

# Grassy Mountain Gold Project

## Environmental Evaluation - Draft Outline

### EXECUTIVE SUMMARY

Brief description of the Applicant's proposed project and concise presentation of the results of the environmental evaluation (EE) including the Alternatives Analysis, Impact Analysis, and Cumulative Impact Analysis. This section will highlight key issues evaluated including identified mitigation measures and remaining unresolved or ongoing subjects (e.g., consultation). A master table may also be included that allows for a comparison of effects by alternative. The section will conclude with a collective findings decision or findings document rather than a record of decision.

### CHAPTER 1 INTRODUCTION

Introduction to the proposed project, structure and content of the EE, and description of the role of the EE in the consolidated permitting process.

#### 1.1 Project Overview

Overview of the Applicant's proposed project including ownership, project location and access, proposed operations, infrastructure, and reclamation/closure plans.

#### 1.2 Purpose of the Environmental Evaluation

Explanation of the purpose of the EE and an overview of the consolidated permitting process. This section will also include a description of the Project Coordinating Committee (PCC) and Technical Review Team (TRT), as well as their roles in the permitting process.

#### 1.3 Regulatory Frameworks Considered

Description of the regulatory framework of the evaluation and permitting process, including the roles of permitting and cooperating agencies.

#### 1.4 Permits/Decisions to be issued by Agencies

Description of the regulatory permitting process, including public and agency meetings that are held. Includes a list of permits that would be required for development, operation, and reclamation of the proposed project.

### CHAPTER 2 PROJECT DESCRIPTION AND ALTERNATIVES

Discussion of the systematic procedure used to arrive at the preferred alternative in sufficient detail to allow agencies and the public to evaluate the comparative merits of each alternative, and rationale for elimination of alternatives. A review of the Best Available, Practicable, and Necessary Technology will also be described in this section.

#### 2.1 Project Description

##### 2.1.1 Site Preparation and Construction of Surface Facilities

*2.1.1.1 Site Preparation*

*2.1.1.2 Growth Media Storage*

*2.1.1.3 Invasive Species Control*

*2.1.1.4 Borrow Areas*

*2.1.1.5 Construction of Surface Facilities*

2.1.2 Underground Mining Methods

2.1.3 Waste Rock Storage

2.1.4 Run-of-mine (ROM) Ore Stockpile

2.1.5 Ore Processing

*2.1.5.1 Crushing, Grinding, and Classification*

*2.1.5.2 Gravity Separation*

*2.1.5.3 Carbon-in-leach (CIL) cyanide circuit (Reference International Cyanide Code Sections as applicable)*

*2.1.5.4 Electrowinning Recovery*

*2.1.5.5 Cyanide Detoxification*

2.1.6 Electrical Power

2.1.7 Tailings Disposal and Storage

2.1.8 TSF Reclaim Pond

2.1.9 Water Management and Supply

*2.1.9.1 Water Needs*

*2.1.9.2 Process Water*

*2.1.9.3 Potable Water*

*2.1.9.4 Fire Suppression Water*

*2.1.9.5 Storm Water and Sediment Control Structures*

2.1.10 Process Materials and Waste

2.1.11 Access and Haul Roads

2.1.12 Ancillary Facilities

*2.1.12.1 Maintenance Shop*

*2.1.12.2 Warehouse*

*2.1.12.3 Administration Buildings*

#### *2.1.12.4 Security and Fencing*

#### 2.1.13 Equipment and Schedule

#### 2.1.14 Workforce

#### 2.1.15 Closure and Reclamation

#### 2.1.16 Financial Assurances and Bonding

#### 2.1.17 Monitoring and Applicant-proposed Mitigation

##### *2.1.17.1 Operations Monitoring*

##### *2.1.17.2 Post-closure Monitoring*

## 2.2 Alternatives

### 2.2.1 Methods of Analysis

Description of the procedure used to identify and evaluate alternatives.

### 2.2.2 Alternatives Considered

Description of the No Action alternative, the Applicant's proposed project, and alternatives identified.

#### *2.2.2.1 Alternative Locations for mine facilities*

Including heap leach pads, roads, impoundments, ponds, ore storage areas, and waste disposal areas

#### *2.2.2.2 Alternative Designs, Processes, Operations and Scheduling*

For mine facilities and operations including, heap leach pads, roads, impoundments, ponds, ore storage areas, and waste disposal areas. Chemical processing alternatives including gravity flotation (initial ore separation and truck transport to Nevada gold extraction facility), froth flotation, and others, as identified.

##### **2.2.2.2.1 Review of Best Available, Practicable and Necessary Technology**

Include a review of the best available, practicable and necessary technology. Appendix C can provide a more detailed analysis if necessary, including literature used.

(ODFW): Include a thorough analysis on the best available, practicable and necessary technologies and methodologies related to maintaining process wastewater and solutions in a condition which results in zero wildlife mortality, both individually and cumulatively with other potential contaminants (e.g., bioaccumulation risks, metals, etc.).

#### *2.2.2.3 Alternative Water Supplies*

#### *2.2.2.4 Alternative Power Supplies*

overhead powerline (per DEQ)

#### *2.2.2.5 Alternative Reclamation Procedures*

### 2.2.3 Alternatives Eliminated

Discussion of the alternatives that would not be feasible along with rationale for elimination based on previously described procedure.

### 2.2.4 Alternatives to Be Carried Through the Environmental Evaluation

Discussion of feasible alternatives that will be carried through the analysis of impacts to environmental resources in the EE.

