Township of Cooks Valley

Established in 1927

Please note the applicant has not signed or included

a check with this application

Quarles & Brady LLP

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February 27, 2012

Town of Cooks Valley
3717 County Highway A
Bloomer, Wisconsin 54724
Attn: Town Board Members

Re: Preferred Sands of Minnesota LLC — Non-Metallic Mining Operation

Dear Cooks Valley Town Board Members:

This firm represents Preferred Sands of Minnesota, LLC ("**Preferred**"). At the request of the Town of Cooks Valley (the "**Town**"), and in light of the recent Supreme Court decision in *Town of Cooks Valley v. Zwiefelhofer*, Preferred Sands of Minnesota LLC ("**Preferred**") is considering submitting an application for a non-metallic mining permit pursuant to the Town's non-metallic mining ordinance. Attached to this letter is a draft of what that application would include. Please note that, unless and until a formal application is submitted, these materials are **for discussion purposes only**.

As you know, Preferred has been lawfully conducting non-metallic mining operations in the Town for nearly two years. In connection with that operation, Preferred has obtained all required state and county permits. Preferred has also negotiated a separate agreement directly with the Town relating to Preferred's use and maintenance of various Town roads. Preferred employs dozens of people and has invested millions of dollars in order to conduct an operation that incorporates state-of-the-art processes and procedures to ensure the safety of all employees and the preservation of surrounding properties. For all of these reasons, the information included in the draft application is necessarily elaborate. Preferred believes it is important that the Town obtain a thorough understanding of Preferred's operations before convening any public hearings that might adversely affect the ongoing operation. Preferred will make itself available to respond promptly to any questions or concerns the Town may have regarding the content of its draft application.

We have advised Preferred that by submitting this draft application, Preferred is not conceding that its existing operation is subject to the Town's ordinance or that the Town has authority to approve, disapprove or impose conditions on Preferred's non-metallic mining

activities. By proceeding in this manner, Preferred desires to inform the Town as to Preferred's ongoing activities and to afford the Town an opportunity to work with Preferred to identify issues that could lead to an enhanced application.

Preferred looks forward to a mutually beneficial relationship with the Town and to responding to any questions the Town may have regarding the information included with this letter.

Sincerely,

QUARLES & BRADY LLP

Kevin A. Delorey

Enclosures

cc: Paul McLean
Preferred Legal Department

Town of Cooks Valley Non-Metallic Mining Application
This is a portion of Appendix A
15784 40th Street
Clerk Residence
3717 County Highway A
Bloomer, WI 54724
Filing Fee $500.00

Table of Contents

Date of Application February 24th, 2012

Company Name Preferred Sands of Minnesota, LLC

Contact Person Shasta Moore

Address One Radnor Corporate Center,
100 Matsonford Ave Suite 101,
Philadelphia, PA 19087

Phone (484) 684-1321 **Fax** (484) 684 - 1296 **Cell** (484) 639-8028

Email smoore@preferred.com

Proof of Insurance (Please attach a copy of this at the back of the application)

See **Appendix A** attached

Legal Description of land for proposed mine development

Portions of the following quarter sections:
SW ¼ SE ¼, of Sec 03, T30N, R10W
NW ¼ SE ¼, of Sec 03, T 30N, R10W
SW ¼ of Sec 03, T30N, R10W

Tax parcel numbers

23010-0342-00020000; 23010-0343-00020000:
23010-0334-02000000; 23010-0331-00020000:
23010-0332-00000000; 23010-0333-00000000:
23010-0334-00020000; 23010-0343-04000000:
23010-0331-04000000; 23010-0342-07250000

Name and address of surface land owner

Samuel R. Lagesse
4621 186th Ave.,
Bloomer, WI 54724

Donald Prill
4121 186th Ave.,
Bloomer, WI 54724

James Springer
16569 State Hwy 40,
Bloomer, WI 54724

Name and address of mineral owner

Samuel R. Lagesse
4621 186th Ave.,
Bloomer, WI 54724

Donald Prill
4121 186th Ave.,
Bloomer, WI 54724

James Springer
16569 State Hwy 40,
Bloomer, WI 54724

Preferred Sands of Minnesota, LLC
One Radnor Corporate Center,
100 Matsonford Ave Suite 101,
Radnor PA 19087

1) Type of Mine:

_____ Construction Fill (Sand, gravel, aggregate, or clay used in construction trades).

__X__ Industrial Sand Mine (used to produce glass, moldings for castings, manufacture of abrasives, or processed into proppant or other industrial uses).

2) Final destination of mined material:

The final destination of the nonmetallic minerals is primarily but not limited to the continental United States of America.

3) Describe current land uses within and adjacent to the project area: Photos would be helpful in providing a view in all directions. Coordinate the photo with the description below.

In this un-zoned community, the project and adjacent area can be described to include non metallic mineral mining, rural residential and agricultural land uses.

4) Permits:

A) Does this mine have a current reclamation permit from Chippewa County to operate?

Yes: Nonmetallic Mining Reclamation Permit # 2011-01
See Appendix B attached

B) List other permits (county, state, federal, DNR, etc.) necessary for this project, indicate status and provide a copy (if available).

The following permits are located in **Appendix C**.

Permit No.	Permit Name	Issuer	Date Issued	Status
WI-0046515-05	Nonmetallic Mining Operations General Permit	WI Department of Natural Resources	11/15/2011	Active
09-3-0014	Industrial Well Approval	WI Department of Natural Resources	4/10/2011	Active
	Building Permit	Township of Cooks Valley	6/22/2011	Active
	Driveway and Road Approach Permit	Township of Cooks Valley	5/25/2011	Active

5) Size:

A) Expected maximum depth of mine? Elevation 1100 MSL. **Depth is relative to what benchmark?** Mean Sea Level (MSL). **(Natural ground cover, mean sea level, road elevation, etc.)**

B) Groundwater level in the project area? Elevation +/- 1080 MSL.

Confirmed or Estimated? (circle one).

Depth is relative to what benchmark? Mean Sea Level (MSL).

C) Will any part of the mine extend below the water table? Yes ____ No X .
If yes - do you intend to dewater?
If yes - Estimated dewatering rates in gallons per day? N/A What impact, if any, will mine dewatering have on neighboring wells? Provide data to support any conclusions or statements made, including any monitoring well data, well construction data, and current water withdrawal rates.

Since there is no dewatering associated with this project, questions related to dewatering are non-applicable.

D) Specify total area +/- 146 Acres (in acres) to be affected by this project. Include areas for future expansion, stockpiling, processing, haul roads, settling basins, buildings, parking facilities. Show all phases for the removal of material. Give a complete description of the entire site. Use a separate sheet if necessary. Any area of extraction must be at least 50 feet from any line fence or property boundary.

Approximately 146 acres will be affected by all activities including excavation in 6 phases hereafter referred to as cells. In cell 1, a wash plant has been constructed. Mining will commence in a counter clockwise direction through the 6 cells, leaving a 50' mining setback between the excavation area and the property boundary. A stockpile/screening berm separates the mining operations from 186th Ave. A private drive and haul road provides access from 186th Ave. to the interior mine which also includes office/lab facilities and a scale. The site plan attached in **Appendix D** captures all relevant details of the operation.

6) Mining operations:

A) Describe the method that will be used to dispose of brush and other vegetative debris. Describe the process completely:

All land clearing and grubbing activities will include the complete removal of brush, trees and stumps. Marketable timber is preserved by the land clearing forester. All other non marketable timber and brush will be chipped for use in reclamation and soil erosion control or removed from the mine property.

B) Describe the methods that will be used to retain topsoil and all other overburden. Describe how the topsoil, subsoil, and other materials will be stored until the reclamation process takes place.

Horizon A topsoil and horizon B subsoil are stripped separately using conventional earth moving equipment including but not limited to excavators, haul trucks, bull dozers and scrapers. These soils are separated and stored in the screening berms adjacent to the excavation mine limits for use in final reclamation. Berms are as depicted in the site plan attached as **Appendix D**. Post mining, the horizon B subsoil will be placed within the mine limits to achieve the non metallic mine reclamation plan grades as required under the existing reclamation permit. Horizon A topsoil will be placed over the horizon B subsoil to complete the non metallic mine reclamation plan grades as required under the existing reclamation permit.

C) Describe the processing methods that will be used at the site. (Processing methods may include stockpiling & storage, blending, grading, crushing, screening & cleaning, scalping, dewatering, and dust control). If there are none, please explain why they are not necessary.

Processing activities are those activities customarily incident to nonmetallic mining including but not limited to earth excavating and grading, blasting, crushing, screening, washing, stock piling and loading all subject to geological conditions and market demand and in compliance with all applicable permits.

D) Describe the method of extraction (shovel and truck, front-end loader and truck, hydraulic dredge, dragline and truck, self loading scraper, other):

After blasting, various types of heavy equipment such as bull dozers, front end loaders and excavators will be used to break up partially consolidated material for transport via haul truck, conveyor, or slurry piping to the wash plant.

E) Will explosives be used? Yes _X_ No ____.
If yes - specify the types & methods of explosives used and describe what precautions will be used to prevent physical hazards to persons and neighboring property from flying debris, excessive air blasts, or ground vibrations.

The blasting agent used is Ammonium Nitrate – Fuel Oil (ANFO). Physical hazard to persons or neighboring properties is prevented in that all blasting activities are completed by qualified blasting contractors licensed in accordance with Wisconsin Department of Safety and Professional Services Chapter SPS 305

Licenses, Certifications and Registrations and conducting activities in accordance with the Wisconsin Department of Safety and Professional Services Chapter SPS 307 Explosives and Fireworks.

F) Will water be used at the site? Yes __X__ No _____.
(Water may be necessary for processing and also to keep dust under control at the pit site and the haul road, if present).
If yes - describe the volume of water needed, the source of the water, and any run off control measures (if needed).

Water is used onsite for wash production and dust control. Water is delivered to the wash production via a closed loop recycle system. System water losses exist due to evaporation, percolation back to ground water and moisture content of product. Water losses (less than 10%) customarily referred to as "makeup" water are replenished using approved wells permitted in an application process through the Division of Water, Bureau of Drinking Water and Groundwater at the State of Wisconsin Department of Natural Resources. The Industrial Well Approval identifying pump capacity, average daily and maximum daily approved pumping limits is attached in **Appendix C**. Water delivered through the same approved wells is also used to control fugitive dust emission sources as detailed and described in the Fugitive Dust Control Plan required by State of Wisconsin Administrative Code NR415 - Control of Particulate Emissions. The State rule is administered through the Department of Natural Resources Air Management Program. A copy of the Fugitive Dust Control Plan is attached as **Appendix E**.

G) Describe the methods used to control dust at the site. This includes mining processes, on haul roads, and while transporting to final destination.

Fugitive dust emissions attributed to mine operation are primarily controlled by application of water to the fugitive dust source. Fugitive dust emissions are also controlled by limiting speed limits within the mine and tarping trucks after they are loaded.

H) Will fuel tanks, solvents, explosives, or other chemicals be stored on site? Yes __X__ No _____. If yes - describe these materials and how they will be secured, stored, and method of containment.

Petroleum products and flocculants are contained and stored on site in compliance with the rules established by the Wisconsin Department of Safety and Professional Services – Regulation of Industry, Building and Safety and the Mining Safety and Health Administration.

I) Will any of structures need to be established on site? Yes __X__ No _____. This includes any storage shed, portable toilet, employee facility, etc. If yes - specify the number, type, and location:

The on site structures needed include those required for administrative office, employee break/lunch, quality control, maintenance and containment/storage activities. In addition the site includes structures associated with the wash plant production and scaling.

J) Identify the number of employees expected to work at the site and the facilities that will be provided.

30 - 35 employees are expected to work at the site. Employee facilities include a fully equipped office and break/lunch room.

K) Hours / days of operation (including maintenance):

Operations and maintenance commence 24 hours a day 7 days a week subject only to winter weather constraints typically lasting from approximately November 15th through March 1st.

L) Length of time the mine is to remain operational? From 2010 to 2040.

The length of time the mine is expected to remain operational is highly dependent upon market demand. That being said the mine could be operational for 20 -30 years.

7) Trucking operations:

A) How many loads per day? +/-425 Hours trucks will operate? 16 hr/d.

Trucks will operate to transport sand to dry processing facilities consistent with the receiving hours of that facility. For the future Town of Bloomer facility, the receiving hours are Monday through Saturday, 6:00 AM to 10:00 PM and Sunday from 1:00 PM to 9:00 PM excluding holidays. The Town of Bloomer facility at full production requires approximately 425 loads per day.

B) Weight per load?

The weight per load is approximately 24 tons.

C) Type of truck?

Trucks drivers are contractually hired to haul material from the mine site. The size and type of truck vary from bottom dump trucks to end dump trucks.

D) Which township and county roads will be used to transport material? Please provide a complete description of all roads to be used to transport and to return to the site. Performance bonds may be necessary for the repair and/or restoration of any township road affected in an adverse way. What specific contributions will be taken to insure that the township roads will be maintained to a safe and secure condition?

Heavy hauled material will be transported on Town road 186th Avenue between the mine entrance and County Road DD to the west and on County Road DD from 186th Avenue to State Highway 64 to the north. This haul route is documented in a Town Road Upgrade and Maintenance Agreement. By way of that same agreement a temporary haul road is also established on Town road 186th Avenue between the mine entrance and 60th Street to the east and along 60th Street from 186th Avenue to State Highway 40 to the south.

In the agreement with Chippewa County a payment has been made in the amount of $500,000.00 to be deposited into an account, as well as an additional payment of $0.05 per ton of sand hauled from the Mine Site to be made on a monthly basis. The payments made per this agreement are to be used on construction and maintenance costs to benefit the roads. Also, per the agreement with the Town of Cooks Valley, a payment of $498,772.00 has been made which is also deposited into an account to be used for construction and maintenance costs to benefit the roads.

The town roads will be maintained to a safe and secure condition by making improvements and administering maintenance as described in the Town Road Upgrade and Maintenance Agreement, all at the expense of the applicant.

8) Environmental:

A) List resources that may be impacted by this project such as timber, agriculture, surface water, ground water, air quality, noise pollution, and plant, wildlife or fish habitat. Describe measures that will be taken to mitigate those impacts.

This project will have no measurable impact to area resources.

B) Are there any known endangered species on or near the mine site?
Yes _____ No __X__.

If yes - Describe the species and whether an environmental impact statement will need to be prepared?

C) Are there any known acid producing minerals or soils present?
Yes _____ No __X__.
If yes - how will acid water pollution from the excavation, stockpiling, and waste areas be controlled?

D) What is the schedule and method for well monitoring within a ¼ mile of the mine's boundaries before, during and after the mine is opened, worked, and reclaimed?

In accordance with the Nonmetallic Mining Reclamation Permit **(Appendix B)** a network of groundwater monitoring wells has been installed for the purpose of establishing the actual groundwater elevation at the mine site and for monitoring changes to the groundwater elevation over time. The network is designed to triangulate the elevation of the water table surface and to establish the direction of groundwater flow at the site. Wells are monitored with automatic data loggers programmed to record elevations daily.

E) Describe erosion control practices that will be used during mining.

Soil stockpile erosion is controlled by seeding and the establishment of vegetation on stockpiles combined with silt fencing placed on the outside berm edge. Soil erosion is also controlled by creating an internally drained mine excavation. Site erosion control will comply with the Nonmetallic Mining Operations General Permit **(Appendix C)** and WDNR Administrative Code NR 151 – Runoff Management.

F) Describe measures that will be taken to screen the operation from view of surrounding land uses or an explanation of why such measures are not needed.

The aforementioned topsoil berm will screen the operation from view of 186th Ave. Also, the wet plant operations are located inside previously excavated Cell 1, below the existing topography.

9) Reclamation:

A) Describe progressive reclamation activities that will occur over the life of the operation. Be complete in the description. If necessary show the reclamation in the various phases.

Reclamation activities during operation can generally be described as the careful balancing of marketable and unmarketable materials encountered throughout the life of mine excavation processes.

Unmarketable materials, which generally include the overburdens and interburdens encountered, are moved beyond the limits of excavation often providing initial screening to the excavation. As mining advances through each cell future unmarketable materials are backfilled in previously mined areas to conform to and meet with the post mining reclamation plan.

The reclamation process is continuous and ongoing from year to year based on all earth volumes encountered and the ability to produce reclamation grades while not adversely affecting the mine performance.

When reclamation grades conforming to the approved Nonmetallic Mining Reclamation Permit are achieved, subsoil and topsoil preserved as part of the activities are placed in reverse order to complete the desired grades.

B) Is an excavated/impounded body of water to be left as part of the reclamation? Yes _____ No __X__.
If yes - 1) Will it be secured to prevent unauthorized access by the public? Yes _____ No _____.
If yes - 2) Will it be stocked with fish? Yes _____ No _____.
If yes - what species?

C) Describe the methods that will be used at the cessation of seasonal operations to stabilize slopes from erosion. This includes both wind and water erosion.

Erosion is controlled as described in Section 8.e. throughout the entire year independent of any seasonal operation cessation.

D) Will the site become inactive during current operations for an unspecified period of time?
If yes - Describe the interim reclamation methods that will be used:

While we don't expect the operation to become inactive, operation of the mine is subject to market demand.

E) Describe proposed reclamation including final slopes, high wall reduction, benching, terracing, and other structural slope stabilization measures. Will the reclamation practices being followed be in agreement with all items in Chapter 30 of the General Code of Ordinances of Chippewa County?

Specifically, this is Chapter 30 (NON-METALLIC MINING RECLAMATION)

Reclamation will comprise of no steeper than 3H:1V slopes and gently rolling terracing all in compliance with the Nonmetallic Mining Reclamation Permit **(Appendix B)** and DNR Administrative Code NR135 - Nonmetallic Mining Reclamation

F) Describe anticipated topography, water impoundments, artificial lakes, and future land use of the site. This should be based upon the entire proposed site. It should include a detailed description of the process and how it will relate to the Chippewa County Non-Metallic Mining Reclamation Ordinance.

The reclamation features described in this section are all as depicted in C3 Final Site Map of the Nonmetallic Mining Reclamation Permit. Final slopes will be constructed at 3H:1V or flatter to meet reclamation standards. Final grades will range from 1100 – 1280 feet above MSL. The post mining reclaimed land use will be appropriate for pasture farmland and/or open space wild life.

G) Describe plans for the disposition of surface structures, haul roads, and related facilities after completion of mining.

Post mining reclamation includes the removal of all mine related structures and equipment. All private driveway accesses to residences will remain. All private residential structures that are not disturbed by mining activity will remain.

H) Describe the methods proposed for the disposal or reclamation of oversize and undersized materials. If returned to the site, how will they be incorporated into the reclamation process?

