



NOISE AND VIBRATION VOL 1

BASELINE DATA AND METHODS

TWIN METALS MINNESOTA PROJECT

Environmental Review Support Document

Prepared for Twin Metals Minnesota, LLC
Prepared by

Document No. TMM-ES-025-0150-01
Revision 0A
November 20, 2020



REVISION RECORD

Revision	Date	Description	EDMS Download Date	Project Configuration Version
0A	11-20-2020	Submitted for Agency Review – TOC		

REVISION NARRATIVE

DISCLAIMER

This document is a working document. This document may change over time because of new information, or further analysis or deliberation.



TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	SUMMARY.....	1
3.0	PROPOSED ACTION AND ALTERNATIVES.....	1
3.1	PROPOSED ACTION.....	1
3.2	ALTERNATIVES TO THE PROPOSED ACTION.....	1
3.3	NO ACTION ALTERNATIVE.....	2
4.0	REGULATORY FRAMEWORK.....	2
5.0	AFFECTED ENVIRONMENT.....	2
5.1	AREA OF ANALYSIS.....	2
5.2	METHODS.....	2
5.3	EXISTING CONDITIONS.....	2
6.0	REFERENCES.....	3

TABLES

FIGURES

APPENDICES

LIST OF ABBREVIATIONS, ACRONYMS, AND SYMBOLS

TMM

Twin Metals Minnesota, LLC

1.0 INTRODUCTION

The Twin Metals Minnesota, LLC (TMM) Project (Project) is focused on designing, permitting, constructing, and operating an underground copper, nickel, cobalt, platinum, palladium, gold, and silver mining project. Located approximately nine miles (14 kilometers [km]) southeast of Ely, Minnesota, and 11 miles (18 km) northeast of Babbitt, Minnesota, the Project targets valuable state, federal, and private minerals within the Maturi deposit, which is a part of the Duluth Complex geologic formation.

All potential Project infrastructure locations presented herein are considered preliminary and are undergoing further design and engineering evaluations which will dictate final design and locations. Further information about TMM and the Project is located at <http://www.twin-metals.com/>.

The purpose of this document is to provide necessary information for the environmental review and permitting process. TMM retained [insert Consultant name] (insert abbreviated Consultant name) to complete [insert text].

2.0 SUMMARY

- Provide a high level summary of what is presented within this report.
- Describe how this report volume relates to the other volumes.
- Will describe the rationale for selecting the area of analysis.
- Will describe the area of analysis.
- Describe the existing conditions of the noise and vibration that may be affected by the proposed action and alternatives.
- Reference relevant sections of the FSDD, SEAW, and / or federal documents to remind the reader there is a defined scope that is being followed.

3.0 PROPOSED ACTION AND ALTERNATIVES

3.1 Proposed Action

- Reference the TMM Project Description and Alternatives document and indicate the proposed action is defined within this document.

3.2 Alternatives to the Proposed Action

- Reference the TMM Project Description and Alternatives document and indicate the alternatives to the proposed action are defined within this document.

3.3 No Action Alternative

- Reference the TMM Project Description and Alternatives document and indicate the no action alternative is defined within this document.

4.0 REGULATORY FRAMEWORK

- Establish Regulatory Framework by discussing the following:
 - Definition of noise and vibration
 - Steady noise
 - Non-steady noise
 - Impulsive noise
 - Low frequency noise
 - Noise Area Classifications (NAC) established by the State of Minnesota in Minn. R., part 7030.0040
 - Ground vibrations from blasting (Minn. R., part 6132.2900, subpart 2 B)

5.0 AFFECTED ENVIRONMENT

5.1 Area of Analysis

A discussion will be provided to describe the area of analysis.

- Areas of analysis for noise and vibration will be determined by areas that the proposed action and alternatives could have an impact to the ambient noise levels or vibration.
- Area of analysis will be consistent with the area of potential effect used in the *Noise and Vibration Data Package*.

5.2 Methods

Methods and data sources for defining the affected environment will be described in this section. Data sources may include the following:

- Baseline ambient noise
 - Regional setting
- USFS data collected within the Superior National Forest in the vicinity of the Project area between 2014 and 2016

5.3 Existing Conditions

Using the methods and data sources defined in Section 5.2, existing conditions will be described within this section including the following:

- Baseline ambient noise level
 - Proximal to Project area
 - Regional
- Sensitive receptors identified
- Ground vibrations from blasting associated with Kasota Stone quarry.

6.0 REFERENCES



TABLES



FIGURES



APPENDICES



APPENDIX [#A, B, C, D]

[APPENDIX TITLE]



APPENDIX [#A, B, C, D]

[APPENDIX TITLE]

[Insert page break for each additional appendix.]