimination System/State Disposal System permitted discharges to the city of Perham's stormwater system, Bongard's Creamery and the PRRF.

PRRF – Reverse Osmosis Reject Water
Max flow 200,000 gpd
Current average flow 34,500 gpd
Effluent limits:
Flow
pH

Reporting requirements:

Flow	Bicarbonates	Calcium
Total chloride	Hardness	Magnesium
pH	Potassium	Sodium
Salinity	Total dissolved solids	Specific conductance

Bongard's - Non-contact cooling water
Maximum flow 2 million gpd
Average daily flow 700,000 gpd
Effluent limits:
Carbonaceous Biological Oxygen Demand
Total residual Chlorine
pH
Total Suspended Solids
Temperature

Reporting requirements:

Flow	Total residual chlorine	Hardness
Magnesium	Total ammonia nitrogen	Potassium
Sodium	pH	Total suspended solids
Specific conductance	Total sulfate	Temperature

4. TRAFFIC

The projected increase in traffic volumes from the proposed project would not require changes to roads or intersection controls within the industrial park, County Highway 80, or the BNSF railway crossing. The proposed project would not significantly affect traffic volumes or patterns within the vicinity of the PRRF, and therefore would not require additional improvements or controls.

There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

5. NOISE

Based on the calculations and evaluation in the Noise Study, the proposed Project at the PRRF would not generate additional audible noise in the adjacent residential areas. The proposed Project would potentially reduce noise generated from the PRRF by enclosing four pieces of processing equipment that are currently outside.

Additionally, the proposed Project would keep noise levels below the industrial standard as do current operations. The PRRF operates under a Part 70 Air Emissions Permit administered through the MPCA. This permit regulates state noise standards at PRRF and if necessary, would enforce these standards with the proposed Project through an amended permit for the PRRF.

There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

6. SOLID WASTE MANAGEMENT

The proposed Project serves the identified needs of the region and provides an alternative solid waste management option for individual counties (i.e., Becker, Otter Tail, Todd, and Wadena Counties) that is ranked higher on the *Minnesota Waste Hierarchy* than landfilling. Implementation of the proposed Project is also consistent with recommendations in the *2009 Solid Waste Policy Report* by providing continued local leadership and creating strong intergovernmental partnerships and regional governments that can effectively manage solid waste. The proposed Project provides these benefits to the region as well as reused solid waste for a beneficial purpose, reduces the amount of MSW disposed of in landfills, and also increases the lifespan of existing landfills in the region.

The operation of the PRRF and the proposed Project addresses Minnesota Waste Policy by creating energy from waste. Overall, the five goals listed in Minn. Stat. 115A.02a would all be met by the proposed Project in some way. The proposed Project would allow greater separation and recovery of materials prior to using the waste to produce steam (i.e., energy) with the use of the MRF. Additionally, the PRRF is a joint effort between four counties, which allows coordination of solid waste management among political subdivisions.

The PRRF operates under both an MPCA approved Solid Waste Permit (116H-85-OT-1) and a Part 70 Air Emissions Permit (AQ Facility ID No. 11100036). As part of the proposed Project, the Part 70 Air Permit for PRRF is being amended simultaneously with this EIS. The solid waste management plan and permit for PRRF will be updated and amended as necessary. Through these permitting processes and requirements, the PRRF is complying with all applicable state rules.

There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

7. ECONOMIC AND SOCIAL IMPACTS

The PRRF currently employs 15 full-time and part-time employees that work in shifts, 7 days per week, 24 hours per day. Most employees work during the weekdays when the PRRF is receiving loads of MSW. The proposed Project would increase the number of employees to 27 in order to operate the MRF and handle the additional MSW loads from the increased processing capacity. Under the proposed Project, employees working in the MRF would recover undesirable wastes and fines, including glass and grit, ferrous (magnetic) metals, and non-ferrous metals from the MSW at manual and mechanical picking stations.

The proposed Project would allow an increased amount of MSW from the four-county area to be hauled to the PRRF while decreasing the distance haul trucks travel to dispose of MSW. Currently, most of the waste from the four-county area is sent to the landfills out of Minnesota at a distance of over 100 miles. Haulers in northeast Otter Tail County and Wadena County are able to haul directly to the PRRF. Haulers outside of the 25 to 30 mile radius around the PRRF deliver first to a transfer facility, and then the waste is hauled to the PRRF for processing.

Recreational resources for the City were also reviewed. There are no recreational resources in close proximity to the PRRF, and therefore none are anticipated to be effected during construction or operation of the proposed Project. Additionally, development of new recreational resources is not planned as of the publication date of this EIS.

There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

8. MITIGATION MEASURES

Mitigation measures to be implemented by the PLMSWA include the following:

- PLMSWA will take a long-term mercury limit of 41 µg/dscm which is less than the current long-term standard to which PRRF is subject (60 µg/dscm, Minn. R. 7011.1229). This limit was determined using MPCA's Mercury Risk Estimation Method (MMREM), which estimates the increase in hazard from estimations of increased mercury in fish tissue. MMREM assumes that someone eats 4-5 meals per week for 52 weeks per year. The proposed long-term mercury limit is realistic for PRRF to achieve based on a history of lower stack test results and would reduce the hazard quotient from the proposed project to less than 1. PRRF would still also be subject to the short-term limit of 100 µg/dscm (Minn. R. 7011.1229), and 0.08 mg/dscm based on New Source Performance Standards.