Nonmarketable, nonmetallic minerals or other soils will be returned to the open excavation areas of the mine so that post mining reclamation grades as depicted in the approved nonmetallic reclamation plan will be achieved.

I) Describe or attach a copy of a seeding plan that includes methods of seed bed preparation, seed mixtures, seeding rates, mulching, and other techniques needed to accomplish site stabilization.

The seeding plan is documented in the Nonmetallic Mining Reclamation Permit attached as **Exhibit B**. More specifically, the seed mixes are as identified in the Application Section 3) b.4 and application Appendix D – Plan Contents and Specifications Section F.

J) Describe long term maintenance needed to support reclamation

No long term maintenance is expected. That being said, Preferred Sands of Minnesota expects to fulfill the reclamation standard approved in the Nonmetallic Reclamation Permit.

K) Provide an estimate of the reclamation cost of each phase of the project or the entire site if phasing is not planned.

It is impossible to detail or estimate a separate and distinct cost to reclaim since the cost associated with operational production includes those costs necessary to achieve the efficient movement of soils to uncover nonmetallic minerals for production and the similar movement of those soils to their final resting place as part of the approved reclamation plan. However, as part of WDNR Administrative Code NR135 – Nonmetallic Mining Reclamation, a Financial Assurance Bond for Nonmetallic Mining is bound unto the Chippewa County Department of Land Conservation and Forest Management in the amount of $500,000.00. In accordance with the County review guidelines the Financial Assurance Bond will be updated as necessary to ensure the completion of the reclamation obligation.

To the best of my knowledge, I certify that the information provided on this application and accompanying documents is true and accurate.

Property Owners signature _____ **Date** _____

Please print or type the signature _____

Property Owners signature _____ **Date** _____

Please print or type the signature _____

Property Owners signature _____ **Date** _____

Please print or type the signature _____

Mining Company Signature _____

Please print or type the signature _____

Company Preferred Sands of Minnesota, LLC

Address _____

Signature of this application authorizes the Town of Cooks Valley staff and its designees to enter upon the property to perform the needed inspections. Entry will not require a prior notice.

The applicant agrees to provide twenty-five (25) copies of this application. These copies are necessary for the plan commission, town board, adjoining landowners, and general public at the public meetings.

COOKS VALLEY NON-METALLIC MINING PERMIT
This is a portion of Appendix A
15784 40th Street
CLERK RESIDENCE
3717 COUNTY HIGHWAY A
BLOOMER, WI 54724

THE TOWNSHIP OF COOKS VALLEY, LOCATED IN CHIPPEWA COUNTY, WISCONSIN, HERBY GRANTS A NON-METALLIC MINING PERMIT TO:

PREFERRED SANDS OF MINNESOTA

RESIDING AT THE FOLLOWING ADDRESS:

ONE RADNOR CORPORATE CENTER,
100 MATSONFORD AVE SUITE 101,
PHILADELPHIA, PA 19087

THIS IS A CONDITIONAL USE PERMIT. IT IS GRANTED WITH ALL OF THE CONDITIONS LISTED BELOW.

THIS PERMIT IS NOT TRANSFERRABLE TO ANY OTHER PERSON OR COMPANY. IT IS TRANSFERRABLE ONLY TO HEIRS OR SPOUSES PROVIDED THE STIPULATIONS AS OUTLINED IN THE APPLICATION AND PERMIT ARE FOLLOWED.

THE LAND ASSOCIATED WITH THIS PARTICULAR PERMIT IS LOCATED IN THE _____ OF THE _____, SECTION 3, TOWNSHIP 30 NORTH, RANGE 10 WEST. IF OTHER SECTIONS OR PLOTS EXIST – PLEASE LIST

PARCEL NUMBERS

23010-0342-00020000	23010-0343-00020000
23010-0334-02000000	23010-0331-00020000
23010-0332-00000000	23010-0333-00000000
23010-0334-00020000	23010-0343-04000000
23010-0331-04000000	23010-0342-07250000

- Permits for operations need to be **renewed annually for at least the first 5 years**. At that point the duration might be extended for multiple years if the provisions of the permit have been followed.

- Permits will allow activity and reclamation in specific areas as outlined in the operational plan. The operational plan was submitted in detail with the application.

- Activities are to be in compliance with Wisconsin DNR (WDNR) (WPDES) permit

- ~~A setback of 250 feet from any well and 250 feet from any structure (house, barn, garage, etc.)~~ **N/A**

- Hours of operation: 24/7/365

- Operator will follow all provisions of the Chippewa County Non-Metallic Mining Reclamation Ordinance and Wisconsin Administrative Rule NR135

- Activities to be conducted in compliance with submitted materials listed under "Plan Review Documents" or the operational plan". This includes the covering of all haul trucks and any other stipulations agreed upon by the Township of Cooks Valley and the landowner or lease holder prior to the actual hauling and/or mining.

- Wells within __0__ mile will be tested for quality.

- No hauling may take place from any mine or pit area after the permit(s) have/has expired.

- **It is the responsibility of the landowner and/or lease holder to keep all permits current. Failure to pay the necessary fee before the due date shall result in the fee increase to $750.00 or suspension of the permit.** The due date for this permit is: _____

- Annual review of the permit will take place prior to the expiration date of the permit (at least 15 but no more than 30 calendar days).

- A complete record of the hearing and the decision of the Planning Commission and/or Town Board will be available for inspection at the Town Hall upon request. Information can be reviewed/and/or requested at the convenience of the Town Clerk (Cooks Valley does not have an office open at the Town Hall).

Information may be sought Monday through Friday. This does not include Weekends or Holidays.

- The Conditional Use Renewal fee is $200.00 annually for the first five (5) years. After that it will be for the duration of the permit as determined by the Town Board. Violations of the terms of this permit during a permit period will cause it to cease. This fee should be submitted to the Clerk of Cooks Valley.

- Revocation of Permit – If any condition of the permit is violated or if the use is substantially detrimental to persons or property in the neighborhood, the Plan Commission and/or Town Board shall hold a public hearing on the revocation of the permit. If, upon finding of facts, any material condition of the permit has been violated or if the character and quality of the area has been substantially and adversely affected by the continuation of the activities as allowed under the Conditional Use Permit, the Town Board may revoke and/or modify the Conditional Use Permit. At that point legal action will be initiated to ensure that compliance with the Non-Metallic Mining Ordinance of Cooks Valley occurs.

- In the event of revocation or termination, the Conditional Use Permit will be determined to be void and the property shall be reclassified to its original type. At this point a performance bond, taken at the time of renewal will be invoked.

- Lapse of Permit – Conditional Use Permits issued shall lapse and will be considered void 6 months after approval by the Plan Commission and/or Town Board unless the use is fully established and improvement of the property as described in the permit is implemented.

- Performance bonds and road maintenance procedures as agreed to by the Town Board, Landowner and/or Company shall be adhered to. Failure will result in revocation of this permit. This shall be in writing and signed by all parties prior to the issuance of this permit. Performance bonds and proof of liability are required prior to the issuance of a permit.

- Any person or persons jointly or severely aggrieved by the decision of the Plan Commission or Town Board or any taxpayer, or any officer, department, board or bureau of the Township, may commence an action in the Circuit Court for Writ of Certiorari.

- Any haul roads shall be maintained so that dust is kept to a minimum by an approved method. There are chemicals available to do this. A suitable surface may also meet the conditions of the permit.

- Any legal fees arising from non-compliance to this permit shall be paid for by the landowner, company, and/or haulers of the material.

- Other Conditions:
  (May include, but are not limited to: Tarping of loads, trucking routes and times of use, operation and processing methods used, other permits required for operation, etc.)

- Other conditions: _____

- Other conditions: _____

WE AGREE TO THE ABOVE CONDITIONS AND TERMS OF THIS PERMIT

LANDOWNER Samuel R. Lagesse

PRINTED NAME & SIGNATURE _____

ADDRESS 4621 186th Ave.,
Bloomer, WI 54724

LANDOWNER Donald Prill

PRINTED NAME & SIGNATURE _____

ADDRESS 4121 186th Ave.,
Bloomer, WI 54724

LANDOWNER James Springer

PRINTED NAME & SIGNATURE _____

ADDRESS 16569 State Hwy 40,
Bloomer, WI 54724

HAULER(S) NAME(S) **By contract**

ADDRESS(ES) _____

HAULER(S) NAME(S) _____

ADDRESS(ES) _____

DATED _____

TOWN BOARD:

Chairman: _____ **Supervisor:** _____

Supervisor: _____ **Clerk:** _____

Appendix A
Proof of Insurance

PREFPRO-01 KOSU

CERTIFICATE OF LIABILITY INSURANCE

For Discussion Purposes Only

DATE (MM/DD/YYYY) 2/27/2012

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER The Graham Company The Graham Building 1 Penn Square West Philadelphia, PA 19102 (215) 567-6300	CONTACT NAME: Kevin D. Connelly PHONE (A/C, No, Ext): 1-215-701-5376 FAX (A/C, No): 1-215-525-0235 E-MAIL ADDRESS: Connelly_Unit@grahamco.com
INSURED Preferred Sands of Minnesota, LLC 4621 186th Ave Bloomer, WI 54724	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Ironshore Specialty Insurance Co. INSURER B : INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT LOC			001244400	12/21/2011	12/21/2012	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
A	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED RETENTION $			001244500	12/21/2011	12/21/2012	EACH OCCURRENCE AGGREGATE	$ $ 15,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

EVIDENCE OF INSURANCE
-

Preferred Sands of Minnesota, LLC

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Appendix B
Excerpts from the Nonmetallic Mining Reclamation Application and Permit

For Discussion Purposes Only

Original Date September 2010
Revised September 24, 2010
Revised February 1, 2011
Revised March 21, 2011

Proposed Mining and Reclamation Amendment

LaGesse Property
Prill Property
Springer Property

Chippewa County, WI

Consulting Civil Engineers

SUNDE ENGINEERING, PLLC
10830 Nesbitt Avenue South• Bloomington, Minnesota 55437-3100
Phone: (952) 881-3344 • Fax: (952) 881-1913 • E-Mail: info@sundecivil.com

NON-METALLIC MINING RECLAMATION PLAN NARRATIVE

OPERATOR: Preferred Sands of Minnesota, LLC

OWNER: Samuel R. LaGesse; Donald Prill; James Springer

(1) INITIAL SITE PLAN

(a.) Initial Site Maps - see attached 24" x 36" map

1. Location Map	See Appendix A, Location Maps, Quad Map Excerpt & Plat Map Excerpt.
2. Topographic Map	See Initial Site Map, C1
3. Property Boundaries	See Initial Site Map, C1
4. Roads and Road Labels	See Initial Site Map, C1
5. Road Right-of-way Lines	See Initial Site Map, C1
6. Structures and Structure Labels	See Initial Site Map, C1
7. Intermittent and Perennial Streams	See Initial Site Map, C1
8. Concentrated Flow	See Initial Site Map, C1
9. Wetlands	See Initial Site Map, C1
10. Previous Excavations	See Initial Site Map, C1
11. Wells	See Initial Site Map, C1
12. Groundwater Elevation	See Initial Site Map, C1
13. Utilities	See Initial Site Map, C1

(b.) Supporting Information

1. Landowner: Samuel R. LaGesse
Address: 4621 186th Ave.
City, State, ZIP: Bloomer, WI 54724
Landowner: Donald Prill
Address: 4121 186th Avenue
City, State, ZIP: Bloomer, WI 54724

Landowner: James Springer
Address: 16569 State Highway 40
City, State, ZIP: Bloomer, WI 54724

Applicant: Preferred Sands of Minnesota, LLC
Address: 497 Settlers Ridge Parkway
City, State, ZIP: Saint Paul, MN 55129-9275

2. Lease: See Appendix C, Lease Agreement

3. Legal Description

Tax Parcel Number(s): 23010-0342-00020000; 23010-0343-00020000; 23010-0334-02000000; 23010-0331-00020000; 23010-0332-00000000; 23010-0333-00000000; 23010-0334-00020000; 23010-0343-04000000; 23010-0331-04000000; 2310-0342-07250000

Described as follows: portions of the following quarter sections:
SW ¼, SE ¼ , of Sec 03, T 30N, Range 10W
NW ¼, SE ¼ , of Sec 03, T 30N, Range 10W
SW ¼ of Sec 03, T 30N, Range 10W

4. Property Owners Within 660 Feet of Project Site

James and Claudia Springer 16569 State Hwy 40	Rosemary Gehring 4818 186th Avenue	Melissa & Barry Sarauer 4383 186th Avenue
Donald & Lisa Prill 4121 186th Avenue	Robinson Panosian Mining, LLC	Ryan & Brenda LaGesse 4621 186th Avenue
Chad & Barbara Arendt 18610 50th Street	Wisconsin Robinson Family Limited Partnership	Carol Paulson 19022 75th Ave.
Lee and Sally Prill 4146 186th Ave.	Scott and Dawn Zwiefelhofer 3680 186th Ave.	

5. SOIL INFORMATION

Overburden (Horizon A and Horizon B soils) over the site ranges in depth from zero feet to as much as 4 feet. The following is a table of overburden depth for each core drilled: Source of information: Drilled core samples. Core sample interpretation by A. Lierman.

Boring number	Horizon A (topsoil)	Horizon B (clay)
1	0	0
1a	0-18 inches	18-30 inches
1b	0-9 inches	9-19 inches
1d	0	0
1f	0-18 inches	18-48 inches
2a	0-18 inches	18-30 inches

(2) SITE OPERATIONS PLAN

(a.) Site Operations Map - see attached 24" x 36" map

1. **Mine Site Boundary**	See Operations Site Map, C2
2. **Separation Boundaries and Separation Dimensions**	See Operations Site Map, C2
3. **Planned Cell Boundaries**	See Operations Site Map, C2
4. **Disturbed Areas**	See Operations Site Map, C2
5. **Processing Facilities**	See Operations Site Map, C2.
6. **Dewatering Systems**	See Operations Site Map, C2.
7. **Arrows Showing Surface Runoff Flow**	See Operations Site Map, C2.
8. **Screening Measures**	See Operations Site Map, C2
9. **Roads, Culverts, and Points of Public Road Access**	See Operations Site Map, C2
10. **Practices to Limit Erosion and Sediment Delivery**	See Operations Site Map, C2

(b.) Description of Site Operations

1. Description of Materials to be Extracted

Materials to be excavated are primarily sand and sandstone including other non-metallic minerals (excluding topsoil and clay).

2. Extraction and Processing to be Conducted at the Site

Processing activities may include but are not limited to earth excavating, blasting, washing, screening, crushing and loading depending on conditions encountered. Washing will likely occur on-site. Various types of heavy equipment will be used to break up partially consolidated material and load it into trucks. Blasting operations will take place on site. Blasting contractors operate in accordance with all state, county and township rules and follow the Department of Commerce Chapter Comm 7 regulations. The blasting contractor will determine the size of the blast and the blast hole locations. To prevent impact on neighbors, the contractor will monitor the vibrations at the closest residence. The construction of the wash plant will include the plant operations, recycle ponds (at least one sedimentation pond and one clean water pond) and sand stockpiles. The wash plant design will require the construction of high capacity wells. The proposed well locations are shown on the Site Operations Map, C2. It is anticipated that a minimum of 2 wells will be required, but as many as four may be needed for plant operations. Each well will be approximately 300 feet deep and will pump groundwater from the Mount Simon aquifer. The anticipated pumping rates of each well will be 900-1200 gallons per minute (gpm). The peak volume water usage is estimated at 1.3 million gallons per well and the estimated average daily usage is 0.6 million gallons per well. The permit application for the high capacity wells has been submitted to the DNR. The County will be kept up to date on the status of the permit. See Appendix E for the DNR High Capacity Well Approval Application.

Cells 1-6, as shown on The Site Operations Map, C2, represent the proposed mining extraction boundary. Areas outside of the cell boundaries, but within the mining operations boundary, may be used for mining operations including but not limited to stockpiling, equipment storage, processing activities, etc. No mining extractions will take place within the 50 foot mining Setback. If the area outside the mining extraction boundary (cells 1-6) is disturbed, the applicant will provide an addendum to this plan to include stormwater and erosion control for the additional disturbed areas. The addendum will provide stormwater ponds and erosion control practices to the same level of assurance that is included in the current reclamation plan.

3. Volumes of Materials

(Estimated Cubic Yards of In Place Raw Marketable Material)

Cell*	Area (acre), includes berms, roads, ponds etc.	During 1st two years (estimated, will depend upon market demand)	During Full Life of Operation (maximum, based on a pit floor of 1100 feet above msl)
1	50.7	1,488,600 yd^3	3,721,500 yd^3
2	15.4	0	1,756,500 yd^3
3	12.0	0	1,760,500 yd^3
4	12.94	0	1,974,100 yd^3
5	24.64	0	3,261,600 yd^3
6	30.55	0	1,296,600 yd^3
Total	146.23	1,488,600 yd^3	13,770,800 yd^3

*Cell areas are meant to indicate how the operator will navigate through the site, but volumes are subject to market conditions.

4. Site Dewatering and Effluent Discharge

There will be no dewatering at the mine site. The pit floor is to be excavated to a maximum bottom elevation of 1100 feet above mean sea level (msl) and the water table is approximately at an elevation of 1080 feet above msl (± 10 ft with seasonal fluctuations). The mining pit bottom is approximately 10-20 feet above the approximate water table elevation. All washplant effluent will be handled internally and recycled through a series of sedimentation ponds. The site will comply with Wisconsin Pollutant Discharge Elimination System Permit (WPDES) Non Metallic Mining Operations General Permit No WI-0046515-4. A copy of the original permit is included in Appendix B. This permit is in the process of being amended to include the proposed areas. The County will be kept up to date on the current status of this permit.

5. Stormwater Permits/Management

Stormwater management within the mining area involves maintaining run-off within the mining site and allowing run-off to pool and infiltrate into the mine floor. Temporary stormwater ponds are shown to indicate the volume capacity necessary to hold the 100 year storm event (5.8 inches). Mine pit depressions will be constructed as needed and the mine pit floor will be directed toward the pond/depression. The depressions will be maintained as necessary to remove sediment when accumulation interferes with infiltration rates and required volume capacities. For illustrative purposes the stormwater pond locations correlating to the depressions necessary are marked on the Operation Site Map, C2. Each pond

volume is designed for each cell, but the actual depressions may be modified to handle run-off from other cells. Additional depressed areas may be constructed to accommodate additional run-off as needed. The site operates under a Wisconsin Pollutant Discharge Elimination System Permit (WPDES) Non Metallic Mining Operations General Permit No WI-0046515-4. A copy of the original permit is included in Appendix B. This permit is in the process of being amended to include the proposed areas. The County will be kept up to date on the current status of this permit.

