

May 17, 2012

Anne Hurlburt  
Scandia City Administrator  
14727 209<sup>th</sup> Street North  
Scandia, MN 55073

RE: City of Scandia Draft Environmental Impact Statement (DEIS)  
Zavoral Property Mining and Reclamation  
Metropolitan Council District 12 (Harry Melander)  
Council Review File No. 20475-2

Dear Ms. Hurlburt:

The Metropolitan Council received the City's DEIS for the Zavoral Property Mining and Reclamation project on March 14, 2012. The proposed project involves mining and site restoration of 64 acres of the 114-acre site located east of State Trunk Highway (TH) 95 near its intersection with TH 97 in the City. The following comments are offered on the draft document.

### **3.1.1.3 Site Reclamation**

Should the City decide to allow site mining and reclamation to proceed as proposed, very little soil and organic matter will be left on the site following reclamation to provide for filtering of nutrients and contaminants to prevent them from infiltrating to the groundwater on the site. Ordinarily, surficial organic-rich soil horizons and naturally developed clay-rich soil horizons near the surface are relied upon to filter out and retain surface-deposited contaminants, fertilizers, and pesticides as moisture moves them down from the surface toward the ground water table. Post-mining and reclamation, only approximately four inches of variable-component topsoil material and three feet of coarse sands will remain above the water table on most of the site, which will be in constant movement laterally to the east. The groundwater below the mine site will only be moving laterally a short distance over a very short relative time span (potentially days to weeks) before it reemerges on the eastern bluff slope as groundwater seeps that will accumulate in the small streams and run off the site area. Council staff recommends that *no* fertilizers or pesticides be allowed to be applied to the site following mining and reclamation (aside from very short lifespan chemicals spot-applied to control noxious weed growth during reclamation), to minimize the potential for contamination of and toxicity impacts to the downstream seeps and streams which flow to the Saint Croix River. Active farm cropping and residential development of the site following reclamation are discouraged.

### **4.1.1.1 Affected Environment**

The forested area below the bluff line within the southern perimeter of the site's proposed mining area, which has not been previously mined, is included within the MnDNR's designated Regionally Significant Ecological Area (RSEA) and within the *Metropolitan Council 2030 Regional Development Framework's* designated Natural Resources Inventory and Assessment (NRI/A) area within the twin cities area. The 6 to 8-acre area is part of a larger adjacent area

which has been characterized as 'outstanding' in quality by the NRI/A. The white pine-hardwood forested area within the proposed mining area appears to be part of the larger high-quality wooded area which trends along the Saint Croix River bluffs along the eastern boundary of the site.

The Council's policy with regard to areas mapped within either the RSEA or the NRI/A is to encourage their protection and conservation by local land use planning authorities. Therefore, Council staff recommends that the mining area limits be redefined to avoid and protect these regionally significant natural resources. Should the determination be made by the City to allow mining within this area, Council staff encourages the City to work with the project proposer to find the highest and best off-site uses for the 'significant' trees that will have to be cut down on the site.

#### **4.14.2 Potential (Dust) Mitigation Measures**

The document proposes the application of calcium chloride to the internal haul roads from the edge of the milled portion of the haul road through the unpaved haul roads within any given active mining phase. Because of mine phasing and the extensive movement of internal roadways within the mine site, any applied calcium chloride could ultimately end up almost anywhere on the 64-acre area. Council staff recommends against the use of *any* calcium chloride within the mine site, due to the coarse texture of on-site road base materials, the near complete internal drainage of the site both during and following mining, its potential for long range negative impacts to plant growth, and the high probability of resultant elevated chloride concentrations in the downgradient groundwater seeps and streams due to their close proximity to the on-site application areas. "Application of chemical dust suppressants should be avoided near sensitive environments, near water bodies and fractured rock, in areas with a shallow groundwater table, and other areas where water could quickly reach the saturated zone." (*Potential Environmental Impacts of Dust Suppressants "Avoiding Another Times Beach"*, An expert panel summary, Las Vegas, Nevada, May 2002, <http://www.epa.gov/esd/cmb/pdf/dust.pdf>)

Chloride concentrations as low as 400 ppm have been found to be toxic to trout, and can negatively impact the growth of pine, poplar, and spruce trees. (Foley, G., Cropley, S., and Giummarra, G., 1996. *Road Dust Control Techniques – Evaluation of Chemical Dust Suppressant's Performance*, ARRB Transport Research Ltd., Special Report 54, Victoria, Australia; Golden, B.J., 1991. *Impact of Magnesium Chloride Dust Control Product on the Environment*, In: Proceedings of the Transportation Association of Canada Annual Conference, Volume 1, Winnipeg, Manitoba; Hanes, R.E., Zelanzy, L.W., and Blaser, R.E., 1970. *Effects of Deicing Salts on Water Quality and Biota*. National Cooperative Highway Research Program, Report No. 91; and Hanes, R.E., Zelanzy, L.W., Verghese, K.G., Bosshart, R.P., Carson Jr., E.W., Wolf, D.D., 1976. *Effects of Deicing Salts on Plant Biota and Soil*. National Cooperative Highway Research Program, Report No. 170.)

Should the decision be made to *allow* the limited use of calcium chloride on the site during mining, chloride concentration monitoring should be added to the list of parameters requiring

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mandatory surface water quality monitoring in the surface flows of seeps and streams on the eastern bluff face. After first establishing what existing chloride levels are, an acceptable maximum level should be established before mining begins (that will not negatively impact known macroinvertebrates or fish in the streams) and require ceasing further use of calcium chloride and its physical removal from applied areas within the mine site, should that maximum value be reached or surpassed. Due to the unique hydrogeologic conditions of this site whereby essentially all precipitation that falls on the property will discharge at a few environmentally sensitive downgradient seeps and into small trout-bearing streams, it may prove to be difficult for the EPA limit of 230 ppm for chronic effects of chlorides to aquatic life in (freshwater) surface water to be met.

The Metropolitan Council will take no formal action on the DEIS. If you have any questions or need further information on these comments, please contact Jim Larsen P.E., Principal Reviewer in the Council's Regional Growth Strategy and Parks and Open Space Department, at 651-602-1159.

Sincerely,



Phyllis Hanson  
Manager, Local Planning Assistance

cc: Harry Melander, Metropolitan Council District 12  
Cheryl Olsen, Reviews Coordinator  
Lisa Barajas, Council Sector Representative  
Judy Sventek, Water Resources Assessment Manager