



August 12, 2010

PND Project # 062065.01

Ms. Heidi Firstencel
Regulatory Specialist
Army Corp of Engineers
Juneau Regulatory Field Office
8800 Glacier Highway, Suite 106
Juneau, Alaska 99801

Subject: POA-2000-495-M3 , AK 1001-01J
Douglas Harbor Renovation – Permit Application Modifications

Dear Ms. Firstencel:

This is written to describe the proposed modifications to the referenced permit application. These modifications are intended to address concerns raised by permitting agencies relating to the dredging of Douglas Harbor and the placement of dredged material at the designated Gastineau Channel disposal site. The material designated to be dredged from Douglas Harbor has been found to contain mercury above regulatory screening thresholds and has been exhaustively studied.

Please see the attached drawing for additional details on the modifications. The following is proposed:

- CBJ Docks & Harbors Department agrees to place a 6" thick layer of imported clean course sand with cobble over both the dredged material deposited at the Gastineau Channel disposal site and over the newly exposed dredge surface in Douglas Harbor.
- Harbor dredging and Gastineau Channel disposal will occur between November 1 and March 15th to further minimize impacts to the aquatic environment.

We propose to use a clean course-grained sand with a mean grain size of 1 millimeter as our capping material. We have performed sediment transport calculations which indicate that a bottom current velocity of approximately 55 cm/sec would be required to induce grain movement of this material (see attached calculations). We believe the current at the disposal site and the harbor bottom is less than this threshold velocity. This is based upon visual observation of ADF&G's dive survey of the disposal area, the modeling of tidal currents in the disposal site area to develop the LPC for disposal and our observations of the current in inner Douglas Harbor. As stated in previous correspondence, the prevalence of fine-grained sediment visible in the recently conducted by ADF&G dive survey video lends credence to the fact that bottom current speeds and sediment transport at the site would not impact a cap with the proposed sediment grain sizes.

In addition, the attached NOAA report detailing currents in the project vicinity shows actual measurement of benthic currents that can be expected within the Juneau area. Since these values are

far below the threshold required to initiate grain movement, we are confident that once the coarse-grained sand cap is in place, the particles will not disperse and the dredge materials and harbor bottom will remain isolated.

We also examined the dive survey for evidence of bioturbation or the vertical movement of bottom materials by marine organisms. There are no observations or indications of significant bioturbators, such as ghost and mud shrimp at either the Gastineau Channel disposal site or at Douglas Harbor. This has been substantiated by Dr. Jack Word, our consultant, and the ADF&G reviews of bottom videos conducted by ADF&G as well as reviews of available benthic infauna data. Because of this, we believe that a cap thickness of 6-inches is sufficient to permanently isolate both the dredged material and the new harbor surface from the aquatic environment.

We ask that the agencies resume the review of the Douglas Harbor permit application with consideration of our agreement to cap both the disposal site and the new harbor surface.

We are available to meet with you if needed. We hope this can move the project forward.

Sincerely,
PND Engineers, Inc. | Juneau Office



Andrew Schicht, P.E.
Senior Engineer

cc: Carrie Bohan, ADNR

Enclosures