

1. PURPOSE AND NEED

1.1. INTRODUCTION

The Montana Environmental Policy Act (MEPA) requires state agencies to prepare an Environmental Impact Statement (EIS) prior to taking a state action significantly affecting the quality of the human environment (§ 75-1-201(1)(b)(iv), Montana Code Annotated [MCA]). The Department of Environmental Quality (DEQ) has prepared this EIS prior to taking state action on applications for permits or other state authorizations submitted by Tintina Resources Inc. (the Proponent) for the proposed Black Butte Copper Project (the Project).

The Proponent has submitted applications to DEQ for an operating permit under the Metal Mine Reclamation Act (MMRA) (§ 82-4-301, *et seq.*, MCA), a Montana Pollutant Discharge Elimination System (MPDES) permit under the Montana Water Quality Act (§ 75-5-101, *et seq.*, MCA), and a Montana Air Quality permit under the Clean Air Act of Montana (§ 75-2-101, *et seq.*, MCA).

1.2. PURPOSE AND NEED

This section describes the purpose and need to which each agency or company is responding for the proposed Project. MEPA and its implementing rules require that EISs prepared by state agencies include a description of the purpose and benefits of the proposed project; this EIS was written to fulfill those requirements. The Project purpose and need is in Section 1.2.1, Department of Environmental Quality, and in Section 1.2.2, the Proponent. Benefits of the Project include the production of copper to help meet public demand. The Project would also increase employment and tax payments in the Project area (see Section 3.9, Socioeconomics).

1.2.1. Department of Environmental Quality

DEQ's purpose and need in conducting the environmental review is to act upon the Proponent's applications to obtain state permits authorizing underground mining of the Johnny Lee Deposit at the proposed Black Butte Copper mine site approximately 15 miles north of White Sulphur Springs, Montana. DEQ's actions on the permit applications must be in accordance with applicable state law. The permits that the Proponent is applying for and the governing state laws include: (1) an operating permit in compliance with the MMRA; (2) an integrated Montana Pollutant Discharge Elimination System (MPDES) permit in compliance with the Montana Water Quality Act; and (3) a Montana Air Quality permit in compliance with the Clean Air Act of Montana.

1.2.2. The Proponent

The Proponent's purpose is to develop and mine the Johnny Lee Deposit by underground mining methods with the expectation of making a profit. The Proponent's need is to receive all necessary governmental authorizations to construct and operate the proposed underground mine and to reclaim disturbances associated with the underground mine, including associated infrastructure and other incidental facilities.

1.3. PROJECT LOCATION AND HISTORY

The Project area is approximately 15 miles north of White Sulphur Springs in Meagher County, Montana (see **Figure 1.3-1**). The Project area is located in Sections 24, 25, and 36 in Township 12N, Range 6E, and in Sections 19, 29, 30, 31, and 32 in Township 12N, Range 7E (Tintina 2017). The Project area is accessed from United States (U.S.) Highway 89, by traveling west along 1.5 miles of well-maintained gravel county road (County 119; Sheep Creek Road). The Project area consists of privately owned ranch land, with associated buildings and a road network throughout.

Mineral exploration started in the Project area in 1894 with small-scale underground copper mineralization development projects. When the focus switched to iron resources in the 1900s, R&S Mining Company started mining iron ore from Iron Butte, west of the Project area. Iron ore continues to be mined from this area (Operating Permit No. 00071) as an ingredient for cement production at a facility in Trident, Montana. Homestake Mining Company started exploring for non-ferrous metals in the Project area in 1973 and 1974. Cominco American Inc. resumed exploration in the district in 1976 and joint ventured the property with Broken Hill Proprietary Company Limited in 1985 (Tintina 2017). This joint venture drilled the discovery hole for the Johnny Lee Deposit (named after the former homesteader and miner). The joint venture completed approximately 66 exploration core holes in the current Project area.

The Proponent acquired mineral rights lease agreements to mine the property via underground mining in May 2010, and has conducted surface exploration activities since September 2010. Under Exploration License No. 00710, the Proponent used surface drilling methods to complete 229 exploration drill holes (including metallurgical and geotechnical test holes) in the Project area to assess the feasibility of mining the deposit. The Proponent has hydraulically plugged all of these exploration drill holes to avoid aquifer cross-contamination in accordance with Administrative Rules of Montana (ARM) 17.24.106. Additionally, 23 monitoring wells, 28 piezometers, and 15 pump wells currently remain open. Surface disturbances related to exploration (e.g., drill holes, drill pads, test pits, and access roads) have totaled approximately 9 acres to date, most of which have been reclaimed.

