University of Minnesota
UMore Park Sand and Gravel Resources
Draft Scoping Decision Document

January 2009
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I. Introduction and Purpose
The University of Minnesota (University) is proposing to open new aggregate mine(s) and ancillary operations on the UMore Park property owned by the University located in the City of Rosemount and Empire Township, Dakota County, Minnesota (see Figures 1, 2, and 3), hereafter referred to as the “UMore Mining Area”. The purpose of the project is to make cost-effective and environmentally-sound usage of regionally significant aggregate resources owned by the University and generate revenues to support the mission of the University. Mining operations and practices are proposed to be similar to current practices at existing aggregate mines adjacent to and near the UMore Mining Area. An Environmental Impact Statement (EIS) for this project is mandatory pursuant to Minnesota Rules 4410.4400 Mandatory EIS Categories, subpart 9B, which states:

“For development of a facility for the extraction or mining of sand, gravel, stone, or other nonmetallic minerals, other than peat, which will excavate 160 acres of land or more to a mean depth of ten feet or more during its existence, the local government unit shall be the RGU.”

The Regents of the University of Minnesota is the Responsible Governmental Unit (RGU) for this project pursuant to Minnesota Rules 4410.0500 subp 1 and concurrence of the City of Rosemount and Empire Township. The EIS will meet the requirements of Minnesota Rules 4410.0200 to 4410.7800 (MEQB rules), which govern the Minnesota Environmental Review Program.

The Scoping Decision Document (SDD) is a companion to the Scoping Environmental Assessment Worksheet (EAW) prepared for the project. The purpose of the SDD is to identify the issues and alternatives that will be examined in depth in the EIS. Since this is a draft SDD, the decisions presented here are subject to change based on comments received or further analysis. The SDD also presents a tentative schedule of the environmental review process.

II. Project Alternatives
The MEQB rules require EIS studies to include at least one alternative of each of the following categories or provide a description of why no alternative is included in the EIS (MN Rule 4410.2300, Item G).

- Alternative sites
- Alternative technologies
- Modified designs or layouts
• Modified scale or magnitude
• Alternatives that incorporate reasonable mitigation measures identified through the scoping process

Minnesota Rules part 4410.2300, subpart G also states that an alternative may be excluded from analysis in the EIS when it does not meet the underlying need for or purpose of the project, (2) it would likely not have any significant environmental benefit compared to the project as proposed; or (3) another alternative, of any type, that will be analyzed in the EIS would likely have similar environmental benefits, but substantially less adverse economic, employment, or sociological impacts.

Alternative Sites
Off-site alternatives are not being investigated because they do not meet the project purpose and need of making use of regionally significant aggregate resources that are found within the UMore Mining Area. Site Alternatives are limited to the presence of the natural resource, as well as University ownership. This regional resource is well located to cost-effectively serve the long-term needs of the region. A regional study by the Metropolitan Council, Department of Natural Resources and the University of Minnesota in 2002, titled Aggregate Resources Inventory of the Seven-County Metropolitan Area identified significant aggregate resources within UMore Park. In addition, the UMore Park Geological Assessment prepared by ProSource Technologies Inc., dated September 2008, identified the location, quality, and quantity of aggregate on the UMore Park Property. The proposed UMore Mining Area comprises approximately the western third of the UMore Park property, and contains substantial quantities of high quality aggregate material.

Preferred Alternative
The University is proposing to open new aggregate mine(s) and ancillary operations on the UMore Park property. The UMore Mining Area location is shown in Figure 3. The UMore Mining Area consists of approximately 1,711 acres of land. Mining operations and practices are proposed to be similar to current practices at existing aggregate mines adjacent to and near the UMore Mining Area.

The project consists of three primary activities/components:

Mining and Aggregate Processing
• Clearing and grubbing the site of vegetation and structures, as necessary.
• Removal and/or relocation of infrastructure, as necessary.
• Excavation and transport of the raw aggregate materials.
• Excavation, stockpiling, and transporting of other soils materials, including clay and topsoil, which may be present within the UMore Mining Area for shipment to sites out of the area or for use in future reclamation.
• Washing, grading, and stockpiling aggregate materials for sale or later internal use.
• Transporting and stockpiling waste for potential later use in reclamation.
• Transporting finished aggregate materials internally for subsequent processing and to construction sites beyond the UMore Mining Area.
• Transporting, accepting, and stockpiling clean, compactable fill materials and/or clean organic soil materials for potential later use in reclamation.

