Final
Environmental Impact Statement

ROCK CREEK PROJECT

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U. S. Forest Service
Kootenai National Forest

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PREFACE

This document is the final EIS. This final EIS merges the contents of the draft and supplemental EISs and incorporates the agencies responses to issues and concerns brought forward by the public, Tribal enities, and other contributing federal and state agencies. The draft EIS was released in October 1995 and the supplemental draft EIS was released in January 1998. Both National Environmental Policy Act (NEPA) and Montana Environmental Policy Act (MEPA) (§1502.9(c) CFR and ARM 17.4.621 respectively) identify the reasons that drive the preparation, release, and review of an EIS.

The evaluation of this proposed project has extended over 14 years and is now integrated into this final EIS. This timeframe reflects the extremely thorough analysis the agencies have conducted to insure that identified issues and concerns are fully addressed. This includes a review of project designs, water treatment facilities, tailings storage design and risk assessment, baseline resource data such as surface and ground water quantity and quality, wildlife and fisheries habitat conditions, threatened and endangered species analyses, area socio-economics, recreation, wilderness resources, cultural resources, and Native American treaty rights. An agency preferred alternative to the proposed action, two additional alternatives, and the no-action alternative were developed through the EIS process. The Agency preferred alternative, Alternative 5, meets the requirements in 36 CFR 228 Subpart A and in 75-1-101 et seq., MCA to minimize, reduce, avoid, or mitigate impacts on the environment.

An environmental impact statement (EIS) is not usually read like a book, from chapter one to the end. The best way to go about reading this EIS depends on where your interests lie. You may be more interested in impacts, while others might have more interest in the details of the proposed plan and how it will affect them. This document follows the format established in NEPA and MEPA regulations (40 CFR Parts 1500-1508 and ARM 17.2.601-663, respectively). The following paragraphs outline information contained in the chapters and appendices of this EIS so that readers may find the parts of interest without having to read the entire document.

- **Summary:** contains a short, simple discussion to provide the reader and the decision makers with a sketch of the more important aspects of the EIS. The reader can obtain additional, more detailed information from the actual text of the EIS. The summary for the Proposed Rock Creek Project EIS is a separate, stand-alone document, which is paired with the EIS.

Chapters 1 through 4 are found in Volume 1 of the EIS for the Rock Creek Project; Chapters 5 through 9 and the Appendices are found in Volume 2. All public comments and concerns, along with their responses, are included in Volumes 3 and 4. The chapters are briefly described below:

- **List of Abbreviations and Acronyms:** This list describes the abbreviations and acronyms used throughout the EIS.

- **Chapter 1 - Purpose and Need for the Action:** describes the proposed action, purpose and need for the action and the EIS, project area, agency roles and responsibilities, decisions to be made, and public participation.

- **Chapter 2 - Description of Alternatives:** describes the significant issues associated with the proposed action and the development of alternatives. It describes in detail the proposed action, the no-action alternative, and three agency alternatives. Other alternatives that were considered but dismissed are identified along with rationale for not including them in the analysis. Reasonably foreseeable activities in the vicinity of the proposed project are identified. This chapter also provides a comparative analysis of the environmental impacts of the alternatives to provide a clear basis of choice among

options for the decision maker and the public. The lead agencies' preferred alternative is identified.

- **Chapter 3 - Affected Environment:** summarizes the present condition of the environment that would be affected by the proposed action and alternatives.

- **Chapter 4 - Environmental Consequences:** describes the probable impacts to the human environment that would result from developing the proposed action or the new alternatives, including cumulative impacts, short-term uses versus long-term productivity, unavoidable impacts, and irreversible or irretrievable impacts. A section on regulatory restriction of private property as required by state law is also included.

- **Chapter 5 - Consultation With Others:** lists the agencies, companies, and organizations consulted as well as the cooperating agencies.

- **Chapter 6 - Preparers and Contributors:** lists the people involved in the research, writing, and internal review of the EIS.

- **Chapter 7 - Distribution and Review of the EIS:** lists agencies, organizations and individuals who received a copy of the EIS.

- **Chapter 8 - Glossary:** describes the technical terms used in the EIS.

- **Chapter 9 - References Cited:** lists the references cited in the EIS.

- **Index:** contains cross-references and identifies the pages where key topics can be found.