The Proponent submitted an application to amend their exploration license on November 7, 2012, in order to construct an exploration decline into the upper Johnny Lee zone. DEQ conducted an environmental review regarding that exploration license amendment application, issuing a Final Mitigated Environmental Assessment in January 2014. DEQ selected the Agency Mitigated Alternative during that review. However, the Proponent subsequently chose not to construct the exploration decline.

The Proponent submitted an application for a Mine Operating Permit (MOP) to DEQ on December 15, 2015, and submitted revisions May 8 and July 14, 2017. The Proponent submitted the following additional requests for updates:

- DEQ letter dated January 30, 2018 (DEQ 2018a), “Update to Proposed Treated Water Disposition for the Black Butte Project,” which includes Underground Infiltration Galleries (UIGs) to Sheep Creek alluvium (Proponent request letter dated January 11, 2018 [Tintina 2018a]);
- DEQ letter dated January 30, 2018 (DEQ 2018b), “Update to Proposed Rail Load Out Facilities for Shipment of Containerized Copper Concentrates” (Proponent request letter dated January 11, 2018 [Tintina 2018b]); and
- DEQ letter dated November 21, 2018 (DEQ 2018c), “Update to Mine Operating Permit Application for the Black Butte Copper Project, Proposed Holding Pond Facility for Treated Water, Revision to Annual Water Balance, and Addition of a Wet Well” (Proponent request letter dated October 26, 2018 [Tintina 2018c]).

DEQ reviewed all updates and determined that the proposed Project changes were not considered substantial changes to the MOP Application; as such, the modifications did not change DEQ’s completeness and compliance determination.

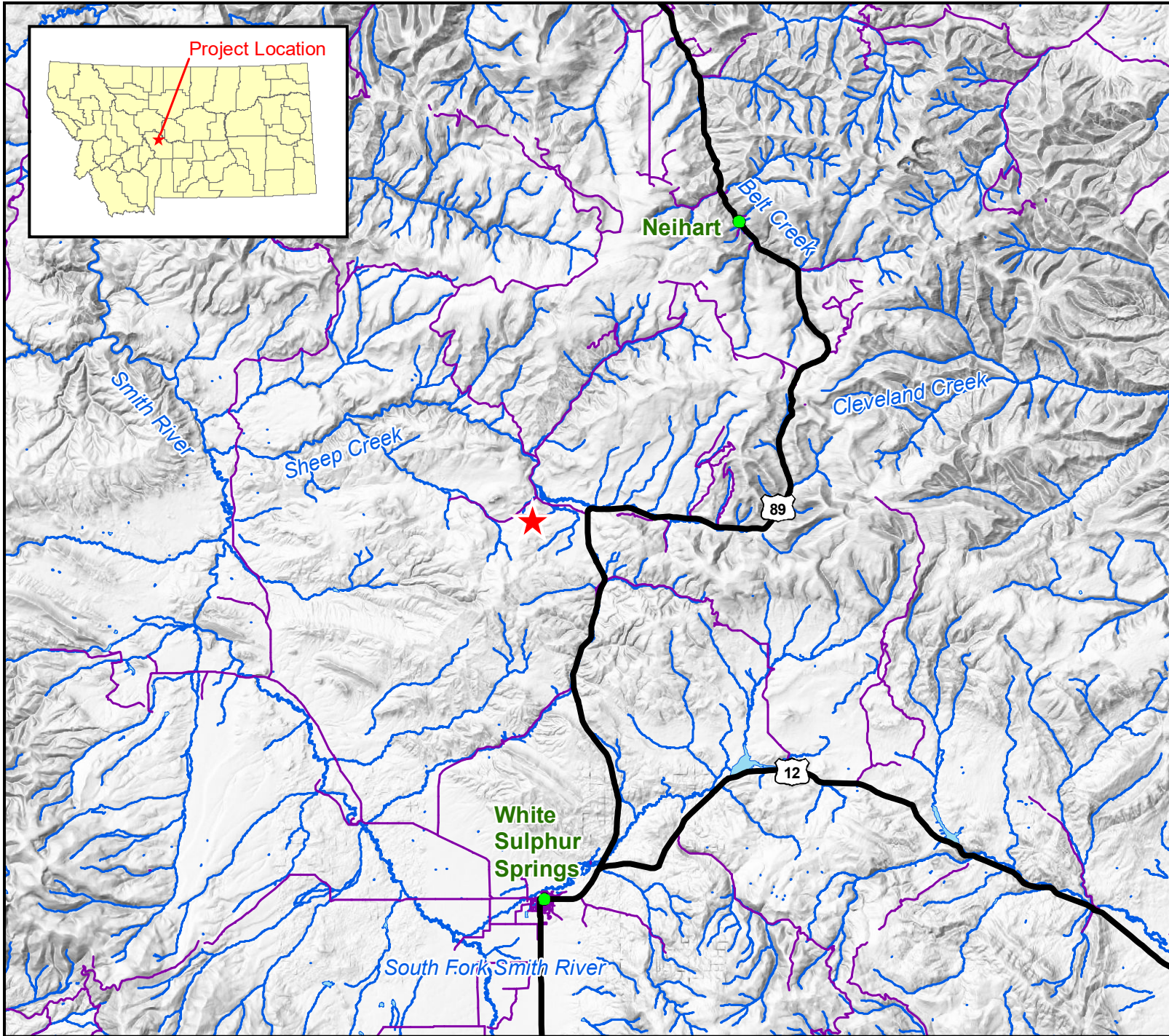
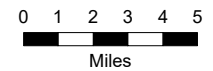