Cell	Pond	Required Volume (100-YR)		Provided Pond Volume*	
		CU. FT.	AC-FT	CU. FT.	AC-FT
1	A	1,061,122	24.4	1,069,200	24.5
2	B	324,232	7.4	324,900	7.5
3	C	252,648	5.8	266,124	6.1
4	D	272,440	6.3	298,368	6.8
5	E	518,770	11.9	527,352	12.1
6	F	643,200	14.8	656,430	15.1

See Specifications for Specific Pond Design in Appendix D

6. Erosion Control & Permits

Soil stockpile erosion is controlled by seeding and the establishment of vegetation on topsoil stockpiles. The topsoil stockpiles are used to create a screening berm along the North edge of the mining limits. The berms/stockpiles are constructed with 3H:1V (horizontal to vertical) slopes with a 10 foot flat top and a 20 foot maximum height. Silt fence will be constructed along the Northside of the proposed topsoil stockpile and to prevent sediment from entering the wetland and existing drainage-way. A perimeter diversion berm is constructed on the West side of the mining limits to divert off-site stormwater around the mining area. Site erosion control will comply with Wisconsin Pollutant Discharge Elimination System Permit (WPDES) Non Metallic Mining Operations General Permit No WI-0046515-4. A copy of the original permit is included in Appendix B. This permit is in the process of being amended to include the proposed areas. The County will be kept up to date on the current status of this permit.

7. Reclamation Activities During Operations

Reclamation activities during operation can generally be described as the careful balancing of marketable and unmarketable materials encountered throughout the life of mine excavation processes. Unmarketable materials, which generally include the overburdens and interburdens encountered, are moved beyond the limits of excavation often providing initial screening to the excavation. As mining advances through each cell future unmarketable materials are backfilled in previously mined

areas to conform to and meet with the post mining reclamation plan. The process is continuous and ongoing from year to year based on all earth volumes encountered and the ability to produce reclamation grades while not adversely affecting the mine performance. Horizon A will be stripped and stockpiled to construct the screening berm. Horizon B will then be stripped and stockpiled separate from horizon A (see screening berm cross-section in the Operations Map, C2). The stockpiles will have a maximum 3H:1V slopes and be stabilized with seed and mulch. Any overburden or interburden that is encountered will be stripped and then stockpiled within the mining limits. The overburden stockpiles will be seeded and mulched as necessary. As reclamation grading progresses, the overburden/interburden will be utilized as reclamation backfill and slope reconstruction, then Horizon B will be applied and finally Horizon A to create final grade. The reclamation slopes will be stabilized with seed and mulch.

8.Timetable/Sequence of Operations

Location	Activity
Cell #1	Begin and finish mining existing active portions of cell #1 located in the Eastern part of cell #1. Strip A horizon topsoil and B horizon clay in the remainder of cell #1 and stockpile in separate stockpiles along the North edge of the mining limits as shown on Site Operations Map, C2. Before mining the remainder of cell #1, seed topsoil piles with vegetation to prevent erosion (stockpiles will be constructed per the cross-section shown on Site Operations Map, C2). Ensure mine floor depression is appropriately sized to contain 100-YR run-off volume as shown in pond A in the Operations Site Map, C2. Finish mining cell #1. It is estimated that approximately 650,000 cubic yards to 700,000 cubic yards of product will be mined each year. Mining activities in cell #1 will last approximately 5 years. Reclamation activities will begin in cell #1 as mining advances through the site. Any interburden available from either stockpiles or from future cell stripping will be placed as the first layer of reclaimed backfill. This material will be applied in 6-12 inch lifts and compacted to 90% standard proctor density, where achievable. Horizon B soils will be applied in 6-12 inch lifts to an approximate depth of 12 inches. Horizon A topsoil will be windrowed onto the previously applied Horizon B layer to an approximate depth of 4 inches. All slopes will be a maximum 3H:1V and be stabilized with seed and mulch.
Cell #2	Strip A and B horizon soils and stockpile in designated stockpiles. Seed soil piles where needed to prevent erosion. Begin mining cell #2. Ensure mine floor depression is appropriately sized to contain 100-YR run-off volume as

8. Timetable/Sequence of Operations (continued from previous page)

Location	Activity
Cell #2	shown in pond B in the Operations Site Map, C2. Finish mining cell #2. It is estimated that approximately 650,000 cubic yards to 700,000 cubic yards of product will be mined each year. Mining activities in cell #2 will last approximately 2.5 years. Reclamation activities will begin in cell #2 as mining advances through the site. Any interburden available from either stockpiles or from future cell stripping will be placed as the first layer of reclaimed backfill. This material will be applied in 6-12 inch lifts and compacted to 90% standard proctor density, where achievable. Horizon B soils will be applied in 6-12 inch lifts to an approximate depth of 12 inches. Horizon A topsoil will be windrowed onto the previously applied Horizon B layer to an approximate depth of 4 inches. All slopes will be a maximum 3H:1V and be stabilized with seed and mulch.
Cell #3	Strip and store A and B horizon topsoil in the designated stockpiles. Seed stockpiles where needed with vegetation to prevent erosion. Begin mining cell #3. Ensure mine floor depression is appropriately sized to contain 100-YR run-off volume as shown in pond C in the Operations Site Map, C2 Finish mining cell #3. It is estimated that approximately 650,000 cubic yards to 700,000 cubic yards of product will be mined each year. Mining activities in cell #3 will last approximately 2.5 years. Reclamation activities will begin in cell #3 as mining advances through the site. Any interburden available from either stockpiles or from future cell stripping will be placed as the first layer of reclaimed backfill. This material will be applied in 6-12 inch lifts and compacted to 90% standard proctor density, where achievable. Horizon B soils will be applied in 6-12 inch lifts to an approximate depth of 12 inches. Horizon A, topsoil, will be windrowed onto the previously applied Horizon B layer to an approximate depth of 4 inches. All slopes will be a maximum 3H:1V and be stabilized with seed and mulch.
Cell #4	Strip and store A and B horizon soil in the designated stockpiles. Seed stockpiles where needed with vegetation to prevent erosion. Begin mining cell #4. Ensure mine floor depression is appropriately sized to contain 100-YR run-off volume as shown in pond D in the Operations Site Map, C2. Finish mining cell #4. It is estimated that approximately 650,000 cubic yards to 700,000 cubic yards of product will be mined each year. Mining activities in cell #4 will last approximately 3 years. Reclamation activities will begin in cell #4 as mining advances through the site. Any interburden available from either stockpiles or from future cell stripping will be placed as the first layer of reclaimed backfill. This material will be applied in 6-12 inch lifts and compacted to 90% standard proctor density, where achievable.

8. Timetable/Sequence of Operations (continued from previous page)

Location	Activity
Cell #4	Horizon B soils will be applied in 6-12 inch lifts to an approximate depth of 12 inches. Horizon A topsoil will be windrowed onto the previously applied Horizon B layer to an approximate depth of 4 inches. All slopes will be a maximum 3H:1V and be stabilized with seed and mulch.
Cell #5	Strip and store A and B horizon soils in the designated stockpiles. Seed stockpiles where needed with vegetation to prevent erosion. Begin mining cell #5. Ensure mine floor depression is appropriately sized to contain 100-YR run-off volume as shown in pond E in the Operations Site Map, C2. Finish mining cell # 5. It is estimated that approximately 650,000 cubic yards to 700,000 cubic yards of product will be mined each year. Mining activities in cell #5 will last approximately 5 years. Reclamation activities will begin in cell #5 as mining advances through the site. Any interburden available from either stockpiles or from future cell stripping will be placed as the first layer of reclaimed backfill. This material will be applied in 6-12 inch lifts and compacted to 90% standard proctor density, where achievable. Horizon B soils will be applied in 6-12 inch lifts to an approximate depth of 12 inches. Horizon A topsoil, will be windrowed onto the previously applied Horizon B layer to an approximate depth of 4 inches. All slopes will be a maximum 3H:1V and be stabilized with seed and mulch.
Cell #6	Strip and store A and B horizon soil in the designated stockpiles. Seed stockpiles where needed with vegetation to prevent erosion. Begin mining cell #6. Ensure mine floor depression is appropriately sized to contain 100-YR run-off volume as shown in pond F in the Operations Site Map, C2. Finish mining cell #6. It is estimated that approximately 650,000 cubic yards to 700,000 cubic yards of product will be mined each year. Mining activities in cell #6 will last approximately 2 years. Reclamation activities will begin in cell #6 as mining advances through the site. Any interburden available from either stockpiles or from future cell stripping will be placed as the first layer of reclaimed backfill. This material will be applied in 6-12 inch lifts and compacted to 90% standard proctor density, where achievable. Horizon B soils will be applied in 6-12 inch lifts to an approximate depth of 12 inches. Horizon A topsoil will be windrowed onto the previously applied Horizon B layer to an approximate depth of 4 inches. All slopes will be a maximum 3H:1V and be stabilized with seed and mulch.
(Post Mining) All Areas:	Remove processing equipment, fill in stormwater ponds and any processing ponds, finalize grades and land uses consistent with the reclamation plan. See Final Site Map, C3.

9. Timetable

Estimated period of operation/extraction for each cell:

Cell 1	5 years
Cell 2	2.5 years
Cell 3	2.5 years
Cell 4	3 years
Cell 5	5 years
Cell 6	2 years
Total	20 years

(Estimated production = 650,000-700,000 cy/year, Subject to change due to market conditions)

(3) FINAL SITE PLAN

(a.) Final Site Maps - see attached 24" x 36" map

1. **Final Depths, Final Slope Angles, and Slope Stabilization Measures**
   All final slopes will be constructed at 3H:1V or flatter to meet reclamation standards. Final grades will range from 1100-1280 feet above msl. (See Cross Sections, C4)

2. **Areas which Convey Concentrated Flow**
   Erosion control practices, including silt fence, erosion control mats, and mulch will be maintained until vegetation is established. (See Final Site Map, C3)

3. **Locations of Facilities or Structures to Remain in Place**
   The location of roads and structures to remain are illustrated on Final Site Map, C3.

4. **Planned Development Features on the Site Following Closure**
   Approximate areas post reclamation: farmland (pasture):107.0 acres.
   Stable Wildlife: 39.2 acres. (See Final Site Map, C3)

5. **Cross Sections through the Site**
   See Cross Sections, C4: Sections A-A', B-B' and C-C'

(b.) Description of Final Reclamation

1. Disposition of Structures and Roads

All processing and mining equipment will be removed. All private driveway accesses to residences will remain. All private residential structures that are not disturbed by mining activity will remain.

2. Soil Reapplication

Reapply B Horizon soils (clay) first, then place A Horizon (topsoil) on top (for further details see Appendix D, *Plan Contents and Specifications*, Section E. Topsoil reestablishment part E i, ii, iii, iv, v).

3. Safety Assurances

To ensure public safety, screening berms will be placed along the north edge of the mining limits. The entrance to the mine is the private driveway to the home of the land owner. This location allows the traffic flow to and from the site to be monitored. To further ensure safety, the area is to be posted. If trespassing becomes an issue, additional safety measures will be taken at the discretion of the lead operator. Safety will further be observed by operating the site in compliance with MSHA regulations for mining safety and health. The reclaimed site will have final slopes not to exceed 3H:1V and all stormwater/sedimentation ponds and all processing ponds will be filled in to conform to the reclamation grades shown on the Final Site Map, C3. Three to one slopes are considered safe and stable.

4. Seeding Plan

(See Appendix D, *Plan Contents and Specifications*, Part F for more detailed plan).
Pasture (107.03 Acres):

DNR Mix 1- Pasture

Common Name	Scientific Name	Pounds per acre
Timothy	*Phleum pratense*	4
Tall Fescue	*Festuca*	5
Canada Wild	*Elymus*	3
Agricultural	*Secale cereale*	4.5
Alfalfa	*Medicago sativa*	10
Alsike clover	*Trifolium hybridum*	4.5
		31 Pounds total

Sloped area: wildlife (39.2 Acres):

DNR Mix 2 – Stabilization/Wildlife/Grazing:

Common Name	Scientific Name	Pounds per acre
Agriculture Rye	*Secale cereale*	4
Timothy	*Phleum pratense*	2
Tall Fescue	*Festuca*	3
Switchgrass	*Panicum virgatum*	1
Big Bluestem	*Andropogon*	1
Canada Wild	*Elymus*	3
Alsike clover	*Trifolium hybridum*	4
Red Clover	*Trifolium repens*	4
Alfalfa	*Medicago sativa*	5
		27 Pounds total

5. **Future Use**

   Approximately 107.0 acres will be reclaimed to agricultural end land use and will be seeded to pasture land. Approximately 39.2 acres that are sloped 3H:1V will be reclaimed to wildlife habitat.

Attachments

APPENDIX A: U.S.G.S. Quad Map Excerpt and Plat Map Excerpt

APPENDIX B: WiDNR Stormwater Permit (WPDES)

APPENDIX C: Lease Agreement

APPENDIX D: Plan Contents and Specifications

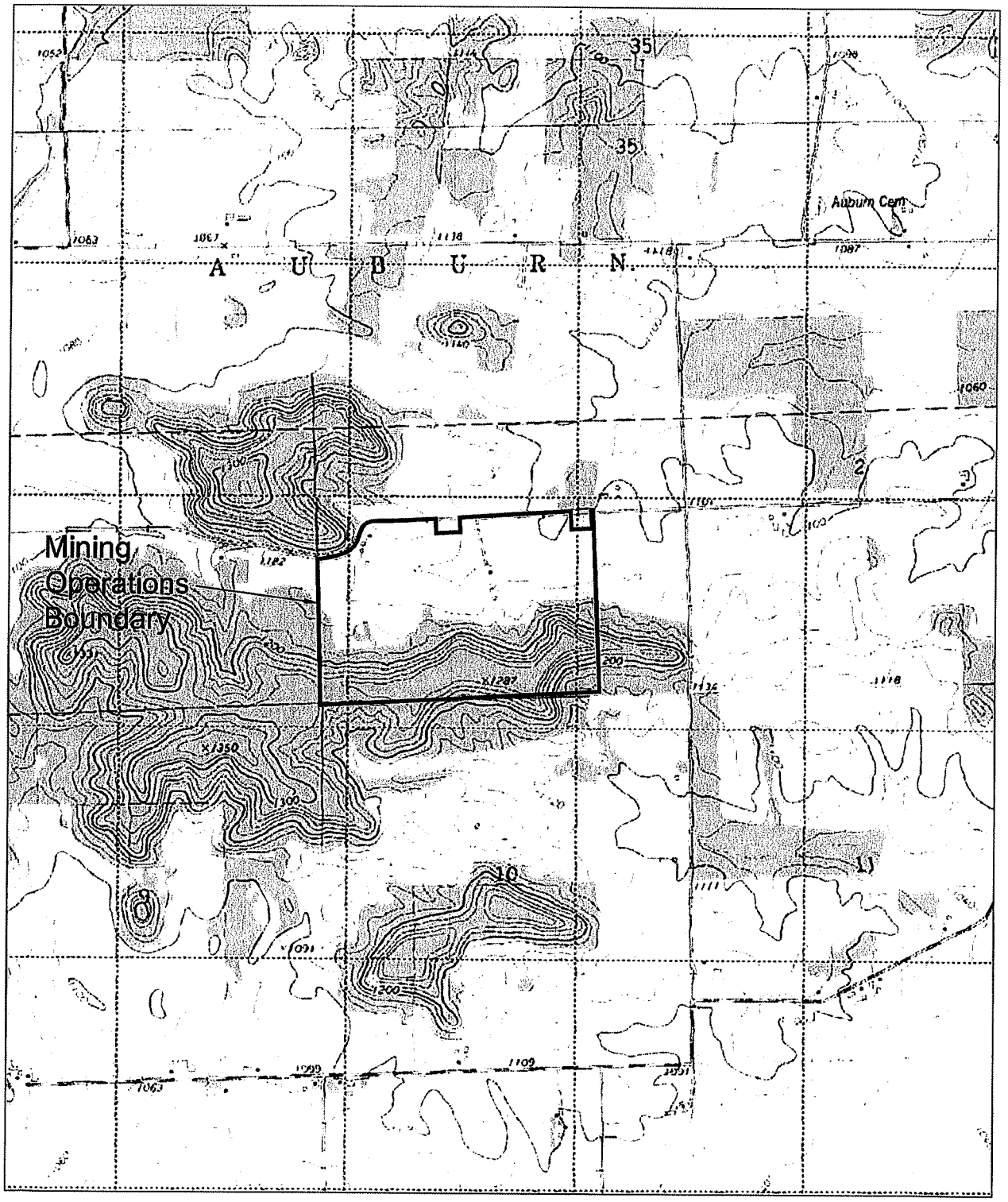
APPENDIX E: DNR High Capacity Well Approval Application Form

APPENDIX F: Water Table Map

APPENDIX G: Annual Reclamation Report & Activities Plan and Construction & Reclamation Inspection Plan

FORM REVISED: DEC 2009

For Discussion Purposes Only



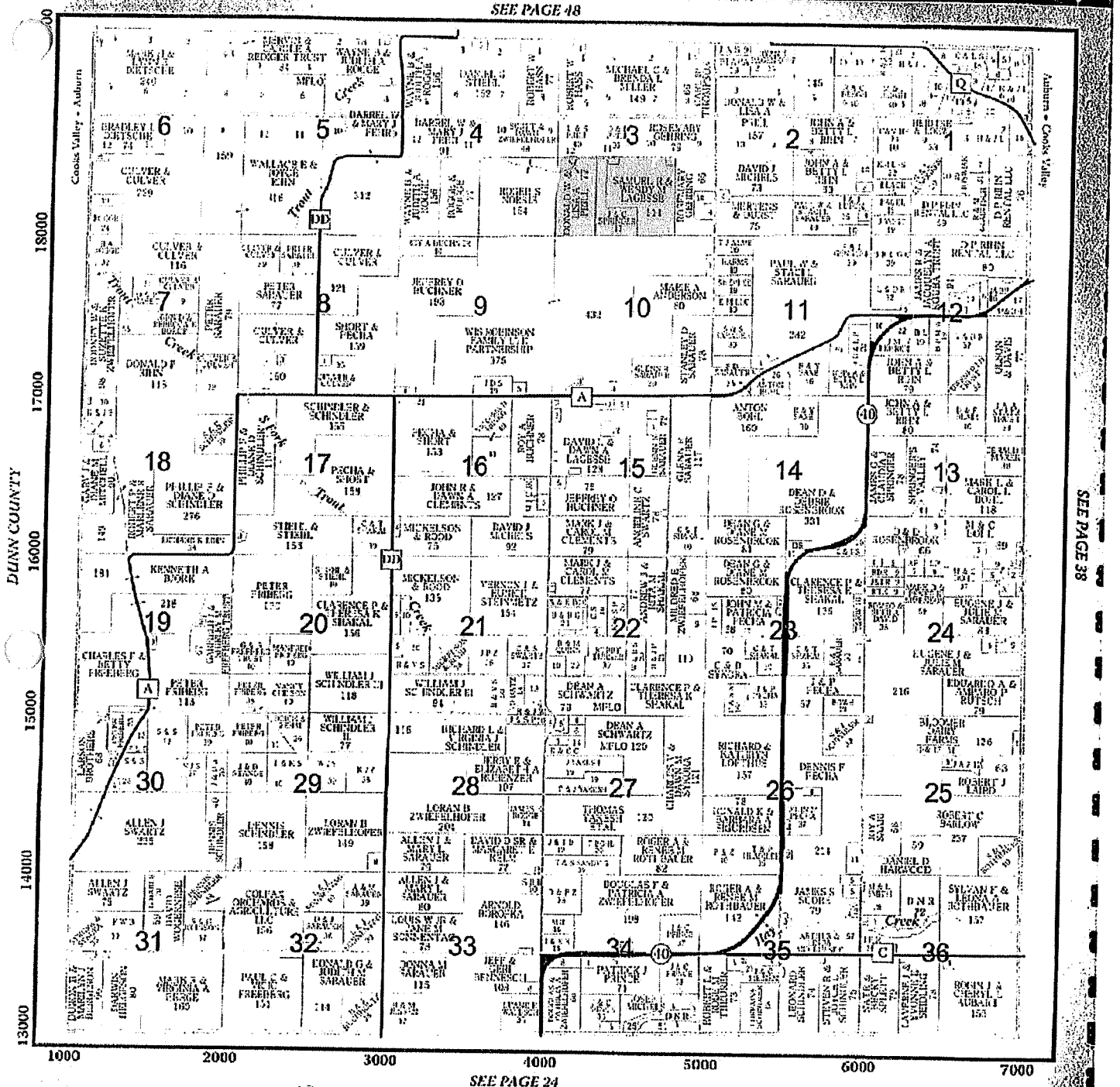
Location Map

USGS Quad Map Excerpt

New Auburn, WI and Como Creek, WI

Preferred Sands of Minnesota, LLC

COOKS VALLEY, AUBURN (S) — T30N R10W



Please note - All acreages are computed & rounded to the closest acre, roadways are excluded from totals. All mapping is for reference only and is not intended, or to be used for any legal purpose. See pages 3 & 115.

