Appendix 4.9 - Operational Plant Inventory

Equipment	Location	No. of Equipment		Sound Pressure Level (SPL) for each equipment [2], dB(A)	Sound Power Level (SWL) for each equipment [3], [4], dB(A)
		Option 1	Option 2		
Flood pumps [1]	Pump room	4	4	78 @ 1m	86
Ventilation fan (A) facing to the corridor	Deodorization Room	1	1	50 @ 3m	71
Ventilation fan (B) facing to the corridor	Deodorization Room	1	1	50 @ 3m	71
Ventilation fan (H) facing to the corridor	Plumbing Pumps and Tanks Room & Store Room	1	1	50 @ 3m	71
Ventilation fan (F) facing to the corridor	Motor Room	3	3	68 @ 3m	89
Ventilation fan (D) facing to the southeast	Fuel tank room	-	1	50 @ 3m	71
Ventilation fan (E) facing to the southeast	Generator Room	-	1	50 @ 3m	71
Ventilation fan (G) facing to the southeast	CLP Transformer Room	1	-	50 @ 3m	71
Ventilation fan (C) facing to the southwest	Equipment Hall	9	9	50 @ 3m	71

Note:

[1] Only 4 sets out of total 5 sets of pumps will be operated at any one time.

[2] SPL from specification for similar capacity of equipment given in Appendix 4.11.

[3] For flood pumps, it is assumed that directivity factor will be hemispherical (Q = 2) and SWL = SPL+(20*LOG$_{10}$(r))+8

[4] For ventilation fans, the directivity factor will be spherical free field (Q = 1) as per specification stated in Appendix 4.11 and SWL = SPL+(20*LOG$_{10}$(r))+11

Operation Modes:

Option 1 (General Condition):

4 pumps + All fans except the fans for Fuel Tank Room (D) and Generator Room (E).

Option 2 (Emergency Condition, if CLP power supply fail):

4 pumps + All fans except the fans for CLP transformer Room (G).