Figure 1.3-1
Black Butte
Copper Project
 Project Location
 Meagher County,
 Montana

- ★ Project Location
- City
- U.S. Route
- Local Road
- Stream
- Lake



1.4. SCOPE OF THE DOCUMENT

DEQ has prepared this EIS in compliance with MEPA. This EIS describes the potential direct, secondary, and cumulative environmental impacts that could result from the No Action, Proposed Action, and other alternatives considered in detail. This document is organized into ten chapters:

- Chapter 1. Purpose and Need: Chapter 1 includes information about the Project and the purpose of and need for the Project. This chapter also summarizes how DEQ informed the public of the Project and how the public responded.
- Chapter 2. Description of Alternatives: Chapter 2 provides a detailed description of the No Action Alternative, Proposed Action, and other action alternatives considered in detail. These alternatives were developed based on key issues raised by the public and, as required by MEPA, in consultation with the Proponent.
- Chapter 3. Affected Environment and Environmental Consequences: Chapter 3 describes the current environment and the potential direct and secondary impacts resulting from the No Action Alternative, the Proposed Action, and the other alternatives considered in detail. This analysis is organized by resource.
- Chapter 4. Cumulative Impacts, Unavoidable Adverse Impacts, Irreversible and Irrecoverable Commitments of Resources: Chapter 4 describes the cumulative impacts, unavoidable adverse impacts, and irreversible and irretrievable commitments of resources associated with the Proposed Action and other action alternatives.
- Chapter 5. Comparison of Alternatives and DEQ's Preferred Alternative: Chapter 5 provides an identification of DEQ's preferred alternative, its reasons for the preference, and the tradeoffs among the alternatives considered.
- Chapter 6. Consultation and Coordination: Chapter 6 provides a listing of other agencies, groups, or individuals who were contacted or contributed information.
- Chapter 7. List of Preparers: Chapter 7 provides a list of preparers for the EIS.
- Chapter 8. Response to Public Comments: Chapter 8 provides the substantive public comments received during the Draft EIS public comment period, and responses to them.
- Chapter 9. References: Chapter 9 provides a list of the source materials that were used in preparation of the EIS.
- Chapter 10. Index: Chapter 10 provides a list of key terms used and where they can be found in the EIS.

