December 16, 2010

Ralph Dollhopf
OSC US EPA Region 5
Emergency Response Branch
801 Garfield Avenue, #229
Traverse City, MI 49686

Kevin Adler, RPM
US EPA Region 5
77. W Jackson, SR-6J
Chicago, IL 60604

Bob Wagner
Lake Huron Regional Director
Michigan Department of Natural Resources and Environment
2100 West M-32
Gaylord, MI 49735

Elaine Pelc
Remediation Division
Michigan Department of Natural Resources and Environment
2100 West M-32
Gaylord, MI 49735

Re: Draft Alternatives Evaluation West, Seep 2, Seep 1 CKD Areas
Little Traverse Bay CKD Release Site, Emmet County, Michigan, July 31, 2010

Dear Ralph, Kevin, Bob, and Elaine:

For more than 30 years, Tip of the Mitt Watershed Council has been working to protect and restore the ground water, lakes, rivers, wetlands, and Great Lakes that make Northern Michigan unique. The Watershed Council has been actively involved in the Bay Harbor remediation to ensure Little Traverse Bay is protected for future generations and we continue to do so by providing the following comments on the Draft Alternatives Evaluation West, Seep 2, Seep 1 CKD Areas. Thank you for the opportunity to provide comments on behalf of our 2,300 plus members and the residents of Little Traverse Bay.

On a positive note, we first want to acknowledge the all the work done by CMS on this difficult site. We commend their efforts, to date.

Mercury Flux Data:

One year of flux data is not adequate or definite enough to make final determinations. It is too preliminary and premature to be approving the Remedial Investigation and Alternatives Evaluation based upon such limited data.

Additional Alternatives Needed:

Require an additional alternative with partial removal at Pine Court.

The Alternative Evaluation includes removal as an engineering control. However, evaluation of removal was based upon removal of all of the CKD from the entirety of the Site, approximately 2,000,000 CY. Removal of the entire 2,000,000 CY is neither necessary nor being called for by any entity.

However, an additional alternative with partial removal to address Pine Court needs to be included within the Alternatives Evaluation. Currently, the proposed alternatives in the Alternatives Evaluation fail to achieve the intended goal to "design, construct, and operate long-term response activity to prevent discharge of groundwater containing hazardous substances at levels above state criteria from the Site to surface waters of the state."

Therefore, additional exploration is needed to determine if partial removal is feasible at Pine Court and if it would address the significant source of mercury that remains venting to the Little Traverse Bay. CMS has successfully conducted removal actions at other various areas throughout the site (East Park, West CKD, and Village Harbor). While a partial removal action at Pine Court would be larger than any of these previous removal actions and potentially have more obstacles to overcome, partial removal at Pine Court should be fully evaluated. It could result in the greatest environmental benefit from the site, in the long-term. It could address the majority of mercury remaining at the Site for minimal cost, when considered over the long-term life of the project, including O&M of all components plus disposal for X amount of years. (See Attachment for our partial economic analysis based upon information provided in documents currently available.)

Therefore, we recommend that an accurate and unbiased evaluation be provided within the Alternatives Evaluation to make partial removal a legitimate option for consideration by the regulatory agencies.

Require an additional alternative that uses a cap rather that grading for the stormwater management improvements.

According to the AE, "surface depressions that pond water and contribute to increased infiltration in the Pine Court" and "contact of infiltration water of CKD would remain a moderate to significant source of leachate generation at the Pine Court subarea."

The options for caps that were evaluated within the AE included asphalt caps, low permeability clay caps, evapotranspiration caps, and impermeable caps. However, as with removal, the assessment was flawed as it applied to the entire Site. Destruction of the golf course, restriction of access to residential properties, etc., were included as justification for

low level of implementability. These negative impacts would not occur if the remedy was put in place in just those areas identified in the Remedial Investigation as problematic areas, rather than applying a horizontal barrier to the entire Site.

