

Chapter 1

Introduction and Purpose and Need

1.1 Introduction

Haile Gold Mine, Inc. (Haile or the Applicant), a subsidiary of OceanaGold Corporation, proposes to expand mining operations at its existing Haile Gold Mine located in Lancaster County in north-central South Carolina (the Proposed Project). The Proposed Project, as summarized in Chapter 2, *Proposed Action and Alternatives*, and further described in Appendix A, *Detailed Project Description for the Proposed Haile Gold Mine Expansion*, would include expansion of surface mining and associated mine pits and overburden storage facilities, initiation of underground mining at the Horseshoe deposit, and increased ore processing through optimization of the mill and related infrastructure including expansion of the water management system and existing tailings storage facility. The mine plan area would increase by approximately 947 acres to accommodate mine expansion under the Proposed Project, increasing the total area within the project boundary from 4,522 acres to 5,469 acres.

Haile has applied to the U.S. Army Corps of Engineers (USACE) for a modification to their existing Department of the Army (DA) permit for the Haile Gold Mine to authorize the discharge of dredged or fill material from the Proposed Project into waters of the United States per Section 404 of the Clean Water Act (CWA).

The Proposed Project involves a federal action because the proposed mine expansion would result in filling wetlands and other waters of the United States and requires authorization through a DA permit under Section 404 of the CWA (33 U.S. Code [USC] 1344). Under Section 404, USACE was delegated authority to issue permits for discharges of dredged or fill material into waters of the United States. USACE provides jurisdictional determinations¹ and DA permit actions pursuant to Section 404 of the CWA, and has set forth regulations governing its implementation of the Regulatory Program at Title 33 Code of Federal Regulations (CFR) Parts 320–332.

USACE has determined that the proposed expansion of the Haile Gold Mine could significantly affect the quality of the human and natural environment, and that the DA permit modification decision would be a major federal action requiring preparation of a Supplemental Environmental Impact Statement (SEIS).

¹ *Jurisdictional determination* means a written USACE determination that a wetland and/or waterbody is subject to regulatory jurisdiction under Section 404 of the CWA (33 USC 1344) or a written determination that a waterbody is subject to regulatory jurisdiction under Section 9 or 10 of the Rivers and Harbors Act of 1899 (33 USC 401 et seq.). An approved jurisdictional determination precisely identifies the limits of those waters on the project site determined to be “jurisdictional.”

This SEIS has been prepared pursuant to the following.

- The National Environmental Policy Act of 1969 (NEPA) (42 USC 4321 et seq.) including Section 102(2)(C) (42 USC 4332(2)(C)).²
- The Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR 1500–1508).
- Section 404 of the CWA on permitting disposal sites for dredged or fill material (33 USC 1344), as amended.
- U.S. Environmental Protection Agency (USEPA) CWA Section 404(b)(1) Guidelines (33 CFR Part 230).
- USACE regulations found at 33 CFR 320–332.

This SEIS updates the *2014 Final Environmental Impact Statement for the Haile Gold Mine Project* (2014 FEIS) (USACE 2014) by describing and analyzing impacts from the expanded mine facilities under the Proposed Project and alternatives considered by USACE.

The Haile Gold Mine is located 3 miles northeast of the town of Kershaw in southern Lancaster County, South Carolina (Figure 1-1), which is part of the Carolina Slate Belt. More information on the Carolina Slate Belt, a history of mining at the Proposed Project site, and recent activities are detailed in the 2014 FEIS.

² On September 14, 2020, the Council on Environmental Quality's "Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act", published at 85 Federal Register 43304 (July 16, 2020), went into effect (the revised NEPA regulations). However, the preamble to the revised NEPA regulations states as follows:

For NEPA reviews in process that agencies began before the final rule's effective date, agencies may choose whether to apply the revised regulations or proceed under the 1978 regulations and their existing agency NEPA procedures. Agencies should clearly indicate to interested and affected parties which procedures it is applying for each proposed action.

85 Fed. Reg. 43304, at 43340 (July 16, 2020). Because preparation of this SEIS had begun prior to September 14, 2020 (i.e., the effective date of the revised NEPA regulations), this SEIS has been prepared under the 1978 NEPA regulations and USACE's existing NEPA procedures (33 CFR Part 325, Appendix B).