Appendices: The following appendices provide detailed information to support the analyses presented in the EIS:

- Appendix A. Technical Memo 1: Increasing Cement Content in Tailings
- Appendix B. Technical Memo 2: Raising Impoundment above the Water Table

- Appendix C. Technical Memo 3: Full Sulfide Separation Prior to Tailings Disposal
- Appendix D. Technical Memo 4: Additional Hydrologic Plugs for Limiting Groundwater Flow at Closure
- Appendix E. Technical Memo 5: In-Situ Treatment or Metal Attenuation through Use of Organics in the Underground Workings
- Appendix F. Technical Memo 6: Additional Source Controls to Limit Oxidation during Operations
- Appendix G. Technical Memo 7: Alternative Water Treatment Technologies
- Appendix H. Technical Memo 8: Analysis of End of Mine Flushing of Underground Workings
- Appendix I. Baseline Surface Water Quality
- Appendix J. Preliminary Determination on Air Quality Permit Application
- Appendix K. Seasonal Fish Size-Frequency Data

1.5. AGENCY ROLES AND RESPONSIBILITIES

DEQ is the agency responsible for the analysis of the Project. This EIS is being prepared to provide a comprehensive analysis of potential environmental impacts. Before construction and operation of the Project could begin, other permits, licenses, or approvals may be required from federal, state, and local agencies.

1.5.1. State and County Agencies

The state and county agencies listed in **Table 1.5-1** have relevant permits or reviews that would potentially be required for the Project.

**Table 1.5-1
 State and County Agencies–Potential Requirements**

Potential Permits or Reviews Required (Statutory Reference)	Purpose of Permit or Review
Meagher County Conservation District	
Montana Streambed Preservation Act - 310 Permit (work in streams)	Required by any private or non-governmental entity to work in or near a stream on public or private land.
Montana Department of Environmental Quality	
Montana Environmental Policy Act, Analysis of Impacts (§ 75-1-102, MCA)	MEPA requires DEQ to prepare an environmental impact statement prior to taking state action for any projects that significantly affect the quality of the human environment.

Potential Permits or Reviews Required (Statutory Reference)	Purpose of Permit or Review
Metal Mine Reclamation Act, Operating and Reclamation Plans (§ 82-4-303, MCA)	Mining must comply with state environmental laws and administrative rules. The MMRA has established reclamation standards for lands disturbed by mining, generally requiring that they be reclaimed to comparable stability and utility as that of adjacent areas. Reclamation must provide sufficient measures to ensure public safety and to prevent the pollution of air or water and the degradation of adjacent lands.
Montana Water Quality Act, Montana Pollutant Discharge Elimination System (§ 75-5-101, MCA)	Establishes effluent limits and treatment standards, and regulates point source discharges of pollutants into state surface waters or to groundwater hydrologically connected to state surface waters through MPDES permits. State water quality standards, including the non-degradation standards, specify the allowable changes in surface water or groundwater quality. An MPDES permit may also authorize discharges of construction storm water and would require the development of a storm water pollution prevention plan.
Montana Public Water Supply Act (§ 75-6-101, MCA)	Regulates public water supply and sewer systems that regularly serve at least 25 persons daily for a period of at least 60 calendar days a year. DEQ must approve plans and specifications for water supply wells in addition to water systems or treatment systems and sewer systems.
Montana Clean Water Act, Section 401 (§ 75-5-401, MCA)	Federal permits related to discharges to state waters must also obtain certification from the state that discharges comply with state water quality standards. On January 19, 2017, DEQ certified that the Project would not violate water quality standards under Section 401. On July 3, 2019, DEQ certified that the Project amendment would not violate water quality standards under Section 401.
Clean Air Act of Montana, Air Quality Permit (§ 75-2-Parts 1-4, MCA)	An Air Quality permit is required for the construction, installation, and operation of facilities and equipment that may cause or contribute to air pollution.
Montana Hazardous Waste Act (§ 75-10-401, MCA) and the Solid Waste Management Act (§ 75-10-201, MCA)	The acts regulate the storage and disposal of hazardous and solid wastes.
Montana Streambed Preservation Act - 318 Permit (short-term turbidity)	Required by any entity initiating a construction activity that may cause short or temporary violations of state surface water quality standards for turbidity.
Montana Hard Rock Mining Impact Board	
Hard Rock Mining Impact Act, Hard Rock Mining Impact Plan, (§ 2-15-1822, MCA)	This Act is overseen by the Hard Rock Mining Impact Board (HRMIB), which is part of the Montana Department of Commerce. The HRMIB consists of five members: (1) a representative of the hard-rock mining industry; (2) a representative of a major financial institution in Montana; (3) a person who, at the time of appointment, is an elected school district trustee; (4) a person who, when appointed, is an elected county commissioner; and (5) a member of the public-at-large. A Hard Rock Mining Impact Plan is submitted to the HRMIB for consideration and approval. If a local government (i.e., city,

