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**MEMORANDUM**

**TO:** Lyn Keenan, Reid Middleton  
**FROM:** Kristen Wallace  
**DATE:** November 12, 2003  
**SUBJECT:** Additional Noise Information Required for T-ROC Conveyor BE

**MFG Project: 9707**

As requested, I am providing you with additional noise information to assist in the completion of the BE for the Fred Hill Materials T-ROC Conveyor Project. The Army Corps of Engineers (Corps) indicated that the following information, not included in the original BE, would need to be provided for completion of the document.

**D. Environmental Baseline.** The Corps requested that the results of the existing noise study be provided. Therefore, the following discussion of the existing sound environment is being provided.

MFG measured existing sound levels at two locations in the project vicinity in February 2002. The measurements were taken in consecutive 1-hour intervals over a 24-hour period using type I sound level meters placed on tripods 5 feet above the ground. **Table 1** summarizes the results of the existing sound level measurements. Existing baseline sound levels in the project vicinity are currently fairly low.

**Table 1.** Existing Sound Level Measurement Results (dBA)

SLM Location		Range of Levels						Ldn
		Leq	Lmax	L2	L8	L25	L90	
1	Day	31-48	42-70	34-56	32-51	31-46	29-43	43
	Night	30-40	37-64	32-47	31-42	30-35	29-30	
2	Day	36-45	55-75	47-54	33-49	27-44	22-32	45
	Night	27-43	46-70	28-52	26-45	25-39	22-26	

Note: Daytime hours are 7 a.m. to 10 p.m. Nighttime hours are 10 p.m. to 7 a.m.

**SLM1:** Located on the Hood Canal Sand & Gravel LLC property at a setback to the water in Hood Canal representative of locations near the water both north and south of the conveyor corridor. Water noise from the canal was audible. Other noise sources included airplanes, birds, and light wind blowing vegetation.

**SLM2:** Located on the Pope Resources property nearer to Thorndyke Road. This location is representative of locations further from Hood Canal, where the background noise is from vehicles traveling on Thorndyke Road, not water in Hood Canal. Traffic on Thorndyke Road, particularly large logging trucks, dominated the noise environment. Other noise sources included aircraft and birds.

**E. Effects Analysis** – Please provide more information on how the operational noise levels might affect foraging and roosting behaviors of bald eagles and marbled murrelets. What decibel levels are typically associated with this type of operation?

*Typical noise levels of Individual Sources*

Noise sources and approximate sound levels associated with the T-ROC Central Conveyor and Pier include:

- X Transfer points on the conveyor, 56 dBA at a distance of 100 feet
- X Conveyor, 49 dBA at a distance of 100 feet
- X Vessel loading facility, 64 dBA at a distance of 100 feet

*Operational Noise Levels*

MFG modeled the operational noise levels from the proposed material conveyor and ship loading dock and created noise contours for the surrounding vicinity. The noise contours are displayed in **Figure 1**, attached to this memo.

The approximate location of the bald eagle nest is shown in **Figure 1**. The predicted sound level at the bald eagle nest is between 35 and 40 dBA and is at or below the existing sound levels currently experienced in the project vicinity. Sound levels in the 30s and 40s dBA would be considered fairly typical for rural or sparsely populated areas.

I hope this additional data is helpful in responding to the Corps information request. Please let me know if you need any further assistance.