• Eventual redistribution, compacting, grading of overburden and clean fill materials to reclaim the disturbed portions of the UMore Mining Area.

Ancillary Manufacturing:
• Manufacture and transport of various asphalt products.
• Manufacture, stockpiling, warehousing and transporting of ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, concrete plank, etc.
• Importing, grading, processing, and stockpiling aggregates to be blended with local aggregates in the production of various products which will increase the effective use of the local aggregates and extend the life of the natural resource.
• Transporting, accepting, and recycling products returned from construction sites, including ready-mixed concrete, bagged mortar products, concrete block, concrete pavers, concrete pipe, concrete plank for inclusion in new products.

General Operations and Administrative
• Offices and sales facilities.
• Equipment storage and maintenance facilities.
• Fuel storage and refueling facilities.

The mining season typically extends from late March through mid-December each year and occasionally starts earlier and runs later. Topsoil and overburden stripping is the first step. Initially, as operators begin mining, each open mine may require the stripping of a few dozen acres to provide space for offices, shops, parking, manufacturing facilities, stockpiles, processing and the actual mining face. Then, as the aggregate is harvested and the mine face advances, additional acreage will be stripped. This will be accomplished using several pieces of earth moving equipment including dozers, scrapers, backhoes and haul trucks.

Once the topsoil and overburden is removed and either used for reclamation or stockpiled, extraction of the mineral deposit can begin. The equipment that will be used on this portion of the mine for extraction will include large front end loaders, backhoes, drag lines, crushers, screens, and conveyor systems. The raw reserves are then transported via a conveyor system or haul trucks to either a dry plant or a wash plant. At the plant the material is fed through a series of crushers, screens, conveyors, wash decks, and classifiers to produce the commercial grade construction aggregates. The finished products are stockpiled adjacent to the plant and sold to contractors for construction jobs. The finished products are hauled off site by trucks to the various construction sites, or internally transported and stockpiled for subsequent production of the various ancillary products (asphalt, concrete, etc.).

Water is an important tool and ingredient to the processes described. As a tool, it is used to wash the aggregate, equipment, and suppress dust. As an ingredient, it is used in the production of the various concrete products. Each operator will require a source of process water that may be secured with wells and/or efficient recycling of water, including storm water runoff, through sedimentation ponds.
The proposed mining operation(s) will result in the lowering and a reconfiguration of the surface topography, and the reconfiguration and redirection of the existing surface drainage system.

In general, reclamation will progress in increments. In the first several years, however, as new mines are opened and plant sites are developed, relatively little reclamation will occur. Exhausted areas of mine floor may have a status of "interim reclamation" since it will be necessary to maintain and relocate conveyor systems and/or haul routes between the mine face and processing. Final reclamation efforts would come once the transport is no longer necessary in that area. The perimeter of the UMore Mining Area will be reclaimed at a slope of three to one or flatter. The reclaimed mine floor will undulate according to the bottom of the deposit and to accommodate the new surface drainage. Upon completion of reclamation the property will be suitable for agricultural use.

Operators on the site may also produce asphalt, ready-mixed concrete, and a variety of the ancillary products. Each of these construction material plants will be located in close proximity to the aggregate processing plants to eliminate unnecessary handling and hauling. Ready-mixed concrete production requires a plant capable of storing and mixing the ingredients for the various mix designs. Ready-mixed plant sites will have storage silos for the cementaceous materials; storage tanks for the liquid additives and will have an area for handling comeback concrete and truck wash out. These plants will require staging and traffic flow areas for trucks. There may also be a need for onsite truck maintenance facilities.

Other concrete product manufacturing plants will have similar needs to ready-mixed plants, except they often require a larger plant footprint and substantial outside storage.

Asphalt plants will require areas for liquid storage tanks for the various ingredients of their mix designs. These would include tanks for asphalt cement, tack oil, and heating oil.

Concrete materials of various types will be imported for recycling and integration into the variety of products emanating from the projects operations.

