HAZARDOUS WASTE
RESOURCE REPORT

TWIN METALS MINNESOTA PROJECT
Environmental Review Support Document

Prepared for Twin Metals Minnesota, LLC
Prepared by

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REVISION RECORD

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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

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

This report will:

- Describe the proposed action and alternatives;
- Establish the area where baseline conditions of hazardous waste need to be assessed;
- Define the methodology used to assess the baseline conditions;
- Describe the baseline conditions;
- Describe the methodology used to assess the impacts;
- Defining the area of effects of the impacts;
- Establish the indicators of effects to the baseline conditions;
- Describe the impacts of the proposed action and alternatives on the baseline conditions; and
- 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 that is applicable to hazardous waste. This include state, federal, or tribal federal statutes or regulations and NEPA / MEPA requirements. This should also include regulatory definitions and how they are used by the Project. Specifically this resource report should discuss:

- Clean Water Act, Sections 307(a) and 311;
- Resource Conservation and Recovery Act, Section 3001;
- Clean Air Act, Section 112; and
- Toxic Substances Control Act, Section 7.

Define:

- Solid Waste
- Hazardous Materials
- Hazardous Waste

5.0 AFFECTED ENVIRONMENT

The affected environment will be deconstructed by features and / or activities of the proposed action and alternatives where hazardous waste have potential to effect the surrounding environment.

5.1 Area of Analysis

Area of analysis will be determined based on areas where there are potential impacts from hazardous materials on the Project. Areas of analysis for hazardous materials and waste will be determined by areas that these materials are stored, used, or generated as part of the proposed action or alternatives as well as major transportation routes that hazardous materials and waste are transported to or from the site.

5.2 Methods

Baseline conditions will be assessed using MPCA data, specifically the MPCA web mapping tool *What's In My Neighborhood* will be used identify potential areas of concern.

Baseline conditions will assess the potential transportation routes that hazardous waste would be transported along as well as the location of water sources along the transportation routes

No field work planned. However, if any potential areas of concern are identified within the area of analysis, follow-up Phase I environmental site assessment will be conducted.

5.3 Existing Conditions

Discuss the baseline conditions of hazardous wastes. This should include:

- Discuss any existing areas of concern.
- Discuss potential transportation routes that hazardous waste would be transported along as well as the location of water sources along the transportation routes.

6.0 IMPACT ASSESSMENT CRITERIA

6.1 Area of Analysis

Describe this based on features and / or of the proposed action or alternatives that would cause potential effect. Area of analysis should include anywhere that the hazardous waste is generate or hazardous materials are used as part of the proposed action or alternative that could have potential effects on the surrounding environment.

6.2 Methodology and Evaluation Criteria

Describe rationale for how impacts will be assessed by the implementation of the proposed action or alternatives. The methodology should include accounting of all the solid waste, hazardous waste, and hazardous materials used, generated, stored, or transported as part of the proposed action and alternatives.

Methodology should also include a discussion on the probability of spills related to the transport of solid waste, hazardous waste, and hazardous materials used or generated by the proposed action and alternatives.

6.3 Indicators

This section will discuss how indicators were selected and what the indicators are.

- Tons or pounds per year of hazardous wastes generated, hazardous materials used, and by-products;
- Amount and type of hazardous materials transported and stored at the project site;
- Location and type of solid or hazardous waste disposal sites/systems; and
- Existing risk assessments of effects of hazardous compounds.

6.4 Timeline for Analysis

Timeline for analysis for effects would be during the construction, operations, and closure phases.

7.0 ENVIRONMENTAL CONSEQUENCES

Provide a high level summary of what is presented in the environmental effects. Section summarizes what environmental effects are and the effects of the proposed action and alternatives.

7.1 Discussion of Environmental Effects

Using the affected environment and the impact assessment an assessment of potential impact of hazardous waste will be conducted and described within this section.

The following items will be assessed and described for the proposed action, alternatives to the proposed action, and the no action alternative:

- Description of hazardous material planned to be used.
    - Types, quantities, MSDS
    - Applicable rules and regulations required for the material
- Description of hazardous waste planned to be generated.
    - Types, quantities
- Spill probability analysis using accident rates and the number of deliveries/miles traveled for hazardous materials.
- Discussion of non-hazardous, solid waste and sewage during:
    - Construction
    - Operation
    - Reclamation/Closure
- Discussion of hazardous wastes and potential impacts during:
    - Transportation
        - Probability of a Release

  - Handling and Use
  - Storage
  - Hazardous Material Management Plans
- Discussion on the effects of a release.
  - Emergency Planning and Community Right-to-Know

7.1.1 Proposed Action

Impacts associated with the proposed action will be described in this section.

7.1.2 Alternatives to the Proposed Action

Impacts associated with the alternatives to the proposed action will be described in this section.

This discussion will focus on differences in impacts between the alternatives and proposed action. Impacts that are the same between the proposed action and alternatives will be noted but not discussed in detail.

7.1.3 No Action Alternative

Impacts associated with the no action alternative will be described in this section.

8.0 AVOIDANCE, MINIMIZATION, MITIGATION, AND MONITORING MEASURES

Highlight environmental protection measures, best management practices, and mitigation plans that the proposed action and alternatives would reduce the potential for impacts from the Project. Information should be pulled from the TMM Project Description and Alternatives document. Including:

- Prevention, minimization, and treatment.
- Management of hazardous material.
  - Description of material transportation, storage, and handling
- Generation and management of hazardous waste.
- Monitoring and inspection activities.
- Spill contingency plans.

8.1 Proposed Action

Avoidance, minimization, mitigation, and monitoring measures associated with the proposed action will be described in this section.

8.2 Alternatives to the Proposed Action

Avoidance, minimization, mitigation, and monitoring measures associated with the alternatives to the proposed action will be described in this section.

9.0 REFERENCES

TABLES

FIGURES

APPENDICES

APPENDIX [#A, B, C, D]

[APPENDIX TITLE]

APPENDIX [#A, B, C, D]

[APPENDIX TITLE]

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