

## EXECUTIVE SUMMARY

HGC Engineering was retained by Union Gas Limited to prepare an updated Acoustic Assessment Report (“AAR”) for the Dawn Compressor Station near Dresden, Ontario. This updated AAR considers a number of changes that have taken place at the site since the previous AAR [1], as well as a proposed new power generator designated as “Dawn H2”. 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 existing sources were conducted at the facility on numerous occasions between 2005 and 2018 and on acoustical data for similar equipment measured at other sites. 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 guidelines NPC-205 and NPC-232.

The measurements and analysis indicate that the sound levels of the facility, including the proposed Dawn H2 power generator, are within the applicable limits as set out in MECP publications NPC-205 and 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. 1600 m northeast of station	40	40	Yes	45	40	Yes/Yes
R2	Two storey dwelling approx. 2050 m northwest of station	38	38	Yes	45	40	Yes/Yes
R3	Two storey dwelling approx. 1650 m west of station	41	41	Yes	50	45	Yes/Yes
R4	Two storey dwelling approx. 2150 m southwest of station	35	35	Yes	45	40	Yes/Yes
R5	Two storey dwelling approx. 1450 m southeast of station	39	39	Yes	45	40	Yes/Yes

**Notes:**

1. Point of Reception sound levels include a + 5 dBA penalty for tonality.
2. As outlined in Section 3.7 of the report, a typical predictable worst case hour of facility operation includes up to four compressor plants, the Dehy, along with Aux 3, Aux 4A/B, Dawn H1/H2 and daytime testing of Aux 2. The sound power level of all sound sources at the station are included herein for completeness. The four compressor plants operating in the above tabulated scenario are C, D, E and H Plants.



ACOUSTICS



NOISE



VIBRATION