



March 26, 2008

PND 072043.01

Mr. Joe Castro, P.E.  
Public Works Director  
City and Borough of Sitka  
100 Lincoln Street  
Sitka, Alaska 99835

Re: Sawmill Cove Industrial Park Pulp Dock  
Structural Condition

Dear Mr. Castro:

PND appreciated the opportunity to review the seriously deteriorated structural conditions of the SCIP Pulp Dock with you, Dan Jones and Scott Brylinsky via teleconference on March 21, 2008. During our discussions, CBS officials indicated that Silver Bay Seafoods (SBS) is under the belief that the pile supported dock structure can currently support an allowable uniform live load of 150 PSF. You indicated that SBS based these conclusions on recent PND reports or recent discussions with PND engineers. This news is alarming to PND as it is not correct. The last time PND assessed the facility to have an allowable live load capacity of 150 PSF was in our *May 2000 Sawmill Cove Ocean Docks Evaluation* prepared for the CBS. Several more recent inspections have revealed that extensive deterioration has occurred since 2000 and currently zero live load capacity (none) remains over much of the pile supported structure.

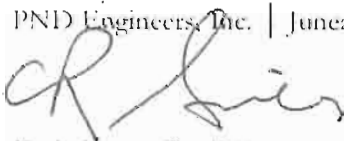
This letter is written to clarify PND's most recent (2007) assessments and recommendations regarding the structural condition of the SCIP Pulp Dock.

1. The majority of Grid C piles have no capacity remaining due to extensive corrosion. Sections of many Grid C piles are completely missing. Many piles on Grid B have little or no capacity remaining due to ongoing corrosion. Large armor rock placed upslope from these piles is currently inducing lateral load causing the weakened piles to bend. Recent inspections indicate that less than 25% of the original steel section remains in many Grid B piles.
2. The concrete pile caps located directly above the deteriorated piles are no longer supported by the piles as originally designed. These concrete beams were not structurally reinforced during original construction to support the increased stresses caused by the gradual loss of support from adjacent piles. Failure of a concrete beam is likely to occur rapidly due to the brittle nature of concrete material and the limited reinforcing steel at the piles. Failure of any pile cap supporting the warehouse will likely cause a collapse of the building.
3. The condition of the concrete deck above the pile caps is very poor. Laboratory testing from core samples obtained in 2000 revealed compressive strengths much lower than the strengths used in the original structural design. Further inspections using chain dragging and core sampling found that between 30-50% of the structural deck within the warehouse was delaminated. Visual examination from below the deck revealed extensive cracking with visible efflorescence, indicating overloaded deck conditions and distressed concrete.

4. Until approximately three years ago, the dock was not equipped with a fendering system. Currently, only a portion of the dock has been equipped with steel fender piles however a significant section of the dock has no fenders. Many piles along the face of the dock are cracked or otherwise damaged from loads imparted from ships breasting against the dock. Without a functioning fender system, vessels will impart lateral loads into the support piles at the face of the dock. Those loads could shear or buckle a pile, especially under severely corroded or cracked conditions, causing loss of support and possible failure of the pile caps and deck.
5. The base of the pile supported retaining wall along grid A has eroded due to wave action. The retaining wall is satisfactorily supported on H piles however erosion has removed fill from behind the wall. This has resulted in the loss of support for the warehouse slab on grade. The slab has disintegrated in many areas behind grid A.
6. In March 2007, PND reported the structural capacity of the dock was limited to its dead load and little more based on calculations alone and the capacity would continue to diminish over time due to corrosion. We have not reported verbally or in writing of anything otherwise to any party.
7. In May 2007, PND assisted the CBS to determine operational limits within defined deck areas by performing light duty load testing. Recommendations were provided to address load restrictions, storage, signage, barricades and routine inspections by CBS personnel. As stated in our letter, these recommendations were prepared under the assumption that significant repairs or replacement would be implemented immediately and would be completed within two years. PND has not performed any inspections at this facility since May 2007 and we have not received or reviewed any inspection reports prepared by others since then.
8. Between May and September 2007, PND assisted the CBS in preparing several permanent and temporary repair and replacement options for the dock and warehouse. In lieu of proceeding with those options, we understand that the CBS is currently negotiating the sale of the facility to Silver Bay Seafoods with a provision for making the necessary structural repairs. PND has not been involved in any way with that agreement nor have we directly consulted with or advised Silver Bay Seafoods on any matters associated with the sale.
9. PND recommends that the CBS carefully assess all operations at this facility to determine whether safe operational guidelines are being followed. We are very concerned about occupational safety given the expanded operations at this facility without the recommended structural repairs being made.

Hopefully this report clarifies many of PND's prior recommendations for this important facility. We acknowledge receipt of your directive to cease work until further notified by the CBS. PND is available and prepared to assist the CBS further on this project upon your subsequent request. If you have questions or need additional information, please feel free to contact me or Chris Gianotti, P.E.

Sincerely,  
PND Engineers, Inc. | Juneau Office



Dick Somerville, P.E.  
Vice President



Chris Gianotti, P.E.  
Principal Structural Engineer

Cc email: Dan Jones P.E., Mary Larsen P.E., Scott Brylinsky / CBS