

EXECUTIVE SUMMARY

HGC Engineering was retained by Union Gas Limited to prepare an updated Acoustic Assessment Report (“AAR”) for the Bright Compressor Station near Bright, Ontario. This updated AAR considers a number of changes that have taken place at the site since the previous AAR [1]. This report has been prepared to satisfy condition 5.2 of Environmental Compliance Approval 2592-AQPSJ2, issued by the Ontario Ministry of the Environment, Conservation and Parks (“MECP”), which requires that a current AAR be maintained.

Source sound level measurements of the majority of sources were conducted at the facility on several occasions between 2003 and 2011. Sound emissions from the C Plant, aftercooler, three emergency generators and two firewater pumps were based on measurements conducted by HGC Engineering at other similar Union Gas installations. The source sound levels were used as input to a computational acoustical model to quantify the environmental sound emissions associated with the facility.

Acoustic assessment criteria were established in accordance with the sound level limits in MECP guideline NPC-232.

The measurements and analysis indicate that the sound levels of the facility are within the applicable limits as set out in MECP publication NPC-232. Given the absence of any sources of ground-borne vibration at the site, the facility also complies with the applicable vibration limits of MECP Publication NPC-207.

Table A3: Acoustic Assessment Summary Table

Point of Reception	Point of Reception Description	Sound Level at Point of Reception, L_{EQ} [dBA]		Verified by Acoustic Audit	Performance Limit, L_{EQ} [dBA]		Compliance with Performance Limit
		Day	Evening/Night		Day	Evening/Night	
R1	Two storey dwelling approx. 450 m south of station	45	40	No	45	40	Yes/Yes
R2	Two storey dwelling approx. 600 m southeast of station	42	38	No	45	40	Yes/Yes
R3	Two storey dwelling approx. 680 m east of station	40	35	No	45	40	Yes/Yes
R4	Two storey dwelling approx. 780 m southeast of station	38	36	No	45	40	Yes/Yes
R5	Two storey dwelling approx. 950 m northwest of station	41	39	No	45	40	Yes/Yes

Notes:

1. Point of Reception sound levels include a + 5 dBA penalty for tonality.
2. As outlined in Section 3.5 of the report, a typical predictable worst case hour of facility operation includes up to three compressor plants, along with daytime testing of one emergency generator (EG2). The three compressor plants operating in the above tabulated scenario are A1, B and C Plants, which result in the highest offsite sound levels.



ACOUSTICS



NOISE



VIBRATION