- PLMSWA will take a long-term dioxin/furan limit for total PCDD/PCDF of 20 ng/dscm for the North Unit. This is less than the current long-term standard to which this boiler is subject (125 µg/dscm, Federal Rule 40 CFR 62 Subpart JJJ, Federal Plan Requirements for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999). This limit is based on results from the HHRA. The new south unit will have a long-term dioxin/furan limit for a total PCDD/PCD of 13 ng/dscm.
- PLMSWA intends to plant trees along the northern property boundary between the residences and PRRF. The primary objective is to improve the area aesthetically, but an added benefit of the trees is reduced air pollution at the residences, including dust control. Recent research indicates trees, bushes, and vegetation can reduce street level concentrations in urban areas of NO₂ and PM by enhancing deposition of air pollutants.
- Relocation of the ID fan, drum vent, pulse poppets, and the turbine drive feedwater pump vent to inside of the PRRF would result in a reduction in noise generation from those sources. The net effect of the proposed project creating one new noise source while enclosing four existing noise sources is anticipated to be a decrease in overall noise generated by PRRF from the proposed project compared to existing noise levels.

There were no changes to the Draft EIS regarding this issue. No comments were received and no corrections needed to be made.

Minnesota Pollution Control Agency

Perham Resource Recovery Facility Expansion Project

LIST OF COMMENT LETTERS RECEIVED

1. Chuck Johnson, Director, Perham Economic Development Authority, letter received January 3, 2013.
2. Bridget Miller, Minnesota Department of Transportation, e-mail received January 8, 2013.
3. Michele Ross, Minnesota Department of Health, letter received by e-mail January 18, 2013.

RESPONSES TO COMMENTS ON THE EAW

1. **Chuck Johnson, Director, Perham Economic Development Authority, letter received January 3, 2013.**

Comment 1-1: Commenter stated support for the project.

Response: No response necessary.

2. **Bridget Miller, Minnesota Department of Transportation, e-mail received January 8, 2013.**

Comment 2-1: Commenter had no comment on the proposed project.

Response: No response necessary.

3. **Michele Ross, Minnesota Department of Health, letter received by e-mail January 18, 2013.**

Comment 3-1: The commenter asked about the facilities carbon injection/control rate requirements.

Response: The carbon injection rate required by the permit can change but the injection rate must always be greater than the feed rates used during the most recent mercury or dioxin/furan compliance test.

Comment 3-2: The commenter asked for clarification about the statement "No additional adjustments were made to the toxicity values to incorporate early-life sensitivity. As noted in the Minnesota Pollution Control Agency's (MPCA) AERA-26 form text, when following the hierarchy, early-life sensitivity adjustments are already made when developing the toxicity values."

Response: The procedural description is correct when it states "No additional adjustments were made to the toxicity values to incorporate early-life sensitivity." This is because no additional adjustments were necessary. Refined modeling showed that the only carcinogens above risk driver levels were

dioxin/furans. In a 2003 memo (<http://www.health.state.mn.us/divs/eh/risk/guidance/air/dioxins.html>) the Minnesota Department of Health (MDH) recommends that U. S. Environmental Protection Agency's (EPA) early-life adjustment of the cancer potency not be made to dioxin/furans.

The MPCA realizes that some of the confusion around this statement might have been a result of the AERA Impact Statement in Appendix C on page 14 of 21 stating that "The toxicity values used for dioxins and furans include an incorporation of early childhood exposure, and therefore the 1.6 scalar is not appropriate." It should say "The toxicity values used for dioxins and furans already **includes a consideration** of incorporating an early childhood exposure, and the 1.6 scalar is not appropriate."

The commenter also questioned the statement "As noted in MPCA's AERA-26 form text, when following the hierarchy, early-life sensitivity adjustments are already made when developing the toxicity values." The intent of the statement was to refer generally to calculations like those seen in the MDH's Trichloroethylene <http://www.health.state.mn.us/divs/eh/risk/guidance/air/tce.html> and 1, 3 Butadiene <http://www.health.state.mn.us/divs/eh/risk/guidance/air/butadiene13.pdf> air reference values. A more accurate summary of the standard practice would be to say

"As noted in MPCA's AERA-26 form text, when following the hierarchy, early-life sensitivity adjustments are already made for some pollutants when developing the toxicity values. If the toxicity value for a linear carcinogen was developed without considering early-life sensitivity and it is a risk driver (with the EPA's default adjustment of 1.6), then MDH would be asked for guidance on whether to include an adjustment or not. None of the risk drivers in the Perham analysis met this criteria."

Comment 3-3: The commenter states that the "HHRAR does not appear to have a single cancer risk value that is calculated for people exposed during childhood and into adulthood. As a result, it appears that this could bias calculated cancer risks low –by a small factor".

Response: The method used to calculate the adult cancer risks in the HHRAR followed standard risk assessment guidance and used standard risk assessment software. The risk assessment software used in this EIS (IRAP) is based on EPA's Human Health Risk Assessment Protocol (HHRAP) for Hazardous Waste Combustion Facilities (finalized September 2005). In this analysis, the highest risks came from dioxin/furans from beef and dairy ingestion. As explained on page 12 of 22 in Chapter 6 of the HHRAP guidance http://www.epa.gov/region6/6pd/rcra_c/protocol/protocol.htm, the adult cancer risk estimates from ingestion include time weighted average consumption rates from age 7 to 70. Depending on what is assumed as an average consumption rate from birth to age 6, the risk would either go up or down. If the consumption rate for ages 6 to 11 is assumed for birth to 6, than the adult cancer risk (including birth to age 6) would increase by about 10 percent. If the default consumption rate recommended by HHRAP is used, than the adult cancer risk (including birth to age 6) would decrease. Uncertainty around exposure assumptions is inherent in all risk assessments. Page 15 of 21 of the AERA Impact statement in Appendix C explains that "The exposure assumptions may over or under predict actual exposures."

