

# COMMENTS RECEIVED AND RESPONSES CONCERNING THE ENVIRONMENTAL ASSESSMENT WORKSHEET FOR

## Great Plains Sands Non-Metallic Mineral Mining Operation EAW Louisville and Sand Creek Township Scott County, Minnesota

**The headings for the EAW Item topics are in brackets.**

**Comments received are in normal font following the name/organization of the commenter in bold font.  
Staff responses are in Bold Underlined Italics**

Note: Comments received note the name of the commenter and are either quotes from their comments or are paraphrased by staff to capture the essence of the concern as it relates to the EAW item in question. *Staff responses to the comments follow each comment and are in italics and noted as Staff Response.* Comments received that were of similar concern are addressed once throughout the document.

Acronyms: Throughout this document the following acronyms will be used: Minnesota Pollution Control Agency (MPCA or PCA), Minnesota Department of Health (MDH), Minnesota Department of Natural Resources (MNDNR or DNR), Minnesota Department of Transportation (MNDOT), State Historical Preservation Office (SHPO), Office of the State Archaeologist (OSA), Minnesota Environmental Quality Board (MNEQB or EQB), Environmental Impact Statement (EIS), Environmental Assessment Worksheet (EAW), Responsible Governmental Unit (RGU), U. S. Fish and Wildlife (USFW), MRVAC (Minnesota River Valley Audubon Chapter of the National Audubon Society), and Friends of the Minnesota Valley (FMV).

# Contents

6. Project Description.....	3
8. Permits and Approvals.....	13
11. Fish, Wildlife and Ecologically Sensitive Resources.....	14
12. Physical Impacts on Water Resources.....	16
13. Water Use.....	17
17. Water Quality: Surface Water Runoff.....	19
18. Water Quality: Wastewaters.....	21
19. Geologic Hazards and Soil Conditions.....	21
21. Traffic.....	22
23. Stationary Source Air Emissions.....	24
24. Odors, Noise and Dust.....	25
25. Nearby Resources.....	30
26. Visual Impacts.....	33
29. Cumulative Impacts.....	33
31. Summary of Issues.....	35

DRAFT

## 6. Project Description

### Louisville Township

The reclamation plan and final end land use plan is insufficient as it does not adequately demonstrate that future reclamation and development of the site is feasible, which if not feasible could impact the ability of both this property and adjacent properties to develop. It needs to be demonstrated that a frontage road can be laid out in a location acceptable to both Louisville and Sand Creek Township that provides logical connections to adjacent properties and meets the Township's specifications. Along this frontage road, buildable lots with access to sewage treatment need to be shown.

The end use plan needs to show how this property can be laid out for future industrial usage, including right-of-way, lots, and sewage treatment options.

A specific location for the end use frontage road needs to be agreed upon with the Township and a contract executed as a condition of the Interim Use Permit. The contract needs to specify such items as platting of the right-of-way, preparation of base and subgrade following mining activity, and cash contribution towards the remaining cost of constructing the future frontage road in a manner that is satisfactory to the Township and Town Attorney.

Item 4 states the average depth of the mining activity, but the minimum and maximum depth should also be included.

*Staff Response: The developer provided the following response to this comment: "Maximum Depth: The maximum depth of excavation will occur in the central portion of the site, which is a topographic high. In this location, there is approximately 23 feet of overburden, 26 feet of sandstone above the water table and 49 feet of mineable sandstone below the water table for a total maximum depth of excavation of 98 feet. This corresponds to an elevation of 670 feet above mean sea level (msl). The minimum excavation elevation will occur further to the northwest where there is approximately 40 feet of overburden removal, about 4 feet of sandstone removal above the water table and 50 feet of sandstone removal below the water table, for a total mining depth of approximately 94 feet. This corresponds to an elevation of 665 feet above mean sea level, approximately five feet above the bottom of the Jordan Sandstone. Because the existing grade, the top of sandstone and bottom of mineable sandstone elevations all vary across the Site, the depth of mining will vary across the Site. Figure 1 illustrates the two scenarios described above.*

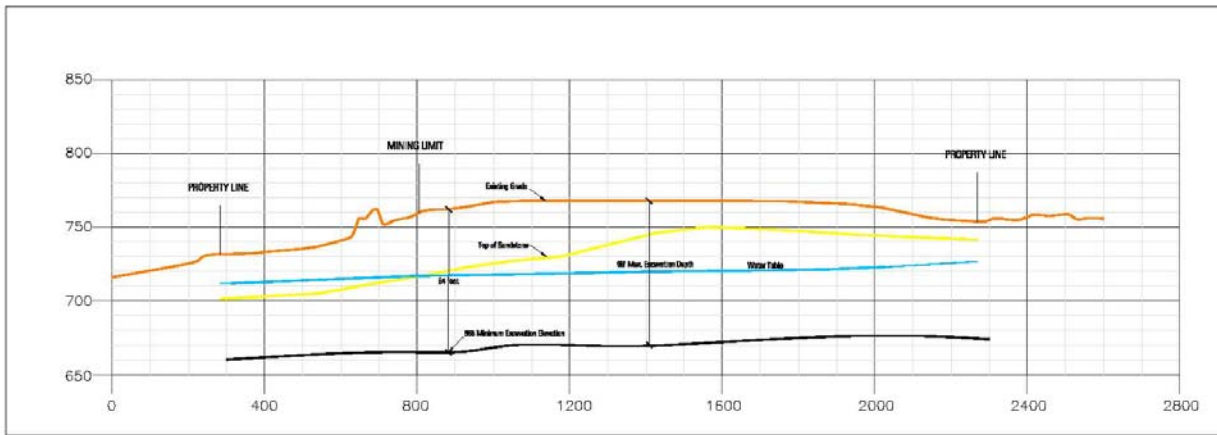


Figure 1 Maximum Mining Depth, Minimum Mining Elevation.

The minimum depth of mining is zero feet in areas of the site that will not be mined or used for stormwater management. This includes approximately 4 acres in the southwestern portion of the Site.”

Staff and the Townships still contend that this issue has not been addressed in sufficient detail to describe either the assurance that the site can be reclaimed after completion of the mining nor, more importantly at any time after commencement of mining should the market conditions change resulting in a premature cessation of mining. We, therefore, recommend that a staged reclamation plan be provided with staged securities to assure that the site can be reclaimed to an acceptable condition suitable for development consistent with the County’s Comprehensive Land Use Plan. **[The requested information including a geotechnical report on the feasibility of reclamation below the water table and a staged mining and reclamation plan was provided for further evaluation during the IUP process.]**

Page 8 states that mining will occur within 30 feet of rights of ways. Information on depth and slopes of excavation in these areas needs to be provided.

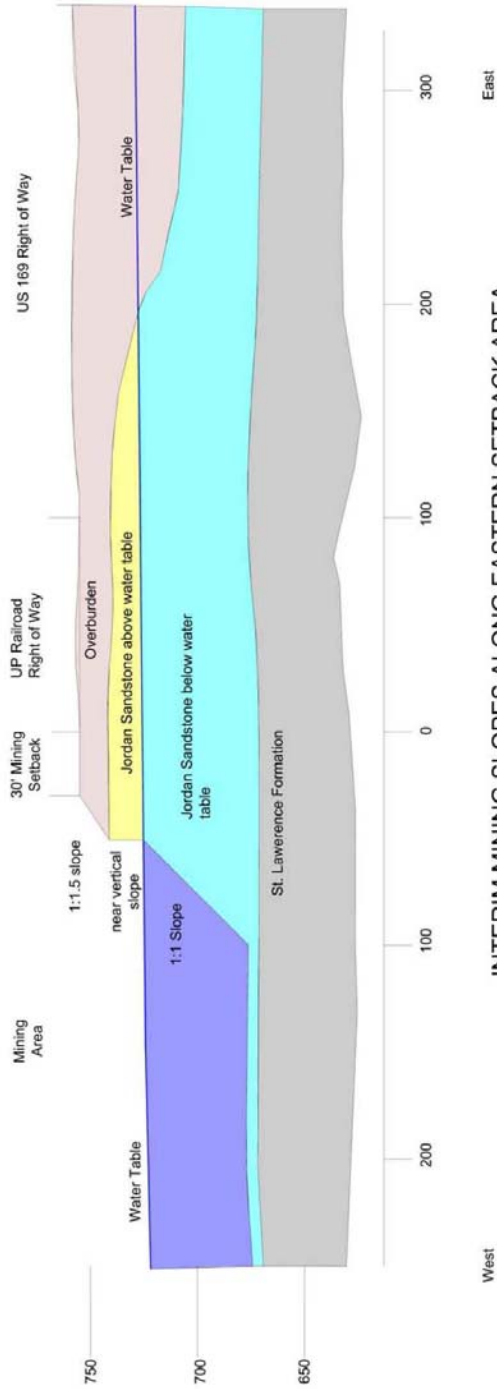
*Staff Response:* The developer provided the following response to this comment: Mining is proposed to be conducted to within thirty feet of right-of-ways as allowed by ordinance. Along the west side of the property, this boundary is a railroad right of way. Excavation slopes along the railroad right of way setback will include an approximately 1.5:1 excavation slope in the overburden, a near vertical wall in the sandstone above the water table, a 2:1 excavation slope in the sandstone below the water table and a 5:1 upland reclamation slope. Along the eastern setback line a typical excavation section will be approximately 14’ of overburden, 16’ of sandstone wall above the water table, and 40-50 feet of mining below the water table. Figure 2A illustrates the excavation slopes during the interim mining condition along the eastern boundary of the property with respect to the railroad and US 169 rights of way. Figure 2B illustrates the slopes across this same section upon reclamation. These slopes are approximate only and are expected to vary somewhat throughout the mining area depending upon the nature of the material encountered in the overburden as well as the nature of the sandstone itself. Highly consolidated and cemented layers encountered throughout the formation will impact the actual mining slopes both above and below the water table.

Mining limits are setback over 350 feet from the western property line right-of-way of the UP railroad running along the western boundary of the Site due to the absence of mineable Jordan along the western edge of the property.

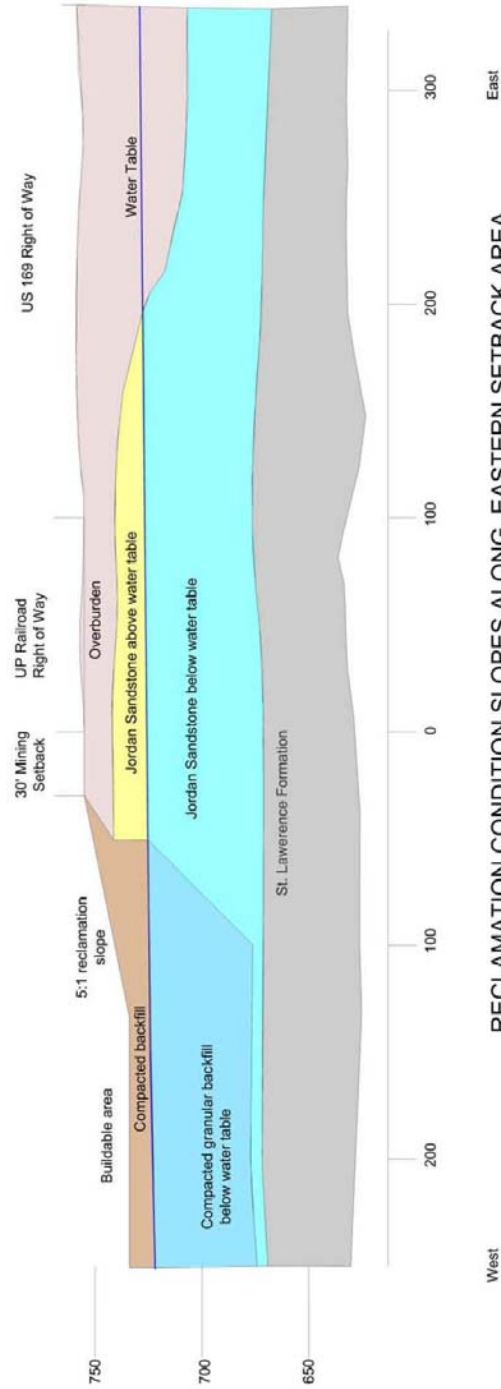
Along the Southern property line (right-of-way with Bluff Drive) is an area where the sandstone drops off to the south and is only present along the eastern portion of the southern property except for near the very eastern

portion of the southern right of way setback. Past mining and reclamation has occurred in this area. There will be an excavation slope of approximately 1.5:1 along this entire setback to the reclamation grade but not below the water table, until the eastern portion where the sandstone picks up. In this eastern area of the southern boundary, along the road-right-of way, the setback will include an approximately 1.5:1 excavation slope in the overburden, a near vertical wall in the sandstone above the water table, a 2:1 excavation slope in the sandstone below the water table and a 5:1 reclamation slope. Figure 3 A,

A request was sent to the developer to provide more information on the cross sections as well as a staging plan for reclamation. This information was not provided. There remains a concern about the stability of interim slopes over time adjacent to the road and railroads. Should the mining operation cease prematurely these slopes would be left exposed unless funds were available for proper reclamation. Reclamation fill may need to be imported. The cross sections provided did not present information about the extent of the reclamation fill across the entire open pond. Questions remain about the long term stability of the fines proposed to be placed below the water and thus the long term stability of the fill material placed on top of these fines above the water table. **[The requested information including a geotechnical report on the feasibility of reclamation below the water table and a staged mining and reclamation plan was provided for further evaluation during the IUP process.]**