## CHAPTER 3 IMPACT ANALYSIS

Description of the affected environment (existing conditions) for environmental resources, impacts from the proposed project, and alternatives focused on significant effects (“significant” will also be defined). This chapter will also analyze the causes and impacts of potential accidents supported by credible scientific evidence, including catastrophic consequences (even if the probability of occurrence is low). Each resource discussion would include the following sub-sections:

### 3.1 Environmental Resources

The resources (Division 37) that will be analyzed in the EE include, Environmental Resources impact analysis will be to mirror BLM’s EIS with similar to Environmental categories:

Geology and Minerals

Water Resources

Vegetation and Wetlands

Wildlife and Special Status Species

Soils

Non-native and Invasive Plants

Rangeland Management

Air Quality and Greenhouse Gas Emissions

Cultural Resources

Lands and Realty

Noise

Visual Resources

(Can discuss lighting in this section per DEQ’s request)

Recreation

(ODFW): Wildlife and Wildlife Habitat: Determine compliance with the wildlife exclusion provisions and other requirements from OAR 635-420 including: 1) An analysis of the fate of the WAD-CN at the concentrations at discharge proposed by the application, specific to the potential toxicity to wildlife; 2) A review of the contingencies should toxins become elevated in the TSF to a level that is deemed harmful to wildlife; and 3) A review of the Ecological Risk Assessment.

(ODFW): Surface water and Groundwater: An evaluation of springs since there is the potential for significant impacts to area springs that must be analyzed.

(ODFW): Natural Environment: Add this section to address the impacts from an increase in human presence from both the mine construction and operation, as well as public access that may alter current functions of the ecosystem.

For each resource, the following sub-sections would be provided.

### 3.1.1 Regulatory Context

### 3.1.2 Method of Analysis

### 3.1.3 Affected Environment

### 3.1.4 Impact Analysis

#### 3.1.4.1 *No Action Alternative*

#### 3.1.4.2 *Preferred Action Alternative*

#### 3.1.4.3 *Alternative A*

## CHAPTER 4 CUMULATIVE IMPACT ANALYSIS

The scope of the cumulative impact analysis will be determined by the TRT in consideration of the alternatives developed, the environmental impacts from the proposed project, and the physical dimension of the proposed mining operation.

### 4.1 Introduction

Explanation of a cumulative impact analysis and the types of actions that are considered in the analysis, including similar actions, connected actions, and separate actions.

### 4.2 Scope of Cumulative Impact Analysis

Description of the area studied and timing considerations of potential effects.

(ODFW): Evaluate the potential impacts of additional extraction and processing of mineral resources identified by Paramount Gold in the vicinity of Grassy Mountain. These include North Spur, Dennis Folley, Wally/Wood, Crabgrass, Frost claims, etc. It is reasonably foreseeable that material extracted from these sites would be processed at the Grassy Mountain facility. These development impacts include but not limited to improvement of roads, increased traffic and noise, longevity of proposed facility components, improvement/enlargement of tailings storage, etc. Include an evaluation of cumulative environmental toxicity of cyanide and other chemistries. An Appendix should also be included which evaluates the fate of additional chemical byproducts associated with the mine. The analysis should also evaluate how additional processing at the mill changes the current understanding of impacts to ground water, byproduct storage, impacts to wildlife.

### 4.3 Identification of Cumulative Actions and Projects

Identification of projects and actions to be assessed in the cumulative impacts analysis.

### 4.4 Cumulative Impacts Assessment

Presentation of the results of the cumulative impact assessment including discussion of potential cumulative effects to the same environmental resources evaluated in Chapter 3 in table format.

## CHAPTER 5 MITIGATION

Discussion of mitigation measures identified by the TRT in addition to regulatory standards and requirements (e.g., wildlife mitigation), and in addition to Applicant-proposed measures (e.g., BMPs) that are part of the proposed project. A discussion of financial assurance requirements will also be included in this section.

(ODFW): Clearly identify the various regulatory frameworks that speak to mitigation, and how those requirements will be addressed in an efficient and transparent way to meet the statutory standards for mitigation of impacts.

(ODFW): Include a summary of the following (or in a thorough Summary Report as an Appendix) - evaluation of existing chemical process mining facilities (both active and reclaimed) to document “lessons learned”, such as:

- BMPs/adaptive management strategies from other chemical mining projects for avoidance and minimization of impacts to surface water, groundwater, soils, and wildlife habitat. This includes identification of what wildlife species were considered in any modeling or monitoring, and assessment for any bioaccumulation. This includes identification of successful acid rock drainage mitigation.
- Evaluate permit conditions for existing chemical process mining facilities related to the avoidance or minimization of risks to wildlife and habitat, including monitoring strategies that have been implemented to evaluate effectiveness.
- Evaluate the potential impacts to groundwater and area springs and potential measures that can be implemented to mitigate those impacts.

## CHAPTER 6 REFERENCES

Includes a list of all documents used in the development of the EE. All references will be provided as part of the project administrative record in PDF format.

## APPENDIX A CYANIDE CHEMISTRY

Review of general cyanide chemistry, application in gold mining, specific role for Project, fate and transport, ecological and human health risk, toxicity, standards and practices required by Nevada and Arizona for use in chemical process mining. This material will be presented exclusively in this technical appendix or also provided as a brief summary in the body of the EE report.

## Appendix B ANALYSIS OF CREDIBLE ACCIDENTS

Analysis of Credible Accidents Draft Outline.

## Appendix C Acid Rock Drainage Assessment and Analysis

DEQ request of Acid Rock Monitoring and resources to best assess and analyze any potential acid rock drainage.

## Appendix D Review of Best Available, Practicable and Necessary Technology

Analysis of all available technology with literature and references used (ODFW). Can include detailed analysis in this appendix and an executive summary in the main body of the EE.