

Predicted Operation Noise Levels

NSR: N S1

Noise Source	SWL dB(A)	Qty	% Utilization			Horizontal Distance, m	NSR Height mPD	Noise Source Height, mPD	Slant Distance, m	Correction, dB(A)				Noise level at NSR, dB(A)		
			Daytime	Evening time	Nighttime					Façade	Distance	Tonality <sup>(8)</sup>	Screening <sup>(9)</sup>	Daytime	Evening time	Nighttime
Berth 1 - IWMF	100	1	80%	50%	-	246	74	13	254	3	-56	-	-	46	44	-
Berth 2 - IWTS	100	1	80%	50%	-	321	74	13	327	3	-58	-	-	44	42	-
Berth 3 - IETS	100	1	80%	50%	-	408	74	13	413	3	-60	-	-	42	40	-
Berth 4 - WKTS	98	1	80%	50%	-	515	74	17	518	3	-62	-	-	38	36	-
Berth 5 - Staff/Visitor	100	2	20%	20%	-	204	74	7	215	3	-55	-	-	44	44	-
Stacks for the incinerator <sup>(1) (2)</sup>	97	6	100%	100%	100%	437	74	155	445	3	-64	3	-10	37	37	37
Ventilation System for Main Building <sup>(1) (3)</sup>	97	1	100%	100%	100%	359	74	10	365	3	-59	3	-10	34	34	34
Ventilation System for Mechanical Treatment Plant <sup>(1) (4)</sup>	97	2	100%	100%	100%	553	74	10	557	3	-63	3	-10	33	33	33
Air-cooled Chiller <sup>(5)</sup>	109	3	100%	100%	100%	475	74	5	480	3	-62	3	-20	38	38	38
Container Vehicle														48	48	-
													<b>Total Noise Level</b>	<b>53</b>	<b>52</b>	<b>42</b>
													<b>Criteria</b>	<b>55</b>	<b>55</b>	<b>44</b>

Noise Source <sup>(6) (7)</sup>	SWL dB(A)	Qty	% Utilization	Horizontal Distance, m	NSR Height mPD	Noise Source Height, mPD	Slant Distance, m	Speed, kph	Angle, deg	Correction, dB(A)				Noise Level, dB(A)	
										Façade	Distance	Speed	Angle		Screening
Container Vehicle <sup>(6) (7)</sup>	101	54	100%	225	74	6	235	25	90	3	-24	-14	-3	0	48

NSR: N S2

Noise Source	SWL dB(A)	Qty	% Utilization			Horizontal Distance, m	NSR Height mPD	Noise Source Height, mPD	Slant Distance, m	Correction, dB(A)				Noise level at NSR, dB(A)		
			Daytime	Evening time	Nighttime					Façade	Distance	Tonality <sup>(8)</sup>	Screening <sup>(9)</sup>	Daytime	Evening time	Nighttime
Berth 1 - IWMF	100	1	80%	50%	-	302	74	13	308	3	-58	-	-	44	42	-
Berth 2 - IWTS	100	1	80%	50%	-	402	74	13	406	3	-60	-	-	42	40	-
Berth 3 - IETS	100	1	80%	50%	-	502	74	13	506	3	-62	-	-	40	38	-
Berth 4 - WKTS	98	1	80%	50%	-	618	74	17	621	3	-64	-	-	36	34	-
Berth 5 - Staff/Visitor	100	2	20%	20%	-	226	74	7	236	3	-55	-	-	44	44	-
Stacks for the incinerator <sup>(1) (2)</sup>	97	6	100%	100%	100%	463	74	155	470	3	-64	3	-10	36	36	36
Ventilation System for Main Building <sup>(1) (3)</sup>	97	1	100%	100%	100%	358	74	10	363	3	-59	3	-10	34	34	34
Ventilation System for Mechanical Treatment Plant <sup>(1) (4)</sup>	97	2	100%	100%	100%	499	74	10	503	3	-62	3	-10	34	34	34
Air-cooled Chiller <sup>(5)</sup>	109	3	100%	100%	100%	534	74	5	538	3	-63	3	-20	37	37	37
Container Vehicle														47	47	-
													<b>Total Noise Level</b>	<b>52</b>	<b>51</b>	<b>42</b>
													<b>Criteria</b>	<b>55</b>	<b>55</b>	<b>45</b>

