

Appendix A

Surf Noise Data

The following represents the results of nine days of surf noise measurements conducted at Location 9, atop the west side of the fuel oil tank containment berm, west of south fuel oil tank, overlooking the surf of the Pacific Ocean. The measurements were conducted in three sets of three-day long, continuous noise measurements.

**9 Days of Surf Noise Measurements: Calculation of Typical Low Surf-Noise Levels
(As measured at Location 9, west of South Fuel Oil Tank)**

		L_{eq} (dBA)	L₅₀ (dBA)	L₉₀ (dBA)	4-Hour L₅₀ (dBA)		Lowest 4-Hour Period in 24-Hours (dBA)	Average of 9 Lowest 4-Hour Intervals (dBA)
6/20/01	15:00	63.2	62.5	60.8		60.8	57.6	61.0
	16:00	63.1	62.1	58.3		59.7		
	17:00	61.0	59.8	56.0		58.7		
	18:00	60.6	58.8	54.5		58.1		
	19:00	59.7	58.3	55.1		57.8		
	20:00	59.1	57.8	55.1		57.6		
	21:00	59.3	57.5	55.0		58.7		
	22:00	59.4	57.5	54.3		59.9		
	23:00	60.3	57.8	55.1		60.8		
6/21/01	0:00	62.4	61.8	58.9		61.5	57.5	
	1:00	63.1	62.3	60.8		61.3		
	2:00	62.1	61.3	60.0		61.0		
	3:00	61.3	60.5	59.3		61.0		
	4:00	61.4	61.0	59.3		61.3		
	5:00	61.3	61.0	59.0		61.5		
	6:00	62.0	61.3	60.3		61.5		
	7:00	62.4	61.8	60.0		61.3		
	8:00	62.4	62.0	59.5		61.3		
	9:00	61.9	61.0	57.8		61.2		
	10:00	61.5	60.5	56.5		61.5		
	11:00	62.1	61.5	57.5		62.0		
	12:00	62.6	61.8	58.5		62.4		
	13:00	63.0	62.3	60.3		62.6		
	14:00	63.2	62.3	60.5		62.5		
	15:00	64.3	63.3	61.0		62.1		
	16:00	63.2	62.5	60.8		60.9		
	17:00	62.4	61.8	58.8		59.7		
	18:00	61.8	60.6	57.2		58.5		
	19:00	60.7	58.8	55.5		57.7		
	20:00	59.1	57.5	54.8		57.5		
	21:00	58.7	57.0	54.0		58.1		
	22:00	59.4	57.3	54.3		59.5		
	23:00	59.9	58.1	54.5		60.8		
6/22/01	0:00	61.1	60.1	56.1		61.5		
	1:00	63.1	62.8	60.3		61.6		
	2:00	62.7	62.3	60.8		61.2		
	3:00	61.5	61.1	59.5		61.0		

	4:00	60.7	60.3	58.5	61.2			
	5:00	61.4	61.0	59.0	61.9			
	6:00	62.0	61.5	60.1	62.1			
	7:00	62.7	62.0	61.0	62.1			
	8:00	63.7	63.0	61.5	62.1			
	9:00	62.9	62.0	59.8	61.8			
	10:00	62.3	61.5	57.8	61.9			
	11:00	62.5	61.8	57.5	62.3			
	12:00	62.5	61.8	57.5	62.6			
	13:00	63.5	62.5	59.2	63.1			
	14:00	63.8	63.3	60.8	63.3			
	15:00	64.0	63.0	61.5	63.3	60.6		
	16:00	64.5	63.5	61.8	63.2			
	17:00	64.6	63.5	61.8	62.5			
	18:00	63.6	63.3	60.5	61.8			
	19:00	63.4	62.3	59.3	61.1			
	20:00	62.0	61.0	58.0	60.6			
	21:00	61.8	60.8	58.0	60.8			
	22:00	62.0	60.3	57.5	61.3			
	23:00	61.6	60.5	57.8	62.1			
6/23/01	0:00	62.6	61.8	58.0	62.7			
	1:00	63.5	62.8	60.5	62.7			
	2:00	64.3	63.5	62.3	62.3			
	3:00	63.6	62.8	61.8	61.8			
	4:00	62.4	61.8	60.8	61.6			
	5:00	61.7	61.0	60.0	62.2			
	6:00	62.3	61.5	60.5	63.0			
	7:00	63.0	62.3	61.3	63.6			
	8:00	64.4	64.0	62.8	63.8			
	9:00	64.8	64.0	63.0	63.6			
	10:00	64.5	64.0	62.0	63.4			
	11:00	63.9	63.0	61.0	63.3			
	12:00	63.8	63.3	60.5				
	13:00	63.7	63.3	61.1				
	14:00	64.3	63.8	62.1				
7/31/01	14:00	64.7	64.0	62.8	63.5	61.5		
	15:00	64.5	64.0	62.0	63.0			
	16:00	64.0	63.3	61.5	62.5			
	17:00	63.6	62.5	60.3	62.1			
	18:00	63.3	62.0	59.5	61.7			
	19:00	63.0	62.0	59.3	61.5			
	20:00	62.5	61.8	59.3	61.8			
	21:00	62.1	61.0	59.0	61.9			
	22:00	62.6	61.3	60.3	62.1			
	23:00	63.3	63.0	61.0	62.3			