The University's goal is to have the site ready for mining operations to commence in 2010 construction season.

No-Build Alternative
The No-Build Alternative will be described in the EIS. The No-Build Alternative will describe the potential impacts, outcomes, constraints, benefits and disadvantages, and economics if the proposed UMore Mining Area existing land use were to continue. The description will be based on the existing University of Minnesota's use of the site for agriculture and research purposes and will make projections or forecasts based on this use to identify No-Build Alternative effects and impacts.

Technology Alternatives
Technology alternatives are not within the scope of the UMore Park Sand and Gravel Resources Project and will not be considered in the EIS. Best practicable technologies for the various activities will be utilized as part of the preferred alternative.
Modified Designs or Layouts
Modified design or layout alternatives were evaluated during the scoping analysis. The UMore Park Geological Assessment, is an instrumental study used in defining the UMore Mining Area, which is illustrated in Figure 3. This area represents the Preferred Alternative and is flexible dependent upon the results of the analysis that will be completed for the EIS and the permit requirements for the operations on the site.

Scale or Magnitude Alternatives
Scale and project magnitude were defined in part through the analysis conducted for the UMore Park Geological Assessment Report and the selected scale and magnitude parameters in the Preferred Alternative meet the project purpose and need. Scale and magnitude alternatives will not be addressed in the EIS.

Project Site With Reasonable Mitigation Measures
MEQB rules require consideration of mitigation measures identified through comments on the Scoping EAW or the Draft EIS. The EIS will consider all relevant mitigation measures suggested through public comment and will recommend incorporation of reasonable mitigation measures into project design and permitting as warranted.

III. EIS Issues
MEQB guidance documents describe that the purpose of scoping is to streamline the EIS process by identifying only potentially significant and relevant issues, and defining alternatives to be carried forward into the EIS. Issues have been identified and described in the Scoping EAW and are described below by potential significance and the extent of analysis needed to be adequately addressed in the EIS. Mitigation measures, permitting and approvals, public comments, and the results of analyses, existing data, and separate studies will all be addressed in the EIS to fully disclose the potential impacts from the Preferred Alternative.

Scoping EAW Topics Screened and Removed from Further Review
The following topics were adequately assessed in the Scoping EAW and were found to be not relevant or so minor that they will not be addressed in the EIS.

- Water Surface Use (Item 15)
- Vehicle-Related Air Emissions (Item 22)
- Designated Parks, Recreational Areas, or Trails; Scenic Views or Vistas (Item 25c, d, and e)

Scoping EAW Topics to be Included in the EIS
The following subjects will be described and analyzed to varying degrees in the EIS.

Land Use/Potential Environmental Hazards (Item 9)
The EIS will verify and summarize the existing land uses identified within the UMore Mining Area. The EIS will also address existing land uses adjacent to the site within a half-mile buffer area to the north, west and south of the site. This half-mile buffer will serve as a guideline to evaluate land use compatibility and identifying environmental impacts within an area of potential impact resulting from the proposed gravel mining operations and ancillary uses. No additional analysis is planned for the EIS regarding the description of land uses within the
The reclamation plan for the proposed mining site will accommodate agricultural end use. A series of mitigation strategies will be explored to avoid and minimize impacts from gravel mining operations on land uses within the area of impact.

The EIS will describe the University's plans to conduct a Phase II Investigation in areas that are potentially related to past releases of hazardous substances within the UMore Mining Area. The Phase II Investigation Work Plan, which will be reviewed by the MPCA, will describe the methods and sampling locations that will evaluate the occurrence of suspect soil and groundwater impacts. Mitigation measures will be described as appropriate and will be in accordance with MPCA rules and guidance.

**Cover Types (Item 10)**

This information will be described as needed to analyze land use, cover types, water quality, and other subjects that reference before and after cover type acreages for analysis.

**Fish, Wildlife, and Ecologically Sensitive Resources (Item 11a)**

The EIS will include a discussion of existing wildlife habitat and impacts of habitat changes on Species in Greatest Conservation Need (SGCN) as defined by the MNDNR. Habitat availability for SGCN species will be evaluated. The level of impact to SGCN species will be described on the basis of species presence and status of habitat on the project site and in the region.