APPENDIX D

Preferred Sands of Minnesota, LLC
LaGesse, Prill and Springer Properties

PLAN CONTENTS AND SPECIFICATIONS

A. Groundwater Management

(i) Depth to water table

See attached Appendix F, Water Table Map. The water table contours shown in Appendix F that are based on the Generalized Water-Table Elevation Map of Chippewa County, Wisconsin by I.D. Lippelt, 1988.indicate that the water table varies from approximately 1060-1085 feet above msl. Based on the map data, the direction fo groundwater flow is from the south to the north and northeast beneath the site, The information on Lippelt's map shows that these contours are only accurate to within ±0.50 mile.

In order to verify the accuracy of Lippelt's map, well construction logs for wells in the area were reviewed. Based on the well construction logs and the topography shown on the Initial Site Map, C1, the groundwater elevation appears to vary between 1050 - 1085 ft above mean sea level. The direction of ground water flow beneath the site also appears to be to the north and northeast. The locations of the wells are estimated locations based on residential structure locations. The accuracy of the ground water depth from the well construction logs is limited by the accuracy of the base map, i.e. the topography is based on 20 foot contour intervals and the well locations are estimated. They are also influenced by the year and season that they were drilled as water tables fluctuate in response to both seasonal and longer term climatic trends.
While these two data sets do not provide identical data or interpretation of ground water levels, they are similar. Without accurate site specific data, a conservative approach is being used in establishing the maximum excavation depth. Current plans show the mine excavated to a minimum elevation of 1100 feet above mean sea level (msl), which is at least 10 feet above the assumed highest ground water elevation of 1090 feet above msl.

As mining operations advance and new high capacity wells are drilled, ground water levels can be more accurately defined and any adjustments made to excavation elevations as necessary at that time. The applicant will also investigate, as mining excavation gets closer to the proposed floor elevation, the necessity and merit of

adding piezometers in order to further understand and characterize the ground water elevation and flow direction.

(ii) Volumetric storage capacity of unsaturated bedrock

Based on an average estimate of the porosity of fine-grained sandstone of 18% (porosity range from 6-34% Pg. 153 Freeze and Cherry, 1979) the unsaturated bedrock below the site can hold a volume of water substantially greater than or equal to the volume of the ponds. The ponds will be constructed on the floor of the mining cells so that they can receive runoff. Depth of ponds is approximately 6 feet. At the location of the ponds, the estimated unsaturated bedrock depth beneath the ponds is approximately 4-14 feet. Even at a minimum separation of 3 feet from the bottom of the ponds to the water table elevation at 137.74 acres, the volume of unsaturated bedrock beneath the site is 74.4 acre-feet compared to the total volume of all six ponds at full build out of 72.1 acre-feet.

(iii) Groundwater elevations and range of seasonal and historic groundwater fluctuations.

See A(i) above and Water Table Map, Appendix F. The water table contours shown in Appendix F are based on the Generalized Water-Table Elevation Map of Chippewa County, Wisconsin by I.D. Lippelt, 1988 and interpretations from local well data (also in Appendix F). Kirsten Pauly is a registered professional geologist in Minnesota. She is also registered as a professional engineer in Minnesota and Wisconsin. To be clear, she is not a registered geologist in Wi. She has extensive experience in hydrogeology and environmental engineering . Ms. Pauly has been consulted on this topic of groundwater and the validity of the available data. She has determined that the water table levels appear to be between 1050 and 1090 feet above msl across the site. Accounting for a 10' seasonal fluctuation in water table elevations, this still maintains a 10' separation between the proposed mine floor and the ground water table. Mining plans can be adjusted if necessary as a result of any new data obtained when the high capacity wells are drilled. Any additional data on water levels obtained as a result of the well drilling activities, including the well logs and/or modifications to maximum excavation elevations can be submitted to the County for review.

(iv) Infiltration rate of bedrock

The infiltration rate of medium grained sandstone is approximately 0.003 feet per day to 0.03 feet per day (pg 29 Freeze and Cherry: Infiltration10^{-8} m/sec to 10^{-7} m/sec).

(v) Spill Prevention control and countermeasure Plan (SPCC Plan)

Fuel storage is portable and will be kept outside the active mining area. On-site fuel storage is in full compliance with Wisconsin Dept of Commerce, Division of Environmental Regulatory Services. There is no on-site storage of other chemicals in the active mining area. A list of contacts will be developed as mining advances. The current contact is Paul McLean of Preferred Sands 610-389-5483 .

B. Surface Water and Stormwater Management

(i) Percentage of runoff to stormwater ponds, versus infiltration, versus internal site drainage.

Mine floor depressed areas will contain the run-off volume for a 100 yr event assuming no infiltration.

(ii) Diversion of existing surface water flows

In cell #1 diversion berms and drainage swales will be erected as mining progresses to divert surface water flow around the mining operations to a farm field which will provide a natural filtration area. In cells #2-#6, the natural lay of the land prevents external surface water from entering the mine. If erosion problems occur in the field due to concentrated surface water flow, riprap will be added at the diversion outlet to dissipate the energy of the flow. If erosion problems occur in the diversion itself, riprap check dams will be added to reduce flow velocities.

(iii) Water detention ponds

See Plan Narrative for stormwater treatment methodology. The pond volume for each cell is calculated below. Pond volumes include 6 feet of depth with 3H:1V side slopes. The pond volumes are designed to hold a 100 year storm event (5.8 inches) over the area of each mining cell assuming zero infiltration. The actual ponds/depressions will be monitored to maintain storage volume capacity and infiltration rates. Accumulated sediment will be removed as necessary to maintain storage capacity and infiltration rates.

Required Volumes:

Cell 1: 50.7 acre x 43,560 sf/acre x 5.8 in x 1ft/12in = 1,061,122 cf

Cell 2: 15.4 acre x 43,560 sf/acre x 5.8 in x 1ft/12in = 324,232 cf

Cell 3: 12.0 acre x 43,560 sf/acre x 5.8 in x 1ft/12in = 252,648 cf

Cell 4: 12.94 acre x 43,560 sf/acre x 5.8 in x 1ft/12in = 272,440 cf

Cell 5: 24.64 acre x 43,560 sf/acre x 5.8 in x 1ft/12in = 518,770 cf

Cell 6: 30.55 acre x 43,560 sf/acre x 5.8 in x 1ft/12in = 643,200 cf

Size: Area depth

For Cell #1: Pond A: 178,200 ft^2 x 6ft = 1,069,200 ft^3

For Cell #2: Pond B: 54,150 ft^2 x 6ft = 324,900 ft^3

For Cell #3: Pond C: 44,354 ft^2 x 6ft = 266,124 ft^3

For Cell #4: Pond D: 49,728 ft^2 x 6ft = 298,368 ft^3

For Cell #5: Pond E: 87,892 ft^2 x 6 ft = 527,352 ft^3

For Cell #6: Pond F: 109,405 ft^2 x 6 ft = 656,430ft^3

Cell	Pond	Required Volume (100-YR)		Provided Pond Volume*	
		CU. FT.	AC-FT	CU. FT.	AC-FT
1	A	1,061,122	24.4	1,069,200	24.5
2	B	324,232	7.4	324,900	7.5
3	C	252,648	5.8	266,124	6.1
4	D	272,440	6.3	298,368	6.8
5	E	518,770	11.9	527,352	12.1
6	F	643,200	14.8	656,430	15.1

Hydrologic budget (for 100 year event): inflow, outflow seepage, evaporation, etc.

Depressed areas will be built to the volumes of the specified ponds and will adequately drain all water within the mining site.

Estimate of time to drain runoff ponds from the full to empty condition assuming an infiltration rate of 0.03 ft/day:

6 ft depth/0.03 ft/day = 200 days

Inflow and Outflow: channels, piped pumped

N/A. Stored in ponds

Design for settling of solids

Depressed areas designed to hold 100 year event. Accumulated sediments will be removed as needed to maintain pond volumes and infiltration rates.

Inlet and outlet protection

N/A. No water inlet or outlet within the mine. If run-off from other areas becomes apparent, berms will be constructed, as needed, to redirect flow around the perimeter of the mining area to prevent run-off into active mining area.

Emergency Spillway

Depressed areas built to conservatively hold a 100 year event. Drainage, in the event that a spillway will be needed, can be accommodated in surrounding field.

Pond maintenance requirements, including sediment removal and disposal.

As noted above, sediment will be removed as needed and accumulated sediments will be distributed in mined areas for sloping and reclamation grading.

(iv) WPDES Permit

The site operates under a Wisconsin Pollutant Discharge Elimination System Permit (WPDES) Non metallic Mining Operations General Permit No WI-0046515-4. A copy of the permit is included in Appendix B. This permit is in the process

of being amended to include the proposed areas. The County will be kept up to date on the current status of this permit.

C. Soil and overburden management

(i) Document thickness and volume of topsoil (A horizon), subsoil (B horizon), and overburden to be stripped and stored.

Overburden (Horizon A and Horizon B soils) over the site ranges in depth from zero feet to as much as 4 feet. The following is a table of topsoil depth for each core drilled: Source of information: Drilled core samples. Core sample interpretation by A. Lierman.

Boring number	Horizon A (topsoil)	Horizon B (clay)
1	0	0
1a	0-18 inches	18-30 inches
1b	0-9 inches	9-19 inches
1d	0	0
1f	0-18 inches	18-48 inches
2a	0-18 inches	18-30 inches

Core samples have not yet been analyzed to determine the exact depth of interburden material. Interburden material is approximately between elevations 1180 feet above msl and 1240 feet above msl. This material will be stockpiled within the mining operations boundary.

Cell	Area (acre), includes berms, roads, ponds etc.	Horizon A (average 12 inch depth)	Horizon B (average 12 inch depth)	Interburden Volume (approximate depth is 60 feet)
1	50.7	81,796 yd^3	81,796 yd^3	141,300 yd^3
2	15.4	24,845 yd^3	24,845 yd^3	1,368,700 yd^3
3	12.0	19,360 yd^3	19,360 yd^3	1,100,900 yd^3
4	12.94	20,876 yd^3	20,876 yd^3	1,120,300 yd^3
5	24.64	39,753 yd^3	39,753 yd^3	1,769,400 yd^3
6	30.55	49,287 yd^3	849,287 yd^3	25,600 yd^3
Total	146.23	235,917 yd^3	235,917 yd^3	5,526,200 yd^3

(ii) Stripping process for topsoil, subsoil, and overburden over the full extent of life of the mine.

First strip horizon A soils and stockpile as shown on the cross-section on Site Operations Map, C2. Then strip horizon B soils and stockpile as shown on the cross-section on Site Operations Map, C2. Striping will be done using heavy equipment. Horizon A and B soils will be stockpiled along the north edge of the mining limits to be used as a screening berm. Interburden will be extracted using techniques noted previously in the reclamation plan section 2 (b.)2. Interburden will be stockpiled within the mining operations boundary for reuse in reclamation activities.

(iii) Separate stockpiling of each soil horizon and overburden over the full extent and life of the mine.

Areas for stockpiling are noted on Site Operations Map, C2. Soil horizons A and B will be stockpiled as shown on the cross-section on Site Operations Map, C2. All other overburden/interburden will be stockpiled separately within the mining operations boundary.

(iv) Stockpile location, construction, and stabilization.

Topsoil and subsoil will be stockpiled along the north edge of the mining limits to be used as a screening berm. The stockpiles will have 3H:1V slopes with a 10 foot wide top. The berms are shown on Site Operations Map, C2. The berms will be stabilized seeded in accordance with WiDOT Mix 20.

(v) Screening berms: Location, dimensions, erosion control, seeding.

Screening berms will be located along the north edge of the mining limits. The berms will have 3H:1V slopes with a 10 foot wide top. The berms are shown on Site Operations Map, C2. The berms will be seeded in accordance with WiDOT Mix 20.

(vi) Interim management of externally generated soil materials (processing fines, and topsoil substitute, etc.).

If material is removed off-site for processing, the byproduct may be returned to the site in compliance with state standards (NR518.06). This material will be stockpiled within the mining operations boundary, and when reclamation processes can begin, the material will be used for backfill and slope reconstruction. If processing (washing) occurs on-site, the byproduct will be stockpiled within the mining operations boundary and later used for backfill and slope reconstruction in accordance with the reclamation plan.

(vii) Vertical management of mining (# of lifts, etc.).

Overburden will be stripped and stockpiled. The first layer of marketable material will be extracted using standard mining techniques. This material may be shipped off-site for processing or processed on-site. The marketable material will be stockpiled and then hauled off the site. The interburden material will be extracted using standard mining techniques. The interburden will be stockpiled to be later used in reclamation grading. The second layer of marketable material will be extracted using standard mining techniques. The handling of this material will be similar to the first product layer. Generally 1H:1V excavation slopes will be utilized. Terracing will be used in mining within the bedrock.

D. Slope reconstruction

(i) General sequence.

Grade out slopes 3H:1V, reapply B Horizon (clay) first and A Horizon (topsoil) last.

(ii) Material source(s).

All materials used for reestablishing slopes and soil horizons A and B shall be obtained from the mining site.

(iii) Offsite materials and testing. Provide a testing protocol, in advance, for hauled in fill materials, solid wastes, or other materials proposed for use in reclamation.

N/A. No offsite materials will be hauled in for reclamation purposes.

(iv) Estimate of volume of overburden available for slope reconstruction; relation to volume of material needs for slope reconstruction.

Interburden volume over the life of the mine is approximately 5.5 million cubic yards and will be available for fill. Processing will produce approximately 4.8 million cubic yards of material that will be available for reclamation backfill. The total volume of material available for backfill and slope reconstruction is approximately 10.3 million cubic yards. The volume of material required to bring the mine site up to the final grades, as shown on sheet C3, is approximately 10 million cubic yards. If more or less interburden, overburden, and/or processing byproduct becomes available, the reclamation surface will be adjusted to accommodate the change. Grading measures will be implemented to create a stable 3H:1V slope (or flatter).

(v) Details of slope construction process

As reclamation activities begin, stockpiled interburden and processing byproduct material will be used as the base of the reclamation surface. This material will be placed in 6-12 inch lifts and compacted to 90% standard proctor density, where achievable. The next layer will use the horizon B soil (clay) material. This material will be placed to an approximate depth of 12 inches. The final layer will be the horizon A topsoil material. This material will be placed to an approximate depth of 4 inches. The area will then be seeded and mulched.

(vi) Management of inactive unreclaimed mine faces.

Reclamation of any face may need to be addressed when mining is complete. Long periods of inactive high walls are not anticipated. MSHA regulations will be followed for active vertical high walls.

E. Topsoil Reestablishment

(i) Details of soil application process

See D (v) above.

(ii) Reestablishment of soil horizons, i.e. topsoil (A horizon) and subsoil (B horizon).

See D (v) above.

(iii) Measure to limit compaction.

Dozers and farm tillage equipment known to have minimal compaction will be used to reestablish topsoil Horizons A and B.

(iv) Vegetation rooting depth for selected vegetation types.

DNR seed mix 2 will be used for the steeply sloped areas (see Non-Metallic Mining Reclamation Plan Narrative section 4).

(v) Erosion control

Mulch steeper slopes as mentioned above, Silt fence as need on downslope areas. If winter construction occurs additional BMP measures will be placed in order to meet erosion control standards. Additional erosion control BMP's may include temporary seeding and mulching, synthetic erosion control mats, and/or large sedimentation basins.

F. Site revegetation

(i) Length of slope limitations.

Install check dams, diversion swales, or other grade control practices in order to ensure sheet flow and prevent rills (for slope lengths greater than 75 feet with a grade of 3H:1V).

(ii) Type of vegetation by area (side slopes, bottom, and hilltop)

107.03 acres: will be seeded as pasture land (DNR mix #1).
39.2 acres will be seeded as stable wildlife (DNR mix #2).

(iii) Soil Fertility and p.H.

Existing topsoil will be replaced during reclamation. Soil amendments such as fertilize or lime may be applied where necessary. Topsoil will be tested for nitrogen, phosphorus, potassium, and pH prior to seeding, when returned to crop production. Topsoil will be amended to sustain pasture land, at a minimum.

(iv) Planting techniques.

A combination of broadcast and hydroseeding will be used depending on erosion matters tied to the slopes.