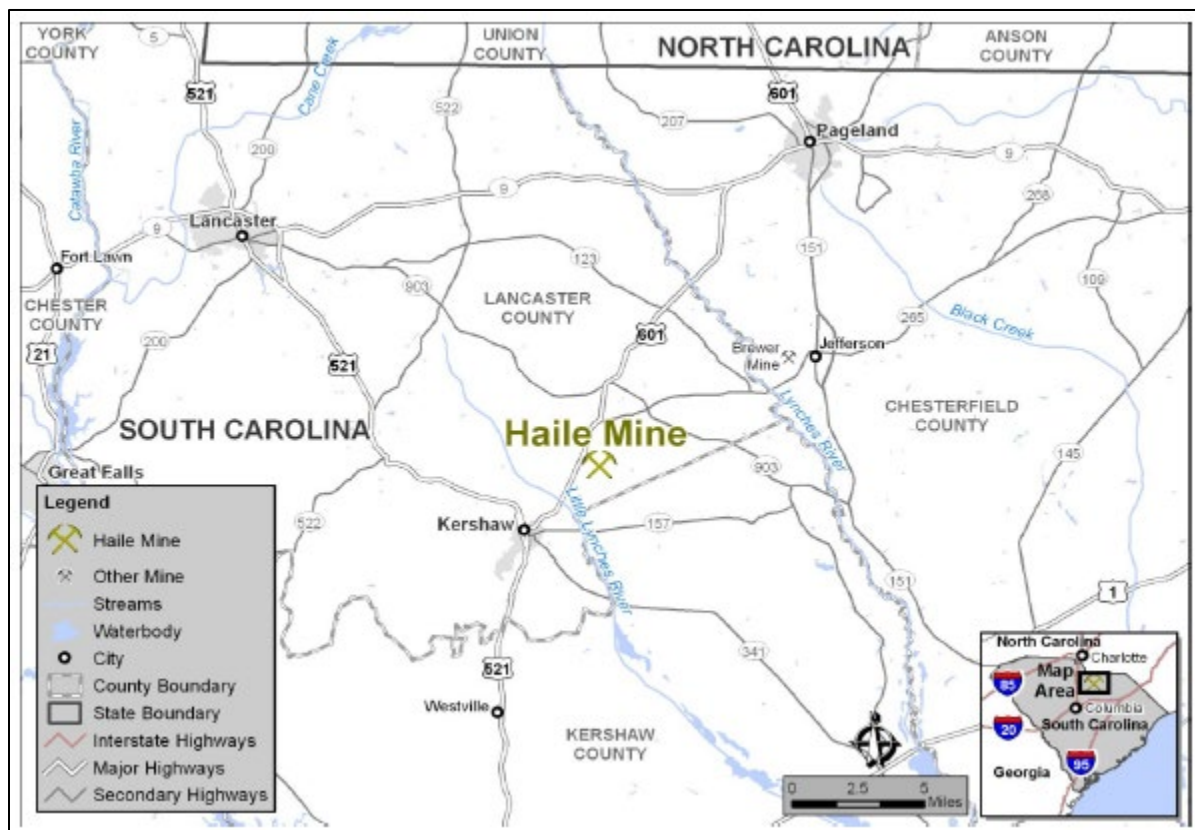


Figure 1-1. Location of the Proposed Haile Gold Mine Expansion

Haile initiated its preconstruction activities for its mine in 2015, pursuant to permits issued in 2014, as a result of analysis completed for the 2014 FEIS and did not formally initiate its mining operations until October 2017. Haile started its processing operations in October 2017 and is presently still working under those permits. In June 2020, Haile Gold Mine, Inc. submitted an application to the South Carolina Department of Health and Environmental Control (SCDHEC), Bureau of Land and Waste Management, Division of Mining and Solid Waste Permitting, requesting modification to its existing mine permit (SCDHEC Permit No. I-000601). The application requested approval on five operational adjustments to the mine and reclamation plan as it was proposed in the 2014 FEIS. SCDHEC approved the modification to the permit in September 2020. In addition, USACE approved a minor modification to the 2014-approved DA permit for Haile's proposed modification that would affect 4.75 acres of wetlands in September 2020.