**Threatened and Endangered Species (Item 11b)**

The EIS will address the potential for impacts of the project on state threatened and endangered species, rare plant communities and sensitive ecological resources including: Loggerhead Shrike (*Lanius ludovicianus*), Mesic Prairie, Blanding’s Turtle (*Emydoidea blandingii*), and the Vermillion River.

The EIS will use species range and distribution maps, scientific literature, and site survey information to determine whether these resources are present in the UMore Mining Area, and if present, the extent of and potential impact to the resource. Potential impacts to these species will be described at both a local and regional level.

Potential direct and indirect impacts to the Vermillion River trout stream will be evaluated by using stormwater and groundwater modeling (described in other sections of this Scoping EAW) and by reviewing existing literature and data pertaining to the trout stream.

**Physical Impacts on Water Resources (Item 12)**

The EIS will include an assessment and discussion of existing jurisdictional wetlands on the site, potential wetland impacts and proposed mitigation, impacts of mining below the water table, and impacts of surface water (e.g., lake) creation during the site utilization and reclamation process.

**Water Use (Item 13)**

Water use will be addressed in the EIS. This will include a description of the planned water supply well location and operations. A groundwater model will be used to demonstrate the likely pumping effects related to the water supply well. The EIS will also include a discussion of the
location of existing wells that will be potentially affected by the new well or that will be sealed prior to mining.

*Water-Related Land Use Management Districts (Item 14)*

The EIS will further investigate the floodplain districts shown on Flood Insurance Rate Maps within the UMore Mining Area and will evaluate the potential affect of the proposed operations on the floodplain.

*Erosion and Sedimentation (Item 16)*

The EIS will discuss erosion and sedimentation, including an estimate of acres to be graded/excavated and cubic yards of soil to be moved and proposed methods of minimization and mitigation.

*Surface Water Quantity and Quality (Item 17)*

A watershed model will be developed during the EIS process to estimate peak runoff from less frequent events and a water budget model to estimate the long term change in the volume of water contributed to the receiving water bodies. The EIS will summarize the model findings and include mitigation options if impacts are anticipated. In addition, the EIS will address potential for impacts of changes in surface water runoff on the Vermillion River.

*Water Quality - Wastewater (Item 18)*

Wastewater will be addressed in the EIS. In particular, it will include a discussion of on-site individual sewage treatment facilities and portable toilet facilities, as well as a more complete discussion of the layout and operation of settling ponds for aggregate production and concrete plant wastewater handling.

*Geologic Hazards and Soil Conditions (Item 19)*

The EIS will include a revised geologic model based on results from the Groundwater Assessment that will be carried out for the EIS. The EIS will also include, as part of the Groundwater Assessment, documentation for the groundwater flow model that will be used to predict groundwater flow and predictive simulations. The model will be used for the following predictive simulations:

1. Anticipated groundwater head conditions under full mine development based on the calibration of the flow model using field measured water levels collected during the Groundwater Assessment.

2. The anticipated drawdown resulting from a single pumping well operated at 200 gallons per minute.

3. If modeled groundwater flow from the proposed mine pit lakes or ponds is toward the Vermillion River, the model will be used to simulate thermal transport from the mine pit lakes or ponds.

*Solid Waste, Hazardous Waste, Storage Tanks (Item 20)*

The EIS will further discuss the anticipated solid wastes and hazardous waste materials produced at the UMore Mining Area and will identify the disposal plan for these materials. A
hazardous waste reduction and minimization plan will be discussed as part of the mitigation commitments.

*Traffic (Item 21)*

The EIS will include a discussion of the detailed traffic analysis and results of the traffic study. Intersection and roadway operations and safety conditions will be addressed in the Draft EIS.

*Stationary Source Air Emissions (Item 23)*

The EIS will include a description of the equipment and processes that may generate regulated pollutants. Potential emission rates will be estimated for stationary sources and fugitive dust sources associated with the project. Emissions will be calculated for criteria pollutants, greenhouse gases, and federal hazardous air pollutants. In the EIS, air quality regulations and permitting programs will be identified that may apply to the project.

A summary of the emission limits, pollution control equipment, dust suppression methods and systems, and compliance practices associated with those regulations and programs will be included in the EIS. A comparison of air dispersion modeling results and ambient air quality standards will be presented in the EIS.

