

## **20.0 BLASTING**

### **20.1 INTRODUCTION**

Based on desktop review of existing soils and geology maps, on-site soil surveys, and geotechnical investigations conducted on site, blasting may be required in certain locations to construct the proposed Project. As such, the Applicant will consult with the Towns of Benton and Clinton, the LUPC, and the MDEP prior to conducting blasting activities. Blasting would only occur at areas with shallow depth to bedrock to allow for construction of the solar panel racking structure foundations, burial of the underground Collector, the collection substation, and O&M building. Construction of the Genlead is not anticipated to require blasting.

All approved blasting activities will be conducted in accordance with local, state, and federal regulations, as indicated in Section 20.3. Blasted rock and other areas of excavation cuts will provide fill that can be used elsewhere on-site during the construction of access roads.

### **20.2 SOILS**

The Project solar array area consists primarily of regenerating forests and gentle to moderate slopes. Soils range from well drained soils in areas of higher elevation to very poorly drained soils in lowland wetlands. The Project solar array area is dominated by Per/Colonel Complex, Marlow/Peru Complex, and Tunbridge/Lyman Complex soils (see Section 11.0). Dominant soils within the solar array areas are somewhat poorly drained to somewhat excessively drained and formed in dense glacial till (see Exhibit 11-1). All modifications to drainage or slope are proposed as shown on the grading plan (see civil site plans in Exhibit 1-1).

The Applicant will provide advance notice to the Towns of Benton and Clinton, LUPC, and MDEP, as required by local and state permit conditions, for necessary blasting in localized areas during construction.

### **20.3 BLASTING PLAN**

This section describes the Applicant's blasting plan, which will be implemented should unanticipated, and subsequently approved, blasting be necessary. Blasting operations will follow local, state, and federal regulations related to the transportation and use of explosives, including ground vibration, flyrock control, and sound (38 M.R.S.A. §490-Z(14) and M.R.S.A. Title 25, Chapter 318). Flyrock will be controlled so that it remains on the Project site and does not enter protected natural resources unless the MDEP has previously approved alteration of the resource in the impacted area.

#### **20.3.1 Pre-Blast Surveys and Notifications**

Pre-blast surveys will be offered to property owners with structures, wells, etc., within a 2,000-foot radius of the blast site. Appropriate notices will be given, and appointments will be arranged for those owners who desire a survey. Results of those surveys will be documented through video or still photographs and appropriate narration or written reports.

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Prior to blasting, the owner or operator will develop and implement a plan to provide notification of a planned blast to all persons located within 1,000 feet of the blast site. Notification may be made by telephone, in writing, by public notice in a newspaper of general circulation in the area affected, or by other means identified in the plan. The plan must be in writing and must be available for inspection by MDEP.

#### 20.3.2 Blast Monitoring

Blasts will be monitored by a representative who has been properly trained in the setup and use of seismic monitoring equipment. At least one seismograph will be in use at all times, and monitoring equipment will be placed at the structure in the closest proximity to the blast site.

#### 20.3.3 Sequence of Blasting

Blasting operations will be strictly coordinated with appropriate parties including the local Fire Department. Operations will emphasize the safe and efficient removal of rock without impacting surrounding structures. Blasts will be developed to create adequate relief that will minimize ground vibrations and offer the greatest possible protection to surrounding structures. Ground vibration at offsite structures will not exceed the limits identified in the Report of Investigations 8507, Structure Response and Damage Produced by Ground Vibration from Surface Mine Blasting, as shown on Figure B-1 of Appendix B.<sup>1</sup>

#### 20.3.4 Blasting Procedures

- Explosives will be delivered to the job site on a daily basis or will be stored in a secured bulk tank at the Project site per applicable regulations.
- Blasting operations will occur Monday through Friday, commencing after 7 am and ceasing by 7 pm.
- Blasting will not be conducted at times different from those announced in the blasting schedule although will be suspended in emergency situations, such as electrical storms or other circumstances concerning public safety.
- Warning and "all clear" signals of different character will be sounded within an audible range of 0.5 miles from the blasting location. Persons within the permit area will be notified of signal designations through appropriate instructions and posted signs.
- Blasting area access will be regulated to protect the public from the effects of blasting. Access to the blasting area will be controlled to prevent unauthorized entry before each blast and until it is determined that no unusual circumstances exist following the blast, at which point access to the area can then safely resume.
- Areas in which charged holes are awaiting firing will be guarded, barricaded, and posted or flagged to prohibit unauthorized entry.
- Blasts will be made in the direction of the stress relieved face.
- Stemming material will be clean, dry 3/8-inch crushed stone.

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<sup>1</sup> <https://www.osmre.gov/resources/blasting/docs/USBM/RI8507BlastingVibration1989.pdf>

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#### **20.3.5 Blast Security and Warning Whistles**

Each blast will be preceded by a security check of the affected area and a series of warning whistles. Communications will be made with job site supervisors and local officials as required to ensure safe operations. Personnel in the vicinity closest to the blast area will be warned. The warning whistles will consist of the following sequence: 3 whistles = 5 minutes to blast; 2 whistles = 1 minute to blast; and 1 whistle = all clear. The blast site will be examined by the blaster prior to the “all clear” signal to determine that it is safe to resume work. No blast will be fired until the area has been secured and deemed safe.

#### **20.3.6 Blasting Personnel**

Blasting operations will be conducted by experienced, trained, and competent persons who understand the hazards involved. Persons working with explosive materials will be aware of safety and security requirements and will comply with such protocols. Those responsible for explosives will possess current knowledge of applicable local, state, and federal laws and regulations and will also possess a Certificate of Competency or a license as required by state law. Furthermore, persons working with explosives will be in good physical condition with no addictions to intoxicants, narcotics, or other similar drugs and will exercise mature judgement in all situations.

#### **20.3.7 Licenses, Permits, and Records**

Blasting operations will be performed by a blaster who is fully licensed and insured for the transportation, use, and handling of explosives. Blasting permits will be obtained as required by local authorities. Records of individual blasts will comply with 38 M.R.S.A. §490-Z(14)(L).

#### **20.3.8 Blast Vibration and Sound**

Blast vibration will be monitored at the blast site, typically at the structure(s) closest to the blast site. Vibration limits will adhere to guidelines described in state regulations, and sound from blasting will comply with 38 M.R.S.A. §490-Z(14)(H). Blast designs will be modified as required to remain within the guidelines and operations will be modified accordingly when approaching buildings and utilities.