Potential Permits or Reviews Required (Statutory Reference)	Purpose of Permit or Review
	county, etc.) disagrees with any portion of the Hard Rock Mining Impact Plan, the governing body may file an objection with the HRMIB during a 90-day review period.
Montana Department of Transportation	
Construction Permit (§ 61-1-1 <i>et seq.</i> , MCA)	The Montana Department of Transportation (MDT) is responsible for approving road approaches onto state-owned highways. A construction permit may be required for modifying the approach onto Highway 89 from County Road 119.
Approach Permit (§ 61-1-1 <i>et seq.</i> , MCA)	The MDT is responsible for approving road approaches onto state-owned highways. An approach permit may be required for load out areas if accessing them via a highway.
Heavy or Oversize Loads Permit (§ 61-1-1 <i>et seq.</i> , MCA)	The MDT is responsible for safe operation of state-owned highways, including U.S. Highway 89 near the Project area and the roadways as part of the proposed haul routes. Appropriate permits for heavy or oversize loads (if any) may be required.
Montana Department of Natural Resources and Conservation	
Montana Water Use Act, Permit to Appropriate Water (§ 85-2-311, MCA) and Change Authorization	The Montana Department of Natural Resources and Conservation (DNRC) is responsible for administration of various components of the Water Use Act, and determines whether or not to issue permits and changes to existing appropriation rights. Permits to Appropriate Water and Change Authorizations would be required before appropriating water for beneficial use or commencing construction of diversion, impoundment, withdrawal, or related distribution works.
Montana Fish, Wildlife & Parks	
NA	Montana Fish, Wildlife & Parks (FWP) is responsible for protecting fish, wildlife, and natural resources for recreational activities. FWP would approve and designate a licensed collector for monitoring, mitigation, and transplanting of fish species within the Project area, if necessary.
Montana State Historic Preservation Office	
NA	The State Historic Preservation Office (SHPO) advises state agencies when a project could affect cultural resources that are eligible or potentially eligible for the National Register of Historic Places (NRHP). Sites that are eligible or potentially eligible to the NRHP are considered Historic Properties. After consultation, SHPO may concur if the Project could have (1) no impact; (2) no adverse impact; or (3) adverse impact on Historic Properties. If SHPO does not concur with DEQ's determination, then DEQ may request the Proponent to conduct additional cultural work. If SHPO concurs that the Project would have no impact or no adverse impact, then the Project could move forward. If DEQ determines and SHPO concurs that the Project could have adverse impacts on Historic Properties, then DEQ would request the Proponent to implement protection, mitigation, and monitoring as approved by SHPO.

MCA = Montana Code Annotated; NA = not applicable

1.5.2. Federal Agencies

The federal agency listed in **Table 1.5-2** requires a permit for the Project, which has been obtained.

**Table 1.5-2
Federal Agencies–Potential Requirements**

Potential Permits or Reviews Required (Statutory Reference)	Purpose of Permit or Review
U.S. Army Corps of Engineers	
Clean Water Act, Section 404 Permit (33 Code of Federal Regulations Section 1344) Permit No. NWO-2013-01385-MTH	The U.S. Army Corps of Engineers (USACE) has responsibilities under Section 404 of the Clean Water Act (CWA), and has the authority to take reasonable measures to inspect Section 404-permitted activities. Construction of certain Project facilities in Waters of the United States, including wetlands and special aquatic sites, would constitute disposal of dredged or fill materials. The USACE also requires Section 401 certification from DEQ (see Table 1.5-1 above). The Proponent submitted a Section 404 permit application to the USACE for the Project for impacts to Brush Creek and adjacent wetlands. The USACE issued a Department of the Army permit (NWO-2013-01385-MTH) for discharge of fill into Waters of the United States on November 27, 2017.

1.6. DEVELOPMENT OF ALTERNATIVES

This section describes the process and outcomes of considering reasonable alternatives to the Project, which is also discussed in Section 2.3. This could include alternatives with different processes or designs that would minimize environmental impacts of the Project. The sources of potential alternatives were public scoping comments, the MOP Application including DEQ’s comments, DEQ’s third-party contractor Subject Matter Expert input, and internal DEQ deliberations and analysis including technical memos (see Appendices A through H). Approximately 60 ideas were identified and screened for potential inclusion in the EIS by DEQ.