Noise Source <sup>(6) (7)</sup>	SWL dB(A)	Qty	% Utilization	Horizontal Distance, m	NSR Height mPD	Noise Source Height, mPD	Slant Distance, m	Speed, kph	Angle, deg	Correction, dB(A)				Noise Level, dB(A)	
										Façade	Distance	Speed	Angle		Screening
Container Vehicle <sup>(6) (7)</sup>	101	54	100%	266	74	6	274	25	90	3	-24	-14	-3	0	47

NSR: N S3

Noise Source	SWL dB(A)	Qty	% Utilization			Horizontal Distance, m	NSR Height mPD	Noise Source Height, mPD	Slant Distance, m	Correction, dB(A)				Noise level at NSR, dB(A)		
			Daytime	Evening time	Nighttime					Façade	Distance	Tonality <sup>(8)</sup>	Screening <sup>(9)</sup>	Daytime	Evening time	Nighttime
Berth 1 - IWMF	100	1	80%	50%	-	399	79	13	405	3	-60	-	-	42	40	-
Berth 2 - IWTS	100	1	80%	50%	-	469	79	13	473	3	-62	-	-	41	38	-
Berth 3 - IETS	100	1	80%	50%	-	549	79	13	553	3	-63	-	-	39	37	-
Berth 4 - WKTS	98	1	80%	50%	-	648	79	17	651	3	-64	-	-	36	34	-
Berth 5 - Staff/Visitor	100	2	20%	20%	-	356	79	7	363	3	-59	-	-	40	40	-
Stacks for the incinerator <sup>(1) (2)</sup>	97	6	100%	100%	100%	400	79	155	407	3	-63	3	-10	38	38	38
Ventilation System for Main Building <sup>(1) (3)</sup>	97	1	100%	100%	100%	315	79	10	322	3	-58	3	-10	35	35	35
Ventilation System for Mechanical Treatment Plant <sup>(1) (4)</sup>	97	2	100%	100%	100%	254	79	10	263	3	-56	3	-10	40	40	40
Air-cooled Chiller <sup>(5)</sup>	109	3	100%	100%	100%	502	79	5	507	3	-62	3	-20	38	38	38
Container Vehicle														48	48	-
													<b>Total Noise Level</b>	<b>52</b>	<b>51</b>	<b>44</b>
													<b>Criteria</b>	<b>55</b>	<b>55</b>	<b>44</b>

Noise Source <sup>(6) (7)</sup>	SWL dB(A)	Qty	% Utilization	Horizontal Distance, m	NSR Height mPD	Noise Source Height, mPD	Slant Distance, m	Speed, kph	Angle, deg	Correction, dB(A)				Noise Level, dB(A)	
										Façade	Distance	Speed	Angle		Screening
Container Vehicle <sup>(6) (7)</sup>	101	54	100%	178	79	6	192	25	90	3	-23	-14	-3	0	48

Notes:

- (1) Silencer and acoustics treatment will be installed to reduce the noise levels from the ventilation system and stack. 10dB(A) screening correction is therefore assumed.
- (2) The total volume flowrate for each incinerator is 175,033m<sup>3</sup>/hr.
- (3) The total volume flowrate for the ventilation system of Main Building is 108,000 m<sup>3</sup>/hr.
- (4) The total volume flowrate for the ventilation systems of Mechanical Treatment Plant is 205,000m<sup>3</sup>/hr and assume the volume flowrate for each system is 102,500m<sup>3</sup>/hr.
- (5) Enclosure and discharge silencer will be installed to reduce the noise levels from air-cooled chiller. 20dB(A) screening correction is therefore assumed.
- (6) The SWL of the container vehicle is made reference to the approved NENT Landfill EIA Report.
- (7) Based on BS5228-1:2009 F2.5.2 Method for mobile plant using a regular well defined route (haul road).
- (8) For conservative assessment, +3dB(A) tonality correction is considered in the calculation
- (9) 10dB(A) reduction for the noise sources screened by silencer and acoustics treatment and 20dB(A) reduction for the noise sources screened by enclosure and discharge silencer.