1.2 Overview of the Proposed Haile Gold Mine Expansion

This section presents a brief summary of the proposed Haile Gold Mine expansion. Full details of the Proposed Project are provided in Appendix A, *Detailed Project Description for the Proposed Haile Gold Mine Expansion*; a more complete summary of the Proposed Project is found in Chapter 2, *Proposed Action and Alternatives*. The Glossary contains definitions of the scientific and mining terms used in this SEIS.

The Proposed Project would increase existing gold mining operations by doing the following.

- Expanding existing pits, overburden storage areas, and the tailings storage facility.
- Initiating underground mining of the Horseshoe deposit.
- Optimizing the mill operations and increasing the rate of ore processing.
- Expanding the water treatment facility.
- Increasing water storage capacity.

The mine project boundary would be expanded by approximately 947 acres from 4,522 to encompass a total of 5,469 acres, of which approximately 3,747 acres would be disturbed over the life of the mine. Proposed mining activities in the expanded Proposed Project would focus on areas affected by past mining activities and additional land purchased by Haile to support proposed mining expansion activities.

Surface water and ground water would be managed to meet permitting requirements, disturbed sites would be reclaimed as soon as practical, and site conditions would be monitored from project initiation to post-closure.

1.3 Project Purpose and Need

The purpose and need for the Proposed Project is the same as described in Section 1.5, *Project Purpose and Need*, in the 2014 FEIS except where clarified or noted in this section.

The applicant's stated need for the proposed expansion project is the same as Section 1.5.1, *Applicant's Stated Need*, in the 2014 FEIS which states, "[t]o produce gold for sale from the mineralized gold-bearing zones on the Haile property" (Haile Gold Mine, Inc. 2012).

This SEIS stated need has the following clarification, to expand gold producing operations from mineralized gold-bearing zones on the Haile property.

USACE's basic project purpose and determination of water dependency for the Proposed Project is the same as described in Section 1.5.2, *USACE's Basic Project Purpose and Determination of Water Dependency*, in the 2014 FEIS. In that document USACE determined the basic purpose is "to extract and process gold" and that "this process itself does not require access to or proximity to, or siting within, a special aquatic site to fulfill its basic purpose." Therefore, USACE found that the project is not water dependent (2014 FEIS).

USACE's overall project purpose and alternatives analysis is applicable to that as described in Section 1.5.3, *USACE's Overall Project Purpose and Alternatives Analysis*, in the 2014 FEIS. In the 2014 FEIS, USACE determined that the overall purpose of the Proposed Project is "[t]o open and operate a gold mining operation using gold-bearing mineral reserves in the Carolina Slate Belt region." The primary difference would be the expansion of the existing mine rather than opening of a new mine. Therefore, USACE's overall project purpose for the Proposed Project is to expand Haile's gold mining operation using gold-bearing mineral reserves in the Carolina Slate Belt region.

Section 1.5.4, *Basis for Applicant's Stated Need and Mine Plan*, of the 2014 FEIS is generally applicable to the Proposed Project except in Subsection 1.5.4.2, *Basis for Haile's Mine Plan—The Feasibility Study and the \$950 Reserve*, as described below.

Haile's predecessor, Romarco Minerals, Inc. (Romarco) used \$950 per troy ounce as the cutoff price to determine economic feasibility for the mine in the 2014 FEIS. This established the blocks of ore material that would be economical to mine, which provided the basis for the original mine plan that was permitted in 2014. The price of gold has consistently been above the \$1,150-per-troy-ounce benchmark over the past 10 years; therefore, Haile based the new mine plan on \$1,150 per troy ounce and a mineralization cutoff grade above 0.013 recoverable troy ounce per ton. This results in additional reserves being included in the mine plan for the Proposed Project.

The mine plan for the Proposed Project is based on the feasibility study titled *National Instrument 43-101 Technical Report, Haile Gold Mine, Lancaster County, South Carolina* (SRK 2017) and the \$1,150 Reserve. The mine plan represents a financially optimized plan describing how Haile proposes to expand the mine; process and produce the gold; and reclaim, close, and monitor the mine site after closure.