1.6.1. Public Participation

On August 15, 2017, DEQ issued a press release stating that the MOP Application was complete and the environmental review was set to begin (DEQ 2017a). DEQ issued a second release on September 18, 2017, indicating the review had begun under MEPA (DEQ 2017b). Additionally, DEQ issued a press release on October 3, 2017, disclosing the times and locations of three public scoping meetings, as well as information about the EIS and permit application (DEQ 2017c). A fourth press release was issued on October 23, 2017, due to the addition of a fourth and final public scoping meeting (DEQ 2017d). Each of these releases was also submitted via email to national, state, and local news outlets on the respective release dates. The press releases requested public comment on the Project until November 16, 2017.

DEQ established a public comment scoping period from October 2, 2017, to November 16, 2017 (i.e., 46 calendar days). During this time, DEQ received written and oral comments from the public that were submitted via email, mail, or public meetings. On October 30, 2017, a public meeting was held at the Civic Center in Great Falls, Montana. On November 1, 2017, a second meeting was held at the White Sulphur Springs High School gymnasium in White Sulphur Springs, Montana. The third meeting was held at the Radisson Hotel in Helena, Montana, on November 6, 2017. The final public meeting was held November 7, 2017, in Livingston, Montana, at the Park County High School Gymnasium.

DEQ established a public comment period for the Draft EIS from March 11 to May 10, 2019 (i.e., 60 calendar days). During that time, DEQ received oral and written comments at the public meetings, by regular mail, and by electronic mail. On April 24, 2019, a public meeting was held at the Great Falls High School fieldhouse in Great Falls, Montana. On April 29, 2019, a second meeting was held at the Park County High School Gymnasium in Livingston, Montana. On April 30, 2019, a third public meeting was held at the White Sulphur Springs High School gymnasium in White Sulphur Springs. Two online webinar public meetings were also held on May 1 and May 2, 2019.

1.6.2. Issues of Concern

Based on comments received during the public scoping process, DEQ prepared a Scoping Report that included a summary of all comments received, organized by issue. These comments were separated into “non-substantive” and “substantive” categories. Non-substantive comments were identified by DEQ as those (1) outside the scope of the Project analysis; (2) irrelevant to the decisions to be made; (3) conjectural and not supported by scientific or factual evidence; or (4) those that MEPA does not allow for certain analysis. Substantive comments pertained to the analysis and contained information or suggestions to be carried forward into the alternative development process.

DEQ identified 13 different topic issues to be considered in more detail in the EIS. The issues of concern identified during scoping are listed below.

1.6.2.1. Air Quality

The EIS should evaluate the Project’s potential impact on climate change and how this impact would affect local natural resources. Fugitive dust and its impacts to natural resources should be evaluated. This issue is discussed in Section 3.2.

1.6.2.2. Alternatives

The EIS should provide an alternative analysis informed by other tailings impoundments that reduces the risk of environmental impacts including liner degradation, impoundment location, and design. The EIS should evaluate the use of tanks instead of ponds to retain process water. The EIS should evaluate alternative truck transportation routes. The EIS should evaluate a wetland treatment system for a long-term water treatment solution. Under the Proposed Action, there is potential for groundwater contamination within the mine workings caused by not

backfilling the access tunnels and ventilation shafts. Federal Clean Water Act (CWA) guidelines for mineral processing facilities discourages the discharge of treated mine process water to surface waters of the United States, including wetlands such as those that occur near the Proposed Action alluvial UIG. This issue is discussed in Chapter 2.

1.6.2.3. Aquatic Species

The EIS should collect fisheries baseline data that includes Calf Creek, Sheep Creek, the South Fork of Sheep Creek, Coon Creek, Moose Creek, and the Smith River. This analysis and subsequent impact analysis should consider climate change, species composition, size distribution, spawning, fish densities, seasonal migration behavior, macroinvertebrates, amphibians, mollusks, waterway physical characteristics, metal concentrations in fish tissue, and impacts from changes to water temperature, flow, and quality. Sources of water to streams and rivers via groundwater and surface water including wetlands should be evaluated for potential impacts. Potential for acid mine drainage to develop and affect fisheries should be evaluated. This issue is discussed in Section 3.16.

