| Maritimes &Northeast Pipeline | National Energy Board GH-3-2002 NEB File No. 3400-M124-14 March 2002 s.58 Mainline Expansion | | IR Date: 8 July 2002 |
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- **References:** (i) EA Report, Concord Section 6.5.2.1 Noise, page 98.
 - (ii) Application, Appendix 3, Drawing No. PFD1, Rev. C.
- **Preamble:** In the application it is stated that in addition to regular noise generated by turbines, there will be episodic maintenance events that will necessitate a blowdown of the pressurized gas in the system, which typically generates noise in the range of 70 dBA.
- **Request:** Please indicate:
 - (a) the distance from the source at which the 70 dBA value is taken;
 - (b) the predicted frequency and duration of the blowdown events;
 - (c) the criteria that would be used to determine when a "slow unit blowdown" is conducted with a unit blowdown silencer, reference (ii);
 - (d) the criteria that would be used to determine when a "fast unit blowdown" is conducted resulting in the gas being vented to the atmosphere, reference (ii);
 - (e) the predicted sound levels at the closest or most impacted residence during temporary blow downs, for each compressor station; and
 - (f) the permissible sound levels, using the Class B adjustment for temporary blow downs, for each compressor station.
- **Response:** (a) The 70 dBa sound level value referenced in the EA Report, Concord Section 6.5.2.1 Noise, page 98 is the estimated sound level 300 m from the compressor station fence line during a compressor station blowdown through a silencer. The 70 dBa is the initial sound level and would quickly drop to about 55 dBa within approximately 5 minutes and be completely exhausted within approximately 15 minutes.
 - (b) The predicted frequency of both planned and unplanned "station" blowdown events will typically be 2 - 6 events per year. This will vary year-to-year depending on actual maintenance requirements. In a typical operating year the majority of station blowdown events will be planned allowing for public notifications to take place to anyone impacted by the event.

Typically, the duration of a complete station blowdown will be approximately 15 minutes through a silenced blowdown stack.

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(c) – (d)

The "fast" and "slow" unit blowdown references shown in drawing No. PFD1. Rev. C. identifies two potential options for a unit blowdown scenario. Typically, a fast unit blowdown would occur during an emergency situation when a quick blowdown is required to avoid a potentially hazardous situation. In this scenario the gas would vent directly to atmosphere. A slow unit blowdown would typically be an option during a planned event such as the maintenance or inspection of equipment. In this scenario the gas would be vented to atmosphere through a blowdown silencer.

(e) The predicted sound levels at the most impacted resident at each compressor station during a blowdown are shown in the table below. The information contained in the table below should be considered preliminary pending detailed design and engineering.

| Compressor Station | Most Impacted Receptor | Predicted Sound Level (during a blowdown) | Approximate distance from Compressor Station Fence Line. |
|-----------------------|---------------------------|---|--|
| CS # 1 | Stewart | 63 dBa | 580 m |
| CS # 2 | Hicks | 58 dBa | 1000 m |
| CS # 3 | NA | NA | NA |
| CS # 4 | Nason | 58 dBa | 950 m |

(f) The permissible sound levels during a temporary a blowdown using class "B" adjustments are as follows:

| Compressor Station | PSL (daytime) | PSL (nighttime) |
|-----------------------|-------------------|-------------------|
| CS # 1 – Concord | 67.6 dBa | 57.6 dBa |
| CS # 2 – Amherst Head | 63.2 dBa | 53.2 dBa |
| CS # 3 – New Canaan | 65 dBa (@ 1500 m) | 50 dBa (@ 1500 m) |
| CS # 4 – Tracyville | 68.1 dBa | 58.1 dBa |