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Frequently Asked Questions

Q: Will there be mercury emissions from the mining and processing operations at the Haile Gold Mine plant?

A: Mercury is a naturally occurring element that is found in air, water and soil. Mercury can be mobilized in the environment from natural sources (such as volcanoes) and human activities (such as industrial combustion and mining). Historically, mercury was used extensively in gold mining and extraction process (called mercury amalgamation) but this practice has effectively ceased in the United States. Haile Gold Mine is not proposing the use of mercury in its gold processing in this way (e.g., mercury amalgamation). However, the mining and processing of ore for gold extraction does have the potential to release mercury compounds to the environment from the native rock and soil, especially where ores of gold also have substantial quantities of naturally-occurring mercury, which may not be the case at Haile Gold Mine. The occurrence of mercury in the soil and rock of the Haile Gold Mine site and the potential for release of mercury through mining and processing will be addressed in the environmental analysis for the EIS.

Q: I'm concerned about the use of cyanide in the mining process. Will there be any cyanide in the tailings pond and if so, how much will be allowed? Will it be safe for birds or other wildlife? Will cyanide get into the air above the tailing storage facility?

A: Cyanide is a naturally occurring molecule of carbon and nitrogen. Low concentrations of cyanide are present in nature, for example in many insects and plants, including a wide range of vegetables, fruits and nuts. In addition, cyanide is present in much of the everyday environment, to which we are exposed, for example in road salt and automobile exhaust and as a stabilizer in table salt. Cyanide is used in the manufacture of metal parts and numerous common organic products such as plastics, synthetic fabrics, fertilizers, herbicides, dyes and pharmaceuticals. However, cyanide is also a toxic substance and can be lethal if ingested or inhaled in sufficient amounts.

Cyanide is proposed to be routinely used in the Haile Gold Mine processing facility to extract gold from the ore. During gold processing, sodium cyanide (NaCN) would be used to dissolve the gold from

crushed and milled ore in special containers. The gold would then be extracted from solution via a carbon-in-leach (CIL) process. The remaining slurry would contain fine-grained sediment material and cyanide residues in various forms. This slurry would be pumped to the disposal facility referred to as a tailings storage facility (TSF); the TSF is proposed to be lined to contain the sediments, associated fluids, and rainfall. Once the slurry is released to into the TSF, the particles would settle out and a temporary pond of standing water would form on the TSF and would be open to the environment. Much of the solution would drain down to the bottom of the TSF where it would be collected and recycled back to the

slurry would drain down to the bottom of the TFS where it would be collected and recycled back to the mill for re-use. The temporary pond that would form in the TFS has the potential to attract terrestrial wildlife, particularly birds. According to documents submitted by Haile, birds are the most common class of wildlife observed in TFSs. Birds or other wildlife do have the potential to be exposed by cyanide in the TFS pond or at the surface of the TFSs. There have been reports of wildlife mortalities associated with cyanide containing facilities at gold mine sites in the Western US. Haile Gold Mine, Inc.'s mine processing plan includes discharging the slurry to the TFS with cyanide concentrations proposed to be no greater than 50 parts per million. Thus, when tailings arrive at the TFS, there will be cyanide and other chemicals present in the water. In the TFS, certain forms of cyanide would degrade further by direct exposure with sunlight and the atmosphere. One of the natural degradation processes for cyanide is its conversion from a liquid form into a gas, and so some cyanide would be released to the atmosphere as hydrogen cyanide (HCN), a toxic gas when occurring at sufficient concentrations.

Because of the potential for some release of cyanide and the potential exposure of wildlife to the TFS, the environmental analysis for the EIS will include an evaluation of exposure risks from cyanide and other chemicals in the water and tailings at the tailings storage facility. Haile has submitted as part of the application initial assessment of the toxicity of cyanide and the potential ecological risk of cyanide exposure to wildlife. These documents will be reviewed and evaluated and included, as appropriate, in the independent analysis being conducted by the U.S. Army Corps of Engineers (USACE) for the EIS. The measures proposed by Haile to manage the associated risks and potential impacts will also be evaluated and considered.

Q: Are there methods proposed to safely manage cyanide for the project?