1.6.2.4. Cultural Resources

The EIS should evaluate the impacts on archaeological features of the Smith River. The EIS should evaluate cultural and archaeological resources and cultural landscapes that could be affected by the Project, including those near the mine site. This issue is discussed in Section 3.3.

1.6.2.5. Cumulative Impacts

The EIS should evaluate current water withdrawals from Sheep Creek and Smith River in combination with the potential impacts of the Project. The EIS should consider the combined impacts of truck traffic from new industrial activity along the Missouri River Corridor and truck traffic from the Project. A mining district of multiple Projects should be evaluated. Cumulative impacts to fisheries should be evaluated. This issue is discussed in Chapter 4.

1.6.2.6. Geotechnical Stability

The impacts of earthquakes and heavy rains on the mine should be studied in relation to geotechnical stability. The evaluation and certification of the Cemented Tailings Facility (CTF) stability should be disclosed in the EIS. This issue is discussed in Section 3.6.

1.6.2.7. Land Use, Recreation, and Visual Resources

The EIS should evaluate mitigation to maintain the scenery along Kings Hill Scenic Byway (U.S. Highway 89). Recreation and use of the Smith River must be evaluated. The EIS should evaluate the impacts on the recreation and agricultural industry. These issues are discussed in Sections 3.7 and 3.8.

1.6.2.8. Noise and Vibration

Noise impacts on people and wildlife in the vicinity of the Smith River should be evaluated. The EIS needs to evaluate noise impacts on the Little Moose Subdivision located 3 miles from the proposed mill site. This issue is discussed in Section 3.11.

1.6.2.9. Socioeconomics

Population, urban growth, and demographic change in White Sulphur Springs as a result of mining should be studied. The EIS should evaluate the impact on rural life by the introduction of the mine. The EIS should evaluate the impacts of a boom and bust mining cycle on White Sulphur Springs, including the costs of building infrastructure that would be temporary, such as schools. The EIS should evaluate how many jobs could be provided to local residents. Environmental justice must be included in the EIS. The EIS should consider the loss of state tax dollars if the Smith River is impacted. The EIS should include a detailed economic analysis of Meagher County. This issue is discussed in Section 3.9.

1.6.2.10. Vegetation

The EIS should evaluate the spread of weeds on lands adjacent to the Project site and adopt mitigation measures. This issue is discussed in Section 3.13.

1.6.2.11. Water Resources

The EIS should perform a review of potential long-term impacts on the Smith River and its watershed. The EIS needs to address the dynamic aquifer and springs. The EIS should evaluate the durability and longevity of proposed water treatment as well as contingencies. The EIS should evaluate surface water and groundwater quantity and quality and the potential for acid mine drainage. This issue is discussed in Sections 3.4 and 3.5.

1.6.2.12. Wetlands

The EIS should examine the impact of filled wetlands on cold-water storage during low-water periods on Sheep Creek and the impacts on the Smith River. This issue is discussed in Section 3.14.

1.6.2.13. Terrestrial Wildlife

The EIS should disclose the specifics of the wildlife baseline data collection efforts, as the surveys for many species were inadequate. The EIS impact analysis should evaluate potential impacts to wildlife including migration patterns due to traffic, dust, noise, and increased human populations. This issue is discussed in Section 3.15.

1.6.3. Issues Considered but Not Studied in Detail

It was determined that a number of resources and issues raised during the scoping process would not be affected by the Project and thus would not be discussed further in the EIS. The resource areas and rationale for the determination are listed below.

1.6.3.1. Alternatives

The EIS does not evaluate sourcing metals from another ore body as that would not satisfy the purpose and need of the Project.

1.6.3.2. Aquatic Species

The aquatic species analysis does not include baseline information or impacts on the Missouri River. Impact analyses do not indicate that there would be a potential impact on the Missouri River as a result of the Project because the Project would not likely have any direct or secondary impacts on aquatic life in the Smith River, which is significantly upstream from the confluence with the Missouri River.

1.6.3.3. Cumulative Impacts

The EIS does not evaluate the possible contributions of Superfund sites in the area of Great Falls, Montana, in combination with the Project's potential impacts on the Missouri River. Impact analyses do not indicate that there would be a potential impact on the Missouri River as a result of the Project. The EIS does not evaluate the combined impact of the Project potentially contaminating the already-contaminated Livingston rail State Superfund site as the shipping containers would be sealed and thus would be unexpected to contribute to existing contamination.