Comment 3-4: The commenter states that additional uncertainties in dioxin/furan emissions that were not specifically listed in the uncertainty section.

Response: The additional uncertainty related to dioxin/furan formation is noted. The overall uncertainty about dioxin/furan emissions is one reason why the permit requires the facility to test at or below the required dioxin/furan permit limits, which were used in the risk analysis.

Comment 3-5: Regulated municipal solid waste (MSW) incinerators in Minnesota contribute very little pollution to the environment.

Response: No response necessary

Comment 3: Among the worst sources of pollution to the environment are “burn barrels” and other uncontrolled burning, especially uncontrolled burning of plastics

Response: The Perham Resource Recovery Facility (PRRF) currently accepts plastic bale wrap and other farm-based plastic, such as feed/supplement bags. These agricultural plastics are received at the PRRF via permitted transfer stations in the four-county region (i.e., Becker, Otter Tail, Todd, and Wadena Counties) from which permitted haulers pickup and transport waste to the PRRF.

Additionally, each county in the four-county region enforces a burning ordinance based on Minnesota Statute 88.71-Open Burning Prohibitions, which makes it illegal to dispose of household or farm waste by burning or on-site burial. All four counties’ solid waste ordinances prohibit the burning of all solid waste, including paper, cardboard, and illegal materials, such as plastic.

Comment 3: Are there ways that the resource recovery facilities can be encouraged to help reduce or eliminate this waste stream?

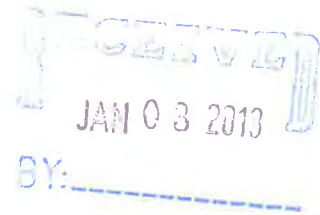
Response: The counties’ solid waste management programs encourage recycling of plastic and provide information on the county websites about recycling and drop off locations for recyclables. Leaders involved with solid waste management in the region strive to stay current with recycling and other waste management options. At this time, options for recycling of agricultural plastics appear limited in the region. However, the PRRF will continue to accept these plastics as farm operators deliver them to permitted transfer stations throughout the four-county region.

CITY OF PERHAM

125 Second Avenue NE * PO Box 130 * Perham, Minnesota 56573 * Phone (218) 346-4455 * Fax (218) 346-9364

January 2, 2012

Kevin Kain,
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Mn 55155-4194



Dear Kevin,

This is in support of expeditious issuance of permits necessary for expansion of the Perham Resource Recovery Facility (PRRF), as requested by the Prairie Lakes Municipal Solid Waste Authority.

This proposed \$28 million expansion has significant economic ramifications for the City of Perham, which has been integrally involved with PRRF for 14 years:

- It creates a significant number of construction jobs during the 18 months of construction
- It creates an estimated 15 FTE new jobs, to be added to the existing base of 15 FTE.
- It assures a permanent supply of affordable steam for two of Perham's major industries, Tuffy's Pet Foods (195 jobs) and Bongards Creamery (120 jobs). Both companies purchase ag commodities regionally and sell finished products nationally.
- It provides an improved long-term solid waste solution for Perham residents, as well as residents of Otter Tail, Becker, Wadena and Todd Counties.

This project will provide industry-leading solutions in terms of air quality, product recycling and energy re-capture, and deserves to move forward as quickly as possible.

Sincerely yours,

Chuck Johnson
Director, Perham Economic Development Authority

Kain, Kevin (MPCA)

From: Moynihan, Debra (DOT)
Sent: Tuesday, January 08, 2013 8:40 AM
To: Slagle, Holly (DOT); Kain, Kevin (MPCA)
Subject: FW: Perham resource Recovery Facility Expansion

For your information....

From: Miller, Bridget (DOT)
Sent: Monday, January 07, 2013 2:36 PM
To: Moynihan, Debra (DOT)
Subject: Perham resource Recovery Facility Expansion

The draft EIS for the above referenced project and has no comments. Thank you for the opportunity to review.

Bridget Miller

Bridget Miller, P.E.
District 4 Planning Director and Consultant Coordinator
1000 Hwy 10 West
Detroit Lakes, MN 56501
218-846-3619



Protecting, maintaining and improving the health of all Minnesotans

January 18, 2013

Kevin Kain
Principal Planner, Environmental Review Unit – 4th Floor
Resource Management and Assistance Division
Minnesota Pollution Control Agency
520 Lafayette Road North
Saint Paul, MN 55155-4194

Dear Mr. Kain,

Thank you for providing the Minnesota Department of Health (MDH) with the opportunity to comment on the Environmental Impact Statement (EIS) for the Perham Resource Recovery project. The bulleted comments and questions below relate to the Human Health Risk Assessment Report (HHRAR) provided in Appendix C of the EIS. Please contact Carl Herbrandson at carl.herbrandson@state.mn.us or (651) 201-4906 for questions related to these comments and questions.

1. The new permit (as described) appears to lock in a limit of 41 ug/dscm for mercury emissions. Is the facility required to maintain a specific carbon injection/control rate? Or can they modify their carbon injection rate to raise their mercury emissions closer to the potential to emit (PTE)?
2. The HHRAR on the top of page 6-4 states, "No additional adjustments were made to the toxicity values to incorporate early-life sensitivity. As noted in MPCA's AERA-26 form text, when following the hierarchy, early-life sensitivity adjustments are already made when developing the toxicity values." Can clarify that this procedural description is correct? In most cases where the reference value is not tied to a specific exposure, MDH does not include an early-life adjustment in air reference values. This is because exposure and potency adjustments need to be coordinated through the appropriate exposure period. In some instances this is the first 33 years of life. In other instances it may be for 70 years.
3. Related to the issue described in #2, above: the HHRAR describes childhood and adult cancer risk as two separate, unconnected diseases. For child cancer, in the HHRAR, the child is only exposed during childhood, and yet the averaging time for cancer risk is for a lifetime. Similarly, adult cancer is calculated without a childhood exposure. Adulthood is longer than childhood so the exposures for the adult cancer calculations are longer. As a result, the model-calculated child cancer risk in the HHRAR is always less than the adult cancer risk even though children typically have higher exposures and are more sensitive to many carcinogens. The HHRAR does not appear to have a single cancer risk value that is calculated for people exposed during childhood and into adulthood. As a result, it appears that this could bias calculated cancer risks low – by a small factor.
4. The HHRAR includes a large section that describes uncertainties of many parts of the analyses (Section 9), including polychlorinated dibenzo-dioxin and polychlorinated