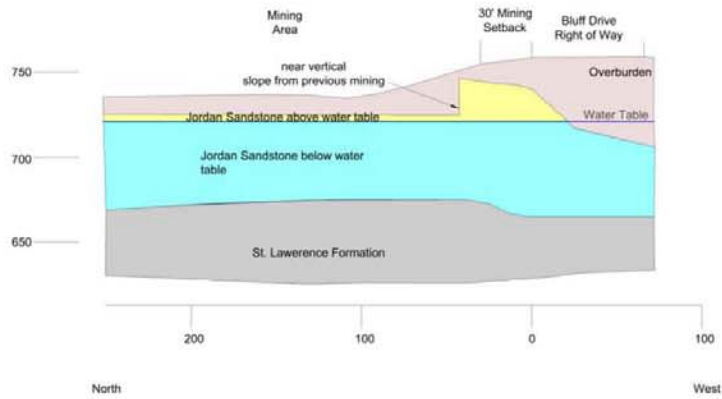


INTERIM MINING SLOPES ALONG EASTERN SETBACK AREA

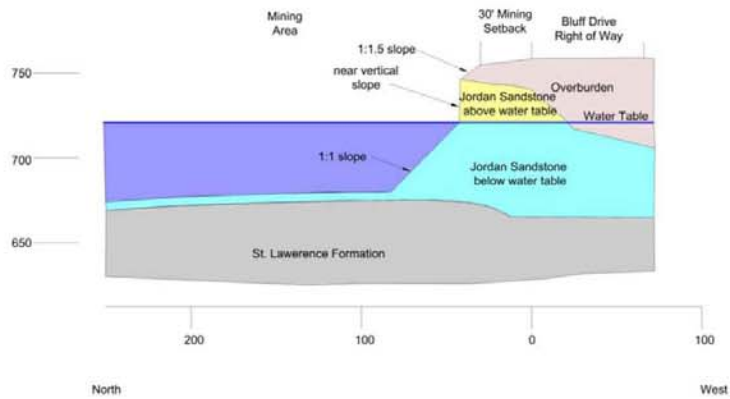


RECLAMATION CONDITION SLOPES ALONG EASTERN SETBACK AREA

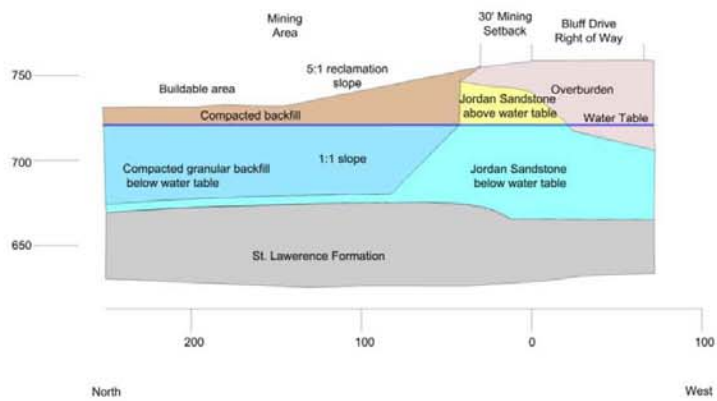
6 Figure 3B and Figure 3C illustrate the slopes along the southern boundary as a result of past mining and reclamation activity, slopes during the interim mining condition and slopes after completion of reclamation activity with respect to the road right-of-way.



CURRENT INTERIM RECLAMATION CONDITION FROM PAST MINING ACTIVITY SOUTHERN SETBACK FROM BLUFF DRIVE



INTERIM MINING SLOPES ALONG SOUTHERN SETBACK AREA



RECLAMATION CONDITION SLOPES ALONG SOUTHERN SETBACK AREA

Page 9 provides some detail as to the reclamation condition of the upland areas by stating that there will be a minimum of six inches of topsoil. However, additional information should be provided to demonstrate that the soil conditions will be useable for development in the end use plan.

*Staff Response: The developer has responded as follows: "The majority (approximately 80%) of the Site soils are Sparta soils, previously called Hubbard Soils. The Soil Conservation Service places these soils in Management Class 26; Deep droughty soils: According to the October 1959 Scott County Soil Survey Much of the acreage in this group within Scott County is idle or in poor pasture; corn, oats and winter wheat, rye and soybeans can be grown, but yields are poor. The 1997 Soil Survey update lists the cropland management considerations for Sparta soils as excessive permeability, limited available water capacity, limited organic matter content, potential for ground water contamination and wind erosion. (HbC soils also are listed as potential for surface water contamination and water erosion) Sparta Soils have fair potential for the following wildlife habitat elements: Grain and seed crops, grasses and legumes, wild herbaceous plants, hardwood trees, coniferous plants, openland wildlife habitat and woodland wildlife habitat According to the 1959 Scott County Soil Survey, native vegetation associated with the Sparta soils was sparse grasses. The range in depth of the A horizon of Sparta soils is 4-12 inches. The range in depth of the B horizon is 12-38 inches Sandstone outcrops make up approximately 15% of the Site soil mapping unit. This soil map unit is predominantly in the very southern portion of the site that was mined in the past. This map unit consists of exposed sandstone with 0-6" of topsoil.*

*Chapter 10 of the Scott County Zoning Code requires that reclaimed areas be resurfaced with soil of a quality at least equal to the topsoil of land areas immediately surrounding, and to a depth of at least six (6) inches. The topsoil shall be seeded, sodded, or planted to establish vegetation that shall adequately retard soil erosion.*

*Although original site topsoil has been removed over a portion of the site, there are still approximately 65 acres that have original topsoil. In addition, some of the topsoil that was removed as part of previous mining operations remains on site in stockpiles and perimeter berms. The reclamation plan anticipates 35-40 acre water body and 100-105 acres of upland area. Utilizing the A and B horizons of the existing topsoil and topsoil stored on-site in existing stockpiles and berms will provide for sufficient topsoil to respread over the upland areas to a minimum depth of 6" in compliance with the reclamation standards of the Scott County Ordinance. Compost or other soil amendments or any topsoil that may be imported to increase the nutrient value of the existing topsoil will be approved by the County prior to importing the material."*

*Staff and Townships requested that additional documentation be provided that demonstrates the feasibility and practicality of reclaiming the site for possible end uses – such as an industrial park with a frontage road, or simply open space with a frontage road. The project description was vague on this. Staff and Townships further acknowledge that the developer has not provided specific staging for commencement of reclamation and recommend that this issue be dealt with during the IUP process. **[The requested information including a geotechnical report on the feasibility of reclamation below the water table and a staged mining and reclamation plan was provided for further evaluation during the IUP process.]***

A development contract will be required that includes financial security for monitoring and correcting structural damage to off-site properties.

*Staff Response: The proposer anticipates a condition requiring a bond as part of the IUP, however, it is recognized that setting an amount for a security will be complicated with uncertainty unless it is staged to coincide with mine and reclamation progression and the developer has not provided sufficient details about staged mining or reclamation.*



## Sand Creek Township

Operation - A more detailed statement of the operations including hours of operation, staffing, on-site parking, emergency planning, lighting, traffic and transportation throughout the daily and yearly mining operation.

*Staff Response: The developer has provided the following response: "Hours of operation will be determined in the IUP process. Proposed hours of operation for mining activity (mining and transport of product to the processing area are 7 am to 7 pm Monday through Saturday. The plant, including limited outdoor equipment such as the rail loadout system, the dryer, a loader, crusher and wet screen are proposed to operate 24 hours per day, seven days a week. During the wintertime, there will be no washing, just operation of the dry plant, crusher and rail load out.*

*The plant is estimated to employ 32 employees during maximum production. The number of employees during the winter months will be reduced to approximately 10.*

*On-site parking areas will include the area north of the shop building located on the Scott Land Company property and adjacent to the office building on the Q Prime property.*

*Emergency Planning will include the preparation of spill prevention, containment and control plan, stormwater pollution prevention plan, emergency preparedness and MSHA training in accordance with all state and federal rules. The local fire and police departments will be contacted prior to start up to review the operations, fuel storage locations, and other pertinent information.*

*Security lights and other lighting may be used in and around the processing buildings. These lights will be shielded and directed downward to reduce glare and visibility from off-site. The majority of product will be shipped via rail - it is anticipated that on the average, two switches will be made per day. One switch per day of 15-17 loaded cars per day out, 15 - 17 loaded cars per day coming in. Depending upon car configuration, each car holds 80-110 tons. Switches will be made by the railroad.*

*The proposer would like the option of maintaining trucking operations consistent with the recent past mining operations which generated approximately 13-38 loads per day. This is to allow leverage when negotiating rail rates. Having the ability to truck even a limited amount of product from the site encourages more favorable rail rates. The proposer would be willing to a condition in the IUP that allows a limited number of truck trips."*

*Staff and the Townships felt that the issue of additional truck traffic was vague and would need to be clearly defined in the IUP in coordination with the local road authorities so that necessary improvements could be addressed accordingly.*

Berm/Planting Effectiveness - The EAW is too general and non-specific as to what and where the berms are to be located. Provide a detail plan and sections, which specify grades and core fill material to be used in the berms. Provide a list of appropriate plant material to be used with the berms including benches and berm grading 'toes' blended in with the existing natural grades, vegetation, property lines and ancillary uses. The sections should indicate what value the proposed berms have on screening the mining operations from offsite views throughout the 'view shed'.

*Staff Response: The developer has provided the following response: "Figure 4 illustrates the proposed berm locations and grades. Per mitigation measures identified in the noise analysis, the applicant is proposing a ten foot high berm in the southwest corner of the Site and a six foot high berm along the eastern property line of the Site. These berms will be constructed with 3:1 slopes and an approximately ten foot top. The berms will be constructed out of overburden material which consists of: terrace deposits; Poorly-graded sand (SP), Silty Sand (SM) and SP-SM; glacial outwash, poorly graded sand (SP); and glacial till (clayey sand-silty sand, SC-*

*SM and clayey sand SC). Six inches of topsoil, amended with compost as may be necessary to enhance moisture retention to allow establishment of vegetation, will be placed over the berm. The berms will be seeded with native seed mix for sandy soils in accordance with MnDOT spec. 2575 for establishment of vegetation and mulched with MnDOT straw 2S mulch or wood fiber 2S type blanket. Vegetation on the berms will be inspected on a monthly basis and areas will be reseeded as necessary to insure that vegetation is adequate to control erosion and sedimentation.*

*Berms will be constructed in phases. The southwestern berm and the southern and northern portions of the eastern berm will be constructed during the onset of Phase 1 mining. The eastern berm will be extended to the north as mining progresses to Phase 2 and Phase 3.”*

*Staff note that if the berms are constructed as the developer proposed in response to this comment they will require a width of 46 feet whereas the proposed mining setback from the property line or right of way is proposed to be 30 feet. Staff also question whether 3/1 slopes on these disturbed soil types are sustainable and recommend further analysis of this issue.*

Reclamation and Restoration Plan - Adequate 'vision' for an incremental (phased) and end-use plan is lacking in the EAW. Restoration shall be commenced as soon as specified by the existing ordinance or sooner to cover exposed spoils. A restoration plan should incorporate suitable plant material and features that will be proposed for phased restoration and end-use planning options. Provide phased and end-use planning options for the purposes of establishing a realistic character and functionality of the site in the context of the area. This documentation can be used for future planning anticipating the mining operation through its phases and end use.

*Staff Response: The developer has provided the following response: “Reclamation activity will be ongoing once a large enough excavation has been created to allow simultaneous mining and hydraulic backfilling. Processing will generate reject fine sands that will be mixed with water and pumped back into the far end of the excavation as mining continues to expand the other end of the excavation. The wet plant will cut out the fine sands which although there is a market for the finer sands for use in the hydraulic fracturing industry, this portion of the deposit is needed to provide general hydraulic backfill to allow the reclamation of mined area to buildable upland conditions. Braun Intertec was hired by the proposer to develop a reclamation specification, compaction and testing specification to insure proper engineering of the reclaimed portions of the site to allow for future site development.*

*The reclamation condition of the site will be consistent with the County’s reclamation ordinance in establishing reclamation grades and vegetation to stabilize the site. Reclamation grades have been designed to accommodate future development of the site in accordance with the zoning at the time such development is proposed and to accommodate a future frontage road through the site connecting properties to the north and south as envisioned by the townships, County and MnDOT for limited access to US Highway 169 and a frontage or backage road system parallel to US Highway 169.”*

*Staff and the Townships asked for the cited Braun Intertec report but this has not been provided. Questions therefore remain as to whether or not the reclamation plan proposed by the developer is feasible. The developer has also not provided an adequate phased or incremental mining and reclamation plan. **[The requested information including a geotechnical report on the feasibility of reclamation below the water table and a staged mining and reclamation plan was provided for further evaluation during the IUP process.]***

Security - The EAW does not adequately define and show how, what and where the necessary security fencing will be used throughout the mining operations. The EAW should anticipate off-site users attempting access to the mining site as well as wildlife use of the site as a conduit.

