EXECUTIVE SUMMARY

HGC Engineering was retained by Union Gas Limited to undertake an Acoustic Assessment of the Payne 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 August 14, 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 Payne 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	
		Dist [m]	L_{EQ} [dBA]
U1	Turbine Combustion Exhaust	658	31
NS-01	Turbine Inlet Plenum	659	3
NS-02	Gas Aftercooler	644	35
NS-03	Compressor Building Roof Vent (West)	658	20
NS-04	Compressor Building Roof Vent (East)	659	22
NS-05	Compressor Building North Ventilation Louvre (West)	663	7
NS-06	Compressor Building North Ventilation Louvre (East)	665	6
NS-07	Compressor Building East Ventilation Louvre	659	11
NS-08	Compressor Building South Ventilation Louvre (West)	650	15
NS-09	Compressor Building South Ventilation Louvre (East)	652	25
NS-10	Compressor Building Open Man Door (East)	665	11
NS-11	Compressor Building Open Man Door (West)	651	26
NS-12	Compressor Building Open Sliding Door	657	32

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. 650 metres south of station	39	N	40	Y