- **Appendices:** contain key supporting documents for the EIS. The following appendices are contained in the EIS:

  — Appendix A: Definition of Significance in NEPA/MEPA
  — Appendix B: Final Biological Assessments (and includes Bull Trout Revision, Lynx Amendment, and Revised Threatened and Endangered Mitigation Plan)
  — Appendix C: Department Decision on Air Quality Permit
  — Appendix D: Proposed MPDES Permit, Fact Sheet, and Statement of Basis
  — Appendix E: USFWS Biological Opinion
  — Appendix F: Preliminary Section 404(b)(1) Showing
  — Appendix G: Tailings, Subsidence, and Hydrofracturing
  — Appendix H: Kootenai National Forest BMP Process
  — Appendix I: Description of Reagents
  — Appendix J: Revegetation Plans
  — Appendix K: Agencies' Conceptual Monitoring Plans
  — Appendix L: Wetlands Mitigation Plan for Alternative V
  — Appendix M: McKay Creek Alternative Description
  — Appendix N: Discussion of R1-WATSED Model and Results
  — Appendix O: New Management Area Descriptions
  — Appendix P: Failure Modes Effects Analysis

- **Public Comment and Responses:** Contains responses to substantive comments on the draft and supplemental EISs. The comments and responses are grouped into 16 main categories and 51 subcategories.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAA	American Automobile Association
ABA	acid base accounting
ABC	anoxic biotreatment cells
ACHP	Advisory Council on Historic Preservation
ADT	average daily traffic
AIRFA	American Indian Religious Freedom Act
ARM	Administrative Rules of Montana
ASARCO	ASARCO Incorporated
BA	Biological Assessment
BAA	bear analysis area
BLM	Bureau of Land Management
BMP	best management practices
BMU	bear management unit
BPA	Bonneville Power Administration
CEM	cumulative effects model
CFR	Code of Federal Regulations
cfs	cubic feet per second
CMW	Cabinet Mountains Wilderness
COE	U.S. Army Corps of Engineers
const	construct/construction
cu	cubic
cy	cubic yard
CYE	Cabinet-Yaak Ecosystem
dBA	decibels, A scale
DEQ	Montana Department of Environmental Quality
DFWP/FWP	Montana Department of Fish, Wildlife and Parks
DHES	Montana Department of Health and Environmental Sciences
DNRC	Montana Department of Natural Resources and Conservation
DOT	Montana Department of Transportation
DSL	Montana Department of State Lands
EIS	environmental impact statement
elev	elevation
EPA	U.S. Environmental Protection Agency
et seq.	and the following
FDR	forest development road
FERC	Federal Energy Regulatory Commission
FMEA	Failure Modes Effects Analysis
FS	Factor of Safety
ft./day	feet per day
GIS	Geographic Information System
gpm	gallons per minute
GPS	Global Positioning System
GVW	gross vehicle weight
HD	hunting district
HDPE	high density polyetheylene

HELP	hydrologic evaluation for landfull performance
HRT	hydraulic residence time
hwy	highway
ID	Idaho
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDNHP	Idaho Natural Heritage Program
IDT	interdisciplinary team
IGBC	Interagency Grizzly Bear Committee
INFS	Inland Native Fish Strategy
ISC	Industrial Source Complex
KNF	Kootenai National Forest
kV	kilovolt
kW	kilowatt
kWH	kilowatt hours
LAD	land application disposal
LC_{50}	lethal concentration that kills 50% of the population
MA	management area (in Forest Plan)
MAC Report	Mineral Activity Coordination Report
MCA	Montana Codes Annotated
MDHES	Montana Department of Health and Environmental Sciences
MDL	method detection limit
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MFWP	Montana Fish, Wildlife and Parks
mg/L	milligrams per liter
mi	mile
MMRA	Metal Mine Reclamation Act
MPDES	Montana Pollution Discharge Elimination System
MPH	miles per hour
MRL	Montana Rail Link
MSHA	U.S. Mine Safety and Health Administration
MT	Montana
MTNHP or NMHP	Montana Natural Heritage Program
NAGPRA	Native American Graves Protection Act of 1990
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NFS lands	National Forest System lands
NHPA	National Historic Preservation Act
NOx	nitrogen oxide
NP/AP	neutralization potential/acid potential
NRHP	National Register of Historic Places
OG	old growth
ORD	open road density
PAX	potassium amyl xanthate
PMP	probable maximum precipitation
PMF	probable maximum flood
ppm	parts per million
PPSM	paste production storage mechanism
PSD	prevention of significant deterioration

psi	pounds per square inch
PVC	polyvinyl chloride
$Q_{7,10}$	7-day, 10-year low flow
QA/QC	quality assurance/quality control
RD	ranger district
RMO	Riparian Management Objective
RO	reverse osmosis
ROD	record of decision
ROG	replacement old growth
ROS	Recreational Opportunity Spectrum
SAG	Semi-autogenous grinding
SHPO	State Historic Preservation Office
SO2	sulfur dioxide
SMZ	streamside management zone
TDS	total dissolved solids
TMDL	total maximum daily load
tpy	tons per year
TSL	traffic service level
TSP	total suspended particulates
TSS	total suspended solids
UCRB	Upper Columbia River Basin
USDI	U.S. Department of Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMS	Visual Management System
VQO	visual quality objective
WET	Whole effluent toxicity
WWP	Washington Water Power