*Staff Response: The developer provided the following response: "The project does not propose fencing. During buildout of the processing plant, there will be after-hours security. There will be a locking gate at the site entrance. The processing plant will operate 24 hours a day, with personnel on-site at all times. During holidays, security may be hired. No trespassing signs and warning signs will be posted around the perimeter of the Site to prevent unauthorized site access." Staff recommend that the issue of fencing and security be dealt with during the IUP.*

Damages - Provide adequate means for financial responsibility for any damage claims through an approved Insurance, Bonds, Escrow, and or Letter of Credit throughout the operation of the mine and a reasonable date and time in the future post mining operations.

*Staff Response: The developer has acknowledged that a bond or other security acceptable to the County will be established through the IUP process. However, staff suggest that establishment of a suitable amount of security will be difficult without agreement on a feasible reclamation plan.*

End Use Plan - The EAW does not show in sufficient detail a proposed end-use plan that realistically anticipates a proposed use options) so that the operations of the mine can be conducted in anticipation of a future use that is consistent with the projected use(s) of the surrounding area. The end-use plan should indicate an appropriate use(s), transportation, sewer, water and other utilities, character and strategy for implementation.

*Staff Response: The developer has noted that "because the ultimate development of this site is not known, detailed end-use of the site has not been prepared." The developer has further stated their intention that "the reclamation condition of the site will be suitable for future development consistent with the current comprehensive guide plan and current zoning. The reclamation grades have been developed to accommodate the future frontage road through the property. Upland areas are at elevations approximately ten feet above the water table to accommodate development. Reclamation specifications include backfilling procedures, compaction monitoring and testing procedures to provide buildable upland areas. Since there is no specific end use development plan for the site and there is no immediate development pressure in the area, design of future utilities is not warranted at this time. Water use is industry/development specific as is ISTS design. At the point in time when a development is proposed, these plans will be prepared and submitted to reflect the requirements of the proposed development. Stormwater management systems will be designed in accordance with the requirements that are in effect at that time. This site has also been selected as a candidate by the MCES as a potential site of a future waste water treatment facility"*

*Staff are not convinced that the developer has provided sufficient details regarding the reclamation plan to determine whether or not the site could be used for an end use compatible with the current Comprehensive Plan after the mining ceases. Staff also note that the lack of detail regarding this makes it impossible to evaluate the cumulative impacts from this project. Staff therefore request that at a minimum the following additional information is needed: details on the feasibility of compaction of fill soil below the water level for road and building construction and feasibility of the proposed set aside location for septic system sites. **[The requested information including a geotechnical report on the feasibility of reclamation below the water table and a staged mining and reclamation plan was provided for further evaluation during the IUP process.]***

Future Vision' - Since Scott County has 'Land Use Authority', they should be responsible for the coordinated development of a forward looking concept plan for the region (assuming Industrial Zone) that comprehensively considers the Land Use, Character, Systems and Strategies as well as the natural resource systems. All interested parties and authorities should be coordinated by Scott County including, but not limited to Scott County Planning, Environment, Engineering, Transportation, Specialized Boards and Committees, Sand Creek and Louisville Townships" Metro Planning, MNDNR, MNDOT, RR and other interested public and private agencies.

*Staff Response: Staff agree that this is a valid concern but suggest it best be dealt with through the IUP process and have already commenced meetings with the townships and other stakeholders in preparation for the IUP process.*

Essentially, the EAW must make the requirement of a complete Site Development Plan which includes the existing Site, Site Preparation, Phase(s) Development in detail, Site Design Details (buildings, roads, parking, stock pile, equipment storage and servicing, transportation of product, wells on and off-site, sewage systems, lighting, screening, berms, security fencing, planting plans, maintenance, signage, etc.). This plan should provide a phasing schedule and projected costs which may impact the surrounding area. The plan should also specify a feasible and functional reclamation, restoration and end use plan to enable the Townships and County to minimize the cumulative effects of this mining operation. Regular meetings with Sand Creek and Louisville Town Boards should be specified and attended by all effected government departments, agencies and special Boards and Committees as well as other interested public and private persons or agencies to monitor the Mining Operations, Schedules, Progress and any potential problems (such as impacts on existing wells, nuisances and any other future uses on and off-site).

Furthermore we want the EAW to indicate the formation of a review and monitoring committee charged to oversee the mining operation throughout the mine's operation. The committee should consist of at least two Town Board Members from Sand Creek and Louisville Townships plus Township Engineers. All fees and expenses are to be paid for by Great Plains Sand Non-Metallic Mineral Mining Operation.

It is our expectation that Sand Creek Township desires a continued partnership with Louisville Township as well as other concerned or effected agencies (public or private) throughout the mining operation. This shall consist of monitoring the progress of the mining operation, development of any consideration of the proposed mine its approval process necessary refinements or modifications the establishment and implementation of an appropriate end-use plan.

*Staff Response: Staff agree with these concerns as noted in the previous response. Staff suggest that a review committee as recommended by the Township be authorized by the Board as soon as possible. The proposer has acknowledged support for a review committee as noted: "The proposer anticipates the formation of a review committee composed of representatives of Sand Creek and Louisville Townships, Scott County and others as deemed appropriate. The proposer is committed to working with the local authorities to resolve any issues that may arise throughout the course of the mining operation."*

## **Minnesota Pollution Control Agency**

### **Description (Item 6)**

The demolition of the existing structures must be in compliance with state and federal regulations that require the structure be inspected for hazardous materials such as asbestos, lead based paint, light ballasts, thermostats, stored chemicals, ozone depleting chemicals, etc. Regulated asbestos-containing materials (RACM) should be abated prior to demolition activities. A "Notification of Asbestos Related Work" must be submitted to the Minnesota Department of Health by a licensed asbestos inspector 10 working days prior to conducting abatement activities, if abatement of 160 square feet, 260 linear feet, or 35 cubic feet of RACM is required. A "Notification of Intent to Perform a Demolition" must be submitted to the MPCA 10 working days prior to the commencement of demolition. Flaking lead based paint that may be present on the structure should be encapsulated or removed and properly disposed of off-site at the appropriate disposal facility prior to demolition activities. Any lead based paint chips that are present on the ground following demolition should also be removed and properly disposed of offsite at the appropriate disposal facility. The Project proposer should also consider recycling as much of the structure materials as possible to reduce the volume of material disposed of in

the landfill. If you have any questions regarding demolition issues or asbestos and lead paint abatement, please contact Derek Pemble in our St. Paul office, at 651-757-2647.

*Staff Response: Staff agree and the proposer has stated they “will comply with all state and local demolition requirements.”*

### **Sand Creek Township (Township Engineer)**

The EAW does not discuss the security measures to be installed at the proposed mining operation. Is there or will there be a perimeter fence to prevent access to the site by children or others?

*Staff Response: See response for Sand Creek’s comment on security described above on page 9.*

### **Section 6 Description**

Blasting is mentioned as part of the mining operation. However, there is minimal discussion of noise impacts from the blasting in Section 24 or in the Noise Analysis Exhibit 7. There should be a clear statement and understanding regarding potential noise impacts from the blasting to nearby residential properties.

Additionally, what effect will the blasting have on wind movement of fine sands? Section 16 states that the fine grains of the sandstone deposit are subject to wind erosion and Sections 17 & 24 discuss sediment transport via wind, but that discussion is limited to stockpiles not any particles that might become windborne as a result of blasting. In light of the issue raised in Section 20 with silica dust and silicosis, a more detailed discussion of windborne particles resulting from blasting and measures to control them is warranted. Import of topsoil materials is mentioned. However, Exhibit 6 discusses the possible import of soils other than topsoil to the site. Clarify what soils may be imported to the site. A possible future road is discussed and shown in the referenced Map D. It appears that a portion of this future road is located on private property owned by others. The location of the future road should be reviewed with all property owners and Sand Creek Township.

*Staff Response: Staff recommends that a blasting and noise monitoring and mitigation plan be provided before the IUP application is accepted, please see section 23 Stationary source air emissions and 24 Odors, noise and dust below. Staff agrees that these plans should examine the impacts of blasting on nearby properties and blasting effects on wind movement of fine sands. Staff also recommends that a dust and air quality monitoring and mitigation plan be provided before the IUP application is accepted, staff agree that the blasting effects on windborne particles should be considered in these plans.*

*The developer has proposed to import compost or other soil amendments or any topsoil that may be needed to increase the nutrient value of the existing topsoil. The groundwater monitoring and mitigation plan attached with the EAW, with a section on imported material, is draft and is only to provide an example of possible monitoring and mitigation. Staff recommends that a review committee review and approve a groundwater monitoring and mitigation plan to be implemented in the MIUP. The review committee should discuss if imported material should be allowed.*

*Staff has reviewed the proposed future road location with Sand Creek Township. The County will continue to collaborate with the Townships on the future road in the MIUP process. In addition to the EAW, the property owners will be notified of the MIUP and will be provided a copy of the future road if requested.*

## **8. Permits and Approvals**

### **Louisville Township**

Item 8 states that an IUP has been applied for concurrently with the EAW. It is the Township's understanding that the IUP has not yet been applied for.

*Staff Response: The applicant has not applied for the Interim Use Permit.*

## **Minnesota Pollution Control Agency**

### **Permits and Approvals Required (Item 8)**

For facilities that are eligible for the Nonmetallic Mineral Mining & Associated Activities National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Permit (MNG490000, formerly the 'Construction Sand and Gravel, Rock Quarry and Hot Mix Asphalt Production Facilities General Permit'), a separate General Permit for Construction Stormwater Activity is not required. However, if the applicant chooses to be covered by the General Permit for Industrial Stormwater Activity (MNR10000) because they do not dewater, have multiple sites, or perform other activities covered under the Nonmetallic Mining & Associated Activities General Permit, then the initial construction phase must be covered by the General Permit for Construction Stormwater Activity.

*Staff Response: The developer noted that the operator will apply for a Nonmetallic Mining & Associated Activities National Pollutant Discharge Elimination System (NPDES)/State Disposal Systems (SDS) General Permit (MNG490000).*

### **Sand Creek Township (Township Engineer)**

#### **Section 8 Permits and Approvals Required**

The list of permits should be modified to include a driveway permit from Sand Creek Township if an access onto Bluff Drive at the south end of the site as shown in Figures 3 & 5 is to be used. The driveway permit process will include a review of sight distance along Bluff Drive to ensure that traffic could enter and exit Bluff Drive safely.

*Staff Response: The developer was informed that they will need to apply for a driveway permit from Sand Creek Township if the project requires access onto Bluff Drive.*

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

### **Sand Creek Township**

Natural Systems- Include sufficient MNDNR documentation and recommendation of the natural systems existing on and off-site. Determine what nutritional value the existing soils have and what plant types are associated with the soils. Any imported soils must be evaluated and approved for use as topsoil or supplemental soils to be augmented with the existing soils. Provide documentation that supports the use by wildlife under different end use options.

*Staff Response: The developer provided the following as a response: "The Minnesota Department of Natural Resources Natural Heritage Database was searched to identify significant natural resources including natural systems. As indicated in the EAW, the search identified Dry Sand – Gravel Oak Savanna (southern) Type#7, Dry Sand-Gravel Prairie, Undetermined native plant communities, Silver Maple (Virginia Creeper) Floodplain Forest, and Bedrock outcrop. The search also found kitten tails, a threatened species, in the vicinity of the site. The DNR indicated that the majority of occurrences were in the wildlife Refuge itself. A copy of the letter including the summary of the search results from the DNR was included in the EAW.*

*A vegetation survey was conducted by Barr Engineering to determine if there were any kitten tails on the site itself. No kitten tails were found on the site. The site is dominated by non-native invasive vegetation, primarily grasses and forbs with sparse shrubs and trees. The only oak species found on the site were less than two feet in height. Only a small area of native grasses was found at the southeastern portion of the site, which had previously been farmed for many years. The report includes a complete list of site vegetation documented during the survey.*

*The majority (approximately 80%) of the Site soils are Sparta soils, previously called Hubbard Soils. The Soil Conservation Service places these soils in Management Class 26; Deep droughty soils: According to the October 1959 Scott County Soil Survey Much of the acreage in this group within Scott County is idle or in poor pasture; corn, oats and winter wheat, rye and soybeans can be grown, but yields are poor. The 1997 Soil Survey update lists the cropland management considerations for Sparta soils as excessive permeability, limited available water capacity, limited organic matter content, potential for ground water contamination and wind erosion. (HbC soils also are listed as potential for surface water contamination and water erosion) Sparta Soils have fair potential for the following wildlife habitat elements: Grain and seed crops, grasses and legumes, wild herbaceous plants, hardwood trees, coniferous plants, openland wildlife habitat and woodland wildlife habitat. Compost or other soil amendments or any topsoil that may be imported to increase the nutrient value of the existing topsoil will be approved by the county prior to importing the material. According to the 1959 Scott County Soil Survey, native vegetation associated with the Sparta soils was sparse grasses. The range in depth of the A horizon of Sparta soils is 4-12 inches. The range in depth of the B horizon is 12-38 inches.*

*Sandstone outcrops make up approximately 15% of the Site soil mapping unit. This soil map unit is predominantly in the very southern portion of the site that was mined in the past. This map unit consists of exposed sandstone with 0-6" of topsoil.*

*Chapter 10 of the Scott County Zoning Code requires that reclaimed areas be resurfaced with soil of a quality at least equal to the topsoil of land areas immediately surrounding, and to a depth of at least six (6) inches. The topsoil shall be seeded, sodded, or planted to establish vegetation that shall adequately retard soil erosion.*

*Although original site topsoil has been removed over a portion of the site, there are still approximately 65 acres that have original topsoil. The reclamation plan anticipates 35-40 acre water body and 100-105 acres of upland area. Utilizing the A and B horizons of the existing topsoil will provide for sufficient topsoil to respread over the upland areas to a minimum depth of 6". Staff further recommends that this issue could be dealt with by a project review committee.*

## **Minnesota Pollution Control Agency**

### **Physical impacts on Water Resources (Item 12)**

It is not clear if there will be a discharge of water from the site as the EAW appears to provide conflicting information. Item 11 indicates that the stormwater ponds are over designed and will not discharge stormwater off site. Item 12 states "No untreated runoff that has contacted exposed soils or stockpiles of sand will be allowed to discharge untreated from the site." Item 17 indicates that stormwater contacting exposed soils will be handled internally or treated for sediment removal prior to discharge from the site. Please clarify.