*Odors, Noise, and Dust (Item 24)*

The EIS will include fugitive dust emission calculations associated with the project and a description of equipment and activities proposed to mitigate the generation of dust. Fugitive dust emissions will be included in the air dispersion modeling described in Item 23. The noise analysis will address potential impacts associated with the operations of on-site processing equipment and trucks hauling the resources from the site via the surrounding roadway system.

*Archaeological, Historical, or Architectural Resources (Item 25a)*

The findings from the Phase IA archaeological (pedestrian) survey will be documented in the Draft EIS along with a summary of any consultation with the State Archeologist and State Historic Preservation Officer.

*Prime or Unique Farmlands (Item 25b)*

An assessment of prime and/or statewide important farmlands will be conducted in the EIS.

*Visual Impacts (Item 26)*

The EIS will evaluate and summarize the degree of visual impacts associated with adjacent land uses and lines of site. Mitigation measures will address site design and landscaping measures to reduce visual impacts over the course of the mines lifespan.

*Compatibility with Plans and Land Use Regulations (Item 27)*

Compatibility with plans and land use regulations will be addressed in the EIS and will support completion of other EIS sections including cumulative effects.

*Impact on Infrastructure and Public Services (Item 28)*

The EIS will contain a complete description of proposed roadway improvements and additions needed to accommodate and/or mitigate traffic from the proposed UMore Park Sand and Gravel...
Resources Project. Additionally, the EIS will examine the issue of on-site power generation versus extension of existing electrical power lines to serve the proposed mining operations.

Cumulative Effects (Item 29)

Potential cumulative and indirect impacts will be addressed and analyzed in the EIS.

IV. Identification of Phased or Connected Actions

There are no phased elements or connected actions associated with the project.

V. EIS Schedule

The following is the anticipated project schedule for completion of the University of Minnesota UMore Gravel Mining Project EIS:

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 12, 2009</td>
<td>Scoping EAW Noticing</td>
</tr>
<tr>
<td>January 12 - February 16, 2009</td>
<td>Scoping EAW Comment Period and Public Meeting</td>
</tr>
<tr>
<td>February 5, 2008</td>
<td>Public Scoping Meeting</td>
</tr>
<tr>
<td>March 2009</td>
<td>Final Scoping Decision/EIS Notice of Intent</td>
</tr>
<tr>
<td>March - July 2009</td>
<td>Draft EIS preparation</td>
</tr>
<tr>
<td>August - September 2009</td>
<td>Draft EIS Comment Period and Public Meeting</td>
</tr>
<tr>
<td>September - December 2009</td>
<td>Final EIS preparation</td>
</tr>
<tr>
<td>February 2010</td>
<td>Final EIS Adequacy Determination</td>
</tr>
</tbody>
</table>

As previously stated, the University's goal is to have the site ready for mining operations to commence in the 2010 construction season.

VI. Special Studies or Research

The UMore Park Geological Assessment Study was completed by the University in September 2008. The findings of the study identified the location, quantity, and quality of aggregate resources on the UMore Park property. In addition, a comprehensive Groundwater Assessment and a Phase II Investigation are being completed for the project area; the results of these studies will be included in the EIS. No additional special studies are anticipated. The Scoping EAW identified the level of analysis and discussion needed all within the framework and format of the EIS documents that will be generated.

VII. Governmental Permits or Approvals

The EIS will identify all permits and approvals potentially required for this project. While some permit application review may occur concurrently with EIS preparation, the EIS will not necessarily contain all information required for a decision on those permits. No permits have been designated to have all information developed concurrently with the preparation of the EIS; however, the University intends to concurrently gather information needed for receiving approvals and/or permits from local, state, and federal agencies. No permits will require the preparation of a record of decision pursuant to Minnesota Rules 4410.2100, subpart 6D. In order to expedite the permitting and approval processes, coordination with Empire Township, the City of Rosemount, Dakota County, and other appropriate jurisdictions has already begun and will occur throughout the EIS process.
The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

Figure 1
State/County Location Map

University of Minnesota
UMore Park Sand and Gravel Resources
Scoping Environmental Assessment Worksheet

January 2009
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Figure 3
Proposed UMore Mining Area