North Side Energy Center
Sound Level Analysis - Tonal Analysis

Tonal Analysis for 10 Nearest Receptors
Table 19-8 Updated: Tonal Analysis & Compliance Evaluation: Modeled Sound Pressure Levels

Received Sound Pressure Levels

Receptor ID	One-Third Octave Band Center Frequency (Hz)	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
	Tonal Limit	-	15	15	15	15	15	15	15	8	8	8	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	-
51	Received Sound Pressure Level (dB)	38	38	40	45	57	49	44	42	44	44	42	40	43	41	39	40	39	38	38	37	35	33	26	22	19	14	2
	Average Sound Pressure Level of Contiguous Bands	-	39	42	48	47	51	45	44	43	43	42	42	41	41	41	39	39	39	38	37	35	31	28	23	18	10	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	1	0	2	-1	0	1	4	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
108	Received Sound Pressure Level (dB)	39	39	41	46	58	50	46	43	46	45	43	42	44	43	41	41	41	40	40	39	37	35	29	26	24	22	12
	Average Sound Pressure Level of Contiguous Bands	-	40	43	50	48	52	47	46	44	44	43	44	42	42	42	41	40	40	39	38	37	33	31	27	24	18	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	1	0	2	-2	0	0	4	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
110	Received Sound Pressure Level (dB)	39	39	41	46	58	50	46	43	46	45	43	42	44	43	41	41	41	40	40	39	38	37	31	30	30	31	26
	Average Sound Pressure Level of Contiguous Bands	-	40.2	42.7	49.6	48.1	51.8	46.7	45.6	44.1	44.3	43.3	43.6	42.3	42.4	42.1	40.9	40.5	40.5	39.6	39.0	38.0	34.6	33.1	30.5	30.1	28.0	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	0	0	2	-2	-1	0	3	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
178	Received Sound Pressure Level (dB)	36	36	38	43	54	47	42	40	42	41	39	38	40	39	37	37	37	36	36	35	33	31	24	20	17	12	0
	Average Sound Pressure Level of Contiguous Bands	-	37	39	46	45	48	43	42	41	41	40	40	39	39	38	37	37	36	35	34	33	28	25	20	16	8	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	1	0	2	-1	0	1	4	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
272	Received Sound Pressure Level (dB)	41	41	43	48	60	52	48	45	48	47	45	44	46	45	43	44	43	42	43	42	41	40	35	34	35	36	32
	Average Sound Pressure Level of Contiguous Bands	-	42	45	52	50	54	49	48	46	46	45	46	44	45	44	43	43	43	42	42	41	38	37	35	35	34	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	0	0	2	-2	-1	0	3	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
333	Received Sound Pressure Level (dB)	42	42	44	49	60	53	48	46	48	47	46	44	47	45	43	44	44	43	43	43	41	40	36	35	35	37	33
	Average Sound Pressure Level of Contiguous Bands	-	43	45	52	51	54	49	48	47	47	46	46	45	45	45	44	43	43	43	42	42	38	38	35	36	34	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	0	0	2	-2	-1	0	3	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
336	Received Sound Pressure Level (dB)	35	36	38	42	54	46	42	39	42	41	39	38	40	39	37	37	37	36	36	35	33	31	25	23	22	22	17
	Average Sound Pressure Level of Contiguous Bands	-	36	39	46	44	48	43	42	40	40	39	40	38	38	38	37	36	36	35	34	33	29	27	24	22	20	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	1	0	2	-2	-1	0	2	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-

Receptor ID	One-Third Octave Band Center Frequency (Hz)	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
	Tonal Limit	-	15	15	15	15	15	15	15	8	8	8	8	8	5	5	5	5	5	5	5	5	5	5	5	5	5	-
377	Received Sound Pressure Level (dB)	39	40	42	46	58	51	46	44	46	45	43	42	45	43	41	42	42	41	41	41	39	38	34	33	33	35	30
	Average Sound Pressure Level of Contiguous Bands	-	41	43	50	49	52	47	46	44	45	44	44	43	43	43	41	41	41	41	40	39	36	35	33	34	32	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	0	0	2	-2	-1	0	3	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
426	Received Sound Pressure Level (dB)	38	39	40	45	57	49	45	42	45	44	42	41	43	42	40	40	40	38	38	38	36	34	27	23	20	16	3
	Average Sound Pressure Level of Contiguous Bands	-	39	42	49	47	51	46	45	43	43	42	43	41	41	41	40	39	39	38	37	36	31	29	24	19	12	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	1	0	2	-1	0	1	4	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
568	Received Sound Pressure Level (dB)	39	39	41	46	58	50	45	43	45	45	43	41	44	43	40	41	41	40	40	40	39	38	33	32	33	34	30
	Average Sound Pressure Level of Contiguous Bands	-	40	42	49	48	51	46	45	44	44	43	43	42	42	42	41	40	41	40	39	39	36	35	33	33	31	-
	Difference between Sound Pressure Level and Contiguous Average	-	-1	-1	-4	10	-2	-1	-2	1	1	0	-2	2	0	-1	0	1	-1	0	0	0	2	-2	-1	0	3	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-