(v) Cover density, monitoring verification-noxious weeds and invasive species control.

Reclamation will provide approximately 70% cover vegetation. The presence of noxious weeds will be monitored and eliminated in accordance with all state and county methods and requirements.

G. Long-term slope Stability

(i) Long term stability. Engineered products (erosion control blankets, etc.). Engineered structural measures (terraces or water diversions, etc.).

If erosion problems occur (in the event of ineffective mulch) use of erosion control mats will be implemented. If erosion control problems persist increasing levels of engineering assurance will be used (riprap and terraces).

(ii) Length of slope limitations.

Install check dams, diversion swales, or other grade control practices in order to ensure sheet flow and prevent rills (for slope lengths greater than 75 feet with a grade of 3H:1V).

(iii) Type of permanent vegetation (grasses versus planted shrubs/trees versus grasses and volunteer trees).

Permanent vegetation almost wholly grasses and pasture land

(iv) Construction site erosion control measures.

Erosion controlled by seeding and the use of mulch to establish new growth. Erosion control on the 3H:1V reclamation slopes will be done either with seed and properly anchored mulch or if need arises single netted light duty (WisDOT Class I Type A) erosion mat. Additional measures noted above will be applied should need occur.

Other Information

1. **Methods to remove soil from grubbed tree stumps.**

   Grubbed tree stumps will be shaken and/or dropped to remove, to the extent possible, the soil from the root mass.

2. **Methods to do away with stumps.**

   Removed trees and stumps will either be hauled off-site or chipped/ground on-site into mulch for use in reclamation.

3. **Methods during mining operations that maintain hydrology and limit the sediment delivery to wetlands on site.**

   The stormwater ponds for cell #1 and cell #2 are located in the northwestern corners of each cell. At this location, the stormwater ponds will infiltrate into the groundwater and will add to the hydrology of the wetland without increasing sediment delivery to the wetland. Silt fence will be used to limit sediment delivery to the wetland during the construction of the screening berm that is adjacent to the wetland. The wetland also has a contributing drainage area from off-site, so the proposed mining activity is not entirely eliminating drainage to the wetland.

4. **Methods to restore hydrology to on-site wetlands after reclamation.**

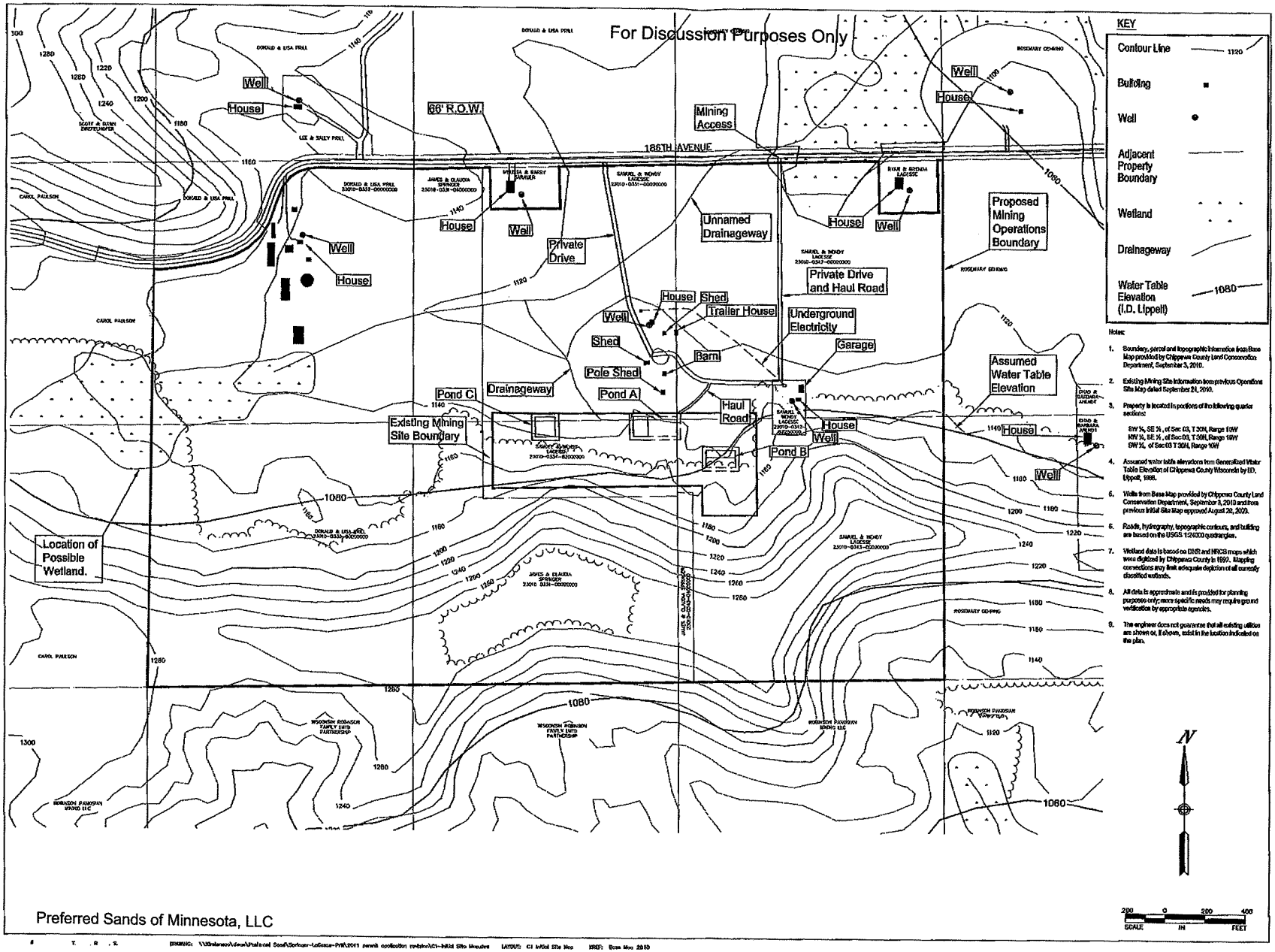
   The reclamation landscape is shown on the Final Site Map, C3. The final grade that is proposed provides hydrology to the wetland that is the same or similar to the pre-mining condition to the maximum extent possible.

5. **Wetland delineations.**

   Preferred Sands will provide a wetland delineation of any on-site wetlands. The delineation will be performed by a recognized wetland specialist. This information will be supplied to The Chippewa County LCFM department when it becomes available.

Bibliography

Freeze, R.A. and Cherry, J. (1979). *Groundwater.* Englewood Cliffs: Prentice-Hall.



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Proposed Mining and Reclamation Amendment

LaGesse Property, Prill Property, Springer Property
Chippewa County, WI

DATE:	REVISION:

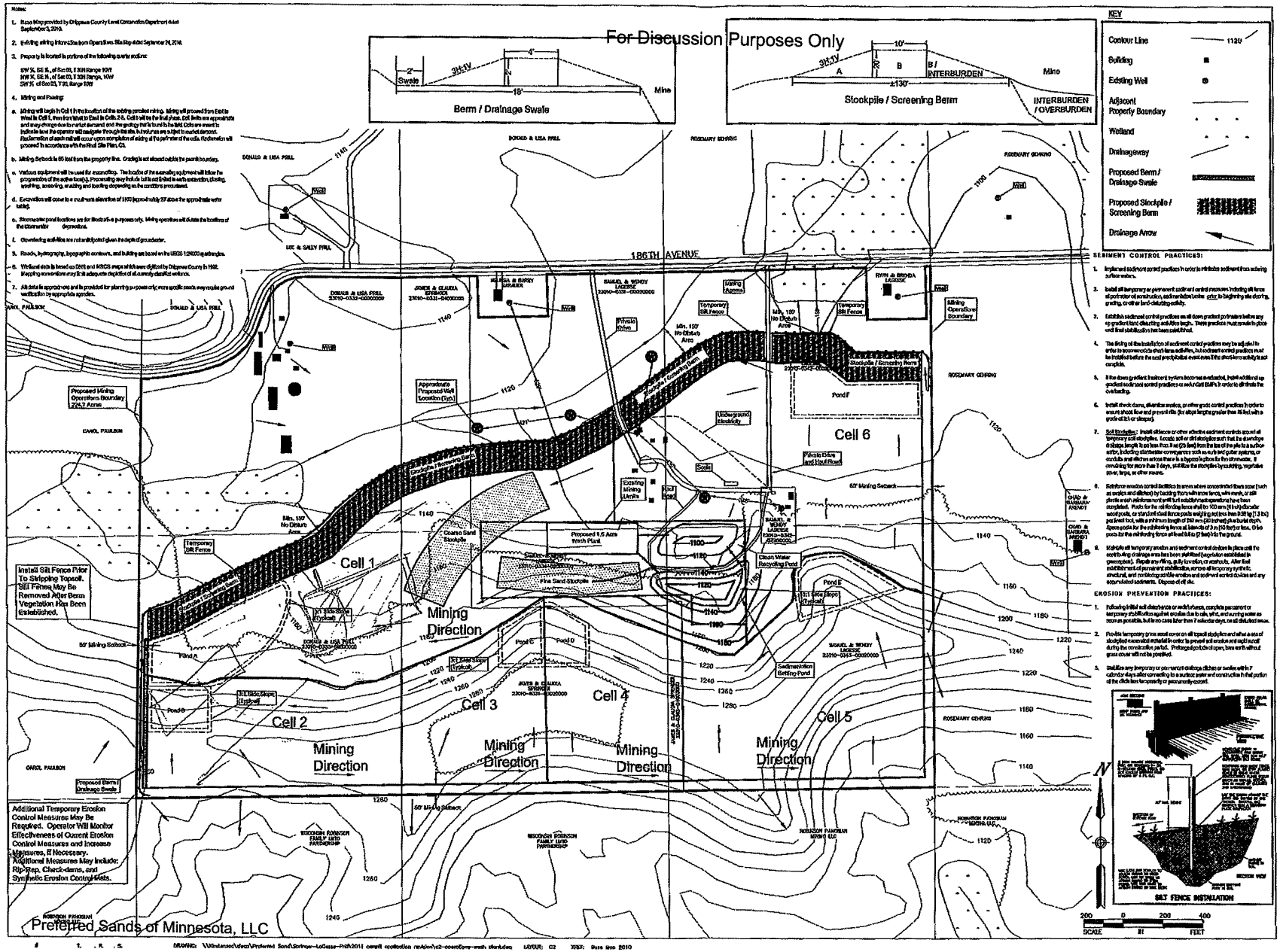
INFORMATION:
PROJECT NO.:
DRAWN BY:
CHECKED BY:
APPROVED BY:
SCALE:
DATE: 3/4/11

DESCRIPTION:

Initial Site Map

SHEET NO.:

C1



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Proposed Mining and Reclamation Amendment

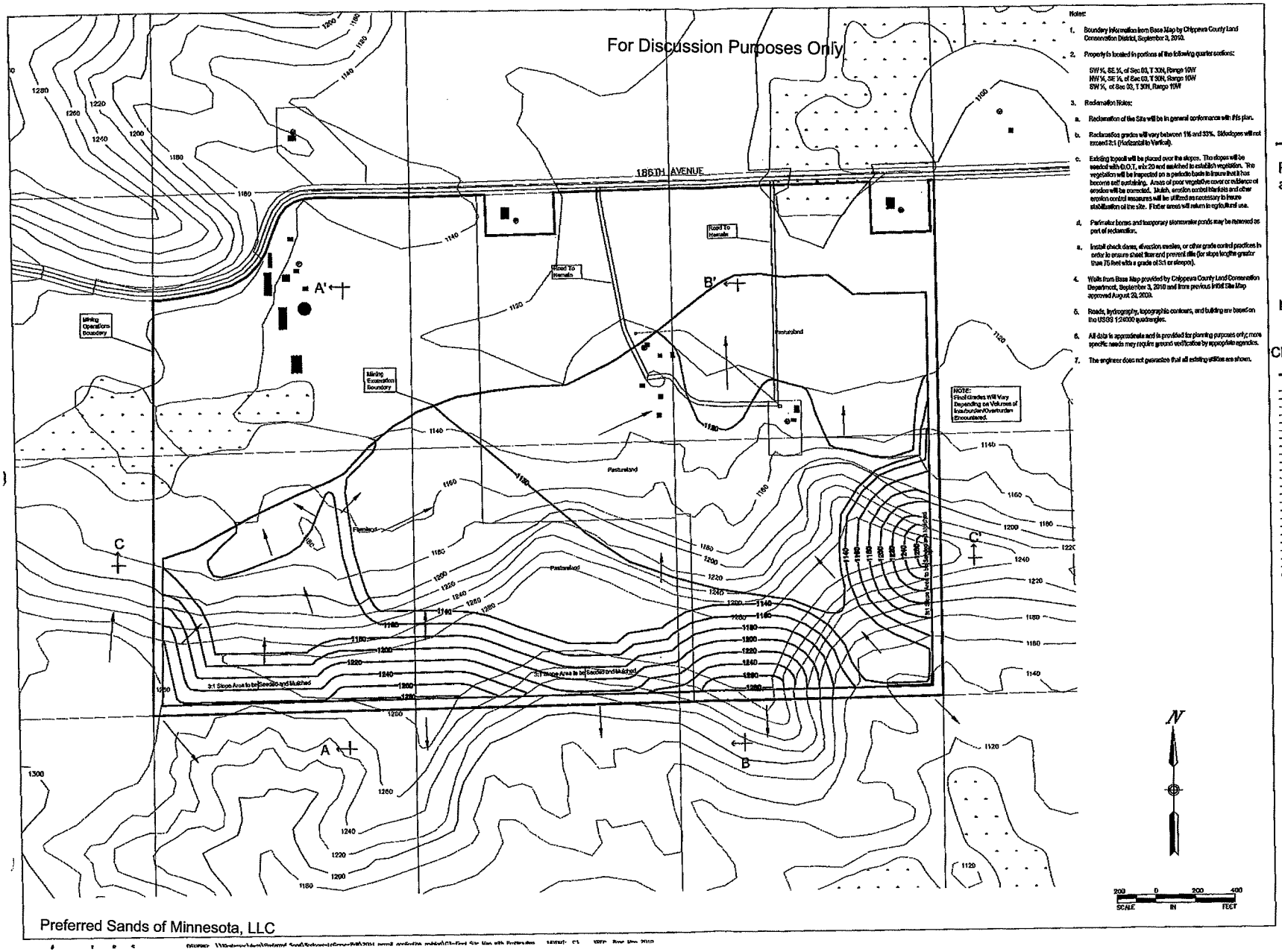
LaGesse Property, Prill Property, Springer Property
Chippewa County, WI

DATE	REVISION

INFORMATION:
PROJECT NO.:
DRAWN BY:
CHECKED BY:
APPROVED BY:
SCALE:
DATE: 3/16/11

DESCRIPTION:
Operations Site Map

SHEET NO.:
C2



Notes:

1. Boundary information from Base Map by Chippewa County Land Conservation District, September 3, 2010.
2. Property is located in portions of the following quarter sections:

   SW ¼, SE ¼, of Sec 03, T 30N, Range 10W
   NW ¼, SE ¼, of Sec 03, T 30N, Range 10W
   SW ¼, of Sec 03, T 30N, Range 10W
3. Reclamation Notes:
   a. Reclamation of the Site will be in general conformance with this plan.
   b. Reclamation grades will vary between 1% and 33%. Sideslopes will not exceed 3:1 (Horizontal to Vertical).
   c. Existing topsoil will be placed over the slopes. The slopes will be seeded with DOT, mix 20 and mulched to establish vegetation. The vegetation will be inspected on a periodic basis to insure that it has become self sustaining. Areas of poor vegetative cover or evidence of erosion will be corrected. Mulch, erosion control blankets and other erosion control measures will be utilized as necessary to insure stabilization of the site. Filter areas will return to agricultural use.
   d. Perimeter berms and temporary stormwater ponds may be removed as part of reclamation.
   e. Install check dams, diversion swales, or other grade control practices in order to ensure sheet flow and prevent rills (for slope lengths greater than 75 feet with a grade of 5% or steeper).
4. Walls from Base Map provided by Chippewa County Land Conservation Department, September 3, 2010 and from previous Initial Site Map approved August 20, 2009.
5. Roads, hydrography, topographic contours, and building are based on the USGS 1:24000 quadrangles.
6. All data is approximate and is provided for planning purposes only; more specific needs may require ground verification by appropriate agencies.
7. The engineer does not guarantee that all existing utilities are shown.