CMS' preferred option proposes to target stormwater improvements through grading, to provide positive drainage and storm sewer improvements to collect surface runoff. The grading is expected to moderately reduce source generation and both systems are expected to enhance the reliability of LCS.

However, given the restricted area to which the horizontal barrier needs to be applied, and the fact that using grading and vegetated/contoured soil cover as a horizontal barrier has proven ineffective already at both the Development and East Park from the original development of the site, we recommend that the horizontal barrier be the impermeable cap followed by a soil cover, contouring, and revegetation. Moderately addressing a significant source of leachate generation at the Pine Court subarea does not seem sufficient. Rather, the impermeable cap has the highest long-term effectiveness, which is important, considering Pine Court represents the most significant remaining source of mercury at the Site.

Therefore, the AE should include a modified alternative that includes an impermeable cap at Pine Court for those areas that experience "surface depressions that pond water and contribute to increased infiltration in the Pine Court" and where "contact of infiltration water of CKD would remain a moderate to significant source of leachate generation at the Pine Court subarea."

Use Available Resources to Optimize Diversion Systems.

Dr. David Hyndman from the University of Michigan, has developed an Integrated Landscape Hydrology Model (ILHM) for the Bay Harbor CKD site and is applying it specifically to the Pine Court Area. The model is a watershed model and incorporates inputs of annual precipitation, soil conductivity and land cover. Through ILHM, spatially-variable monthly outputs can be developed. The model provides a powerful tool to quantify the effectiveness of different remedial alternatives, such as upgradient capture.

Since this tool has been developed specifically for the site through the Regional Stakeholder Group paid for by TASC, the information acquired through the model should be used by CMS and the agencies to optimize the ground water diversion systems. It makes more sense, both scientifically and economically, to base the ground water diversion systems on a sound localized model, rather than on the premise of, according to CMS, pulling as much ground water as possible until leachate is sensed in the sentinel wells. We recommend including a provision that the ILHM be required in the future, to enhance the remediation efforts at Pine Court and reduce mercury flux.

Restoration:

Implementation of any recommendations put forth in the Alternatives Evaluation will hopefully prevent further contamination from impacting our waterways. However, damage has been done and we must not simply look at prevention of future contamination. Rather,

we encourage efforts to protect and restore our existing Great Lakes resources, in order to create a net benefit to the ecosystem.

Enhancement of wildlife habitat can be obtained through restoring and maintaining the natural vegetation along the shoreline. Planting a variety of vegetation types and species provides more diverse habitat for wildlife and offers other benefits, including water quality protection and shoreline erosion control. Native plants will have the best chance of survival and require the least amount of maintenance, since they naturally grow in the region and are best suited for the soil and light conditions at the site. Additionally, native plant communities often have an aesthetic fit to the site, which is difficult to achieve with a collection of exotic species.

Cost:

The cost estimates provided in the Alternatives Evaluation include funding levels for only thirty years. A lack of understanding about cement kiln dust contamination leaves an unspecified amount of time for which operation and maintenance will be required, but it is anticipated to be significantly longer than the allotted thirty years. Therefore, the cost estimates provided in the Alternatives Evaluation are significant underestimates of the true associated costs.

Furthermore, even the costs provided are not accurate and, subsequently, cannot be used for comparison. For example, the cost for collection fails to include the associated management infrastructure (treatment plant) or O&M (p. 61). This is a highly skewed cost estimate for collection, as management and O&M are key components of the collection system.

Additionally, while I have not actually attempted to put together costs and contractor estimates for removal of the Pine Court CKD to determine whether their estimates are accurate, they certainly seem quite high for removal.

General Correction Needed:

CMS states in numerous places that the discharge of mercury is historical and the "loadings to the lake from the Site are not new" (p. 42). Based upon the draft NPDES authorization that designated the discharge as a new loading, CMS should be required to modify or remove these multiple references.

Please feel free contact me with questions or concerns regarding the comments provided at 231.347.1181 or jenniferm@watershedcouncil.org.

Sincerely,

Jennifer McKay