*Staff Response: The developer provided the following clarification as requested: "At the onset of mining operations, a stormwater management basin that will provide sedimentation and rate control and an infiltration basin that will provide volume control will be constructed on the Scott Land Company property. These stormwater management features were designed and approved in conjunction with a resource*

*management plan for the Scott County and Scott Land Company properties. The design is based on full industrial development, assuming 75% impervious conditions.*

*During the mining operation, runoff from the Scott County and Scott Land Company properties (which includes the processing and stockpile areas,) will be directed to these ponds. The ponds are over designed for this interim condition so that all of the runoff from a 2, 10 and 100 year event is treated and infiltrated and will not discharge from the site. Runoff from active mining phases will be directed internally and not discharge off Site.*

*During the initial phases of mining portions of Phase 2-4 which are undisturbed and inactive will continue to drain in the same fashion as the existing site conditions. A portion of the property drains to the east towards the railroad right of way and a portion of the property drains to the west to the railroad right of way. These conditions will remain as is until mining progresses to the next phase and stormwater from the disturbed areas is directed internally. The Site will operate under a stormwater pollution prevention plan prepared as part of the NPDES permit for the site”*

## **12. Physical Impacts on Water Resources**

### **Metropolitan Council**

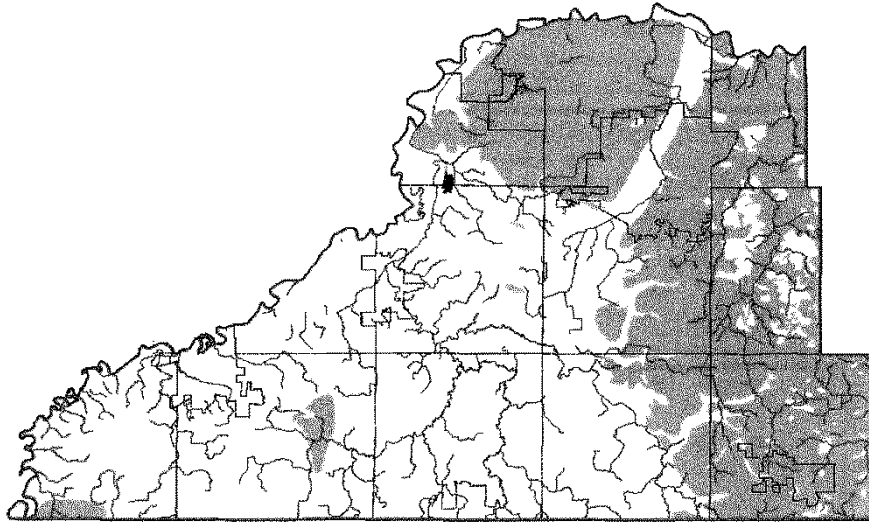
Great Plains Sand, LLC proposes to acquire 140 acres and operate a sandstone mining facility on the edge of a buried plateau of Jordan Sandstone in Scott County, Minnesota (see accompanying Site\_Geology.jpg). The Jordan Sandstone is absent in much of Scott County. The buff areas on the map illustrate the extent of the St. Peter Sandstone; blue areas on the map illustrate the extent of the Prairie du Chien Group; the yellow areas are the extent of the Jordan Sandstone; white areas are where these units are absent in Scott County.

The site is located in a portion of Scott County with limited water supply options to support growth. The Twin Cities Master Water Supply Plan notes that Louisville and Sand Creek townships have the following issues related to future water supplies:

- Potential for well interference due to increased groundwater pumping locally
- Potential for impacts of groundwater pumping on surface water features
- Significant uncertainty regarding the extent and productivity of the Prairie du Chien-Jordan aquifer

The EAW includes a Groundwater Monitoring and Mitigation Plan (Exhibit 6). However, the only mitigation measures are related to well interferences at domestic wells. The plan should also include measures directed at mitigating impacts to Sand Creek and the associated wetland complex. Finally, the placement of a groundwater lake in an area zoned as Rural Industrial has implications for long term water quality in the Jordan aquifer, Scott County's most productive aquifer, and for the connected surface waters in the Minnesota River valley. The EAW states that almost all the surface water runoff on the site will be directed to the created groundwater lake. In the event that the ultimate use changes as planned from open space to Rural Industrial, stormwater management facilities should be redesigned to prevent poor quality stormwater from infiltrating the Jordan aquifer untreated.





*Staff Response: The developer provided the following as a response: “The groundwater modeling predicts no significant environmental effects on Sand Creek or the adjacent wetland complexes. Reclamation will leave the site as vegetated open space and runoff will be directed to the created groundwater lake. Any future development will require adherence to then current stormwater management including controls for stormwater quality, rate and volume. Runoff from industrial developed areas will need to be pretreated prior to being discharged off site. Any future stormwater management system developed in relationship with a proposed future development will be required to be reviewed and approved by Scott County Natural Resources. The County can impose additional protection measures such as requiring runoff from industrial use areas to be treated and diverted off-site and diverted away from the water body.”*

## **13. Water Use**

### **Louisville Township**

7. The Township believes that there may be more wells in the area than identified in modeling used in the reports and EAW. The Applicant is encouraged to coordinate with the Township to identify additional wells that may be affected. In addition, additional information should be provided specifying the owner, depth of well, well identification information, aquifer, and static pressure. Specific mitigation measures and financial security need to be incorporated into a development contract to address well contamination, drawdown, and other impacts of the mining operation on water supply of other users.

*Staff Response: The developer has provided the following responses: “The applicant will collect additional information on nearby wells to the extent practical. However, considerable effort and resources have already been expended in collecting the water well information provided. If the Township has information to share, it will be incorporated into future monitoring as required under the IUP.*

*The IUP will establish a bond to cover mitigation measures related to addressing contamination, drawdown and other impacts of the mining operation on water supply. Groundwater modeling was conducted which*

*predicts no significant impacts to area water wells as a result of the mining operation. A ground water monitoring plan will be established as part of the IUP that will monitor and verify the conclusions of the modeling. The ground water monitoring plan will incorporate monitoring of both water levels and of water quality upgradient and downgradient of the mining operation.*

*In developing this project, the proposer reviewed all of the files at the Minnesota Department of Natural Resources related to water use associated with the original mining operation. Discussions with the townships early on in the process resulted in the recognition that groundwater quantity and quality would be an area of concern and took that into consideration during the design of the processing equipment proposed at the site. There have been many technological advancements in processing equipment associated with the production of industrial sands, such as the use of density separators, dewatering screens and cyclones, which have increased the water recycling efficient and reduced water use. No issues with water quantity are anticipated as a result of the relatively small volume of water appropriation requested.*

*None the less, mitigation measures have been identified in the monitoring plan which is expected to be adopted as part of the IUP process. Mitigation of impacts related to water supply as a result of drawdown from the mining operation include lowering the pump in the impacted well or drilling a new well. In addition, the State of Minnesota has rules regulating water appropriations and has the ability to reduce the amount of appropriation authorized under the permit their department issues if water level drawdowns negatively impact surrounding water users. Residential water use takes priority over industrial water use.*

*The site will operate in a manner that reduces the potential for ground water contamination. The site will be subject to a Spill Prevention Control and Countermeasures Plan (SPCC Plan). This plan identifies measures to prevent spills, as well as measures to be taken in the event of a spill to control the spill and prevent any products containing oils or contaminants from entering the groundwater table or discharging into waters of the state. Fuel will be stored in accordance with MPCA Rules including the use of double walled tanks or secondary containment as needed. Groundwater monitoring will be conducted to establish background water quality parameters and track upgradient and downgradient water quality throughout the life of the mining operation.*

*Mitigation measures related to water quality are addressed in the draft groundwater monitoring plan included in the EAW. They include providing an alternative water supply to the one down gradient well that could be potentially be impacted by the mining operation.”*

8. Information should be provided to document the effects of blasting on wells.

*Staff Response: The developer has provided the following response: “Vibration levels will be controlled to levels that have been established to protect structures. Properly constructed wells should not be impacted by vibrations at these levels. However, if impacts to wells should occur as a result of blasting, the operator will be financially responsible for the replacement of the well.”*

### **Sand Creek Township**

1. Ground Water/Aquifer Contamination – Water quality is extremely critical in and around the proposed site operations including the 'downstream effect' on the Sand Creek and Minnesota River as well as the underlying aquifers. Provide additional geotechnical information that accurately identifies existing wells, water table and aquifers. Establish a regular monitoring well system and report to the Town Board.

*Staff Response: See response 13.7 above. The developer has added: “The proposer anticipates the formation of a review committee composed of representatives of Sand Creek and Louisville Townships, Scott County and others as deemed appropriate. The proposer is committed to working with the local authorities to resolve any issues that may arise throughout the course of the mining operation.”*

## Sand Creek Township (Township Engineer)

Section 13 Water Use Exhibit 6 mentioned in this section provides a proposed monitoring schedule for wells. The monitoring of MW-4 should be monthly rather than quarterly for the first year of operations to provide more notice of any possible impacts to the Bennett well.

*Staff Response: Staff suggests that a review committee, as acknowledged by the developer, along with technical assistance recommend a monitoring and mitigation plan for the IUP. The review committee should consider the recommendation to monitor MW-4 monthly rather than quarterly for the first year*

## 17. Water Quality: Surface Water Runoff

### Louisville Township

The reclamation plan should show the subsurface grades related to the open water. A safety bench should be incorporated as a reclamation feature. Depth of open water should also be shown.

*Staff Response: The developer provided the following as a response: "The reclamation plan has been revised to illustrate conceptual grades related to the open water. This incorporates a gentle slope (6:1 slope) at the shoreline waterward, until a depth of 8-10 feet is reached then a slope equivalent to the angle of repose of the hydraulic backfill and surrounding material. The depth of open water will vary from 40-50 feet. This is also shown on the revised reclamation plan." Staff question what assumptions were used regarding the "repose of the hydraulic backfill" and have asked for but not received a Braun Intertec report that was cited by the developer in regard to the use of waste fines for reclamation. [The requested information including a geotechnical report on the feasibility of reclamation below the water table and a staged mining and reclamation plan was provided for further evaluation during the IUP process.]*

What are the proposed normal and high water levels for the lake? Is there an emergency outlet?

*Staff Response: The developer provided the following as a response: "As included in the EAW, the normal and high water levels are as follows: Proposed Normal water level is 719.00, High Water level (100 year back to back storms) is 721.38. An emergency over flow will be established at elevation 727.0.*

*Because the normal water level of the lake is expected to fluctuate seasonally and may be impacted by flood stages of the Minnesota River, a worst case scenario was evaluated where the normal water level was at flood stage (7425 feet above mean sea level). Starting water level is 725.0 and High water level (100 year back to back storms) is 727.16."*

Page 24 - 25 states that the existing culverts do not need to be cleaned even though they are partially full with sediment. What is the source of the sediment, and how will additional sediment control be incorporated? The EAW states that these do not need to be cleaned out to maintain existing or future runoff, but no information is provided supporting this statement.