Section 1.5.5, *USACE Evaluation of Applicant's Need Statement*, from the 2014 FEIS for the Proposed Project is applicable to the Proposed Project.

USACE evaluated the Applicant's stated need for the Proposed Project and has evaluated other independent market information on the need and demand for gold, as described in the 2014 FEIS. USACE found that there is demonstrable demand for gold and the Applicant's stated need of providing increased domestic gold production to meet world demand is valid.

1.4 Public, Agency, and Tribal Involvement and Participation

NEPA requires meaningful opportunities for public, agency, and tribal participation. The participation program implemented by USACE for this SEIS for the Proposed Project has included an area wide mailing to the public, agencies and tribes for a public scoping meeting with ongoing opportunities for input to the process for determining the scope of this SEIS; broadly distributed and provided access to the information regarding the Draft SEIS, including the use of a public website;³ and provided opportunity to comment on the Draft SEIS. During the development of this SEIS, the public website was also used to inform agencies, tribes, and the general public.

Chapter 8, *Consultation and Coordination*, describes the public involvement and stakeholder outreach process for conducting the public scoping, Appendix D, *Scoping Report*, provides the Scoping Report, and Appendix E, *Agency Correspondence*, contains the formal agency correspondence leading up to the publication of the Draft SEIS.

USACE continued to offer opportunities for agency and public participation during preparation of the Draft SEIS and completion of this SEIS. In addition to making the Draft SEIS available for written public comment, USACE and SCDHEC co-hosted a virtual public hearing on April 1, 2021, to accept oral and written comments on the Draft SEIS. USACE and cooperating agencies have reviewed and responded to each comment, as appropriate, during preparation of this SEIS. A comment-response table in Chapter 10 of this SEIS provides a response to each individual comment or consolidated responses for groups of similar comments. Appendix P, *Comments Received on the Draft SEIS*,

³ <http://www.hailegoldmineseis.com>

contains copies of all comments submitted on the Draft SEIS. The Draft SEIS was revised as necessary according to public and agency input to create this SEIS.

1.5 Agency Roles and Responsibilities

Cooperating agencies and their roles and responsibilities for the Proposed Project would be the same as described in Section 1.8, *Agency Roles and Responsibilities*, of the 2014 FEIS. USACE is the lead federal agency for preparation of this SEIS. Two agencies, USEPA and SCDHEC, formally elected to be cooperating agencies under NEPA. Responsibilities of cooperating agencies include assisting USACE in identifying issues of concern and providing meaningful and timely comment and input throughout the NEPA process. USEPA and SCDHEC were actively involved with the NEPA process for the Proposed Project by providing interdisciplinary expertise to assist with analysis and review.

As the lead federal agency, USACE must determine whether the Proposed Project activities should be authorized and permitted. To do so, USACE must undertake supplemental analysis to evaluate the Proposed Project. This SEIS expands upon the Draft EIS, Final EIS, and Record of Decision for the Proposed Project. The original DA permit was issued on October 27, 2014, after it was determined that the project was in compliance with CWA Section 404(b)(1) Guidelines (40 CFR Part 230) and a public interest review (33 CFR 320.4) was conducted. The original DA permit authorized the preferred alternative, which was determined to be the least environmentally damaging practicable alternative in compliance with CWA Section 404(b)(1) Guidelines. As further described in Chapter 2, *Proposed Action and Alternatives*, USACE approved a minor modification of the 2014-issued DA permit in September 2020.

The Proposed Project requires preparation of this SEIS to inform USACE's consideration of Haile's proposed modification to the original DA permit (as modified in 2020) for the proposed expansion activities.

USEPA provides collaborative regulatory reviews that include, but are not limited to, Section 309 of the Clean Air Act; CWA Section 404(b)(1) Guidelines; and Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. USEPA's responsibilities are further described in the 2014 FEIS.

Since USEPA has delegated many federal environmental programs to the State of South Carolina, SCDHEC is a key partner that is engaged in the NEPA process to ensure necessary analysis takes place to support the permitting and approval process. SCDHEC is evaluating modifications to several permit applications and will continue to play an important role in reviewing amendments due to the Proposed Project (Section 1.6, *Permits, Licenses, and Other Approvals*).

