EXECUTIVE SUMMARY

HGC Engineering was retained by Union Gas Limited to undertake an Acoustic Assessment of the Dow A Pool Station in Moore Township, Ontario. The study is required in support of an application for a Comprehensive Certificate of Approval (C of A) to the Ministry of Environment (MOE). The assessment considers all existing operable sound sources at the facility.

Source sound level measurements of existing sources were conducted at the facility on September 24, 2007. The measured source sound levels were used as input to a predictive 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 MOE guideline NPC-232.

The measurements and analysis indicate that noise emissions from the Dow A Pool Station are within the applicable limits, as set out in MOE publication NPC-232, during a predictable worst case hour of operation at the station.

Table A2: Point of Reception Noise Impact Table

Source ID	Source Name	Point of Reception			
		R1		R2	
		Dist [m]	L_{EQ} [dBA]	Dist [m]	L_{EQ} [dBA]
U1	Recip. Combustion Exhaust	477	27	603	24
NS-01	Recip. Combustion Exhaust Muffler Casing	477	30	603	15
NS-02	Recip. Radiator (West)	463	26	592	17
NS-03	Recip. Radiator (East)	468	27	597	14
NS-04	Gas Aftercooler Fan 1	446	28	571	32
NS-05	Gas Aftercooler Fan 2	451	28	576	32
NS-06	Gas Aftercooler Discharge Piping	444	14	567	21
NS-07	Compressor Building Ventilation Louvre (West)	460	23	584	28
NS-08	Compressor Building Ventilation Louvre (North)	469	16	581	24
NS-09	Compressor Building Ventilation Louvre (East)	476	12	600	8
NS-10	Compressor Building Ventilation Louvre (South)	467	18	593	4
NS-11	Compressor Building Overhead Door	474	13	586	24

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
R1	Upper storey window of two storey home approx. 470 metres southwest of station	36	N	40	Y
R2	Upper storey window of two storey home approx. 590 metres northwest of station	37	N	40	Y