Managing risks associated with the use of cyanide involves sound engineering, careful monitoring and good management practices in order to prevent and mitigate potential releases of cyanide to the environment. Also important is the measures in place to respond to and remediate any accidental release. According to Haile's application, waters or solutions with cyanide would not be directly discharged to streams, lakes, or rivers. Haile Gold Mine has stated that it is committed to follow the International Cyanide Management Code and its Principles and Standards of Practice of the Code. The Standards of Practice address production, transportation, handling and storage, operations, decommissioning, worker safety, emergency response, training, and communication with the public. However, there is always the potential for release of cyanide in the mining process either directly through an accidental spill or leak. Also, there is the potential for fluids with cyanide to leak or escape from the system through tears, punctures or other failures in the facility's liner. The potential for release of cyanide and associated risks will be addressed in the environmental analysis for the EIS, as will measures proposed by Haile to manage the associated risks and potential impacts.

Q: What is acid rock drainage (acid mine drainage) and is it a possible threat for this project?

A: Also commonly referred to as acid mine drainage (AMD), acid rock drainage occurs when rocks with metal sulfides (like pyrite, for example) are exposed to air and water. This causes a chemical reaction in the rocks called oxidation and this process generates acidity. This reduces the pH of the water (the water gets more acidic), and increases the potential for the water to leach out other elements from the rock, such as metals. As this occurs, water that has come into contact with the rocks, such as rainfall or drainage, can contain a number of potentially harmful elements or compounds. Water affected by AMD may drain or discharge to rivers, lakes, streams, groundwater, or wetlands and result in contamination which can stress and even kill fish and other aquatic life. The proposed mine plan for Haile Gold Mine incorporates a number of processes that are designed to prevent the development of acid mine drainage conditions. During the mining process, the rock is proposed to be tested regularly by Haile to determine its potential for acid generation, or PAG. Testing will be performed in accordance with permit conditions prescribed for the project, if permitted. Typically, the applicant performs the testing and is required to maintain the laboratory results and provide regular reports as part of compliance with their permits. Rock material with moderate to high acid generating potential will be stored in a lined facility that will be designed to prevent leakage of water through the rocks and out of the facility. Acid mine drainage has

occurred widely in the mining industry and is recognized as a substantial concern in any hard rock or coal mining process, and this aspect of the proposed Haile Gold Mine will be included in the environmental analysis in the EIS.

Q: I'm concerned about the location of the large tailings storage facility. Will contamination from the mine affect my property, groundwater, or streams nearby?

A: According to the proposal by Haile, the tailings storage facility for the Haile Gold Mine would be constructed with double containment, using a clay liner, a synthetic membrane (high density polyethylene or HDPE, a high-tech plastic) liner and a drainage collection system to capture water draining through the tailings and recycle and treat the resulting solution. However, the potential exists for the proposed design to fail or to have leakage, with the potential for release to the environment. Haile has proposed a monitoring plan that is designed to detect leaks from the tailings storage facility. The potential for contamination of surface and groundwater will be evaluated as part of the environmental

potential for contamination of surface and groundwater will be evaluated as part of the environmental analysis for the EIS.

Q: Will the mine be using state-of-the-art technology or older technologies seen at other previously existing mines in South Carolina?

A: The mine as proposed by Haile is a combination of conventional mining technologies and more modern technologies that may be considered to be "state-of-the-art." The major elements of the proposed Haile Gold Mine plan include mine pits, overburden and topsoil storage areas, tailings storage facility, processing plant, water management, shops and maintenance facilities, and haul roads. Most of the mine pit development and hauling and stacking of overburden would for the most part follow proven conventional mining technologies with updated equipment and processes. Overburden management is proposed by Haile to include testing and overburden separation and storage process designed to segregate overburden rated as having little or no acid generating potential, moderate acid generating potential, and high acid-generating potential. The overburden with moderate to high acid generating potential would be stored in a single overburden area that is underlain by a liner to collect any water leaching through the overburden, and including the water from this area within the closed loop and water treatment system of the gold processing facility. This overburden management process can be characterized as a modern approach. There are two general approaches to leaching gold from mined ore using cyanide: tank leaching and heap leaching. Haile has proposed tank leaching using a carbon-in-leach (CIL) process. With this type of gold extraction, the crushed ore, water, cyanide solution, and fine-grained activated carbon are added to large extraction tanks. Through a multi-step process that includes crushing, grinding, flotation, concentrating, reactions of the gold-containing solutions, and melting in a kiln, gold bars, or doré, are produced. Haile Gold Mine, Inc.'s water management plan includes dividing the process water, contact water, and non-contact water, each with its own treatment and discharge permitting plan to address state water quality standards. While Haile has proposed a modern gold mining facility that can be considered to be state-of-the-art in some ways, there are as yet many details to be examined in their proposed action and potential alternatives that could be used to minimize or further reduce the chances of accidents, releases, or failures or provide for emergency response. These considerations will be carried forward in the environmental analysis for the EIS.

