

Andrew Schicht, P.E., Senior Engineer P|N|D Engineers, Inc. 9360 Glacier Hwy., Suite 100, Juneau, Alaska

Re: Summary of Conclusions for Douglas Harbor:

Previous chemical analysis of dredged material assessments on Douglas Harbor sediment showed mercury is the only contaminant of concern above chemical screening levels. The concentrations of mercury in the sediment are higher than guidance values developed on a national basis for the protection of resources throughout the United States. USEPA and USACE jointly developed protocols to conduct chemical and biological testing to determine if contaminants can be released from the sediment and cause adverse ecological or human health impacts. These procedures were followed to determine the potential effects of mercury to larval fish, small crustaceans and larval mussels that live in the water column, to small marine crustaceans and worms that live within the sediment, and to determine the availability of mercury for uptake into the tissues of organisms living in the sediment using clams and worms. The results of the availability assessment can be used to estimate the possible accumulation of contaminants into the tissues of larger aquatic organisms consumed by people. These chemical and biological assessments are performed on sediment proposed for dredging and placement at established dredged material disposal sites.

Last summer the City of Juneau, in association with state and Federal agencies, developed a plan to evaluate the potential for chemical and biological effects that might occur if Douglas Harbor sediment is removed and placed within an established aquatic disposal site. In parallel with these studies, other potentially feasible and cost-effective disposal alternatives were examined including uplands disposal and confined aquatic containment. The results of this assessment demonstrated the dredged sediment from Douglas Harbor would not negatively influence the water quality or water column organisms of Gastineau Channel outside of the dredged material disposal site and would not adversely affect the organisms exposed directly to the sediment. The dredging and unconfined aquatic disposal of sediment would result in some accumulation of mercury into the tissues of aquatic organisms exposed to Douglas Harbor sediment for an extended period of time but at concentrations less than the lowest observed effects levels established in scientific literature. The tissue levels of mercury were below the federal action level of 1.0 ppm wet weight methyl mercury established by the Food and Drug Administration and the project specific action level of 0.32 ppm wet weight methyl mercury established for fish and shellfish by the Alaska Department of Health and Human Services (Verbrugge et al. 2007). The project specific action level is based on unlimited consumption of all fish for everyone except pregnant (or potentially pregnant) or nursing women and children under twelve. For these groups of people consumption is four fish servings per week or 16 per month.

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An additional assessment included estimating the potential for mercury to accumulate into tissues of fish that feed upon lower trophic levels such as worms and clams. The estimated mercury concentrations in fish were less than the project specific mercury guidance value.

These data and the conclusions based on the data have been incorporated in reports that are being reviewed by Alaskan and Federal Agencies to determine consistency with their appropriate guidance.

Respectfully,

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