1.6 Permits, Licenses, and Other Approvals

As an existing mine property, the Haile Gold Mine currently operates under a number of federal- and state-issued permits. Many of these permits are related to management of surface water and surface water discharges under the National Pollutant Discharge Elimination System program (NPDES). In addition to Haile's request for a USACE-issued modification to the original DA permit for the Proposed Project (as the basis for this USACE-prepared SEIS), many of the existing permits would require modification and/or reissuance to authorize the Proposed Project. Issuance of new permits and modification of existing permits would require various federal, state, and local agency reviews

to be conducted; actions to be completed; and procedures to be followed before construction or operations could be initiated.

Existing permits that may require modification or renewal are listed in Table 1-1. This list may not be comprehensive, and other permitting and approval needs may arise throughout the duration of the Proposed Project. The Applicant, SCDHEC, and USACE (as necessary) will coordinate with federal, state, and local agencies throughout the life of the Proposed Project to ensure that permitting needs are addressed. Appendix F, *Laws, Policies, and Plans Applicable to the Haile Gold Mine Expansion Project*, provides more detailed information regarding the permits and regulatory approvals needed for the Proposed Project.

Table 1-1. Existing Permits, Licenses, and Approvals Held by Haile Gold Mine, Inc. for Past and Present Mining and Reclamation

Agency	Permit Number	Description
Federal		
U.S. Army Corps of Engineers	SAC-1992-24122-4IA (Issued October 27, 2014)	Original DA permit issued pursuant to CWA Section 404 for the current mine plan to authorize impacts to waters of the United States.
Mine Safety and Health Administration	Mine Safety and Health Administration ID: 38-00600 (Issued February 5, 2010)	Operate mine within Mine Safety and Health Administration standards.
Federal Communications Commission	Call Sign: WQJB814 (Issued July 18, 2008)	One base station frequency, six local frequencies.
State		
SCDHEC, Division of Mining and Solid Waste Management	Mine Operating Permit No. I-000601 (Modified November 5, 2014)	Permit for current mine operations, closure, and reclamation.
SCDHEC, Bureau of Water, Dam Safety and Stormwater Permitting Division	Dam and Reservoirs Safety Permit 29-007 (Issued October 7, 2013)	Dam Safety Permit—Significant Hazard (Construction). Stability during earthquake- induced ground motion was evaluated by SCDHEC prior to issuance of the tailings storage facility construction permit.
SCDHEC, Bureau of Water, Dam Safety and Stormwater Permitting Division	Dam and Reservoirs Safety Permit DAM000207 v.1.0 (Issued October 21, 2019)	Permit to construct the Fresh Water Detention Dam.
SCDHEC, Office of Environmental Quality, Bureau of Air Quality	Clean Air Act, Title V Operating Permit No. TV-1460-0070 (Issued June 1, 2021)	Authorizes the operation of Haile Gold Mine in accordance with valid construction permits, and the plans, specifications, and other information submitted in the Title V permit application.
SCDHEC, Bureau of Solid and Hazardous Waste Management	Permit No. SCD987596806	Registration as a Small Quantity Generator of Hazardous Waste.

Agency	Permit Number	Description
SCDHEC, NPDES Program, Water Facilities Permitting Division	NPDES permit for discharge to surface waters, Permit No. SC0040479 (Issued October 7, 2013)	Permit to discharge treated water from current mine operations and reclamation areas.
SCDHEC, Bureau of Water, Division of Water Quality	CWA Section 401 Certification: SAC-1992-24122-41A (Issued October 23, 2014)	State certification that current mine plan is consistent with Section 401 of the Clean Water Act.
SCDHEC, Office of Environmental Laboratory Certification	#29553001 (Issued July 19, 2019)	Environmental Laboratory Certification.
SCDHEC, NPDES Program, Stormwater Permitting Section	Industrial Stormwater Permit No. SCR0004763 (Issued September 1, 2016)	General stormwater permits for mine operations and reclamation areas.
SCDHEC, NPDES Program, Stormwater Permitting Section	Small and Large Construction Stormwater Permit No. SCR100000 (Issued October 23, 2013)	Discharge of stormwater not covered under Industrial Stormwater General Permit No. SCR0004763.
Local		
Lancaster County Council	Floodplain Development Permit (Issued June 27, 2013)	Review/Permit operations per Flood Damage Prevention Ordinance.
Lancaster County Council	Ordinance 2013-2017 (Issued January 1, 2015)	Rezoned Haile Property within Final EIS Permit Boundary to Mining District (M) designation.
Other		
International Cyanide Management Institute	Certified in Full Compliance with the ICC (Issued July 18, 2019)	Signatories to ICC are required to complete periodic third-party audits to certify ICC compliance status.