dibenzo-furan (PCDD/F) emission uncertainties (Section 9.1.6). One PCDD/F uncertainty that may affect the variability of PCDD/F formation and subsequent emission is the impact of copper (and to a lesser extent other metals) on PCDD/F formation. Copper and other metals have been shown to promote the formation of PCDD/Fs. Therefore, incineration of large amounts of chromium copper arsenate (CCA), alkaline copper quaternary preservations (ACQ), and other metal-treated woods at different times may facilitate formation of greater amounts of PCDD/Fs or modify the formation profile. The significance of this impact is not known.

Additionally, regulated municipal solid waste (MSW) incinerators in Minnesota contribute very little pollution to the environment. Among the worst sources of pollution to the environment are "burn barrels" and other uncontrolled burning, especially uncontrolled burning of plastics. Plastic bale wrap, used to wrap haylage, is a considerably large plastic waste stream. It is estimated that 7.5-30 pounds of wrap is used per head of cattle fed wrapped hay. Minnesota has about 2.5 million head of cattle. One survey, conducted in Vermont in the late 1990s, determined that about 25 percent of bale wrap is burned on the farm and 25 percent is buried on the farm. This is a very large waste stream that could be contributing significantly to the state PCDD/F emissions/pollution. Other farm-based plastic disposal, such as feed/supplement bags, may also be contributing significant pollution. While recycling agricultural plastics would be the best solution, incineration in a regulated energy-generating facility would be a substantial improvement over current disposal practices in some rural areas. Controlling the agricultural plastic waste stream could provide significant long term benefit to public health and the environment. Are there ways that the Resource Recovery facilities can be encouraged to help reduce or eliminate this waste stream?

Health starts where we live, learn, work, and play. To create and maintain healthy Minnesota communities, we have to think in terms of health in all policies. Thank you again for the opportunity to provide comments on this EAW. Feel free to contact me at (651) 201-4927 or michele.ross@state.mn.us if you have any questions.

Sincerely,



Michele Ross
Environmental Review Coordinator/EQB Technical Representative
Environmental Health Division
Minnesota Department of Health
PO Box 64975
Saint Paul, MN 55164-0975

FACILITY NAME/ADDRESS:
Perham Resource Recovery Facility
201 6th Ave NE
Perham, MN 56573

WASTEWATER TREATMENT DISCHARGE MONITORING REPORT

PERMITTEE NAME/ADDRESS:
Perham city of
PO Box 130
Perham, MN 565730130



Attachment -1

STATION INFORMATION:

SD-001 (RO Reject to Storm Sewer)
Surface Discharge, Storm Sewer To Surface Water

Attention: Brian Schmidt

MONITORING PERIOD					
YEAR	MO.	DAY	YEAR	MO.	DAY
2011	01	01	2011	03	31

☐ AMENDED

☐ NO DISCHARGE

MPCA:JS

PARAMETER		QUANTITY		UNITS	CONCENTRATION			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	SAMPLE VALUE	*****	2.7353	MG	*****	.043	*****	mgd	1 x Qtr	Cont
50050	PERMIT REQ	*****	REPORT CalQtrTot		*****	0.200 CalQtrAve	*****		1 x Quarter	MeaCon
Bicarbonates	SAMPLE VALUE	*****	*****	....	*****	669	*****	meq/L	1 x Qtr	Grab
00440	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Calcium Total (as Ca)	SAMPLE VALUE	*****	*****	....	*****	246.0	*****	mg/L	1 x Qtr	Grab
00916	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Chloride, Total	SAMPLE VALUE	*****	*****	....	*****	94.5	*****	mg/L	1 x Qtr	Grab
00940	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Hardness, Ca & Mg Calculated(as CaCO3)	SAMPLE VALUE	*****	*****	....	*****	898	*****	mg/L	1 x Qtr	Grab
46570	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Magnesium Total (as Mg)	SAMPLE VALUE	*****	*****	....	*****	69	*****	mg/L	1 x Qtr	Grab
00927	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
pH, Field	SAMPLE VALUE	*****	*****	....	6.94	*****	7.16	SU	2 x Qtr	Grab
00406	PERMIT REQ	*****	*****		6.0 InstantMin	*****	9.0 InstantMax		1 x Quarter	Grab

Send original with supplemental DMR (if applicable) by the 21st day of month following reporting period to:
MINNESOTA POLLUTION CONTROL AGENCY
520 LAFAYETTE RD
ST. PAUL, MN 55155-4194
ATTN: Discharge Monitoring Report

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief the information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

DATE

Brian Schmidt 218/346-4404 4-12-11 MN 0067415

SIGNATURE OF CHIEF OPERATOR

PHONE

DATE

CERTIFICATION#

COMMENTS:

FACILITY NAME/ADDRESS:
Perham Resource Recovery Facility
201 6th Ave NE
Perham, MN 56573