*Staff Response: The developer provided the following as a response: "The existing culverts are partially filled with sediment that has likely accumulated over the past several decades. The initial stage of mining includes the construction of a sedimentation basin and an infiltration area to treat stormwater runoff. This pond and infiltration area is sized for a 75% impervious area ultimate use condition for the Scott Land Company and the Scott County property – (located just north of the Site, but contributing runoff through the Site. During operation of the mining facility, runoff from the processing and stockpile area and from the floor of the old sand and gravel mining operations on the Scott County and Scott Land Company properties will flow to the pond and infiltration area. The design capacity of the sediment pond is sufficient to treat this runoff for sediment removal. The infiltration area will provide sufficient volume control to infiltrate runoff from the 2, 10*

*and 100 year events during the mining operation (from the Scott County and Scott Land Company properties). Undisturbed portions of the Site (phases 2-4) will continue to drain in to the east and west. Runoff towards the west will be diverted around the infiltration area and out through the existing culverts under the tracks until such time as each phase becomes active and runoff from the active area is diverted to drain internally. The culverts are larger than what is needed on an interim basis for the mining operation.”*

## **Minnesota Pollution Control Agency**

### **Water Quality; Surface Water Runoff (Item 17)**

As noted in the EAW, Sand Creek is listed on the MPCA Draft 2010 303(d) Total Maximum Daily Load (TMDL) list of impaired waters. Sand Creek is listed as impaired for turbidity (T) and fish bioassessments (B-F). The groundwater modeling conducted by Barr Engineering dated August 2011, indicates that the mining operations will result in a stream flow loss to Sand Creek of two percent. The EAW did not discuss how this loss of flow is anticipated to impact the impairments and the mitigation efforts that will be employed to ensure they are not exacerbated. Questions as to how the loss of flow will affect temperature and dissolved oxygen levels in Sand Creek should be further addressed. For information regarding impairments to Sand Creek, please contact Brooke Asleson at 651-757-2205.

*Staff Response: The developer provided the following as a response: “To clarify, the modeling conservatively predicts a reduction in baseflow (the contribution of groundwater to streamflow) from the area near the project site of about two percent. This means that groundwater from other reaches will still flow into the creek as well as surface water from upstream. The model therefore does not predict that there will be a loss of flow within Sand Creek. As discussed above, the reduction in baseflow is very low and is not significant relative to the seasonal fluctuation in flow observed during the year.*

*Turbidity would not be affected by water use at the site because the flow volume in the stream is unlikely to change. Although Sand Creek is not impaired for dissolved oxygen, the concentration of dissolved oxygen in groundwater is typically much lower than surface water, so the project will likely not affect dissolved oxygen directly. However, because the section of the reach closest to the site will receive slightly less groundwater from the section of the stream near the site, it will also receive slightly less cold water from groundwater along this reach. This is generally not significant for fish habitat because it is a warm water creek. During warmer summer months, this cooler water could conceivably help to lower stream temperature and allow more dissolved oxygen to be present in surface water. This means that like any human endeavor, an impact is theoretically possible but the impact would not be significant due to the low magnitude of the reduction in streamflow as described above.*

*This conclusion is supported by recent studies (Barr, 2009) that found that the lower reaches of Sand Creek are not impaired for fish bioassessments (B-F). Attached is Figure 4 from that report that found that the Index for Biological Integrity (IBI) score for station 07MN034 was 38. This score is above the threshold for impairment (IBI=30) indicating that although Sand Creek is listed as impaired water, the section of Sand Creek below the City of Jordan is not impaired and is generally in good condition from a fish bioassessment standpoint. Therefore, no mitigation efforts are necessary. Because the reach of Sand Creek near the site would not be the focus of mitigation efforts, the activity at the site would not affect or exacerbate conditions that would be the subject of mitigation efforts.*

### **Reference:**

*Barr Engineering Company, 2009. Sand Creek Impaired Water Resources Investigation: Biological Stressor Identification. Prepared for Scott Watershed Management Organization and Minnesota Pollution Control Agency. December 2009.”*

Figure 4. Biological Sample Stations and MRAP IBI Scores

## **18. Water Quality: Wastewaters**

### **Louisville Township**

4. The EAW contains insufficient information to demonstrate that the proposed areas for future septic use for the final land use would be adequate to support anticipated industrial usage in the end land use condition. In addition, the EAW should identify protection measures for the septic sites to ensure that they are not impacted or otherwise damaged during the interim mining use in such a way as to limit or damage their use for future septic. A subordinate service district may need to be established as a part of the IUP approval process to ensure that the ability of the site to be developed in the future for industrial uses is preserved.

*Staff Response: Staff agree with the need for sufficient information (similar to the requirement for any commercial plat) to demonstrate the suitability of the proposed set aside area for future septic sites. The Developer responded that “Because there are no final development plans proposed at this time, it is premature to establish a subordinate service district as part of the IUP process. An area of undisturbed soils has been set aside that encompasses five acres. This future septic area will be protected by permanent fencing.” Staff recommends that the Townships provide comments during the IUP as to their position on allowing the option of a subordinate sewer district for the future. There are no current plans for extending municipal sanitary sewer into this area and without that the site will have some limitations.*

## **19. Geologic Hazards and Soil Conditions**

### **Louisville Township**

18. Additional information should be provided for review that shows the geotechnical information that will be utilized to determine the depth of the sandstone as well as how the lowest five feet will be protected from cracking during the mining operations. The EAW states that a previous study had been completed for the original quarry operations. The Township is requesting that a new study be conducted to determine the depth and extent of the Jordan Sandstone so that adequate protection of the bottom portion of the formation can be incorporated into the IUP to insure no mixing of the sandstone and the underlying shale unit.

*Staff Response: The developer provided the following response which staff acknowledge as acceptable: “There have been over 100 exploratory borings placed over the site, including several which were performed in conjunction with the proposed project. There is a high degree of confidence with respect to the knowledge regarding the depth and extent of the Jordan Sandstone. Blasting will not be performed on the lower fifteen feet of the sandstone to prevent impacts to lower strata. In addition, the applicant has indicated that blast energy travels upward not downward. The dragline or dredge will be tracked and depth measures to stay on track with targeted depths. The lower portion of the Jordan Sandstone becomes too fine to be economically viable and therefore it is in the best interest of the developer to not penetrate the very lowest level of the sandstone to avoid additional processing expense related to fines removal.”*

## 21. Traffic.

### MNDOT

*Traffic:* The EAW states that "The Project proposer is requesting that a limited volume of truck traffic, consistent with the levels generated by the recent sand and gravel mining operation, be allowed throughout the silica sand mining operation." Providing for truck traffic will require the extension of the existing turn lanes in order to accommodate deceleration. Trucks turning left from the site are of particular concern since they will need to navigate across US 169 with minimal storage space in the median. Mn/DOT would like to continue working with the County on minimizing conflict points and managing access. The northern property access and the middle access are inconsistent with the land use and access management policies of the US 169 Corridor Management Plan. Mn/DOT requires the closure of the middle access to the site. Additionally, when the site has reasonable, convenient, and suitable access from Bluff Drive, the northern access should be closed as well. MnDOT requests the opportunity to review and comment on the Interim Use Permit. For questions concerning these comments, please contact David Sheen (651-234-7824) in Mn/DOT Metro's Traffic Engineering Section.

*Staff Response:* The statement in the EAW "The Project proposer is requesting that a limited volume of truck traffic, consistent with the levels generated by the recent sand and gravel mining operation, be allowed throughout the silica sand mining operation." needs additional clarification. The applicant is proposing limited amount of vehicle traffic for employees and suppliers to the site via US169. As noted by MnDOT the applicant has not explained specifically how many trucks ("consistent with the levels generated by the recent sand and gravel mining operation") they are proposing. However, we have no data on the number of trucks per day associated with the previous operator's gravel mining. The traffic volumes on Hwy 169 have continued to increase. The applicant has stated that the number of haul trucks would be limited to 10 per day (20 trips). The applicant has proposed that all material will be shipped by rail and that vehicle traffic will be limited to 74 trips per day generated from employees and suppliers. Currently, there is a standard turning lane for the proposed vehicle traffic (employees and suppliers).

*The timing on removal of the northern access, which currently serves as the only access to both the Scott County and Scott Land Company LLC property, needs to be addressed. Scott County will work with MnDOT and the applicant to close the middle access to the site as a condition of the IUP. The northern access will be removed, when alternative access can be provided. Scott County will continue to coordinate with MnDOT on achieving the goals of the US 169 Management Plan.*

*Permits:* Any use of or work within or affecting MnDOT right of way requires a permit. Permit forms are available from MnDOT's utility website at <http://www.dot.state.mn.us/utility>. Please include one 11 x 17 plan set and one full size plan set with each permit application. Please direct any questions regarding permit requirements to Buck Craig (651-234-7911) of MnDOT's Metro Permits Section.

#### *Future Plan Submittals:*

As a reminder, there are four submittal options. Please submit either:

1. One (1) electronic pdf. version of the plans. MnDOT can accept the plans via e-mail at [metrodevreviews.dot@state.mn.us](mailto:metrodevreviews.dot@state.mn.us) provided that each separate email is less than 20 megabytes.
2. Three (3) sets of full size plans. Although submitting seven sets of full size plans will expedite the review process. Plans can be sent to: Mn/DOT - Metro District Planning Section Development Reviews Coordinator  
1500 West County Road B-2 Roseville, MN 55113
3. One (1) compact disk.
4. Plans to MnDOT's external FTP Site. Please send pdf files to:

<ftp://ftp2.dot.state.mn.us/pub/incoming/MetroWatersEdge/Planning>. If Internet Explorer doesn't work using ftp please use an FTP Client or your Windows Explorer (My Computer). Also, please send a note to [metrodevreviews.dot@state.mn.us](mailto:metrodevreviews.dot@state.mn.us) indicating that the plans have been submitted on the FTP site.

*Staff Response: The applicant will apply for all required MnDOT permits and provide all necessary future plans as required above.*

### **Louisville Township**

The traffic portion of the EAW relies upon an assumption that the mine will produce silica sand that will leave the site via rail, while the unusable fines will be slurried back to the excavation and used in reclamation. Because of these assumptions, no or limited truck traffic to and from the site and the impact on TH 169 is analyzed. Either the analysis should be updated to address the impacts generated from trucking material out of the site, or the IUP and associated development contracts should specifically limit the method of transporting the product out as via rail.

*Staff Response: Staff agrees with the Township on the need to define the daily truck traffic in and out of this site. The developer has presented updated responses to this question but staff believe that clarification can be obtained during the IUP process and the need for further traffic analysis or intersection improvements and abandonments can be addressed appropriately by conditions on the IUP.*

### **Sand Creek Township**

Transportation/Traffic - Although the EAW is based on strictly railroad transportation of the mining product, certain use of the existing road systems will be impacted. Define the other-than-rail use of the site and provide a coordinated statement of impact on existing systems with MNDOT, Scott County Engineers, and local Townships and what improvements will be required. Provide a regular traffic count in and out of the site and accident reports. Develop proposed suitable end-use system of roadways consistent with the area zoning and existing surrounding 'fabric'.

*Staff Response: The applicant has proposed a maximum of 74 small vehicle trips per day (37 in and 37 out in a 24 hour period) generated from employees and suppliers; and an additional 10 haul trucks per day for a maximum of 20 haul truck trips per day. They have proposed a maximum peak of 22 small vehicle trips between 6am-7am for the existing road system (US169). The estimated number of employees at maximum production is 32. Scott County will continue to inform and coordinate with MNDOT, Sand Creek Township and Louisville Township through the Interim Use permit process.*

*The applicant has provided several end use designs varying from open space to a plan showing 28 lots with some form of community sewage treatment system on one of the lots that would be left undisturbed. The proposed end use plans must be consistent with the County's zoning. The developer has not demonstrated that a buildable open space is feasible.*

### **Sand Creek Township (Township Engineer)**

#### **Section 21 Traffic**

The traffic impacts associated with the mining operation have been reviewed by the proponent, and have been addressed in Question 2 I. The review focused on the traffic operations and concluded the magnitude of traffic generated by the proposed mining does not result in a change in traffic operations. We concur.

The traffic operations are only one component of traffic analysis, however. In the case of the proposed land use, traffic safety should be investigated as trucks are expected to merge into 65 mph flow without jeopardizing the safety of the traveling public. While the main site access to the mining operation is not in Sand Creek



Township, the proponent should review intersection sight distance at the site access and Bluff Drive intersections with TH 169 to ensure that vehicles can safely enter the highway. Further, the proponent should review accident history for a period including the past 5 years, and also during the time when mining was more active on the site, to verify that an existing problem is not exacerbated by the proposed renewed use.

If the safety analysis identifies shortcomings the proponent needs to provide mitigation strategies to fully remedy the situation.

*Staff Response: See comments and responses above. The applicant has stated that the number of haul trucks would be limited to 10 per day (20 trips). The applicant has proposed that all material will be shipped by rail and that vehicle traffic will be limited to 74 trips per day generated from employees and suppliers. Currently, there is a standard turning lane for the proposed vehicle traffic (employees and suppliers).*

*Staff agrees truck traffic safety in and out of this site will need further review. Scott County will coordinate with MnDOT requiring necessary extension of the existing turn lanes in order to accommodate deceleration/acceleration and achieving the goals of the US 169 Management Plan.*

## **23. Stationary Source Air Emissions**

### **Minnesota Pollution Control Agency**

#### **Stationary Source Air Emissions (Item 23)**

Since the EAW did not discuss the Project's potential to emit for all criteria pollutants, it is not possible to determine from the information provided whether the Project will require a Nonmetallic Mineral Processing General Permit or a Part 70 Title V Permit. It is the responsibility of the Project proposer to determine the type of air permit necessary for this specific operation. Application forms and instructions are available on the MPCA's website at <http://www.pca.state.mn.us/air/permits/forms.html#4a>. Although the MPCA has not yet received an air permit application for the proposed Project, it is likely that additional information will be required in order for the MPCA to ensure the Project is properly permitted.