8/1/01	0:00	63.0	62.3	61.0	62.1		
	1:00	62.6	62.0	61.0	62.1		
	2:00	62.2	62.0	61.0	62.5		
	3:00	62.4	62.0	61.0	62.9		
	4:00	63.1	62.5	61.8	63.2		
	5:00	63.8	63.3	62.3	63.1		
	6:00	64.2	63.8	62.3	62.8		
	7:00	63.6	63.1	61.3	62.7		
	8:00	63.0	62.3	60.0	62.8		
	9:00	63.5	62.3	60.0	63.2		
	10:00	63.8	63.3	61.0	63.6		
	11:00	64.4	63.5	61.8	63.8		
	12:00	64.7	63.8	62.3	63.9		
	13:00	64.6	64.0	62.5	64.0		
	14:00	64.6	64.0	62.8	63.8	61.3	
	15:00	64.8	64.0	62.3	63.3		
	16:00	64.3	64.0	62.0	62.7		
	17:00	64.3	63.3	61.3	62.0		
	18:00	63.0	62.0	59.8	61.4		
	19:00	62.3	61.5	59.0	61.3		
	20:00	61.8	61.0	58.0	61.6		
	21:00	61.6	61.0	58.0	62.1		
	22:00	62.2	61.5	58.5	62.4		
	23:00	63.2	62.8	60.8	62.5		
8/2/01	0:00	63.6	63.0	61.3	62.0		
	1:00	62.9	62.3	61.3	61.7		
	2:00	62.1	61.8	60.3	61.6		
	3:00	61.6	61.0	60.0	61.9		
	4:00	62.3	61.8	60.8	62.2		
	5:00	62.8	62.0	61.0	62.3		
	6:00	63.2	63.0	61.0	62.0		
	7:00	62.8	62.0	60.0	61.5		
	8:00	62.8	62.0	59.5	61.4		
	9:00	61.9	61.0	58.3	61.5		
	10:00	61.8	61.0	57.5	62.0		
	11:00	62.3	61.5	58.5	62.5		
	12:00	63.3	62.5	60.5	62.9		
	13:00	63.6	63.0	61.5	63.0		
	14:00	63.5	63.0	61.5	63.0	60.5	
	15:00	64.1	63.0	62.0	62.8		
	16:00	63.9	63.0	61.8	62.3		
	17:00	63.3	63.0	60.5	61.8		
	18:00	62.6	62.0	59.5	61.1		
	19:00	62.0	61.0	58.3	60.6		
	20:00	61.8	61.0	57.8	60.5		
	21:00	61.5	60.3	57.3	60.6		