WASTEWATER TREATMENT DISCHARGE MONITORING REPORT

PERMITTEE NAME/ADDRESS:
Perham City of
PO Box 130
Perham, MN 565730130



STATION INFORMATION:

SD-001 (RO Reject to Storm Sewer)
Surface Discharge, Storm Sewer To Surface Water

Attention: Brian Schmidt

PERMIT #	LIMIT STATUS	PCS #
MN0067415	FINAL	

MONITORING PERIOD					
YEAR	MO.	DAY	YEAR	MO.	DAY
2011	01	01	2011	03	31

☐ AMENDED

☐ NO DISCHARGE

MPCA:JS

PARAMETER		QUANTITY		UNITS	CONCENTRATION		UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Potassium Total (as K) 00937	SAMPLE VALUE	*****	*****	----	*****	9.900	*****	mg/L	1 x Qtr Grab
	PERMIT REQ	*****	*****	----	*****	REPORT CalQtrAve	*****	1 x Quarter	Grab
Sodium, % Total Cations 61166	SAMPLE VALUE	*****	*****	----	*****	31.50	*****	%	1 x Qtr Grab
	PERMIT REQ	*****	*****	----	*****	REPORT CalQtrAve	*****	1 x Quarter	Grab
Salinity, Total 00480	SAMPLE VALUE	*****	*****	----	*****	< 1	*****	mg/L	1 x Qtr Grab
	PERMIT REQ	*****	*****	----	*****	REPORT CalQtrAve	*****	1 x Quarter	Grab
Solids (TDS) Total Dissolved 70295	SAMPLE VALUE	*****	*****	----	*****	1060	*****	mg/L	1 x Qtr Grab
	PERMIT REQ	*****	*****	----	*****	REPORT CalQtrAve	*****	1 x Quarter	Grab
Specific Conductance Field 00094	SAMPLE VALUE	*****	*****	----	*****	1585	*****	umh/cm	1 x Qtr Grab
	PERMIT REQ	*****	*****	----	*****	REPORT CalQtrAve	*****	1 x Quarter	Grab

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

DATE

Brian Schmidt 218/396-1401 4-12-11 MN 0067415

SIGNATURE OF CHIEF OPERATOR

PHONE

DATE

CERTIFICATION#

COMMENTS:

FACILITY NAME/ADDRESS:
Perham Resource Recovery Facility
201 6th Ave NE
Perham, MN 56573

WASTEWATER TREATMENT DISCHARGE MONITORING REPORT

PERMITTEE NAME/ADDRESS:
Perham city of
PO Box 130
Perham, MN 565730130



Attachment -2

STATION INFORMATION:

SD-001 (RO Reject to Storm Sewer)
Surface Discharge, Storm Sewer To Surface Water

Attention: Brian Schmidt

FROM

MONITORING PERIOD					
YEAR	MO.	DAY	YEAR	MO.	DAY
2011	04	01	2011	06	30

TO

☐ AMENDED

☐ NO DISCHARGE

MPCA:JS

PARAMETER		QUANTITY		UNITS	CONCENTRATION			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	SAMPLE VALUE	*****	3.9294	MG	*****	.042	*****	mgd	1x Quarter	Cont
50050	PERMIT REQ	*****	REPORT CalQtrTot		*****	0.200 CalQtrAve	*****		1 x Quarter	MeaCon
Bicarbonates	SAMPLE VALUE	*****	*****	----	*****	466	*****	meq/L	1x Quarter	Grab
00440	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Calcium Total (as Ca)	SAMPLE VALUE	*****	*****	----	*****	228.0	*****	mg/L	1x Qtr	Grab
00916	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Chloride, Total	SAMPLE VALUE	*****	*****	----	*****	71.0	*****	mg/L	1x Quarter	Grab
00940	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Hardness, Ca & Mg Calculated(as CaCO3)	SAMPLE VALUE	*****	*****	----	*****	839	*****	mg/L	1x quarter	Grab
46570	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
Magnesium Total (as Mg)	SAMPLE VALUE	*****	*****	----	*****	65.40	*****	mg/L	1x quarter	Grab
00927	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1 x Quarter	Grab
pH, Field	SAMPLE VALUE	*****	*****	----	7.15	*****	7.15	SU	1x Quarter	Grab
00406	PERMIT REQ	*****	*****		6.0 InstantMin	*****	9.0 InstantMax		1 x Quarter	Grab

Send original with supplemental DMR (if applicable) by the 21st day of month following reporting period to:
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ST. PAUL, MN 55155-4194
ATTN: Discharge Monitoring Report

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

DATE

Brian Schmidt 218/346-4404 7-7-11 MN 0067415

SIGNATURE OF CHIEF OPERATOR

PHONE

DATE

CERTIFICATION

COMMENTS:

FACILITY NAME/ADDRESS:
Perham Resource Recovery Facility
201 6th Ave NE
Perham, MN 56573

WASTEWATER TREATMENT
DISCHARGE MONITORING REPORT

PERMITTEE NAME/ADDRESS:
Perham City of
PO Box 130
Perham, MN 565730130



STATION INFORMATION:

SD-001 (RO Reject to Storm Sewer)
Surface Discharge, Storm Sewer To Surface Water