Q: Why are Haile and/or its parent company, Romarco Minerals Inc., buying property further out from the existing proposed mine site?

A: The answer to this question may best come from the mining company itself, which may be addressed in part by reading the web site for Romarco Minerals Inc. ("Romarco") (<http://www.romarco.com/>), the Canadian parent company of Haile Gold Mine, Inc. According to the web site (accessed January 29, 2012), Romarco is an exploration and development stage gold company hosting projects in the United States. Romarco's flagship development project is the 100%-owned Haile Gold Mine, located in Lancaster County, South Carolina. Further, Romarco states that Haile is part of a much larger gold district and the Company is just beginning to assess the regional potential. Romarco has an active exploration program, and leases and buys property as it sees fit to further its business interests and the value to its shareholders. Romarco and Haile (<http://hailegoldmine.com/home/>) regularly report on their exploration program and finding, as well as gold reserves. In the environmental analysis for the EIS, the USACE must consider the potential cumulative impacts of the project - the effect of the project when considered with past, present, and reasonably foreseeable future actions or projects. This means that the USACE will address effects of past mining, the proposed Haile Gold Mine, and future mining in the area and region, to the extent that these are reasonably foreseeable. The USACE has requested additional information from Haile and Romarco about its land-holdings and documented gold reserves within the broader Carolina Slate Belt region.

Q: What other permits are needed for Haile Gold Mine beyond the one from the U.S. Army Corps of Engineers?

A: In addition to the Department of the Army (DA) permit, Haile Gold Mine, Inc. must obtain a number of other permits before land disturbance and mining operations will be permitted to begin. The project will require a Land Use Permit from Lancaster County. Permits from South Carolina Department of Health and Environmental Control (SCDHEC) will be required for mine operations, air quality, solid waste disposal, stormwater and National Pollution Discharge Elimination System (NPDES) permits for waste water treatment and discharge, drinking water, mine reclamation, dam permit (under the Dams and Reservoir's Safety section), and highway encroachment (for haul road crossings and tailings distribution line crossing). Federal permits will be required for dredge and fill of wetlands, and wetland/stream mitigation. These required permits will be listed in the EIS. Haile's documents submitted as part of the application for permit also include additional information on permits required.

Q: What is the schedule for reviewing this project? How long will it take, and can it be sped up?

A: The USACE recognizes that Haile Gold Mine, Inc. would like to expedite the USACE's review and analysis to the maximum extent. The USACE will conduct the environmental analysis and development of the EIS in a manner designed to be efficient and keep the process moving forward as quickly as

of the EIS in a manner designed to be efficient and keep the process moving forward as quickly as possible; without compromising the accuracy and thoroughness of the analysis and documentation required by the National Environmental Policy Act (NEPA). This includes an effective public involvement program and a rigorous alternatives analysis. The proposed Haile Gold Mine is a large, complex, and technical project with a large set of underlying studies, assessments, and reports. The USACE is committed to a complete, thorough, and independent review of these documents and submittals. The timetable for review and preparation of the EIS will also depend in part on the completeness of the information provided by Haile Gold Mine, Inc. in their federal permit application and the timeliness of complete and adequate responses to Requests for Additional Information (RAI). The Draft EIS is currently scheduled for publication in March 2014. Additional schedule milestones can be found on the schedule tab of this website.

Q: Even with good planning and engineering, accidents can happen. What assurances are there that Haile will satisfactorily fix problems should they arise? Will sufficient funds be set aside for contingencies and accidental spills, contamination, or other problems during the life of the mine and after mine closure?

A: Effectively managing accidents or problems that may occur during mining operation or post-mine closure requires several elements, among them, detecting the problem, responding to accidents, designing the right remedial action, and the management and funding to ensure that the problem is adequately addressed and any environmental damage mitigated. Haile has proposed a number of plans and programs that are designed to address these steps - monitoring plans, spill response, emergency action plans, reclamation plans, post-closure monitoring and maintenance, and the establishment of funds to address them (See also the answer to Q: Who will be watching and monitoring the mine during the duration of mining operations? What assurances are there that problems that arise after the mine is closed will be taken care of?) However, at this time, no independent assessment has yet been made of the scope and adequacy of these programs to achieve their stated objectives, and in some cases, elements of the plans and management steps are conceptual in nature or designed to be developed during or near the end of the mine life. The USACE will coordinate with SCDHEC, Bureau of Land and Waste Management, Mining and Reclamation Section, and consideration of these issues will be addressed in the environmental analysis for the EIS.