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Proposed Mining and Reclamation Amendment

LaGesse Property,
Prill Property,
Springer Property
Chippewa County, WI

DATE	REVISION

WISCONSIN REGISTERED PROFESSIONAL ENGINEER

INFORMATION:
PROJECT NO.:
DRAWN BY:
CHECKED BY:
APPROVED BY:
SCALE:
DATE: 3/14/11

DESCRIPTION:

Final
Site Map

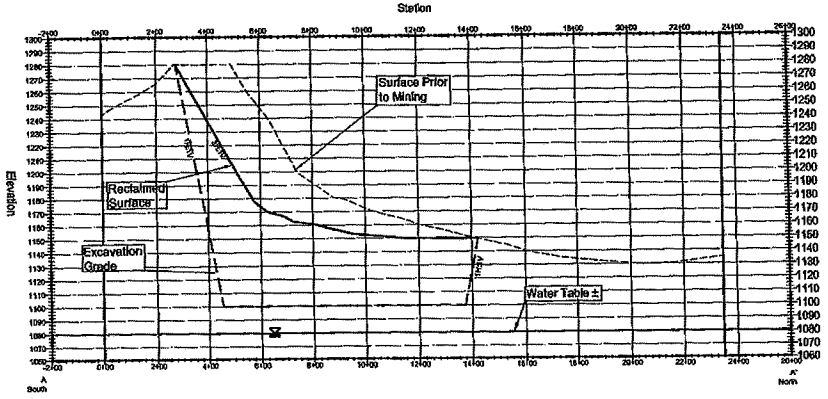
SHEET NO:

C3

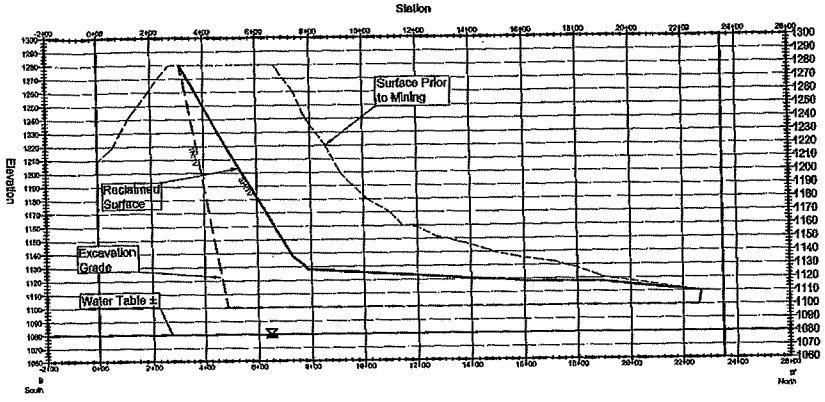
Preferred Sands of Minnesota, LLC

For Discussion Purposes Only

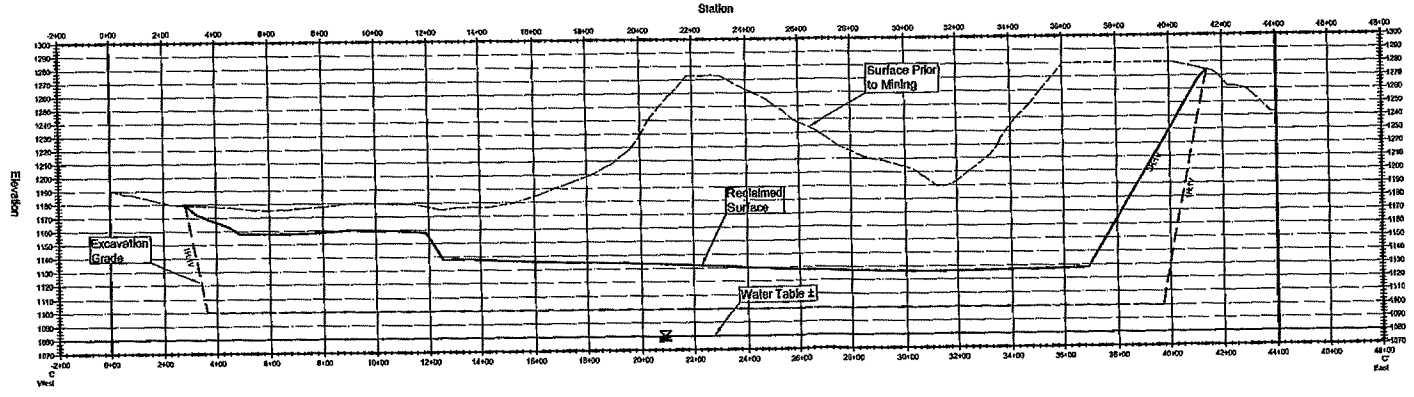
CROSS SECTION A–A'



CROSS SECTION B–B'



CROSS SECTION C–C'



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Proposed Mining and Reclamation Amendment

LaGesse Property, Prill Property, Springer Property
Chippewa County, WI

DATE	REVISION

INFORMATION:
PROJECT NO.:
DRAWN BY:
CHECKED BY:
APPROVED BY:
SCALE:
DATE: 3/14/13
DESCRIPTION:

Cross Sections

SHEET NO:
C4

NONMETALLIC MINING RECLAMATION PERMIT

This permit is issued under the Chippewa County Nonmetallic Mining Reclamation Ordinance and Wisconsin Administrative Code NR135.

Operator: Preferred Sands of Minnesota, LLC

Owner: Samuel LaGesse, James Springer & Donald Prill

Permit Number: 2011-01

Date: June 7, 2011

Permit Conditions

1. Standards & Implementation
   a. All mining and reclamation shall be conducted in compliance with the reclamation plan that is comprised of the following documents: AProposed Mining and Reclamation Amendment, dated March 21, 2011 and received March 24, 2011; Three (3) 24" x 36" maps titled "Initial Site Map", "Operations Site Map", and "Final Site Map" dated 3-21-2011 and received 3-24-2011; One (1) 24" x 36" map titled "Cross Sections" dated 3-14-2011 and received 3-24-2011.

   b. All mining and reclamation shall be conducted in compliance with all provisions and standards of the Chippewa County Nonmetallic Mining Reclamation Ordinance and Wisconsin Administrative Code NR135.

   c. All mining and reclamation shall be conducted so that they meet or exceed provisions of Reclamation Standards for Non-Metallic Mines in Chippewa County (July 2007) and Plan Content Specifications and Engineering Requirements for Non-Metallic Mine Construction in Bedrock (9/17/2009).

   d. To monitor the extent of contemporaneous reclamation, a Reclamation Report & Activities Plan shall be filed with the Dept. of Land Conservation & Forest Management for each calendar year. The report shall be submitted no later than 30 days from the end of the permit year. The plan shall contain the items listed in Appendix G of the reclamation plan including: 1) the extent of current mine development, 2) the existing groundwater elevations, 3) the dates and results of reclamation and storm water facility site inspections, 4) activities implemented to provide groundwater protection, 5) the dates and results of storm water discharge monitoring, 6) the reclamation and storm water management activities planned during the next calendar year, 7) a record of the type, volume, and use of material brought to the mine for reclamation, 8) the results of groundwater quality testing, 9) any other items as required by this permit.

2. Financial Assurance
   a. Financial Assurance in the form of Surety Bond or Irrevocable Letter of Credit meeting the requirements of the Chippewa County Nonmetallic Mining Reclamation Ordinance and NR135.40 is required throughout the life for the mine.

b. The amount of financial assurance shall equal as closely as possible the cost to Chippewa County of hiring a contractor to complete reclamation according to the approved reclamation plan. The amount of financial assurance shall be reviewed annually by the Dept. of Land Conservation & Forest Management to assure it equals the current estimated reclamation costs.

3. Size & Scope
   a. The total permitted area of the mine site is 225 acres. The mine site includes all areas of nonmetallic mineral extraction, haul roads, stormwater ponds, soil berms, and other areas meeting the definition of "nonmetallic mining site" or "site" in the Chippewa County Nonmetallic Mining Reclamation Ordinance.

   b. The final floor elevations of the mine shall be no lower than the elevations shown on the Cross Sections (C4) plan sheet as identified in Cross Section A-A', Cross Section B-B' and Cross Section C-C'of the Reclamation Plan.

   c. Changes to the areal extent or depth of the mine, or changes to the operation that may affect the capacity to meet reclamation standards of NR 135 and Chippewa County Nonmetallic Mining Reclamation Ordinance as documented in the Reclamation Plan, shall require a revised Reclamation Plan and permit modification under NR 135.24.

4. Wetland Protection
   a. The boundaries of all wetlands as defined by Wisconsin State Statute Chapter 23, including mapped wetlands shown on the Operations Site Map of the Reclamation Plan, shall be delineated by a recognized wetland delineator following procedures in the 1987 edition of the Army Corps of Engineers Wetlands Delineation Manual.

      Wetland delineations for tax parcel # 23010-0342-00020000; 23010-0343-00020000; 23010-0334-02000000; 23010-0331-00020000; 23010-0334-00020000; 23010-0343-04000000; 23010-0331-04000000; 2310-0342-07250000 shall be completed and submitted to the Dept. of Land Conservation & Forest Management for review and approval before 8-27-2011. Wetland delineations for tax parcel # 23010-0332-00000000; 23100333-00000000 shall be completed and submitted to the Dept. of Land Conservation & Forest Management for review and approval a minimum of 180 days before mine operations begin on these parcels. Upon approval, the operator shall file a plan amendment map that shows the delineated boundary of the wetlands.

   b. A 100 foot wetland boundary separation shall be established around each delineated wetland. The boundary of the wetland separation shall be monumented with permanent markers. No mining or site disturbing activities are permitted within this separation boundary.

   c. In the event that unique conditions exist where mining activities cannot be conducted to avoid and minimize the impacts to wetlands, the Dept. of Land Conservation & Forest Management may authorize these activities, contingent upon review and approval of a Compensatory Wetland Mitigation Plan. If authorized, wetland mitigation shall be "in kind mitigation" conducted on or near the mine site, to replace wetland functions and values. If authorized, wetland mitigation will occur at a replacement ratio of 1.5 (replaced) to 1 (original).

   d. With respect to the wetland (with approximate center point coordinates of Latitude 45.106643, Longitude -91.589444), during final reclamation of mine Cells 1 and 2, the operator shall establish grades that restore the surface hydrology and flow to the wetland that existed prior to mining.

5. Stormwater Management
   a. The operator shall fully comply with the terms of the Wisconsin Dept. of Natural Resources (DNR) WPDES Runoff Discharge permit WI-0046515-05 and any subsequent permit revisions.

   b. A stormwater management system shall be designed, installed and maintained to meet the nonmetallic mine standards established for surface water and groundwater protection in NR135.07 & 135.08, and shall provide sufficient capacity to store and infiltrate runoff for all rainfall events smaller than the 10 year, 24 hour event (4.1 inches).

   c. Stormwater ponds shall be constructed with a stable outlet that will safely accommodate runoff events up to the 100 year, 24 hour event (5.8 inches).

   d. In the event that stormwater runoff exceeds the capacity of the stormwater management system and stormwater runoff leaves the mine site, the operator shall immediately contact the Dept. of Land Conservation & Forest Management.

   e. The stormwater management system shall be routinely inspected and maintained by the operator to assure the system continues to function as designed.

   f. Sediment that accumulates in stormwater ponds shall be fully removed from the stormwater pond bottom when ponded water persists more than a week, or as needed after major storm events. If routine cleaning of sediment fails to eliminate ongoing ponding, a re-design of the storm water management system shall be undertaken.

   g. Sediment removed from stormwater ponds shall be stockpiled, seeded, stabilized, and used in mine site reclamation.

   h. Whenever changes to the stormwater management system are proposed or required, the operator shall retain a Professional Engineer to re-design the storm water management system. The re-design documentation shall include computations to show that the changes to the stormwater management system will meet the design requirements. This information shall be submitted to the Dept. of Land Conservation & Forest Management for review and approval prior to construction of the changes.

6. Site Clearing
   a. The Dept. of Land Conservation & Forest Management shall be contacted at least 72 hours prior to commencement of any new land clearing or stripping activities in undisturbed areas of the mine site.

   b. All topsoil, subsoil and overburden in areas of mining shall be systematically and individually stripped and stockpiled for future use in reclamation. The location of these stockpiles shall be identified with permanent signage or shall be identified on a map that shows the location of all stockpiles of topsoil, subsoil, and overburden. This map shall be submitted to the Dept. of Land Conservation & Forest Management after initial site stripping and after any changes in stockpile management.

   c. No topsoil, subsoil, or overburden material shall leave the site during the entirety of the site operations.

   d. Burning of stumps, or any other material, in the mine is prohibited unless permitted under local ordinances and authorized by the Dept. of Land Conservation & Forest Management.

7. Groundwater & Surface Water
   a. The operator shall install a groundwater monitoring well network for the purpose of establishing the actual groundwater elevation at the mine site and for monitoring changes to the groundwater elevation over time. The network shall consist of a minimum of four (4) monitoring wells. The network shall be designed to triangulate the elevation of the water table surface and to establish the direction of groundwater flow at the site. The monitoring well network design shall be designed by a Professional Hydrologist or Professional Engineer, and reviewed and approved by the Dept. of Land Conservation & Forest Management in advance of well installation.

   b. Using the information gathered in the monitoring well network, the operator shall prepare a site specific groundwater elevation map. The operator shall provide this map to the Dept. of Land Conservation & Forest Management by 9-27-2011.

   c. The elevations of the water table surface in each of the wells shall be recorded monthly the first year of operation. Water table elevations shall be measured and recorded quarterly thereafter for the life of the mine, unless upon evaluation, an alternate monitoring frequency that continues to provide an adequate representation of water table elevations and fluctuations is agreed to by the Dept. of Land Conservation & Forest Management and the operator. All recorded water table elevations shall be submitted by the operator as part of the Annual Reclamation Report & Activities Plan.

   d. The operator shall provide a copy of any application and permit for a high capacity well subject to state permit requirements. The application and permit shall be provided to the Dept. of Land Conservation & Forest Management within 30 days of permit issuance.

   e. The operator shall keep records of pumping rates and volumes for all high capacity wells at the mine site on a monthly basis following procedures established in NR 820.13. The operator shall provide a copy of those records to the Dept. of Land Conservation & Forest Management as part of the Annual Reclamation Report & Activities Plan.

   f. The operator shall prepare a Water Conservation Plan to limit consumptive use of groundwater. The plan shall include a water budget for the operation that shows the typical annual volume of gains and losses to mining and reclamation activities. The plan shall also describe the processes and best management practices used in mining and reclamation to reduce the consumptive use of groundwater at the mine site.

   g. In the event that offsite monitoring shows that reclamation activities at this site have caused a lowering of the water table that results in adverse effects on surface waters or a significant reduction in the quantity of groundwater reasonably available for future users of groundwater, the operator will mitigate these effects by revising the Water Conservation Plan to limit the pumping frequency, rate or volume of groundwater or to implement water conservation practices to restore groundwater elevations. Any changes to the Water Conservation Plan are subject to review and approval by the Dept. of Land Conservation & Forest Management.

   h. In the event that offsite monitoring shows that reclamation activities at this site have caused groundwater quality standards of Wisconsin Administrative Code NR140 to be exceeded at a point of standards application, the operator will seek to mitigate these effects by altering site operations.

i. This permit does not relieve the owner or operator of the responsibility for compliance with all provisions of Wisconsin State Statute 281, Wisconsin Administrative Code NR 820, or Wisconsin Administrative Code NR 812, as they may pertain to waters of the state and the operation of any private wells on neighboring properties, and any associated liability under state law.

8. Settling Ponds
   a. Settling Ponds and associated earthen conveyances shall be lined to limit the infiltration and leaching of chemical constituents that may be used in mining processes. Liners shall be designed by a Professional Engineer and constructed under their supervision to meet standards and specifications of Wisconsin Administrative Code NR 213.

   b. In circumstances where flocculants, dispersants, or other chemicals are used in the mining or reclamation process, the operator shall select products that limit the potential for groundwater pollution, as may be identified on recognized product lists available from Wisconsin DNR, EPA, or other agencies. The type, volume and frequency of flocculent, dispersants, or other chemicals used shall be provided as part of the Annual Reclamation Report & Activities Plan.

   c. The operator will test the sediment accumulated in the mine site settling ponds for concentrations of residual materials associated with the type of chemicals used. Testing will be performed annually or at any time when there are changes to the type of chemicals used. These test results will be included as part of the Annual Reclamation Report & Activities Plan.

   d. The operator shall apply appropriate best management practices when removing and managing liquids, sediment, and liner material from the settling ponds. In selecting the best management practices, the operator shall consider the results of material testing and material characterization.

   e. In circumstances where the settling pond will be abandoned in-place, the operator shall apply an earthen cap. The cap shall be designed to reduce the potential for long-term leaching of any deleterious materials into the groundwater.

9. Solid Waste & Spills
   a. The import, storage or disposal of any solid waste, recyclable materials or nonmetallic mine refuse generated outside the mine site is subject to the registration provisions of Chapter 30-77 of the Chippewa County Nonmetallic Mining Reclamation Ordinance.

   b. In the event of fuel spills or other hazardous waste spills, the operator shall immediately contact the Dept. of Land Conservation & Forest Management.

   c. Fueling inside of the mine shall be discouraged and limited to vehicles such as tracked equipment that cannot readily access an off-site fueling station. Fueling of highly mobile equipment such as rubber tired loaders, scrapers and trucks shall occur in areas that pose a reduced risk of groundwater pollution. In all cases, spill containment practices; such as drip pans, absorbent pads or other recognized practices; shall be used to contain drips and spills during fueling.

10. Site Stabilization & End Land Use
    a. The operator shall select and apply appropriate best management practices to meet the reclamation standards established in NR 135.10-135.12 (as they pertain to final grading, revegetation, and site stabilization). If the standards cannot be achieved, additional best management practices with a higher level of engineering assurance will be applied. On reclaimed slopes where seed and mulch has been applied and erosion problems persist, use of erosion control mats will be implemented. If erosion control problems continue, best management practices with increased levels of engineering assurance will be used and may include but is not limited to riprap and terraces.

    b. Reclamation of areas designated with an agricultural end land use shall comply with all Wisconsin Administrative Code NR 151 standards (and any subsequent revisions) standards as they apply to non-point pollution control.

11. Permit Evaluation and Amendments
    The Dept. of Land Conservation & Forest Management shall periodically evaluate the extent of contemperanous reclamation achieved through mining operations, the extent of compliance with reclamation standards, and the effectiveness of the conditions that have been placed to achieve the reclamation standards.

    The Dept. of Land Conservation & Forest Management may amend or alter operational conditions that do not significantly alter the scope of the reclamation plan or the reclamation permit issued under the authority of Sec. 30-105 of the Chippewa County Non-Metallic Mining Reclamation Ordinance.

    All permit alternations or amendments shall be mutally acceptable and agreed to by the Dept. of Land Conservation & Forest Management and by the operator.

As the operator, or authorized representative of the operator, I hereby acknowledge and agree to the above permit conditions.

Signature — 6/8/11 (Date)

Kevin J. Traynor — Printed Name - Operator

Senior Vice President/Secretary — Title

Permit approval by Department of Land Conservation & Forest Management

David B. Nashold — Signature — 6-8-2011 (Date)

David B. Nashold — Printed Name - Authorized Staff

Environmental Engineer — Title

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AMENDMENT TO NON-METALLIC MINING RECLAMATION PERMIT #2011-01, DATED 6/7/11

WHEREAS, the Chippewa County Department of Land Conservation and Forest Management and Preferred Sands of Minnesota have acknowledged and agreed to permit conditions of Non-Metallic Mining Permit #2011-01, entered 6/7/11, which is hereby incorporated by reference and attached as Exhibit A, and

WHEREAS, Permit Condition 11 of that permit provides a mechanism by which the "Department of Land Conservation and Forest Management may amend or alter operational conditions that do not significantly alter the scope of the reclamation permit issued under the authority of Sec. 30-105 of the Chippewa County Non-Metallic Reclamation Ordinance", and

WHEREAS, Condition 11 further states that "All permit alterations or amendments shall be mutually acceptable and agreed to by the Dept. of Land Conservation and Forest Management and by the operator", and

WHEREAS, Preferred Sands has now finalized plans to establish an interim wash plant at the permitted mine site, including the construction of settling trenches that will be designed to settle and to collect fine particles that will be used in the reclamation process, and

Condition 8(a) states "Settling Ponds and associated earthen conveyances shall be lined to limit the infiltration and leaching of chemical constituents that may be used in mining processes. Liners shall be designed by a Professional Engineer and constructed under their supervision to meet standards and specifications of Wisconsin Administrative Code NR 213", and

WHEREAS, Preferred Sands has expressed an interest in exploring best available technology that would serve to conserve water and limit potential impacts to water resources, and

WHEREAS, Preferred Sands and the Department of Land Conservation and Forest Management recognize that wash plant operations are integral to mining and mine reclamation activities, and agree that it is in the public interest to pursue best available practices for water conservation and groundwater management, and

NOW, THEREFORE, BE IT ADVISED that to implement and evaluate these practices, Preferred Sands and the Department of Land Conservation & Forest Management have agreed to the following amendment to Condition 11 of Non-Metallic Mining Permit #2011-01.