	22:00	61.3	60.0	57.0	61.0			
	23:00	61.6	60.8	57.5	61.5			
8/3/01	0:00	62.0	61.3	59.1	61.5			
	1:00	62.7	62.0	60.8	61.4			
	2:00	62.2	61.8	60.3	61.3			
	3:00	61.7	61.0	59.8	61.3			
	4:00	61.6	61.0	60.0	61.6			
	5:00	62.2	61.5	60.3	61.5			
	6:00	62.3	61.8	60.3	61.3			
	7:00	62.4	62.0	59.5	61.1			
	8:00	61.6	60.8	57.0	60.8			
	9:00	61.6	60.8	57.0	61.1			
	10:00	61.8	60.8	57.0	61.6			
	11:00	62.0	61.0	56.8				
	12:00	62.7	62.1	58.3				
	13:00	63.2	62.5	59.5				
8/6/01	12:00	64.2	63.5	61.8	63.9	63.3		
	13:00	64.5	64.0	62.8	64.1			
	14:00	64.6	64.0	63.0	64.1			
	15:00	64.7	64.0	63.0	64.2			
	16:00	64.9	64.3	63.0	64.3			
	17:00	65.1	64.3	63.3	64.2			
	18:00	64.9	64.3	63.0	64.0			
	19:00	64.9	64.3	63.0	63.7			
	20:00	64.7	64.0	62.8	63.6			
	21:00	64.1	63.5	61.1	63.6			
	22:00	63.7	63.0	60.3	63.7			
	23:00	64.2	63.8	61.0	63.9			
8/7/01	0:00	64.6	64.0	62.0	64.0			
	1:00	64.9	64.0	63.0	63.9			
	2:00	64.9	64.0	63.0	63.7			
	3:00	64.8	64.0	63.0	63.4			
	4:00	64.2	63.8	62.8	63.3			
	5:00	63.5	63.0	62.0	63.5			
	6:00	63.5	63.0	62.0	64.0			
	7:00	64.1	63.5	62.8	64.4			
	8:00	64.9	64.3	63.3	64.5			
	9:00	65.4	65.0	63.3	64.3			
	10:00	65.4	64.8	63.0	63.9			
	11:00	64.6	64.0	61.8	63.6			
	12:00	64.2	63.5	61.5	63.6	63.6		
	13:00	64.4	63.3	62.0	63.8			
	14:00	64.4	63.8	62.8	63.9			
	15:00	64.9	64.0	63.0	64.1			
	16:00	64.6	64.0	63.0	64.1			
	17:00	64.6	64.0	63.0	64.3			

	18:00	65.5	64.5	63.3	64.3		
	19:00	64.8	64.0	63.0	64.1		
	20:00	65.1	64.5	62.8	63.9		
	21:00	64.6	64.0	61.8	63.7		
	22:00	64.0	63.8	61.0	63.7		
	23:00	63.8	63.3	60.8	63.9		
8/8/01	0:00	64.0	63.8	61.3	64.3		
	1:00	64.4	64.0	62.5	64.5		
	2:00	65.0	64.5	63.0	64.5		
	3:00	65.2	65.0	64.0	64.4		
	4:00	65.1	64.5	63.5	64.1		
	5:00	64.5	64.0	63.0	64.0		
	6:00	64.3	64.0	63.0	64.2		
	7:00	64.5	64.0	63.0	64.4		
	8:00	64.8	64.0	63.3	64.4		
	9:00	65.1	64.8	63.0	64.3		
	10:00	65.0	64.8	62.5	63.9		
	11:00	64.6	64.0	61.5	63.6		
	12:00	64.2	63.8	60.8	63.5	63.4	
	13:00	63.8	63.0	61.0	63.4		
	14:00	64.0	63.5	61.5	63.6		
	15:00	64.9	63.8	62.0	63.6		
	16:00	64.1	63.3	62.0	63.7		
	17:00	64.2	63.8	62.3	63.9		
	18:00	64.2	63.8	62.0	63.9		
	19:00	64.3	64.0	62.5	64.0		
	20:00	64.5	64.0	62.3	63.8		
	21:00	64.6	64.0	62.0	63.6		
	22:00	64.4	64.0	61.3	63.6		
	23:00	64.1	63.3	60.5	63.6		
8/9/01	0:00	64.1	63.3	60.3	63.8		
	1:00	64.1	63.8	61.3	63.9		
	2:00	64.5	64.0	62.0	63.9		
	3:00	64.4	64.0	62.0	63.8		
	4:00	64.5	64.0	62.5	63.8		
	5:00	64.0	63.5	62.0	63.8		
	6:00	64.2	63.8	62.0	63.9		
	7:00	64.4	64.0	62.5	64.0		
	8:00	64.6	64.0	62.5	64.0		
	9:00	64.7	64.0	62.3			
	10:00	65.0	64.0	63.0			
	11:00	64.9	64.0	62.8			

Nine Days of Surf Noise Measurements: Hourly Noise Level at Location 9 (L₅₀ dBA)