The Project proposer should also be aware that operation of a stationary crusher and aggregate spread that is greater than 25 tons per hour capacity, or greater than 150 tons per hour portable, and assuming the equipment is newer than 8/31/83, is subject to 40 CFR 60 Subpart 000 of the federal New Source Performance Standards. Under this subpart, the facility owner must conduct specific performance testing (i.e., opacity testing) when the mining site is in normal operation.

Depending on engine horsepower and date of equipment purchase, the operation may also be subject to Subpart ZZZ of the federal National Emissions Standards for Hazardous Air Pollutants, which has additional reporting requirements. If you have any questions on air permitting issues, please contact the Small Business Environmental Assistance Program in our St. Paul office at 651-282-6143.

*Staff Response: Staff recommends that the proposer have all necessary Minnesota Pollution Control Agency air quality permits approvals as a condition for application for the Mining Interim Use Permit. The proposer is aware that there will be air permits required and has stated that an application along with appropriate supporting information will be submitted to the MPCA once the Environmental Review process is complete. It is recommended that this permitting be complete and available for consideration with the IUP application.*



## 24. Odors, Noise and Dust.

### Louisville Township

Despite that the State of Minnesota does not regulate respirable silica separately from particulate matter in terms of fugitive dust, the EAW states that the Applicant will be applying standards established by other states for respirable silica. Additional information should be included to specify and establish the specific standards that will be imposed so that they may be reviewed to determine if sufficient methods of handling fugitive dust exists or whether additional information is still needed to address this health concern.

*Staff Response: Staff recommends that the IUP include conditions to ensure compliance with the MN ambient air quality standard for at a minimum PM<sub>10</sub>. Staff recommends that the developer prepare a real time monitoring and mitigation plan to the satisfaction of the County and MPCA to monitor dust emission from all sides of the site and an agreed background location. Staff recommends that the details about how the data should be collected and evaluated be worked out prior to submittal of an application for an IUP. Staff further recommend that the project review committee be formed and involved in preparation of the monitoring plan and negotiating an acceptable mitigation plan. Staff notes that the developer indicated in item 20 of the EAW that the developer would apply standards from other states to address respirable silica dust; however, no specifics have been provided. Therefore, staff is recommending that at a minimum the project should be required through the IUP to comply with current Minnesota state standards and that a monitoring and mitigation plan be developed to assure this. Staff would further recommend that the IUP include conditions that if/when the state establishes more stringent or specific standards for silica that the developer will be required to comply with these more stringent standards and that a “grandfather” status not be allowed. The developer has acknowledged concurrence with this approach toward monitoring and mitigation and provided the following background information:*

*“The goal of the federal Clean Air Act (CAA) is to ensure that human health and the environment are protected from the adverse effects of air pollution. Under the CAA, the U.S. Environmental Protection Agency (EPA) sets limits on certain air pollutants, along with standards for how much of various air pollutants certain sources can emit.*

*The Minnesota Pollution Control Agency (MPCA) monitors and regulates air pollution in Minnesota. MPCA works with the U.S. Environmental Protection Agency to identify and regulate sources of air pollution to comply with state and federal requirements. MPCA also works with the Minnesota Department of Health to assess health risk from air pollution. The Minnesota Pollution Control Agency writes and enforces Minnesota's air rules and issues permits for air emissions*

*The six criteria pollutants are: carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>), nitrogen oxides (NO<sub>x</sub>), lead, and particulate matter in two size fractions: less than 10 microns (PM<sub>10</sub>) and less than 2.5 microns (PM<sub>2.5</sub>). Primary and secondary NAAQS are established for each of these pollutants. Primary standards define the air quality required to prevent adverse impacts on human health while secondary standards define the air quality required to prevent adverse impact on other elements of the environment such as vegetation. Minnesota's ambient air quality standards are described in Mn Rules Chapter 7009. State PM 2.5 and PM<sub>10</sub> standards are as follows:”*

PM-10	150 micrograms per cubic meter	same as primary standard	maximum 24-hour average concentration; the standard is attained when the expected number of days per calendar year exceeding the value of the standard is equal to or less than one
	50 micrograms per cubic meter	same as primary standard	annual arithmetic mean; the standard is attained when the expected annual arithmetic mean concentration is less than or equal to the value of the standard

PM-2.5	65 micrograms per cubic meter	same as primary standard	24-hour average concentration; the standard is attained when the 98th percentile 24-hour concentration is less than or equal to the standard
	15.0 micrograms per cubic meter	same as primary standard	annual arithmetic mean; the standard is attained when the annual arithmetic mean concentration is less than or equal to the standard

The EAW contains conflicting statements regarding exposed mining area. In some portions it states that a variance will be sought to delay the reclamation and to allow an increase in the amount of open mining area exposed at one time. In other sections it states that a mitigative measure for fugitive dust is to limit the exposed mining area. The Township is interested in reclamation occurring as quickly as possible, with limiting the amount of exposed mining area. Based on the information available, the Township would not be agreeable to granting a variance in this circumstance.

*Staff Response: The developer provide the following response: “The proposer is requesting a variance from the County’s ordinance requiring reclamation to begin after four acres have been disturbed. This is not in conflict with the overall process of phased and continual reclamation described in the EAW. In order to have sufficient area to efficiently mine both the above water table and below water table resources, an area larger than 4 acres is required. The majority of granular fines, generated from the wash plant will be utilized as reclamation fill as they are generated from the processing plant in order to eliminate stockpiling of this material. This will help to minimize dust generation at the site. A large enough water body must be available to prevent mixing when placing hydraulic backfilling on one end of the excavation and sandstone removal on the other end of the excavation. Scott County has granted a variance to this standard in the past.” Staff as noted previously, recommends that a staged reclamation plan be provided with staged securities to assure that the site can be reclaimed to minimize the potential sources of dust. [The requested information including a geotechnical report on the feasibility of reclamation below the water table and a staged mining and reclamation plan was provided for further evaluation during the IUP process.]*

## Sand Creek Township

4. Nuisance - Provide additional documentation on Dust, Vibrations, Sound, Odors and Visual impacts that potentially impact the site and off-site land uses.

*Staff Response: The developer provided the following response: “Dust may be generated during the removal of overburden, sandstone mining and site reclamation activity. Removal of overburden to prepare the site for mining and removal of sandstone above the water table will be conducted by equipment common to the construction industry; including excavators, front-end loaders, and haul trucks. Reclamation activities include the use of construction equipment to backfill the excavation and replace topsoil and agricultural machinery to seed the area and establish vegetation in accordance with the approved reclamation plan. Fugitive dust emissions from both construction and mining operations include best management practices, such as watering haul roads, limiting heights of stockpiles, recessing processing operations, constructing screening berms, and prompt seeding of newly graded areas. In addition to the MPCA’s air emissions permit, a dust monitoring plan will be adopted as part of the County IUP permitting process, which will include monitoring fugitive dust emissions and assuring compliance with the State’s ambient air quality standards adopted to be protective of both human health and the environment.*

*Vibrations will result from blasting of the sandstone. All blasting will be performed by an independent blasting company. Seismographs will be utilized during each blast to record the ground vibrations. These results can be used to demonstrate compliance with industry standards for the protection of structures. The results can also be used to design future blasts which are adjusted as the mining moves closer or further away from existing surrounding structures. As blasting approaches a structure, blasting charges can occur more frequently but with smaller charges to reduce ground vibrations at nearby structures. A blast monitoring plan will be adopted as part of the IUP process which will require the proposer to perform pre-blast surveys by an*

*independent party of structures located within one-half mile of the blasting limits (with owner approval) identify the location of seismograph monitoring points as mining progresses throughout the Site, establish acceptable PPV limits based on industry standards designed to protect structures, and outline reporting requirements. The proposer is financially responsible for any damage to structures which may occur as a result of the blasting performed at the Site.*

*Noise emissions at the Site will result from the operation of mining and processing equipment. Noise mitigation measures have been designed into the proposed project as a result of the modeling. These include shielding noise sources by lowering the elevation of the equipment that produces the noise (for example the crusher) and constructing berms at strategic locations around the perimeter of the site to protect adjacent receptors. Modeling conducted for the Site under these conditions predicts that the site will operate below both daytime and nighttime standards. Additional noise modeling was conducted by Dr. David Braslau to determine the attenuation of noise across the National Wildlife refuge. This modeling predicts that the Site will meet state nighttime noise standards for noise area classification 1, the strictest of the standards, throughout the refuge and that noise levels will be at or only a few decibels above summer ambient noise levels when the mitigation measures are adopted at the site.*

*The Site will not generate any substantial odors.*

*The Site will be screened from view along US Highway 169 and from the NWR parking area by perimeter screening berms. Some mining activity may be visible from Bluff Drive. Mining activity will generally take place at recessed elevations. The existing processing building is visible from the US Highway 169. The tops of the concentrate piles will be visible from some locations along US Highway 169.”*

*Staff further recommend that concerns about blast impacts be addressed during the IUP and could be monitored at the same monitoring stations as established for dust monitoring. Standards or limits could be established initially and reviewed and modified as needed periodically by an advisory committee. Staff notes that there has not been an analysis of businesses or structures that might be significantly adversely impacted by blast shocks. The developer has also not provided a specific plan for use of explosives. Staff is recommending that this issue be further evaluated prior to consideration of an IUP. This could also be dealt with by prohibiting any blasting until such a plan with impact analysis were provided and approved by a review committee, which may need assistance from independent experts. The U.S.F.W.S provided comprehensive comments late in the process but had promised them at an earlier meeting. They listed a number of concerns about the noise modeling and assumptions used. They requested more information, which would include field monitoring. They also suggested the establishment of a noise berm or wall as a preemptive measure.*

### **Minnesota River Valley Audubon Chapter of the National Audubon Society**

Noise:

“Birding by ear”, is a popular activity where birders identify species by song and this activity is enjoyed by our Chapter members a great deal. Noise is not only a pollutant and a very disturbing social impact, but can disrupt this type of birding. Blasting and the other noise proposed by the development may be inappropriate in a wildlife refuge setting. Annoyance is a common judgmental response to noise regardless of its level, it has its base in the unpleasant nature of some sounds, and in the activities that are disturbed or disrupted by noise. Minnesotans seeking peace and quiet, fresh air, personal safety and a healthy environment are continually losing access to this experience as increasing areas of the state are impacted by noise and development.

In particular it is important to take into account wildlife impacts of noise. Animals exposed to high-intensity sounds suffer both anatomical and physiological damage, including both auditory and non-auditory damage

(Brattstrom and Bondello 1983). Intermittent sounds or startle noises, like the blasting proposed 3-4 times per week, have been shown to have many effects on humans including annoyance, disruption of activity, and some physiological reactions. In addition to this OSHA and EPA recommended noise guidelines for humans may not provide protection for wildlife hearing.

According to the EPA, noise acts as a physiological stressor producing changes similar to those brought about by exposure to extreme heat, cold, pain etc. (EPA 1971). The EPA states that:

“Clearly, the animals that are directly affected by noise are those capable of responding to sound energy and especially the animals that rely on auditory signals to find mates, stake out territories, recognize young, detect and locate prey and evade predators. Further, these functions could be critically affected even if the animals appear to be completely adapted to the noise (i.e. they show no behavioral response such as startle or avoidance). Ultimately it does not matter to the animal whether these vital processes are affected through signal-masking, hearing loss, or effects on the neuro-endocrine system. Even though only those animals capable of responding to sound could be directly affected by noise, competition for food and space in an ecological niche appropriate to an animal’s needs, results in complex interrelationships among all the animals in an ecosystem. Consequently, even animals that are not responsive to or do not rely on sound signals for important functions could be indirectly affected when noise affects animals at some other point in the ecosystem. The “balance of nature” can be disrupted by disturbing this balance at even one point.”

There are many species of birds and other wildlife that fit the category of those that need direct response to sound energy within the Louisville Swamp Unit of the Refuge. Of particular concern is the blue heron rookery located within 1 mile of the development site. There are also many species of owls and other raptors, as well as many songbirds, dependent on sound for survival that breed, nest, feed and migrate through this area. MRVAC encourages Scott County and Great Plains Sands, LLC to work cooperatively with the U.S. Fish & Wildlife Service to address any noise impact issues that arise if the project is approved and moves forward.

*Staff Response: The US Fish and Wildlife Service has provided a comprehensive analysis of the developer’s noise modeling and findings. They have noted a need for additional information and clarification. They have recommended pre-emptive construction of a noise barrier. This issue needs to be addressed prior to consideration of an IUP so that appropriate conditions established and a mitigation plan can be developed.*

### **Minnesota River Valley Audubon Chapter of the National Audubon Society**

Dust:

Silica is a compound made of oxygen and silicon. Silica is in sand, rock and mineral ores. Silica exists in smooth and sharp forms. The sharp forms are called Crystalline Silica. SILICA SAND GRAINS are made up of crystalline silica particles. When silica sand grains are broken (fractured) from blasting, abrasion, or crushing, tiny particles of crystalline silica “dust” are produced. Some of these particles are so small and light-weight they can stay in the air for a long time and can travel long distances. The RESPIRABLE SILICA are very tiny, sharp silica particles, small enough to be breathed deep into our lungs. Once they settle in the lungs, they never dissolve and never leave.