Condition 8.a. of Non-Metallic Mineral Mining Permit #2011-01, dated 6/7/11, shall be eliminated and replaced as follows:

8.a. Settling ponds, settling trenches, and associated conveyances shall be lined with earthen materials of high silt and clay content. The earthen liners will meet the design and construction specifications contained in Attachment I, titled: Alternative Settling Pond Liner Specification, (LCFM 9/29/09).

i. Preferred Sands will design and install a groundwater monitoring system and will develop and implement a sampling program to detect and measure the concentration of any acrylamide that may enter the groundwater from mining, mine-related processing, and mine reclamation.

This groundwater monitoring system and sampling program may, upon agreement by Preferred Sands, be expanded and applied to monitor other chemical constituents.

ii. The groundwater monitoring system will incorporate the monitoring wells from the monitoring well network that has been designed and installed under Condition 7.a. of Permit #2011-01.

This monitoring well network will be augmented by the addition of two (2) or more "sentinel wells" that will be designed, located, and installed immediately down gradient of the settling trenches, for the explicit purpose of detecting and measuring the concentration of any acrylamide that may enter the groundwater from the trenches.

The location, depth, and construction of these "sentinel wells" will be recorded and provided to the Department of Land Conservation and Forest Management.

iii. The groundwater sampling program will include a description of:

a. The overall purpose of the program and the procedures that will be used to initiate and maintain the sampling program, the sampling protocol and methods that will be used to extract and preserve samples, the name and accreditation of the laboratory conducting the analysis, and the laboratory techniques that will be used to analyze the samples.

The description of the groundwater sampling program will be compiled in a report and will be filed with the Department of Land Conservation and Forest Management.

b. The number and frequency of the sampling events that will be scheduled for the sentinel wells and for the other monitoring wells that will be sampled.

The Department of Land Conservation and Forest Management will be notified and will be invited to participate in scheduled sampling events.

To initiate the sampling program, the sentinel wells will be first sampled within 14 days of the date that wash plant operations begin and settling trenches are filled.

Sentinel wells will be sampled at a frequency of once every 14 days commencing in October of 2011, and continuing through December, 2011.

This sampling program and frequency will be resumed in the spring of 2012 and will be maintained on a two (2) week cycle.

c. A certified copy of all laboratory results will be submitted to the Department of Land Conservation & Forest Management within two weeks of receipt.

In the event that no detections occur during the initial fall, 2011 cycles and first three (3) sampling cycles of 2012, the sampling frequency may be reduced upon mutual agreement by the parties.

In the event that acrylamide is detected, Preferred Sands will immediately install a protective liner meeting the Standards and Specifications of NR213, following the procedures established in Condition 8.a. of Non-Metallic Mining Permit #2011-01, dated 6/7/11.

In the event that acrylamide is not detected through the sampling program, the County will entertain an amendment to this condition to curtail the frequency of the sampling program.

This amendment is limited in purpose and scope, and has been created by the parties to replace Condition 8.a. of Non-Metallic Mine Permit #2011-01, dated 6/7/11.

All other conditions and terms of Permit #2011-01, dated 6/7/11, remain in place and are not affected by this amendment.

As the operator, or authorized representative of the operator, I hereby acknowledge and agree to the above amended permit conditions.

Signature

Kevin Traynor
Senior Vice President

Printed Name - Operator

10/3/11
Date

Title

As the agent and authorized representative of the Department of Land Conservation and Forest Management, I hereby acknowledge and agree to the above amended permit conditions.

Signature

Date

Printed Name – Authorized Staff

Title

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Appendix C
Other Permits

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Baldwin Service Center
890 Spruce Street
Baldwin, WI 54002

Scott Walker, Governor
Cathy Stepp, Secretary
Scott A. Humrickhouse, Regional Director
Telephone (715) 684-2914
FAX (715) 684-5940

WISCONSIN DEPT. OF NATURAL RESOURCES

November 15, 2011

Paul McLean
PREFERRED SANDS OF MINNESOTA, LLC
One Radnor Corp Cent
Radnor , PA 19087

SUBJECT: Nonmetallic Mining Operations General Permit WI-0046515-5

FACILITY LaGesse Pit
LOCATION: 4621 186th Ave, Town of BLOOMER, Chippewa County
FACILITY ID NUMBER (FIN): 41799

Dear Permittee:

The Department of Natural Resources (Department) has evaluated the Notice of Intent you submitted for the above site and has determined that your discharge will be regulated in accordance with the Nonmetallic Mining Operations (NMM) General Wisconsin Pollutant Discharge Elimination System Permit No. WI-0046515-5.

The information you provided states that

- Excavation, aggregate crushing, or washing will be occurring at the LaGesse Pit site.
- Mining process wastewater will be generated from aggregate washing or mine dewater pumping [*and/or boiler blowdown, vehicle washwaters, contact and non-contact cooling water, and other process wastewaters*] and monitoring and submittal of an annual discharge monitoring report (DMR) is required.
- Storm water run-off is **internally drained** - storm water is seeped into the ground within the mining site in areas that are not protected wetlands.

STORM WATER CONTROL REQUIREMENTS

1. Facilities that have Department concurrence that their storm water contains only earthen materials from NMM operations and **the storm water is seeped into the ground within the mining site in areas that are not protected** wetlands under NR 103, Wis. Adm. Code are required to have the following as detailed in the general permit:
   - Physical Controls;
   - Contaminated Storm Water Treatment Best Management Practices; and
   - Annual Facility Site Compliance Inspections (AFSCI).

2. NMM operations that have storm water contact with overburden, raw material, intermediate product, finished product or waste material and have **storm water drainage off the mining site or to a protected wetland** under NR 103, Wis. Adm. Code shall be operated in compliance with a Storm Water Pollution Prevention Plan (SWPPP) as detailed in the general permit. Any concrete product operations covered under this permit and any portable NMM groupings specifically requested to be covered under this permit shall also be operated in compliance with a SWPPP.

   - Development of **SWPPP** and Certification of SWPPP Completion:

- New NMM operations shall comply with the SWPPP requirements of this permit and shall submit a SWPPP certification to the Department prior to initiating NMM activities that result in a discharge of storm water to surface waters or to a protected wetland.
- Existing NMM operations discharging without a permit must comply with the Department's enforcement action or stipulated schedule for SWPPP development, implementation, and certification within the shortest time practicable.

- **Quarterly Site Inspection** of Storm Water Controls *(Demonstrations supporting a waiver to an annual frequency or to an alternate schedule for inactive sites with no material stockpiles must be submitted as part of SWPPP certification).*
- **Quarterly Visual Check** of Storm Water Runoff Quality *(Can be waived in certain instances as specified in permit parts 3.7.2 & 3.7.3. Submit justification as part of SWPPP certification).*

3. An **annual check** for NMM operation discharges to impaired waters or to Total Maximum Daily Load (TMDL) allocated waters is required by **February 15th, each year**. If the discharge is to 303(d) impaired waters or to TMDL allocated waters, an updated SWPPP or TMDL implementation plan is required to be submitted to the Department.

PROCESS WASTEWATER REQUIREMENTS Monitoring requirements for mining process water **discharges to seepage (to groundwater):**

- Quarterly discharge flow monitoring (estimate typical day seepage into the earth), except
  - *Monthly* monitoring is required for 12 months following a month with a discharge greater than 200,000 gal/day.
- Annual oil & grease monitoring, except
  - *Quarterly* monitoring for 4 quarters beginning the quarter following a sample result above 15 mg/L, and
  - *Further annual samples waived* if the first year (after June 2009) result is less than 7.5 mg/L.
- Water Treatment Additives - A record of water treatment chemical additive use (such as polymers, biocides, boiler steam additives, etc) is required on a monthly basis.

1. Monitoring requirements for process water **discharges to surface water resources**:
   - Quarterly flow monitoring (total gallons per day and number of days of discharge), except
     - *Monthly* monitoring for 12 months following a month with a discharge flow greater than 200,000 gallons per day.
   - Quarterly total suspended solids monitoring, except
     - *Monthly* monitoring using a 3 grab composite sample for 12 months beginning the month following a sample result above 40 mg/L.
   - Quarterly pH monitoring for concrete product operations, except
     - *Annual* monitoring if four consecutive quarterly samples are within the range of 6.7 to 8.3 s.u.
   - Annual pH monitoring for nonmetallic mining operations, except
     - *Further annual samples waived* if the first two annual (after June 2009) samples are within the range of 6.7 to 8.3 std.units.
   - Annual oil & grease monitoring, except
     - *Quarterly* monitoring for 4 quarters beginning the quarter following a sample result above 15 mg/L, and
     - *Further annual samples waived* if the first year (after June 2009) result is less than 7.5 mg/L.
   - Water Treatment Additives - A record of water treatment chemical additive use (such as polymers, biocides, boiler steam additives, etc) is required on a monthly basis.

2. **Annual monitoring reports** shall be submitted to the Department by **February 15th, each year** reporting sampling result from discharges during the previous calendar year.

3. **For portable operations,** monitoring may occur at any site where the unit is located during the specified sampling period for samples representative of the process wastewater discharge associated with operation of the portable unit.

You are responsible to notify the Department should conditions at this site change, as your permit requirements will also change.

The Nonmetallic Mining general permit documents can be accessed on the Department's internet site at the following address: http://dnr.wi.gov/org/water/wm/ww/gpindex/gpinfo.htm
The permit limitations, conditions, and requirements are designed to ensure that mining wastewater and storm water discharges from nonmetallic mining operations does not degrade the quality of Wisconsin's surface waters, wetlands, or groundwater. It is important that you read and understand this permit because it is enforceable under both state and federal law.

Copies of a quarterly visual inspection form, an annual facility site compliance inspection (AFSCI) form, and additional storm water forms including an example NMM storm water pollution prevention plan can be obtained at http://dnr.wi.gov/runoff/stormwater/industrialforms.htm or by contacting Department storm water staff.

Additional information regarding the Department's legal authority in this matter and your rights of appeal are shown below. If you have any questions regarding the permit or your coverage under the permit you can contact Jim Devlin at (715) 684-2914. We appreciate your help in protecting Wisconsin's water resources.

Sincerely,

Jim Devlin
Storm Water Management Specialist

Ref. General Permit WI-0046515-5, Nonmetallic Mining Operations & Fact Sheet
DMR form (if needed for process wastewater discharge)
Quarterly Visual Inspection Form
AFSCI Form

LEGAL AUTHORITIES AND APPEAL RIGHTS

Section 283.35, Stats., authorizes the Department to issue a general permit for discharges from categories or classes of point sources. The Department may withdraw a facility from coverage under a general permit if it is determined that a discharge is a significant contributor of pollutants to waters of Wisconsin, if the source is not in compliance with the permit terms and conditions, if the permittee requests it, or in certain other cases set out in s. 283.35, Stats. In lieu of general permit withdrawal, the Department may refer any violation of this permit to the Department of Justice for enforcement under s. 283.89, Stats. In order to remain in compliance and avoid any enforcement action, **please read your permit carefully.**

If you believe that you have a right to challenge this decision to cover this facility with the nonmetallic mining operations general permit, you should know that the Wisconsin statutes, administrative rules and case law establish time periods within which requests to review Department decisions must be filed. To request a contested case hearing pursuant to section 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the time period for filing a petition for judicial review.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you must file your petition with the appropriate circuit court and serve the petition on the Department within the prescribed time period. A petition for judicial review must name the Department of Natural Resources as the respondent.

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

For Discussion Purposes Only

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
FAX 608-267-3579
TTY Access via relay - 711

WISCONSIN DEPT. OF NATURAL RESOURCES

April 10, 2011

File Number: 09-3-0014

SAMUEL LAGESSE
4621 186TH AVE. S.
BLOOMER, WI 54724

SUBJECT: Industrial Well Approval, Chippewa County, Wisconsin

Dear LAGESSE, SAMUEL:

The Division of Water, Bureau of Drinking Water and Groundwater, has received an application for two non-potable industrial wells. The application was submitted on your behalf by Michaelea Whelan of Sunde Engineering and was received on March 30, 2011. The proposal was reviewed and it has received conditional approval.

Your application has received a limited engineering review to determine compliance with the well construction and pump installation requirements of ch. NR 812, Wis. Adm. Code. However, that does not relieve the owner and constructor of the well and pump system of the responsibility for compliance with all provisions of ch. NR 812, Wis. Adm. Code, and the conditions in this letter. A hydrogeological review was conducted to determine whether your application complies with the provisions of ch. 281, Wis. Stats. and ch. NR 820, Wis. Adm. Code, Wisconsin's Groundwater Quantity Law.

PROPOSAL SUMMARY

Operator: PREFERRED SANDS OF MINNESOTA
497 SETTLERS RIDGE PARKWAY
WOODBURY, MN 55139

Officials: Paul McLean Telephone: 484-684-1208

Property Owner: LAGESSE, SAMUEL
4621 186TH AVE. S.
BLOOMER, WI 54724

Officials: SAMUEL LAGESSE Telephone: 715-568-4083

Property Description: 111 acres in the SE and SW quarters of Section 3 T30N R10W, Town of Cooks Valley, Chippewa County.

Well Name: 001
DNR Permanent Well #: 71503
Location: NE SW section 3 T30 N R10W
Civil Town Cooks Valley

Pump Capacity: 690 Gallons/Minute
Average Daily Pumpage: 500,000 Gallons
Max. Daily Pumpage: 993,600 Gallons

Well Name: 002
DNR Permanent Well #: 71504

Pump Capacity: 690 Gallons/Minute
Average Daily Pumpage: 500,000 Gallons

Location: NE SW section 3 T30 N R10W Max. Daily Pumpage: 993,600 Gallons
Civil Town Cooks Valley

The Department of Natural Resources is authorized by chapters 280 and 281 Stats., to have general supervision and control over the waters of the state and to establish and enforce standards and rules for obtaining drinking water and protecting the public health from polluted water supplies. Chapter NR 812, Wis. Adm. Code is adopted pursuant to this authority. A summary of existing and proposed wells is attached in Table 1 at the end of this approval. For the purposes of issuing this approval, department staff members have not inspected the proposed well site(s) or the existing wells (if any) for compliance with NR 812, Wisconsin Administrative Code.

Your application has received a limited review. Your application will become a part of the permanent high capacity well property file. A review has been conducted on your application to determine whether the proposed work will or will not adversely affect the availability of water to a public utility as defined in s. 196.01, Wis. Stats., and to determine if the proposed work will have a significant adverse impact on waters of the State protected under s. 281.34, Wis. Stats. Because the operation of the high capacity water supply is not expected to cause any significant reduction in groundwater availability to the nearest public utility well, or have a significant adverse impact on waters of the State protected under s. 281.34, Wis. Stats. you may proceed with construction subject to the provisions of Ch. NR 812, Wis. Adm. Code and the conditions noted below. The Department reserves the authority to require changes to the well construction and to limit the pumpage in any amount that may be necessary to eliminate excessive drawdown in any public utility well that may be affected. If the operation of the well adversely affects the operation of any private wells on neighboring properties, this Department letter will not negate the protection to which private well owners are entitled under Wisconsin case law relating to groundwater. This Department letter does not relieve the property owner or well operator of any liability which may result from injury or damage suffered by any person upon operation of the well.

Failure to comply with the requirements of ch. NR 812, Wis Adm. Code, or any condition of this approval voids the approval. Construction or operation of a high capacity well without a valid approval is a violation of s. 281.17, Stats., and is subject to potential forfeitures of $10-$5000 per day with each day being a separate offense.

LOCATION CRITERIA

The department has not inspected the proposed well site and the department may not have fully evaluated the distance from the proposed well(s) to all potential contaminant sources for compliance with Chapter NR 812, Wisconsin Administrative Code. It is the responsibility of the owner to provide a complete description of potential contaminant sources to the driller and it is the responsibility of the driller to ascertain that the proposed well(s) is located and constructed in compliance with NR 812 and this approval. The well(s) shall be installed and maintained in accordance with the requirements of Section NR 812.08, Wisconsin Administrative Code.

Proximity to Landfills: There are no reported landfills within 1,200 feet of the proposed well.

Contamination Sites: There were no reported ground water contamination sites regulated by the department's Remediation and Redevelopment Program on the property near the proposed well site as of July, 2008, based on the database maintained by that program.

Ground Water Management Areas: The well is proposed to be located in an area that is not a designated Groundwater Management Area.

Proximity to Nearby Springs: The department believes that the well will not cause an adverse environmental impact as defined in Section NR 820.12(19), Wisconsin Administrative Code to any protected springs as a spring is defined in Section NR 820.12(20). This determination was based on the distances between the wells and nearby springs, the proposed pumping capacity of the wells and/or the hydrogeological conditions of the area. There are no known 1 CFS springs within two miles of the proposed well site.

Ground Water Protection Areas: The proposed wells is located more than 1,200 feet from the water body that is the core of the nearest ground water protection area, as a ground water protection area is defined in s. 281.34(1)(a), Wisconsin Statutes. Therefore, the proposed well location is not within a ground water protection area. The nearest ERW water body is Creek 1-16 located 9200and 9600 feet from the proposed well sites.

Wells Operated by a Public Utility: The department believes that the proposed wells will not impact a well operated by a public utility. This determination was based on the proposed pumping capacity of the proposed wells, hydrogeological conditions in the area and the distance between the proposed wells and nearby public utility wells. The nearest public utility well is in Bloomer, 3.5 miles ESE of the proposed well sites.

PROPOSED WELL, PUMP AND DISCHARGE DETAILS

Proposed Pump Installation: The maximum pumping capacity that may be installed in the proposed well (#71503 &71504) is specified in Table 1, below. Refer to the attached guidelines for methods to measure or estimate pumpage, an hour meter or flow meter is required.

Proposed Well Construction: The applicant proposed to construct a well that will draw water from a bedrock formation. Construction of a bedrock well is approved provided that all aspects of well construction meets the criteria specified in Chapter NR 812, Wisconsin Administrative Code. In the event that the driller uses dual rotary drilling methods to install a permanent casing, for purposes of installing casing for a non-potable high capacity well in accordance with Chapter NR 812, the dual rotary drilling method is considered to be comparable to a percussion drilling method. For purposes of Chapter NR 812, the casing bit that is used in the dual rotary drilling method is considered to be comparable to a drive shoe. The proposed wells will be constructed with mud and air rotary. A 20 inch uperenlarge drillholee will extend 3 feet into sandstone anticipated to be about 50 feet. 16 inch casing will be set to a firm seat in rock and drill cutting will seal the annular space. A 15 inch lower drillhole will be advanced to approximately 300 feet.