Source: Haile Gold Mine, Inc. 2021.

^a International Commission on Large Dams 2020.

ICC = International Cyanide Code

Haile plans to obtain or modify the federal and state-administered permits and approvals for the Proposed Project identified in Table 1-2.

Table 1-2. Permits, Licenses, and Approvals Required for the Proposed Project

Agency	Permit Number	Description
Federal		
USACE	SAC-1992-24122-41A	Modification to DA permit issued pursuant to CWA Section 404 for the proposed mine plan to authorize impacts on waters of the United States.
Mine Safety and Health Administration	Mine Safety and Health Administration ID: 38-00600	Operate mine within Mine Safety and Health Administration standards.
State		
SCDHEC, Division of Mining and Solid Waste Management	Mine Operating Permit No. 601 Modification 20-1	Modification to operation, closure, and reclamation practices.
SCDHEC, Bureau of Water, Dam Safety and Stormwater Permitting Division	Dams & Reservoirs Safety Permit 29-0007	Permit to Alter a Dam—High Hazard.
SCDHEC, Bureau of Water, Water Quality Division	Section 401 Water Quality Certification	State Certification of the Federal Permit for discharges to state waters.
SCDHEC, NPDES Program, Water Facilities Permitting Division	General Permit for Stormwater Discharges for Small and Large Construction (Activities Permit) SCR100000	Modification to discharge of stormwater in connection with construction of structures not covered under the Industrial General Permit—requires submittal of Storm Water Pollution Prevention Plan and public notice prior to construction.
SCDHEC, NPDES Program, Water Facilities Permitting Division	Stormwater discharges associated with industrial activity SCR000000, Permit No. SCR004763	Modification to discharge of stormwater in connection with industrial activities, Industrial General Permit.
SCDHEC, NPDES Program, Industrial Wastewater Permitting Section	NPDES permit for discharge to surface waters, Permit No. SC0040479	Modification to discharge of industrial wastewater, Sector G—Metal Mining, for three outfalls to receiving waters Haile Gold Mine Branch (Creek).
SCDHEC, Office of Environmental Quality, Bureau of Air Quality	Bureau of Air Quality, State Construction Permits	Authorizes construction of the proposed facility and equipment specified in Haile Gold Mine, Inc.'s application for a DA permit; a permit to operate also is required. Includes new construction permits for a concrete batch plant and to increase the ore processing rate; these construction permits will be incorporated into the Title V Operating Permit as a minor modification.

Source: Haile Gold Mine, Inc. 2022.

1.7 References

Haile Gold Mine, Inc. 2021. Haile Gold Mine, Inc.'s Response to USACE's October 1, 2021 Request for Additional Information Related to Supplemental EIS (SEIS) Review. Response to RAI (SEIS) No. 10-332 (October 12, 2021).

Haile Gold Mine, Inc. 2022. Haile Gold Mine, Inc.'s Response to USACE's May 4, 2022 Request for Additional Information Related to Supplemental EIS (SEIS) Review. Response to RAI (SEIS) No. 10-343 (May 5, 2021).

International Commission on Large Dams. 2020. Available: <https://www.icol-d-cigb.org/>. Accessed: November 28, 2018.

SRK. 2017. National Instrument 43-101 Technical Report, Haile Gold Mine, Lancaster County, South Carolina. Effective Date: January 1, 2017, Report Date: August 9, 2017. Completed by SRK for OceanaGold Corporation.

U.S Army Corps of Engineers (USACE). 2014. *Final Environmental Impact Statement for the Haile Gold Mine Project*. U.S. Army Corps of Engineers, Charleston District. SAC 1992-24122-4IA. July 2014.