There are special health concerns with silica dust smaller than PM10. The International Agency for Research on Cancer (IARC) has determined that Respirable Crystalline Silica is a Carcinogen, or cancer causing substance. Prolonged or repeated exposure to fine airborne crystalline silica dust may cause severe scarring of the lungs, a disease called silicosis. Silicosis can develop quickly or over many years, depending upon the amount of silica a person breathes and for how long.

Exposure to silica dust can lead to obstructive pulmonary disease. It can create breathing problems for people

who have asthma, emphysema, and other obstructive lung diseases. Because the dust never leaves the lungs, its sharp edges can continue to cause irritation and inflammation for many years to come. Disease may not show up until years later, even if a person is no longer breathing silica dust.

Children, the elderly, and people who already have health problems are more affected by silica dust, but anyone can be made ill by breathing this air pollutant.

There is a very real possibility that this project will produce significant amounts of silica dust from mining, transporting, and processing operations for the 20 years it is in operation. Blasting will be used to break up the cemented sandstone, and this will produce more silica dust at the mine site. Other contaminants may also be present.

Silica and other dust will escape as the unwashed and freshly mined sandstone is loaded onto trucks, transported, stockpiled, and as it travels over conveyors. Crushing operations at the plant will also produce crystalline silica dust.

MRVAC is concerned that there does not seem to be required accurate air monitoring proposed as a part of this project. We request that through further permitting air monitoring is required so that we know how much harmful dust is being released.

This is not only a human health issue – these respirable dusts can also have the same irreparable impacts to wildlife species living in and near the development site.

In conclusion:

The fast increasing industrial scale silica sand mining coming to Minnesota is relatively new to our state. MRVAC supports the step that Goodhue County has taken calling for a 1 year moratorium on this type of extraction, and we urge Scott County to be cautious regarding this project, and in any plans for this type of mining and mining expansion in the future.

It would be prudent within the present permitting and assessment process to require Great Plains Sands Non-Metallic Mineral Mining Operation adhere to all present, and future, rules, regulations, exposure limits, and monitoring requirements put in place by the State of Minnesota, or local government units, regarding silica sand mining development.

*Staff Response: The developer provided the following as a response: “Air monitoring will be addressed in the IUP process. Great Plains Sands will be required to adhere to all applicable rules and regulations governing the operation. In addition, to the County’s IUP, the Site will also be regulated through permits required by the Minnesota Pollution Control Agency, (air emissions and stormwater), the Minnesota Department of Natural Resources (water appropriations) and MSHA (Mine Safety and Health Administration.” Staff recommend that the proposer obtain the required State air quality permits and work with a review committee to develop appropriate monitoring and mitigation plans prior to submittal of an IUP application.*

## **US Fish and Wildlife Service**

We have reviewed the EAW and are concerned with the potential adverse effects of noise, and other disturbance factors, on Refuge resources. Two disturbance sensitive habitat features (nesting areas) are located less than 400 yards from the proposed operation. A trailhead for the Mazomani Trail, one of the Refuge's most highly used trails, is less than 400 ft. from the proposed operation. Three historic features, including the Ehmler Farm, are also located on the Refuge, less than one-half mile from the proposed operation. Since our major concern at this time is noise, we believe that the noise analysis presented in the EAW is insufficient. The

analysis with respect to Refuge resources assumes that the only receptors are human, the only locations humans use on the Refuge are on the Mazomani trail more than 2,000 feet from the noise generators, and that meeting the state standard for noise implies that there are no noise impacts associated with the project. Both wildlife and human use occurs on the Refuge. Wildlife are able to hear, and thereby are affected by, noise frequencies outside of the range of normal human hearing. The analysis does not address this. Virtually all of the Refuge is used by wildlife throughout the day, year round. As noted above, significant nesting resources which are particularly sensitive to disturbance are within a few hundred yards of the proposed operation. Also, Refuge users, including birders and hunters, do not restrict their activities to our trails. In fact, hunters are prohibited from hunting within 100 feet of trails or roads on the Refuge. We believe that effects to receptors at locations within 50 feet of refuge boundaries should be presented. Finally, the noise analysis does not present any information regarding pre-project noise levels nor analysis regarding increase in noise levels at receptor locations due to project operations.

*Staff Response: The U.S.F.W.S. provided a comprehensive follow-up on the noise issue following their review of additional information provided by the proposer. They are still noting a need for additional information on this issue as previously noted.*

## **25. Nearby Resources.**

### **State Historic Preservation Office**

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

If the project area can be documented as previously disturbed or previously surveyed, we will reevaluate the need for survey. Previously disturbed areas are those where the naturally occurring post-glacial soils and sediments have been recently removed. Any previous survey work must meet contemporary standards.

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

*Staff Response: Historic aerial photos documents that the vast majority of the Site has been disturbed from past farming, or mining or both. See attached photos from 1957, 1937*

### **Metropolitan Council**

The EAW site is located just east of the Minnesota Valley National Wildlife Refuge & Recreation Area and the US Fish & Wildlife Service (USFWS) Louisville Swamp, which are considered to complement the regional parks system. The EAW states that stormwater ponds will be in place at the start of operation to minimize off-site sedimentation and erosion and screening berms will be constructed on the southwest side of the site to screen the mining activities from the parking and trailhead areas at the Louisville Swamp.

The Metropolitan Council's 2030 Regional Parks Policy Plan identifies a regional trail search corridor just north of the EAW site. The regional trail will connect the Scott County West Regional Trail in Prior Lake to the Minnesota River Bluffs Regional Trail in Chaska and includes a crossing of the Minnesota River. This regional

trail will follow the former Union Pacific/Chaska Industrial Lead Railroad Corridor in Scott County from the Minnesota River to the USFWS Louisville Swamp Refuge Unit parking lot and trailhead located at 145th Street West. The alignment of the regional trail heading west to Prior Lake has not yet been determined. The activities outlined in the EAW are not anticipated to affect future planning of this regional trail corridor. This concludes the Council's review of the EAW. The Council will take no formal action on the document. If you have any questions or need further information, please contact Jim Larsen PE, principal reviewer, at 651-602-1159.

*Staff Response: Comment noted*

## **Friends of the Minnesota Valley**

Please accept these comments on the Great Plains Sands Non-Metallic Mining Operation Environmental Assessment Workshop (EAW) on behalf of Friends of the Minnesota Valley (“Friends”). Friends of the Minnesota Valley is a nonprofit citizen organization dedicated to the conservation of natural resources in the Lower Minnesota River and Minnesota River Watersheds, including the Minnesota Valley National Wildlife Refuge (“refuge”). Founded in 1982, Friends of the Minnesota Valley currently has 1,800 members. The Friends played a leading role in establishing the Minnesota Valley National Wildlife Refuge and we continue to advocate for the refuge as one of two refuge “friends” groups. Our members regularly visit the refuge and engage in activities such as birding, hiking, and fishing.

Friends of the Minnesota Valley has several concerns about the proposed frac sandstone mining operation and Great Plains Sands, LLC’s application for an Interim Use Permit. Frac sand mining is a new land use within the Minnesota River Valley. As such, we are interested in the proposed Great Plains Sands operation as somewhat of a test case. While it does appear that quite a bit of thought has gone into preparation of the EAW and the mitigation of various impacts posed by the proposed mining operation, dust, noise, and visual impacts remain a concern for us. The proposed Great Plains Sands mine is located immediately adjacent to the Minnesota Valley National Wildlife Refuge’s Louisville Swamp Unit. The Louisville Swamp Unit arguably contains the most ecologically-significant wildlife habitat within the refuge, including a blue heron rookery. In addition, the Louisville Swamp Unit is one of the most heavily-visited refuge units, utilized for recreation by birdwatchers, hikers, campers, and cross-country skiers. The Minnesota Valley State Trail also runs the entire length of Louisville Swamp.

We are most troubled by potential negative impacts upon refuge visitors and wildlife related to the Great Plains Sands mining operation. The EAW states that, “[a]lthough the majority of the deposit and site operations represent no risk for respirable silica, drilling or blasting of the sandstone and processing activities may produce small amounts of respirable silica” (Great Plains Sands EAW, p. 33). While the EAW does describe mitigation steps to reduce the potential impacts of respirable silica, it is clear that migratory respirable silica may cause adverse impacts to humans and possibly wildlife, as well.

Air monitoring will be required to demonstrate that the mitigation measures adopted at the site to reduce fugitive dust emissions, result in meeting the ambient air quality standards established for both human life and vegetation.

In addition, although the EAW states that the mining operation will meet Minnesota State noise standards, blasting will be occurring during peak refuge visitation hours. Even with mitigation steps, it is clear that ambient noise levels will be raised. Part of the refuge visitor experience, even in an urban refuge such as the Minnesota Valley National Wildlife Refuge, is quiet recreation and the expectation of a certain level of solitude. Visitors would normally expect that noise levels would be reduced as they hike further along the trail into Louisville Swamp. Friends of the Minnesota Valley encourages Scott County and Great Plains Sands, LLC to

work cooperatively with the U.S. Fish & Wildlife Service to address any noise impact issues that arise if the project is approved and moves forward

Likewise, noise from the mining operation has the potential to impact wildlife within the Louisville Swamp Unit. The purpose of the refuge includes conserving and restoring wildlife habitat for the health and propagation of the protected wildlife population. Friends of the Minnesota Valley recently worked with the U.S. Fish & Wildlife Service to restore native oak savanna at Louisville Swamp. We would like to ensure that wildlife and visitors' enjoyment of resident wildlife is not significantly diminished by the mining operation. Again, we encourage Scott County and Great Plains Sands, LLC to work cooperatively with the U.S. Fish & Wildlife Service to address any adverse impacts upon wildlife caused by noise pollution created by the proposed mining operation, if approved.

*Staff Response: The County and proposer met with the Fish and Wildlife Service to discuss their concerns. As a result, additional noise analysis throughout the refuge was performed by Dr. David Braslau. This additional monitoring was subsequently reviewed by the U.S.F.W.S and found by them to be lacking in a number of areas. They have recommended additional analysis of this issue as well as pre-emptive measures, a monitoring and mitigation plan.*

Finally, while we appreciate the attempt to screen the operation from visitors at the parking lot and trailhead at Louisville Swamp through the use of screening berms, berms are not part of the natural landscape in the area surrounding Louisville Swamp. Part of the experience of a refuge visitor or trail user is to escape, albeit temporarily, the noise, normal activity, and scenery of his or her daily life. The Minnesota Valley National Wildlife Refuge is an urban refuge and therefore some intrusion of urban life within refuge boundaries is inevitable. However, it is unfortunate that an area designated as a "refuge" is located immediately next to land zoned for industrial use by the county. This situation in itself poses an inherent conflict between the refuge and its neighbors and makes it more difficult for the U.S. Fish & Wildlife Service to carry out its mission for the Minnesota Valley National Wildlife Refuge.

*Staff Response: The developer provided the following as a response: "The parking lot itself is not natural landscape. The view from the parking lot includes residential structures and public roadway. The proposed screening berm is not inconsistent with these features. Once on the trail, the screening berm will not be visible."*

### **Minnesota River Valley Audubon Chapter of the National Audubon Society**

The Minnesota River Valley Audubon Chapter (MRVAC) has formally adopted the Minnesota Valley National Wildlife Refuge (Refuge) under the National Audubon Society's Program called Refuge Keepers. Our chapter membership consists of approximately 1500 nature enthusiasts, residing along the Minnesota River in the Twin Cities. Our members use Louisville Swamp for many activities including birdwatching, photography and nature study. MRVAC, along with other outdoor organizations, schedule many field trips to Louisville Swamp.

The Louisville Swamp Unit is very important because it is the must-see stop on the new Minnesota River Valley Birding Trail. This trail is a combination of roads, paths, and bike trails along the Minnesota River watershed. It was originated to help focus recreational use of the many great bird habitats along the Minnesota River, bring local and national tourists into the region, and help educators as a tool for students and others in using the local region for nature programs and studies.

The Minnesota Valley National Wildlife Refuge is a national treasure, and attracts visitors from across the country. It is also a unique treasure since it is one of a small handful of urban wildlife refuges. The serene



experience sought by Refuge visitors is extremely important to our Chapter members, and in this regard we have many concerns for the proposed development.

In particular we are concerned about the impacts to Refuge visitors, and the birdwatching that our members enjoy, but are also concerned for the resident and migratory birds and other wildlife that use the Refuge for its intended purpose (a Wildlife Refuge).

The long-term effects of silica sand mining include the leaching of toxic substances into soil and water, noise impacts on wildlife and human visitors to the Refuge, visual impacts to visitors searching for an experience of solitude in our over-developed world, as well as the dust that is generated. Dust from silica sand is considered a carcinogen and has been linked to cancer and silicosis, a deadly disease. The environmental and human health effects of this type of mining are only now being researched and analyzed. The potential for dramatic impacts to both human health and the environment appear likely.

The dramatic affects of respirable dust will also impact the birds and other wildlife in and near the development site – it is of great concern that this impact is silent, invisible, and deadly. We suggest a regular monitoring of resident species populations be a part of any ongoing impact analysis monitoring. We fear that there will be population declines, although most likely unnoticeable for some years, and without true species counts this will be hard to quantify.

