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DATE: November 29, 2005

TO: Project File By E-mail

FROM: Don Dean, David Arnott, Fred Culbert

**SUBJECT: Port of Skagway Re-development Plan Meeting – Seattle, WA Dec. 3/05
Attendees: Paul Taylor, Bob Kollmar, Fred Culbert, David Arnott,
Don Dean**

Concept

A re-development plan that: lengthens and improves utility of ore dock for cruise ship operations; isolates future cargo and mineral terminaling operations from the existing cruise ship/touring activities; provides efficient rail (standard gauge) and materials handling facilities for anticipated YK-based mineral and cargo volumes; offers low profile vertical structures minimizing their visual presence; is environmentally sensitive; and can function as a integral component of the Alaska/Canada rail link.

Design

- Reclamation and filling of a portion of the Skagway River estuary
- Dredging a sizeable area of the east side of the estuary, using the material for an extended ore terminal area, and to fill in the channel between the existing ore dock and ore terminal lands
- Construct two (low profile, elliptical roof) bulk terminal buildings, one each for coal (190,000 ST cpy); and minerals (130,000 ST cpy). Skagway airport air draft requirements are not a problem
- Standard-gauged 3300 ft. loop track with an eight car thaw shed and single car bottom dump conveyor system feeding both terminals. Configured to handle 70 car trains
- Reclaim conveyors feeding a single quadrant loader at the “new” ore dock
- New ore dock with sufficient pilings to moor up to 140,000 DWT “Cape” class vessels
- A multi-track inter-modal and rail car terminal
- A 40’ x 140’ rail ramp, to receive cars from rail barges - 107’ wide, and 465’ long (290 TEU rack)
- Extension of the old ore dock, upgraded to fully service cruise ships, featuring a 300’ x 50’ floating dock structure over deep water
- A 4.7 acre container and storage yard (for pipe, other pipeline materials, etc.)
- Equipment: mobile (Gotwald type) harbor crane, conveyor trippers & shuttles, winches, tug(s)
- Remediation of contaminated sea floor under old ore loader

Discussion

- A common loader for concentrates and coal is problematic
- The plan presents deepwater challenges due to rapid drop-off of estuary
- Coal terminal sized adequately for 1.1 million tonnes/yr. but mining company will likely require 12 months/yr. shipments due to low value of thermal coal
- Project economics require capturing 450,000 tonnes of inbound pipe for the Yukon, for the Alaska Highway gas pipeline project. (The BC portion would be an additional 400,000 tonnes)
- Concentrate (copper, zinc) volumes so low, that a single quadrant loader for both makes sense
- Cross-contamination a serious problem. A single event could jeopardize an entire business operation
- Must also determine if coal involves multi-grades. May be a problem mixing grades
- Rotary dump & coupler systems very expensive. Low volumes may require simpler ore handling techniques
- Planners acknowledge the potential problem(s) crossing the city land and tourist area. A 12 month operating program will likely necessitate an elevated rail bridge. S/b no problem from September – May
- Hope is to get EIS prepared and accepted early, possibly avoiding the need for a full ES study. The metal-contaminated sea floor area at the old ore dock must be cleaned up
- Cost to complete the envisioned work must be less than \$100 million USD for the project to be feasible, which excludes the cost of any marine equipment and rail bridge. This is based on a 4% “hurdle” rate which is currently typical for an industrial bond program to finance the improvements
- Project depends on favorable political will of the City of Skagway, which is currently estimated to be 50/50
- The narrow gauge passenger/tour program will be protected, and the cruise ship facilities improved with the old ore dock extension and widening.
- The loop track curves will be 16 degrees max. 100 ton cars can be handled
- 3 rail track system will provide standard gauging w/o interfering with passenger operations. Standard gauge locomotives are more readily available than narrow gauge units
- The improved cargo/ore terminal area will total 30 acres, 4.7 of which can be used for storage
- Provided truck costing numbers for comparative rail/truck analysis, and likely pipe volumes for YK pipeline segment
- A comprehensive labor program, mine to port, should be structured to avoid shipper business crisis considering (relatively) low throughput and marginal mine volumes
- The City of Skagway owns the tidal lands. Fees will be assessed, impacting terminal operations. Property taxes are based on market value assessments

- Access to the port is via Main Street, which is part of the federally-funded highway system
- AIDEA contact in the AK government overseeing its Skagway port investment (old terminal building and land lease) is John Wood. The plan should be presented to him at the appropriate time. The lease expires in 2023.
- Fisheries have the ability to shut down the entire plan. Skagway River is a spawning stream.