Attention: Brian Schmidt

PERMIT #	LIMIT STATUS	PCS #
MN0067415	FINAL	

MONITORING PERIOD					
YEAR	MO.	DAY	YEAR	MO.	DAY
FROM	2011	04	TO	2011	06
	01			30	

☐ AMENDED

☐ NO DISCHARGE

MPCA:JS

PARAMETER		QUANTITY	UNITS	CONCENTRATION	UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Potassium Total (as K)	SAMPLE VALUE	*****	*****	*****	9.720	*****	mg/L
00937	PERMIT REQ	*****	*****	*****	REPORT	*****	1x Quarter Grab
					CalQtrAve		1x Quarter Grab
Sodium, % Total Cations	SAMPLE VALUE	*****	*****	*****	22.10	*****	%
61166	PERMIT REQ	*****	*****	*****	REPORT	*****	1x Quarter Grab
					CalQtrAve		1x Quarter Grab
Salinity, Total	SAMPLE VALUE	*****	*****	*****	<1	*****	mg/L
00480	PERMIT REQ	*****	*****	*****	REPORT	*****	1x Quarter Grab
					CalQtrAve		1x Quarter Grab
Solids (TDS) Total Dissolved	SAMPLE VALUE	*****	*****	*****	973	*****	mg/L
70295	PERMIT REQ	*****	*****	*****	REPORT	*****	1x Quarter Grab
					CalQtrAve		1x Quarter Grab
Specific Conductance Field	SAMPLE VALUE	*****	*****	*****	1480	*****	umh/cm
00094	PERMIT REQ	*****	*****	*****	REPORT	*****	1x Quarter Grab
					CalQtrAve		1x Quarter Grab

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520 LAFAYETTE RD
ST. PAUL, MN 55155-4194
ATTN: Discharge Monitoring Report

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief the information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

DATE

Brian Scholtz 218/63464404 7-7-11 MN0067415

SIGNATURE OF CHIEF OPERATOR

PHONE

DATE

CERTIFICATION#

COMMENTS:

FACILITY NAME/ADDRESS:
Perham Resource Recovery Facility
201 6th Ave NE
Perham, MN 56573

WASTEWATER TREATMENT
DISCHARGE MONITORING REPORT

PERMITTEE NAME/ADDRESS:
Perham city of
PO Box 130
Perham, MN 565730130



Attachment -3

STATION INFORMATION:

SD-001 (RO Reject to Storm Sewer)
Surface Discharge, Storm Sewer To Surface Water
Attention: Brian Schmidt

MONITORING PERIOD					
YEAR	MO.	DAY	YEAR	MO.	DAY
2011	07	01	2011	09	30

☐ AMENDED

☐ NO DISCHARGE

MPCA:JS

PARAMETER		QUANTITY		UNITS	CONCENTRATION			UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	SAMPLE VALUE	*****	3.1205	MG	*****	0.03533	*****	mgd	1x Quarter	Cont
50050	PERMIT REQ	*****	REPORT CalQtrTot		*****	0.200 CalQtrAve	*****		1x Quarter	MeaCon
Bicarbonates	SAMPLE VALUE	*****	*****	****	*****	692	*****	meq/L	1x Quarter	Grab
00440	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1x Quarter	Grab
Calcium Total (as Ca)	SAMPLE VALUE	*****	*****	****	*****	230	*****	mg/L	1x Quarter	Grab
00916	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1x Quarter	Grab
Chloride, Total	SAMPLE VALUE	*****	*****	****	*****	96	*****	mg/L	1x Qtr	Grab
00940	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1x Quarter	Grab
Hardness, Ca & Mg Calculated(as CaCO3)	SAMPLE VALUE	*****	*****	****	*****	856	*****	mg/L	1x Qtr	Grab
46570	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1x Quarter	Grab
Magnesium Total (as Mg)	SAMPLE VALUE	*****	*****	****	*****	7460	*****	mg/L	1x Qtr	Grab
00927	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****		1x Quarter	Grab
pH, Field	SAMPLE VALUE	*****	*****	****	7.12	*****	7.38	SU	2x Qtr	Grab
00406	PERMIT REQ	*****	*****		6.0 InstantMin	*****	9.0 InstantMax		1x Quarter	Grab

Send original with supplemental DMR (if applicable) by the 21st day of month following reporting period to:
MINNESOTA POLLUTION CONTROL AGENCY
520 LAFAYETTE RD
ST. PAUL, MN 55155-4194
ATTN: Discharge Monitoring Report

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief the information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

DATE

SIGNATURE OF CHIEF OPERATOR

PHONE

DATE

CERTIFICATION#

COMMENTS:

FACILITY NAME/ADDRESS:

Perham Resource Recovery Facility
201 6th Ave NE
Perham, MN 56573

WASTEWATER TREATMENT DISCHARGE MONITORING REPORT

PERMITTEE NAME/ADDRESS:

Perham City of
PO Box 130
Perham, MN 565730130



STATION INFORMATION:

SD-001 (RO Reject to Storm Sewer)
Surface Discharge, Storm Sewer To Surface Water

Attention: Brian Schmidt

MONITORING PERIOD					
YEAR	MO.	DAY	YEAR	MO.	DAY
FROM	2011	07	TO	2011	09
	01			30	

☐ AMENDED☐ NO DISCHARGE

MPCA:JS

PARAMETER		QUANTITY		UNITS	CONCENTRATION		UNITS	FREQUENCY OF ANALYSIS	SAMPLE TYPE
Potassium Total (as K) 00937	SAMPLE VALUE	*****	*****	****	*****	11.30	*****	mg/L	1x Qtr Grab
	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****	1x Quarter	Grab
Sodium, % Total Cations 61166	SAMPLE VALUE	*****	*****	****	*****	29.50	*****	%	1x Quarter Grab
	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****	1x Quarter	Grab
Salinity, Total 00480	SAMPLE VALUE	*****	*****	****	*****	<1	*****	mg/L	1x Qtr Grab
	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****	1x Quarter	Grab
Solids (TDS) Total Dissolved 70295	SAMPLE VALUE	*****	*****	****	*****	985	*****	mg/L	1x Qtr Grab
	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****	1x Quarter	Grab
Specific Conductance Field 00094	SAMPLE VALUE	*****	*****	****	*****	1560	*****	umh/cm	1x Quarter Grab
	PERMIT REQ	*****	*****		*****	REPORT CalQtrAve	*****	1x Quarter	Grab