*Staff response: See related responses above. Staff acknowledge that the proposed mining operation will significantly and permanently alter the landscape on this site and that noise, dust and other impacts will affect the Wildlife Refuge. Since some of the concerns noted are difficult to address with specific measurable data and difficult to mitigate with measurable outcomes it is recommended that the concerns noted be addressed by the recommended review committee and that input be afforded by the organizations who have expressed concerns about the impacts on the Refuge.*

## **26. Visual Impacts.**

### **Sand Creek Township (Township Engineer)**

#### **Section 26 Visual Impacts**

The discussion of light impact should be expanded to cover lighting from the mining operation, particularly the first phase of mining, and how that lighting will be situated and aimed or shielded to reduce visual impact to the nearby residential property.

*Staff response: See developers response to lighting under item 6 Project Description in Sand Creeks Township's comment on operations (page 8). Staff recommends that lighting to reduce visual impacts to nearby residential property be reviewed and lighting standards met for the Mining Interim Use Permit.*

## **29. Cumulative Impacts.**

### **Louisville Township**

19. Item 29 concludes that due to the interim nature of the mining operation, that the project is less likely to contribute to long term cumulative impacts of other future uses. The Township disagrees with this statement.

Other adjacent and nearby mining operations all impact cumulatively upon the future landscape of this area in terms of habitat value, water resource management, groundwater, and noise and air emissions. The EAW states that nearby properties are also being mined, and the Township has been made aware of another additional silica mine in the same area that will be starting the permitting process. In addition, the lack of a functional end use plan for industrial uses and frontage road may impact upon the ability to construct a functional road network in the area, which could have impacts off the project site with regard to addressing future development of neighboring properties and developing subregional traffic improvements. Finally, the lack of information to show the ability to provide sewage treatment service under an end use plan also impacts future constructability of the end use plan, as well as community impact and costs associated with constructing a solution that works with the property following mining activity. A feasible and functional reclamation and end use plan is essential to developing the conditions of the IUP that serve to minimize the cumulative effects of this interim mining use.

*Staff Response: The developer provided the following response: "A reclamation plan with a feasible extension of a backage road through the property, consistent with state and local goals of providing alternative routes along US Highway 169 has been developed as part of the project. The reclamation plan also illustrates that the site will be left in a condition suitable for final development including setting aside 5 acres of land to remain undisturbed, which can serve as a sewage treatment system if in fact development pressure would instigate final site development prior to the availability of municipal services. Because at this time there is no proposed final development, the reclamation plan only demonstrates the ability of future development, which could include an industrial park, consistent with current zoning and guided land use designations."*

## **Minnesota Pollution Control Agency**

### **Cumulative Potential Effects (Item 29)**

Cumulative potential effects were not analyzed in the EAW. A cumulative potential effects analysis must consider other projects in-the vicinity of the proposed Project that might reasonably be expected to affect the same natural resource(s) as the proposed Project, including future projects already planned or for which a basis of expectation has been laid. In completing this item, you must identify any other projects (and explain how they were identified), identify the cumulative impacts that may occur as a result of interaction of the other project(s) with the proposed Project, and identify the natural resource(s) affected and how it may be affected. Given the proximity of the proposed Project to the Sand Creek, we suggest that further analysis of cumulative potential effects to this creek may be needed. The Jordan Aggregates Proposed Mining project located to the south of the Project should be included in the analysis.

We appreciate the opportunity to review this project. Please provide your specific responses to our comments and notice of decision on the need for an Environmental Impact Statement. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this EAW please contact me at 651-757-2508.

*Staff Response: At the time this EAW was completed only the Jordan Aggregates project was known and that had been ordered to prepare an Environmental Impact Statement which would include an analysis of cumulative potential impacts. The Merriam Junction Sands project was proposed after the EAW for the Great Plains Sands (GPS) project was prepared. The Merriam Junction Sands project is in the process of preparing an Environmental Impact Statement which will also include a cumulative impacts analysis. Staff have further recommended that the IUP for GPS be amendable to include substantive related findings and reasonable modifications to address cumulative impacts identified through these two Environmental Impact Statements for projects which may have associated cumulative impacts to the GPS project.*

## **31. Summary of Issues**

Listed below are impacts and issues identified throughout the responses to comments that may require further investigation, additional discussion on alternatives or mitigation measures, or permit conditions before the project is begun.

### **Item 6. Project Description**

The description of the proposed mining operation has been noted to be vague in many aspects including:

- There lacked detail on the phasing of mine progression in the EAW but this information has since been provided;
- There lacked detail on the management of waste fines commencing from the initiation of their generation until they are placed below the water table for permanent disposal; clarification of the waste fines management has subsequently been provided;
- There lacked detail on the reclamation plan and final end land use plan making it difficult to establish a suitable amount of security to ensure this or that an end use plan consistent with the Comprehensive Plan and Zoning Ordinance and Subsurface Sewage Treatment System Ordinance is possible and remains to be addressed;
- There lacked supporting information about the suitability of a proposed set aside area for future septic systems and remains to be addressed.
- location of a frontage road and feasibility and how it will be funded has been partially addressed with the securities and details remaining to be addressed during the IUP process;
- the impact of the proposed mining and blasting adjacent to Bluff Drive and the rail line remains to be addressed;
- structural stability of the fill placed below the water table in areas to be restored for future development and road construction has been addressed with a subsequent report from Braun Intertec;
- stability of the perimeter sandstone after mining and restoration relative to the long term integrity of the railroad and adjacent roads remains to be addressed;
- stability of proposed berms around project site and width needed for berm construction remains to be addressed;
- The daily volume of truck traffic was left somewhat vague in the EAW and this number has been changing in documents provided since and needs to be addressed to ensure that necessary road improvements are made accordingly;
- The issue of site security needs to be addressed.

### **Item 8. Permits and Approvals**

The developer noted that the operator will apply for a Nonmetallic Mining & Associated Activities National Pollutant Discharge Elimination System (NPDES)/State Disposal Systems (SDS) General Permit (MNG490000). Air Quality Permits are needed and the information obtained through this permitting process may benefit the preparation of a dust monitoring and mitigation plan.

### **Item 13. Water Use:**

The project involves excavation into the Jordan aquifer and appropriation of ground water. Concerns have been noted relative to impacts on water quantity and quality for the immediate area.

## **Item 18. Water Quality-Wastewaters:**

A submitted reclamation and end use plan identified an area of undisturbed soils (approximately 5 acres) to be set aside for a possible future on-site septic system. However, the information submitted was noted to be inadequate in demonstrating the suitability of the proposed set aside area for future waste water treatment needs for possible commercial/industrial uses on the reclaimed site. There are no current plans for extending municipal sanitary sewer into this area and without that or clear documentation on the feasibility of an on-site treatment system the concept of a future industrial park should be considered an unlikely possibility due to the extent that mining is being proposed.

## **Item 21 Traffic:**

The applicant is proposing a limited amount of vehicle traffic for employees and suppliers to the site via US169. As noted by MnDOT the applicant did not explain specifically in the EAW how many trucks (“consistent with the levels generated by the recent sand and gravel mining operation”) they are proposing. The applicant has subsequent to the EAW stated that the number of haul trucks would be limited to 10 per day (20 trips). The volume of trucks can be addressed in the IUP. The applicant has proposed that all material will be shipped by rail and that vehicle traffic will be limited to 74 trips per day generated from employees and suppliers.

Currently, there is a standard turning lane for the proposed vehicle traffic (employees and suppliers). The developer will be required to work with the County and MnDOT on providing improvements for truck traffic, such as requiring the extension of the existing turn and acceleration lanes in order to accommodate trucks.

The timing on removal of the northern access, which currently serves as the only access to both the Scott County and Scott Land Company LLC property, was identified as a topic that needs to be addressed.

## **23. Stationary Source Air Emissions:**

This project will be required to obtain air emission permits from the Minnesota Pollution Control Agency. Concerns about respirable silica dust are not currently adequately addressed in State rules. The response to comments regarding this issue suggested the preparation of an air quality monitoring and mitigation plan in cooperation with the MPCA.

## **24. Odors, Noise and Dust**

### **Dust**

Dust has been identified as a nuisance and health concern. A monitoring and mitigation plan for dust has not been provided as a part of the EAW. The developer indicated in item 20 of the EAW that the developer would apply standards from other states to address respirable silica dust; however, no specifics have been provided. Therefore, it is being recommended that at a minimum the project should be required through the IUP to comply with current Minnesota state standards and that a monitoring and mitigation plan be developed to assure this. It is being recommended that the IUP include conditions that if/when the state establishes more stringent or specific standards for silica that the developer will be required to comply with these more stringent standards and that a “grandfather” status not be allowed.

In addition, the proposer is requesting a variance from the County’s ordinance requiring reclamation to begin after four acres have been disturbed. This is not in conflict with the overall process of phased and continual reclamation described in the EAW. In order to have sufficient area to efficiently mine both the above water table and below water table resources, an area larger than 4 acres is required. The majority of granular fines,

generated from the wash plant will be utilized as reclamation fill as they are generated from the processing plant in order to eliminate stockpiling of this material. This will help to minimize dust generation at the site. A large enough water body must be available to prevent mixing when placing hydraulic backfilling of waste fines on one end of the excavation and sandstone removal on the other end of the excavation. Scott County has granted a variance to this standard in the past.” Staff as noted previously, recommends that a staged reclamation plan be provided with staged securities to assure that the site can be reclaimed to minimize the potential sources of dust. This plan should be prepared and approved by the review committee as a prerequisite for the IUP application.

### **Noise**

Comments noted that vibrations will result from blasting of the sandstone. The EAW noted that all blasting will be performed by an independent blasting company and seismographs will be utilized during each blast to record the ground vibrations. These results can be used to demonstrate compliance with industry standards for the protection of structures. The results can also be used to design future blasts which are adjusted as the mining moves closer or further away from existing surrounding structures. As blasting approaches a structure, blasting charges can occur more frequently but with smaller charges to reduce ground vibrations at nearby structures. The developer has stated that a blast monitoring plan will be adopted as part of the IUP process which will require the proposer to perform pre-blast surveys by an independent party of structures located within one-half mile of the blasting limits (with owner approval) identify the location of seismograph monitoring points as mining progresses throughout the Site, establish acceptable peak particle velocity (PPV) limits based on industry standards designed to protect structures, and outline reporting requirements. Considering that blasting will also be conducted at the proposed Merriam Junction Mine it may be difficult to attribute property damage to one operation or another, especially for properties equal distant from both mines. Staff recommend that this issue be addressed by the proposed project review committee and that the review committee be involved in both proposed mining operations.

Noise emissions at the Site will result from the operation of mining and processing equipment. Noise mitigation measures have been designed into the proposed project as a result of the modeling. These include shielding noise sources by lowering the elevation of the equipment that produces the noise (for example the crusher) and constructing berms at strategic locations around the perimeter of the site to protect adjacent receptors. Modeling conducted for the Site under these conditions predicts that the site will operate below both daytime and nighttime standards. Additional noise modeling was conducted by Dr. David Braslau to determine the attenuation of noise across the National Wildlife refuge. This modeling predicts that the Site will meet state nighttime noise standards for noise area classification 1, the strictest of the standards, throughout the refuge and that noise levels will be at or only a few decibels above summer ambient noise levels when the mitigation measures are adopted at the site. The developer has proposed to conduct some operations 24 hours a day six days per week. Though modeling suggests that they will comply with the state’s noise standards impulse noises are not able to be adequately regulated by these standards. The U.S.F.W.S has also questioned the modeling conducted to date and suggested a need for additional information. Impulse noises such as those made by heavy equipment buckets, dump truck tail gates, train car movement and back up alarms will likely still result in nuisance noise complaints for affected area residents. The types of equipment operations allowed during night time hours should also be dealt with by the advisory committee prior to approval of an IUP so that appropriate conditions can be included.

It is being recommended that concerns about blast impacts and noise be addressed during the IUP and could be monitored at the same monitoring stations as established for dust monitoring. Standards or limits could be established initially and reviewed and modified as needed periodically by an advisory committee. There has not been an analysis of businesses or structures that might be significantly adversely impacted by blast shocks. The developer has also not provided a specific plan for use of explosives. It is therefore being recommended that this issue be further evaluated as a prerequisite for the application for the IUP. Alternatively, this could also be

dealt with by prohibiting any blasting until such a plan with impact analysis were provided and approved by a review committee, which may need assistance from independent experts.

A number of comments were received regarding the adverse impacts on both wildlife and users or the National Wildlife Refuge. These impacts will be difficult to ascertain in advance of the mining operation but some pre-emptive design or landscape features could provide some mitigation. This area of concern needs further analysis to identify appropriate mitigation for consideration in the IUP.

## **29. Cumulative Impacts**

The mining operation is likely to contribute to long term cumulative impacts for other potential future uses of the property by limiting the area available for future development with a 35-40 acre groundwater pond and disturbed soils surrounding the groundwater pond. The end use plan provided for the EAW is compatible with the current zoning ordinance, however adequate information has not been provided to determine if future development would have access to sewage treatment systems that meet current State and County requirements. If future development of the site is not feasible, this may impact neighboring properties by causing a disconnect in road connections.

DRAFT