APPROVED WATER USAGE AND APPROVED PUMPING CAPACITIES

The approved water usage rates and approved pumping capacities in existing and proposed wells are listed in Table 1 at the end of this approval.

CONDITIONS

1. It is the responsibility of the licensed well driller and pump installer to complete the installation in compliance with requirements of ch. NR812, Wis. Adm. Code. If the Department discovers aspects of the installation that are in violation of ch. NR 812, Wis. Adm. Code, and then the approval is void and it is the responsibility of the owner or licensed individuals to perform the needed corrections.

2. If construction has not commenced within two years from the date of this letter, then this letter shall become void. After two years, therefore, a new application must be made for approval of the plans and specifications before any construction work is undertaken.

3. Notification of the proposed time of construction shall be given to the Department of Natural Resources Water Supply Specialist Jack Daniel, telephone number 715-839-3796, not less than 48 hours prior to the beginning of construction.

4. All sampling, reporting and other requirements for both the construction and operation of the well shall be complied with. These requirements include the well driller preparing and submitting a construction report of the well to the Department within 30 days after completion of drilling of the well. For the new well, the construction reporting also requires that the well driller collect drill cuttings at 5 foot intervals throughout the depth of the well and at each change in formation. The samples must be sent to the State Geologic Survey for examination and preparation of an accurate geologic log of the well.

5. The operation of wells #71503 and 71504 shall be limited to no more than 690 gallons per minute each.

6. The Department reserves the authority to require any schedule of reporting water use from the wells on the high capacity property that it deems necessary. A meter that measures cumulative hours of pump operation or a meter that measures cumulative gallons that were pumped shall be installed on proposed high capacity wells. If a variable speed pump is used, a meter that measures the cumulative gallons that were pumped is the only acceptable method to determine water usage. Refer to the attached guidelines for methods to measure or estimate pumpage, an hour meter or flow meter is required.

7. The person to whom this approval is issued may not use, or permit another person to use, any water withdrawn from these wells to produce bottled drinking water, as defined in s. 97.34(1)(a), Wis. Stats., unless the Department approves use of the wells for that purpose. A sign stating "WATER FROM THIS WELL SHALL NOT BE USED FOR HUMAN CONSUMPTION OR FOR THE WASHING OR PREPARATION OF FOOD PRODUCTS" shall be posted at the site of the irrigation well and thereafter maintained in a legible condition.

8. Table 1 lists the latitude and longitude of the proposed well location. The proposed location of the well is approved. If the location of the well is moved more than the distance listed in Table 1 as the location tolerance (in feet) from the proposed location, prior department approval is necessary before construction.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30 day period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Dave Johnson P.G., Hydrogeologist
Groundwater Section
Bureau of Drinking Water and Groundwater

Mark F. Putra, R.S., Chief
Private Water Supply Section
Bureau of Drinking Water and Groundwater

Enclosure: Acceptable Measuring or Estimating Pumpage Guidance

cc: Mike Blodgett, Regional DG Supervisor – via email
Jack Daniel, Water Supply Specialist – via email
WGS - Roger Peters – via email
Michaelea Whelan, Sunde Engineering 10830 Nesbitt Ave S., Bloomington MN 55437
Paul McLean, Preferred Sands of Minnesota, 497 Settlers Ridge Parkway, Woodbury MN 54742

Table1 Approved Well Inventory Summary

PROPOSED WELL DNR HIGH CAP WELL#: 71501 WELL STATUS: APPROVED EXISTING WELL SITE WELL NUMBER: 001 WELL NAME: 001 HOUSE WUWN: NONE PWSID NUMBER: NONE LATITUDE: 45 Deg 6.397 Minute LONGITUDE: -91 Deg 34.716 Minute LOCATION TOLERANCE (FT): 660 LOCATION: NW 1/4 SE 1/4 S3 T30N R10W CIVIL TOWN: COOK'S VALLEY COUNTY: CHIPPEWA DATE COMPLETED: NONE WELL DEPTH: NONE PUMP CAPACITY (GPM): 10 USE: PRIVT/SINGLE RESIDENCE AVG USE (GALLONS PER DAY): MAX USE (GALLONS PER DAY):
EXISTING WELL DNR HIGH CAP WELL#: 71502 WELL STATUS: APPROVED WITH WELL REPORT SITE WELL NUMBER: 002 WELL NAME: 002 FARM WUWN: NONE PWSID NUMBER: NONE LATITUDE: 45 Deg 3.463 Minute LONGITUDE: -91 Deg 34.887 Minute LOCATION TOLERANCE (FT): 660

LOCATION: NE 1/4 SW 1/4 S3 T30N R10W
CIVIL TOWN: COOK'S VALLEY
COUNTY: CHIPPEWA
DATE COMPLETED: 10/29/1991
WELL DEPTH: NONE
PUMP CAPACITY (GPM): 15
USE: PRIVT/SINGLE RESIDENCE
AVG USE (GALLONS PER DAY):
MAX USE (GALLONS PER DAY):

PROPOSED WELL
DNR HIGH CAP WELL#: 71503
WELL STATUS: APPROVED NEW WELL
SITE WELL NUMBER: 003
WELL NAME: 003 HI-CAP #1
WUWN: NONE
PWSID NUMBER: NONE
LATITUDE: 45 Deg 6.453 Minute
LONGITUDE: -91 Deg 35.073 Minute
LOCATION TOLERANCE (FT): 660
LOCATION: NE 1/4 SW 1/4 S3 T30N R10W
CIVIL TOWN: COOK'S VALLEY
COUNTY: CHIPPEWA
DATE COMPLETED: NONE
WELL DEPTH: NONE
PUMP CAPACITY (GPM): 690
USE: MINERAL PREPARATIONS
AVG USE (GALLONS PER DAY): 500,000
MAX USE (GALLONS PER DAY): 993,600

PROPOSED WELL
DNR HIGH CAP WELL#: 71504
WELL STATUS: APPROVED NEW WELL
SITE WELL NUMBER: 004
WELL NAME: 004 HI-CAP # 2
WUWN: NONE
PWSID NUMBER: NONE
LATITUDE: 45 Deg 6.466 Minute
LONGITUDE: -91 Deg 34.967 Minute
LOCATION TOLERANCE (FT): 660
LOCATION: NE 1/4 SW 1/4 S3 T30N R10W
CIVIL TOWN: COOK'S VALLEY
COUNTY: CHIPPEWA
DATE COMPLETED: NONE
WELL DEPTH: NONE
PUMP CAPACITY (GPM): 690
USE: MINERAL PREPARATIONS
AVG USE (GALLONS PER DAY): 500,000
MAX USE (GALLONS PER DAY): 993,600

Township of Cooks Valley Building Permit

Name Preferred Sands of MN City Bloomer
Address 4621 186th Ave ZipCode 54724
Phone Number 715 568 5021 Date 6 22 11

23010-0342-000000000 23010-0343-000000
23010-0334-000000000 23010-0331-000000
23010-0333-000000000 23010-0334-000000
23010-0343-040000000 23010-0331-000000
Project Location (Parcel Number) 23010-0332000000000 23010-0342-025000

Located in SW 1/4 SE 1/4 of Section 03 NW¼ SE¼ 03
SW¼ of sec 03
T 30 N
Range 10

Project Description-Please indicate what will be involved
In this project WET Plant Towers Equip, Elect Transformer & underground cable, Gen office bldg Storage building, Scale, Haul roads entrance road upgrade, water wells, Septic Field

- Tirewash
- Waste Ponds
- Conveyors
- Equip & Bldg Foundations
- Slurry piping
- water piping
- well water Piping
- elect conduit

Project Cost $ 7,308,852 Completion Date 12 31 11

Fees to obtain permit if the total cost is less than $2000:
Early Fee: $5.00 _____ Late Fee: $25.00 _____
Fees to obtain permit if the total cost is more than $2000:
Early Fee: $20.00 ~~$20~~ _____ Late Fee: $100.00 _____
PAYABLE TO THE TOWNSHIP OF COOKS VALLEY

Will this project involve a driveway? If it involves a driveway a permit for that must be obtained before this project is started. Be sure to obtain the proper permits before you start to avoid forfeitures –and other costs.
PLEASE SEND A COPY OF THIS PERMIT TO THE TOWN CLERK AND CHAIRPERSON BEFORE YOU START-AND POST A COPY OF THIS PERMIT ON THE JOB SITE.
Your signature of this permit signifies that all of the above info is TRUE.
Applicant Mark Brodin for Preferred Sands of Minnesota

Chairperson or Clerk Daniel W Dahn
Date 6/21/2011

TOWNSHIP OF COOKS VALLEY
For Discussion Purposes Only
CHAPTER 6 ORDINANCE
DRIVEWAY AND ROAD APPROACH PERMIT

Location of Driveway or Approach
_____1/4_____1/4of Section_____Township 30 W Range 10 W

Parcel Number 0 23010- 0331-00020000
23010- 0342-00250000

The fee for this service is $300.00. The check should be payable to: TOWNSHIP OF COOKS VALLEY. It should be paid at the time of application at the site of the proposed driveway. If the driveway or approach is on a County or State Highway, the proper permits must be obtained from that department PRIOR to obtaining a permit from the township.

A copy of the ordinance outlining the proper procedure for placing the driveway/road approach was given to me at the time of inspection. YES X NO_____

The person that this permit is issued to agrees to the following items:

A) That the specifications outlined in the Ordinance will be followed when constructing the roadway or driveway

B) That the proper construction of the approach will result in a ninety percent refund of the initial permit fee at the next Town Board meeting following the approval of the approach.

C) That the Township or it's designated agent will correct an improperly constructed approach within a timely fashion as outlined in the ordinance.

D) That any expense involved in the correction of a nonconforming approach that exceeds the $270.00 figure will be placed on the tax roll as a special assessment.

E) That the Township or it's designated agent will be able to correct the problem without the threat of criminal trespass.

F) That the work will be inspected when completed.

SIGNATURE OF APPLICANT Samuel R Hi Lee (PER Paul MacLean)

NAME (PRINTED) Sam La Gesso (4621 186th ave)

DATE (date, month, year) 5-25-11 Telephonic

SIGNATURE OF TOWNSHIP OFFICER AUTHORIZING THE LOCATION OF THE APPROACH/DRIVEWAY

DATE OF ISSUANCE 5/25/11 Telephonic

refund to pd. to Preferred Sands Check # 2723

SIGNATURE OF TOWNSHIP OFFICER THAT SIGNIFIES THAT THE ABOVE DRIVEWAY OR ROAD APPROACH MEETS ALL OF THE STANDARDS AS OUTLINED IN ORDINANCE CHAPTER 6 -TOWN OF COOKS VALLEY CODE OF ORDINANCES

NAME (PRINTED) Darrel Fehn DATE 5/25/11

SIGNATURE Darrel Fehn

Appendix D
Site Plan

~~For Discussion Purposes Only~~

Preferred Sands of Minnesota, LLC

Drainage Direction

prepared for

APPENDIX D SITE PLAN

PREFERRED SANDS OF MINNESOTA, LLC

DRAWN BY: MRC

SCALE: 1"=500'

Appendix E
Fugitive Dust Control Plan

Fugitive Dust Control Plan
Preferred Sands of Minnesota, LLC

Table of Contents

Appendices

1. Introduction

1.1 Dust Control Plan Description

This Fugitive Dust Control Plan is required by NR 415.075 and has been written to address fugitive emissions for Preferred Sands's Bloomer mine near Bloomer, Wisconsin. This Fugitive Dust Control Plan will outline the best management practices to be used by Preferred Sand for processes at the Bloomer Mine.

This Fugitive Dust Control Plan has been developed to control emissions from the drilling, blasting, bulldozing, sand piles, truck loading, truck hauling, and road maintenance operations at the Bloomer Mine.

1.2 Site Contact Information

The Production Manager for Preferred Sands at the Bloomer mine site, Mr. Ted Peterson, is familiar with the management and operation at the mine site. Mr. Peterson and/or his designee will be responsible for developing, implementing, maintaining, and revising the plan.

Mr. Ted Peterson
Production Manager
Preferred Sands of Minnesota, LLC
Bloomer Mine
tpeterson@preferred.com
(715) 933-0264

1.3 Objectives of the Plan

The plan defines:

- the procedures Preferred Sands Bloomer mine personnel will follow to control fugitive dust emissions;
- steps that will be followed to bring emissions within appropriate ranges; and
- steps and procedures Preferred Sands will use to demonstrate procedures are followed and to verify the facility is controlling avoidable fugitive emissions.

To meet these objectives, the Fugitive Dust Control Plan:

- identifies all fugitive emission sources within the Bloomer mine;
- identifies the control measures and practices to control and minimize fugitive dust emissions;

- identifies visible emissions observation and corrective action requirements;
- describes fugitive dust control training elements; and
- identifies fugitive dust control plan compliance requirements.

1.4 Variance from Monitoring Requirements

The Preferred Sands Bloomer mine is implementing this plan to prevent emissions of particulate matter from the mine and material handling operations at the Bloomer mine from exceeding an air standard or creating air pollution. Per NR 415.075 (4) (b), Preferred Sands intends to demonstrate to the department that through the implementation of this plan, emissions are controlled to a level which meets all applicable requirements. Thus, the general public will not be exposed to significant levels of particulate matter from the Bloomer mine, and Preferred Sands requests the department grant a variance from the ambient air monitoring requirements of NR 415.075.

2. Fugitive Dust Emissions Sources and Control Measures

Fugitive dust will be controlled in order to prevent significant exposure of particulate matter to the general public. During periods where control measures are unnecessary due to site or meteorological conditions, this will be recorded using the daily visible emissions check and weather report in appendix A of this plan. Controls for fugitive dust will be negated during these times. Fugitive dust emission prevention equipment, consist of a 2,000 gallon watering truck. The watering truck is leased, and is maintained by the owner. Spare parts are inventoried by the owner in accordance with standard industry practice.

2.1 Sand Mine Wind Erosion Dust Control

The removal of overburden and sand from the Bloomer mine will potentially cause areas of ground particulate matter to become airborne. Dust from mined areas and storage piles will be controlled by applications of water or suitable chemicals a minimum of once every day, when meteorological conditions warrant it and visible emissions are observed.

2.2 Sand Mining Operations and Material Handling Operations

The Bloomer mine has the following operations and correlated controls:

2.2.1 Description

This process includes drilling, blasting, dozer operations, transport of materials with conveyors and sand screws and loading of trucks. Since there are no crushers or grinding mills, the conveyors and sand screws and are not subject to NSPS Subpart OOO (NR 440.688).

2.2.2 Controls

Currently, no precautions or controls are necessary to prevent fugitive emissions when drilling. The natural moisture content of the material prevents fugitive dust emissions. This is allowed by NR 415.075(2)(a)7. If conditions change and fugitive dust from drilling becomes an issue, the use of wet drilling or some other means of control approved by the Department of Natural Resources (DNR) will be implemented. Blast hole stemming materials will be used that have been approved by the DNR, department of industry, or department of labor.

The natural moisture content of the material handled serves as the best control for material handling operations. If required, additional dust control from movement of the sand due to bulldozer operations will occur through use of water or suitable chemicals. The loading equipment will be maintained in accordance with standard industry practice. The drop distance from conveyors,

screws, and the loading of trucks will be minimized to prevent dust problems. When necessary, the areas of the sand piles worked will be limited.

2.3 Site Roads and Truck Transport of Sand

2.3.1 Description

This source includes the truck transport of sand material and the unpaved roads and parking lots on site.

2.3.2 Controls

A 7 mile per hour speed limit on roads inside Preferred Sands' property line is posted and followed by haul trucks. Trucks shall be tarped after receiving a full load of sand material. Watering or other dust suppressant application shall be applied to roads as a corrective action when visible emissions are observed; the road shall be designed and maintained properly.

2.4 Fugitive Dust Control Observation

Visible checks will be conducted (during daylight hours) from the material handling operations and haul roads at least once each day, when meteorological conditions warrant it. If significant visible emissions (VEs) are observed, determine the cause and take corrective actions as soon as possible to eliminate the VEs. Corrective action may be in the form of discontinuing material transfer operations or adding water or suitable chemical dust suppressant.

3. Recordkeeping

The following records will be maintained by Preferred Sands:

- Daily Visible Emissions Checks (see example in Appendix A)
- Road Watering (see example in Appendix A)
- Suppression Chemical Purchasing Records. If used, the application of chemical dust suppressants will be recorded by way of Preferred Sands purchasing records
- Employee Training Records
- WDNR Letter of Approval and Variance of this Fugitive Dust Control Plan

4. Training

An integral part of the implementation of the Fugitive Dust Control Plan is appropriate training for the personnel involved. Training will be provided for all levels of personnel at the facility and will cover the following:

- Employee Responsibilities
- Forms and Record Keeping
- Reporting
- Corrective Action
- Maintenance
- Work Orders
- Dust Observation and Visibility Training
- Weather Observations
- Location of Information

Preferred Sands provides training in the areas listed above to new employees as their job function demands. Refresher training is provided to existing employees on an annual basis

Bloomer Mine

Daily Visible Emissions Check and Weather Report

Weather Report

Temp (°F)	Humidity (%)	Wind Speed (mph)/Direction	Precip (in.)	Comments

Records based on information from the Eau Claire, Chippewa Valley Regional Airport, retrieved from
http://forecast.weather.gov/MapClick.php?CityName=Bloomer&state=WI&site=MPX&textField1=45.1025&textField2=-91.4908&e=0

Sand Mine Erosion Dust Control

Area	Visible Emissions?	If "YES", describe reason and actions taken (continue on back if necessary)
Sand Storage Piles		

Sand Mining Operations and Fugitive Dust Control

Area	Visible Emissions?	If "YES", describe reason and actions taken (continue on back if necessary)
Drilling		
Blasting		
Dozer Operations		
Loading of Trucks		
Conveyors/Sand Screws		

Site Roads

Area	Visible Emissions?	If "YES", describe reason and actions taken (continue on back if necessary)
Unpaved Roads		

Problems/Maintenance Required

NOTE: Fill in all blanks. If no activity was done, mark "NA."

Completed By: _____ Date: _____

Crew: _____ Shift: _____

Road Watering Records

Month / Year: _____

	Water Wagon				Water Location
	Loads on Shift 1	Loads on Shift 2	Loads on Shift 3	Total for the Day	Water on Unpaved Roads? (Y/N)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Total Loads of Chloride this Month: _____ **Gallons/Load =** _____

Coordinator: _____ **Concentrate Receiving Area**