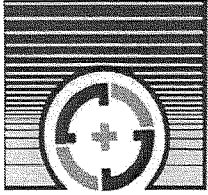


APPENDIX J

Construction Noise Monitoring Plan



**ENVIRONMENTAL SAFETY ASSOCIATES
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Draft Noise Monitoring Plan for AMD Facility Construction Phase

This is a draft plan. The final noise monitoring plan will be provided to the Town of Malta Planning Board during the Site Plan Review.

INSTRUMENTATION

Instrumentation for measurement of A-weighted sound levels and octave-band data shall consist of an integrating sound level meter with octave-band capability meeting the requirements of ANSI S1.4-1983 (R1997), IEC60651-1979 Type I or II.

Instrumentation for unattended measurements shall consist of one or more noise logging dosimeters meeting ANSI S1.25, EN 61252, Type II.

All microphones for this activity shall be equipped with a manufacturer's approved windscreen at all times during use.

Calibration of all instruments is to be checked a minimum of one day before use using a calibrator that meets ANSI S1.40-1984 and IEC 942:1988 Class 1, and has been laboratory calibrated to NIST standards no more than 1 year prior to this activity.

Calibration shall be rechecked upon completion of the readings. If there is a variation exceeding one (1) dB, the readings must be discarded. (see ASTM E1014-84)

MEASUREMENT LOCATIONS AND CONDITIONS

Measurement shall be done using guidelines documented in ASTM E1014-84 (2000). Locations shall be selected at the real property line of the noise sensitive receptor (residential property) closest to the area where the construction noise is being produced. If construction noise is being produced in more than one area, or if properties in a different direction are affected, multiple instruments may be required to monitor all noise sensitive receptors. The sampling period for any location shall not be less than 10 minutes.

The locations selected shall not be blocked in any way from the sound source, and shall be at least 3 feet away from any vertical structure or tree that might reflect sound and cause an erroneous reading.

The wind speed and direction, and temperature shall be recorded at each measurement location using an instrument suitable for this use.

Measurements shall be made at a height of 4-5' from the ground.

Measurement will not be made when there is precipitation or when the wind speed exceeds 10mph.

Ambient (background) noise level (without construction) shall be noted at each designated monitoring location prior to the commencement of construction activity. Corrections will be made to the readings taken during construction per the following table:

IF THE AMBIENT IS:

0-1 dB less than the measured value	Then subtract 3dB
2-3 dB less than the measured value	Then subtract 2dB
4-7 dB less than the measured value	Then subtract 1dB
8dB or more less than the measured value	No adjustment

MONITORING

Monitoring of noise shall be done:

- Upon commencement of construction activities
- Whenever new noise producing machinery is introduced to the site
- When valid complaints of excessive noise are registered
- As requested by town officials

Excess noise shall be noted and documented. Excess noise is defined below:

Noise which, when measured at the real property line of a noise-sensitive receptor or beyond, exceeds an average level (Leq) or L₁₀ exceedance value of 55dBA daytime, 45dBA nighttime.

or

exceeds the average levels defined above by frequency, as shown in Table 1.

ALLOWABLE RESIDENTIAL NOISE LIMITS BY FREQUENCY
Table 1

OCTAVE BAND (Hz.)	Daytime Limit at Residential Property Line and Beyond	Nighttime Limit at Residential Property Line and Beyond
31.5	70	64
63	64	58
125	61	51
250	57	46
500	53	43
1000	49	39
2000	46	36
4000	43	33
8000	40	30

References:

- ANSI S1.4-1983 (R1997) – “Standard for Sound Level Instrumentation:
ANSI S1.25-1983 “Standard for Noise Dosimeters”
ASTM E1014-84 (2000) – “Standard Guide for Measurement of Outdoor A-Weighted Sound Levels”
Brooks, Bennett. “Local Ordinance Targeted to Low-Frequency Noise,” Paper 4pNSa1, Proceedings of the Annual Meeting of the Acoustical Society of America, November 1999.
Noise Ordinance, City of Portland, OR, as amended 1992.
Noise Ordinance, Chapter XI, City of Los Angeles, CA amended 1997
Noise Ordinance, Section 22-37, City of Naples, FL. 2006
Noise Ordinance, Chapter 110, Article XXIV, City of Fairfax, VA. 2003
Model Noise Ordinance, New Jersey DEP. 1974
Noise Ordinance, Section #3-98, Denville, NJ Township.2004
Noise Ordinance, Chapter 389, City of Minneapolis, MN. 1997
Noise Ordinance, Article 44.000, Village of Volente, CA. 2008