1.6.3.4. Financial Assurance

Under Section 82-4-338(1), MCA, an operating permit applicant is required to file a reclamation bond with DEQ payable to the state of Montana in a sum determined by and conditioned upon the performance of MMRA requirements, rules adopted under the MMRA, and the operating permit. This EIS does not disclose reclamation bonding costs and calculations of the reclamation and closure bond; DEQ calculates a reclamation bond only after issuing a Record of Decision approving an application for an operating permit or exploration license.

1.6.3.5. General Topics

The EIS does not evaluate the impacts on and response to unforeseen events. It is not necessary for the EIS to evaluate speculative events or unlikely failures. The EIS does disclose the most likely outcomes, which are based on actual designs and processes supported by engineering.

1.6.3.6. Project Description

The EIS does not address the potential for mine expansion or assume that open-pit mining techniques would be used, as neither of those options is currently proposed, nor do they meet the purpose and need of the Project. If the Proponent is issued a permit, the Proponent would have to submit an application to amend the operating permit to conduct any expanded mining. Any further exploration would also require the Proponent to submit an application to amend its exploration license.

1.6.3.7. Prime or Unique Farmlands

No prime or unique farmlands would be affected by any of the alternatives, and so they are not considered in this EIS.

1.6.3.8. Water Resources

This EIS does not evaluate algal blooms¹ on the Smith River. Impacts on surface water quantity or quality in Sheep Creek are expected to be minor and, therefore, potential impacts on water quantity or quality in the Smith River would be insignificant. Chapter 3 discusses potential impacts to the Smith River.

1.6.3.9. Water Rights

The consumptive use of water by the Project would be offset by the water rights acquired under lease agreements with landowners. The Proponent's water rights mitigation plan would be designed to offset all of the stream depletion in Sheep Creek and Coon Creek. See Section 3.5, Surface Water Hydrology, for more information on potential stream depletion amounts. This EIS does not evaluate impacts on existing water rights.

1.6.3.10. Wild and Scenic Rivers

No Wild and Scenic Rivers would be affected by any of the alternatives. Two river systems are classified as Wild and Scenic in Montana. The Upper Missouri National Wild and Scenic River section starts at Fort Benton, Montana, approximately 75 miles northeast of the Project area. The North Fork, Middle Fork, and South Fork of the Flathead River are designated, and the closest reach (i.e., South Fork) is located approximately 120 miles northwest of the Project area.

Portions of the Smith River are listed as eligible for Wild and Scenic River designation. Chapter 3 discusses potential impacts to the Smith River; however, there would be no effects to outstandingly remarkable values.² Portions of Tenderfoot Creek are also listed as eligible for Wild and Scenic River designation, but this river would not be impacted by the Project as it is located about 15 miles north of the Project area and is not connected to Sheep Creek. As such, no eligible Wild and Scenic Rivers would be impacted.

1.6.3.11. Wilderness

No wilderness, wilderness study, or inventoried road-less areas would be affected by any of the alternatives. The Bob Marshall and Scapegoat wilderness areas are closest to the Project area, and are approximately 80 miles northwest.

¹ A sudden eruption of algae or cyanobacteria growth in water, which usually results from an excess of certain nutrients (e.g., nitrogen, phosphorous).

² The Wild and Scenic Rivers Act of 1968 describes select rivers that "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved..." as Wild and Scenic Rivers.

1.6.3.12. Human Health and Safety

The Proponent is regulated by the Mine Safety and Health Administration. This issue has not been carried forward in the analysis as it is outside the scope of this EIS.

1.6.3.13. Recreation

Comments were received on the potential secondary impacts to regional recreational activities due to a change in the public perception of the area with the addition of the proposed mine. Interest in floating the Smith River has steadily increased over the past 10 years, with nearly double the amount of people applying for permits than permits were issued in 2017. Given this history, it is unlikely that the construction and operations of the Project would cause there to be fewer people applying for float permits than permits that are available in a given year.

1.6.3.14. Climate Change

Public comments suggested that the EIS consider impacts to and from the Project due to climate change and changing weather conditions. Under Section 75-1-201 (2), MCA, an environmental review conducted under MEPA is not required to include a review of actual or potential impacts that are regional, national, or global in nature. Because effects of climate change are regional, national, or global in nature, MEPA does not allow consideration of climate change as direct, secondary, or cumulative impacts.