Send original with supplemental DMR (if applicable) by the 21st day of month following reporting period to:
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520 LAFAYETTE RD
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ATTN: Discharge Monitoring Report

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief the information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

DATE

Brian Schmidt 218/346-4404 10/20/11 MN 0067415

SIGNATURE OF CHIEF OPERATOR

PHONE

DATE

CERTIFICATION#

COMMENTS:

MVTL

MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890

1411 S. 12th St. ~ Bismarck, ND 58502 ~ 800-279-6885 ~ Fax 701-258-9724

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MEMBER
ACIL

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Page: 1 of 1

BRIAN SCHMIDT
PERHAM RESOURCE RECOVERY
201 6TH AVE NE
PERHAM MN 56573

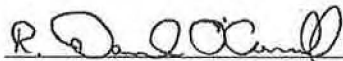
Report Date: 16 Feb 2011
Lab Number: 11-A4377
Work Order #: 12-3094
Account #: 016148
Sample Matrix: WASTEWATER
Date Sampled: 3 Feb 2011 12:00
Date Received: 4 Feb 2011 9:10

Sample Description: RO CONCENTRATE

Temp at Receipt: RECEIVED ON ICE

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Water Digestions					9 Feb 11	RMV
Salinity	< 1		1	SM 2520B	14 Feb 11 6:40	RBK
Bicarbonate	669	mg/L CaCO ₃	0	SM 2320B 18th Ed	11 Feb 11 5:41	RBK
Hardness, Total	898	mg/L CaCO ₃	NA	2340.B	14 Feb 11 13:54	Calculated
Chloride	94.5	mg/L	3.0	SM 4500 Cl E	14 Feb 11 11:31	DAP
Solids, Total Dissolved	1060	mg/L	10	SM 2540C	7 Feb 11 11:45	TWS
Calcium	246.0	mg/L	0.500	200.7	14 Feb 11 13:54	RH
Magnesium	69.00	mg/L	0.500	200.7	14 Feb 11 13:54	RH
Sodium	31.50	mg/L	0.500	200.7	16 Feb 11 11:05	RMV
Potassium	9.900	mg/L	0.500	200.7	14 Feb 11 13:54	RH

Approved by:



Dan O'Connell, Asst. Chemistry Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume
^ = Due to instrument performance at RL

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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BRIAN SCHMIDT
PERHAM RESOURCE RECOVERY
201 6TH AVE NE
PERHAM MN 56573

Report Date: 6 Jun 2011
Lab Number: 11-A22818
Work Order #: 12-7858
Account #: 016148
Sample Matrix: WASTEWATER
Date Sampled: 23 May 2011 11:00
Date Received: 24 May 2011 9:25

Sample Description: RO CONCENTRATE

Temp at Receipt: 4.2C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Water Digestions					27 May 11	JMS
Salinity	< 1		1	SM 2520B	24 May 11 14:26	KN
Bicarbonate	666	mg/L CaCO ₃	0	SM 2320B 18th Ed	25 May 11 8:59	RBK
Hardness, Total	839	mg/L CaCO ₃	NA	2340.B	3 Jun 11 14:20	Calculated
Chloride	71.0	mg/L	3.0	SM 4500 Cl E	26 May 11 14:11	DAP
Solids, Total Dissolved	973	mg/L	10	SM 2540C	24 May 11 15:35	SNM
Calcium	228.0	mg/L	0.500	200.7	3 Jun 11 14:20	RMV
Magnesium	65.40	mg/L	0.500	200.7	3 Jun 11 14:20	RMV
Sodium	22.10	mg/L	0.500	200.7	3 Jun 11 14:20	RMV
Potassium	9.720	mg/L	0.500	200.7	3 Jun 11 14:20	RMV

Approved by:



Dan O'Connell, Chemistry Laboratory Manager New Ulm, MN

RL = Reporting Limit

The reporting limit was elevated for any analyte requiring a dilution as coded below:

@ = Due to sample matrix
! = Due to sample quantity

= Due to concentration of other analytes
+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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BRIAN SCHMIDT
PERHAM RESOURCE RECOVERY
201 6TH AVE NE
PERHAM MN 56573

Report Date: 4 Nov 2011
Lab Number: 11-A53007
Work Order #:12-15309
Account #: 016148
Sample Matrix: WASTEWATER
Date Sampled: 24 Oct 2011 11:45
Date Received: 25 Oct 2011 9:20

Sample Description: RO CONCENTRATE

Temp at Receipt: 3.2C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Water Digestions					28 Oct 11	JMS
Salinity	< 1		1	SM 2520B	2 Nov 11 10:49	RBK
Bicarbonate	759	mg/L CaCO3	0	SM 2320B 18th Ed	1 Nov 11 11:41	RBK
Hardness, Total	1010	mg/L CaCO3	NA	2340.B	2 Nov 11 11:28	Calculated
Chloride	126	mg/L	3.0	SM 4500 Cl E	28 Oct 11 10:29	BLS
Solids, Total Dissolved	1110	mg/L	10	SM 2540C	28 Oct 11 14:30	LH
Calcium	271.0	mg/L	0.500	200.7	1 Nov 11 13:21	RMV
Magnesium	80.40	mg/L	0.500	200.7	2 Nov 11 11:28	RMV
Sodium	31.80	mg/L	0.500	200.7	1 Nov 11 13:21	RMV
Potassium	10.90	mg/L	0.500	200.7	2 Nov 11 11:28	RMV

Approved by:

R. D. O'Connell

Dan O'Connell, Chemistry Laboratory Manager New Ulm, MN

RL = Reporting Limit

The reporting limit was elevated for any analyte requiring a dilution as coded below:

④ 由于样品基质

! = Due to sample quantity

= Due to concentration of other analytes

= Due to concentration of other anal
+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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BRIAN SCHMIDT
PERHAM RESOURCE RECOVERY
201 6TH AVE NE
PERHAM MN 56573

Report Date: 16 Nov 2011
Lab Number: 11-A55341
Work Order #: 12-15881
Account #: 016148
Sample Matrix: WASTEWATER
Date Sampled: 3 Nov 2011 11:45
Date Received: 4 Nov 2011 9:15

Sample Description: RO CONCENTRATE

Temp at Receipt: 4.3C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Water Digestions					8 Nov 11	JMS
Salinity	< 1		1	SM 2520B	10 Nov 11 13:58	RBK
Bicarbonate	707	mg/L CaCO ₃	0	SM 2320B 18th Ed	15 Nov 11 8:15	RBK
Hardness, Total	853	mg/L CaCO ₃	NA	2340.B	10 Nov 11 13:55	Calculated
Chloride	104	mg/L	3.0	SM 4500 Cl E	14 Nov 11 16:09	BLS
Solids, Total Dissolved	1040	mg/L	10	SM 2540C	8 Nov 11 17:30	LH
Calcium	232.0	mg/L	0.500	200.7	10 Nov 11 13:55	RMV
Magnesium	66.40	mg/L	0.500	200.7	10 Nov 11 13:55	RMV
Sodium	34.70	mg/L	0.500	200.7	10 Nov 11 13:55	RMV
Potassium	11.60	mg/L	0.500	200.7	8 Nov 11 17:12	RMV

Approved by:



Dan O'Connell, Chemistry Laboratory Manager New Ulm, MN

RL = Reporting Limit

The reporting limit was elevated for any analyte requiring a dilution as coded below:

@ = Due to sample matrix
! = Due to sample quantity

= Due to concentration of other analytes
+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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BRIAN SCHMIDT
PERHAM RESOURCE RECOVERY
201 6TH AVE NE
PERHAM MN 56573

Report Date: 2 Mar 2012
Lab Number: 12-A5617
Work Order #: 12-1208
Account #: 016148
Sample Matrix: WASTEWATER
Date Sampled: 6 Feb 2012 12:25
Date Received: 8 Feb 2012 9:25


Sample Description: RO CONCENTRATE

Temp at Receipt: 1.8C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Water Digestions					14 Feb 12	JMS
Salinity	< 1		1	SM 2520B	10 Feb 12 12:54	RBK
Bicarbonate	655	mg/L CaCO3	0	SM 2320B 18th Ed	13 Feb 12 6:27	RBK
Hardness, Total	777	mg/L CaCO3	NA	2340.B	24 Feb 12 15:53	RMV
Chloride	62.6	mg/L	3.0	SM 4500 Cl E	16 Feb 12 12:13	DAP
Solids, Total Dissolved	912	mg/L	10	SM 2540C	9 Feb 12 8:05	AS
Calcium	209.0	mg/L	0.500	200.7	23 Feb 12 16:04	RMV
Magnesium	62.00	mg/L	0.500	200.7	24 Feb 12 15:53	RMV
Sodium	23.50	mg/L	0.500	200.7	29 Feb 12 15:35	RMV
Potassium	9.150	mg/L	0.500	200.7	23 Feb 12 16:04	RMV

Due to the high concentration of calcium in the spiked sample, spike recoveries were outside of MVTL limits. Calcium results were reported based on acceptable blank spike recovery and acceptable spike duplication. Sodium was detected in the blank at 0.803 mg/L. Data that exceeded the blank concentration by a factor of ten was reported.

Approved by:



Dan O'Connell, Chemistry Laboratory Manager New Ulm, MN

RL = Reporting Limit

The reporting limit was elevated for any analyte requiring a dilution as coded below:

@ = Due to sample matrix # = Due to concentration of other analytes
! = Due to sample quantity + = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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BRIAN SCHMIDT
PERHAM RESOURCE RECOVERY
201 6TH AVE NE
PERHAM MN 56573

Report Date: 18 May 2012

Lab Number: 12-A19838

Work Order #: 12-4983

Account #: 016148

Sample Matrix: WASTEWATER

Date Sampled: 7 May 2012 13:00

Date Received: 8 May 2012 9:15

Sample Description: RO CONCENTRATE

Temp at Receipt: 2.1C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Water Digestions					11 May 12	JMS
Salinity	< 1		1	SM 2520B	17 May 12 15:21	RBK
Bicarbonate	741	mg/L CaCO ₃	0	SM 2320B 18th Ed	10 May 12 8:00	RBK
Hardness, Total	979	mg/L CaCO ₃	NA	2340.B	14 May 12 13:22	DS
Chloride	87.4	mg/L	3.0	SM 4500 Cl E	10 May 12 11:01	BLN
Solids, Total Dissolved	1050	mg/L	10	SM 2540C	10 May 12 8:45	LH
Calcium	265.0	mg/L	0.500	200.7	14 May 12 13:22	DS
Magnesium	77.00	mg/L	0.500	200.7	14 May 12 13:22	DS
Sodium	32.20	mg/L	0.500	200.7	14 May 12 13:22	DS
Potassium	9.450	mg/L	0.500	200.7	14 May 12 13:22	DS

Approved by:



Dan O'Connell, Chemistry Laboratory Manager New Ulm, MN

RL = Reporting Limit

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@ = Due to sample matrix
! = Due to sample quantity

= Due to concentration of other analytes
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CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022