Q: Will the applicant be required to set aside money to address possible future problems after the mine closes?

A: The environmental analysis performed in support of the EIS will include a review of Haile's proposed final mitigation, closure, reclamation plans, and post-closure monitoring plans for the project. Haile Gold Mine, Inc. has committed to provide a letter of credit, performance bond, funds placed in escrow, or other equivalent means to cover the cost of construction for work activities for final reclamation and mitigation. Additionally, the EIS will provide a review of the financial assurances and assess the adequacy of the type and extent of assurances and whether they are reasonable to address potential post-closure impacts.

Q: Who will be watching and monitoring the mine during the duration of mining operations? What assurances are there that problems that arise after the mine is closed will be taken care of?

A: These questions will be addressed in the environmental analysis for the EIS. Haile has proposed a number of monitoring practices to be in place during the life of the mining process, including ambient groundwater and surface water quality and monitoring of discharges. In addition, Haile must also obtain multiple permits from the State of South Carolina and the federal government (See also the answer to Q: What other permits are needed for Haile Gold Mine beyond the one from the U.S. Army Corps of Engineers?). These permits will also include some conditions for environmental monitoring. The responsibility for mine permits and compliance within the State of South Carolina lies with the SCDHEC, Bureau of Land and Waste Management, Mining and Reclamation Section. Once a permit is issued, inspections are made to confirm the operation is in compliance with the South Carolina Mining Act and regulations. All mines must operate as required by the permit document, any added terms and conditions, the approved Reclamation Plan and the South Carolina Mining Act and regulations. Inspections may be either unannounced or scheduled with the operator. Inspections are conducted until reclamation of the mine is complete, accepted by the Department, and permit cancelled (http://www.scdhec.gov/environment/lwm/html/min_compliance_enforcement.htm). The USACE also performs compliance inspections for conditions in the DA permit, and has the ability to include special requirements that assist in ensuring compliance, such as, but not limited to monitoring reports, third party inspectors, bonds, etc.

Q: Haile has drilled a number of holes that went as deep as 2,500 feet that showed gold in the rock. Does the mine plan include mining deeper than the 840 feet shown in the plan so far?

A: Drilling deeper cores is a typical practice in mining exploration, to identify the extent of ore reserves and underlying geology, even at depths beyond what may currently be a feasible depth for mining, or beyond what may be sought to be permitted. Obtaining information from greater depths provides

geologists and mining engineers with more data regarding the geology and mineral resources at the site. At this time, the proposed Haile Gold Mine includes open pit mining to a maximum depth of 840 feet below ground for one of the pits. Mining to substantially greater depths, such as 2,500 feet below ground, would likely require different mining methods to obtain the material at reasonable costs and with acceptable and controllable impacts. The environmental analysis for the EIS will consider the proposed plan and its practicable alternatives, but using the mine plan specifically identified by Haile and agreed upon as the Proposed Action for the EIS. Changes in the mine plan to attempt to recover gold at greater depths than proposed in the mine permit application, if they were proposed during this permitting and EIS process, may require a re-definition of the Proposed Action, or permit revision or reapplication, all of which will significantly delay the project. Based on information we received during the public meetings, we have specifically requested information from Haile on their intentions in this regard. Proposals for mine expansion, either deeper or outside the boundaries of the currently identified mining areas, may require a new DA permit, depending on the proposal.

Q: Will my private well be impacted by groundwater drawdown from mining activities? Will my well's water quality be affected? There are also springs and streams in the area; will they be affected?

A: Open pit mining requires dewatering or a lowering of the groundwater in the area about the mine to keep the pit dry and allow mining to occur. To accomplish this, Haile proposes to install groundwater pumping wells around the perimeter of the pits and to pump out groundwater to lower the groundwater below the open level of the pit (maximum depth 840 feet) during mining in that location. Haile Gold Mine, Inc. has performed well pump tests and groundwater modeling analysis to estimate the required pumping rates and resulting groundwater drawdown around the mine and the surrounding area. Such activities do have the potential to lower groundwater levels in the area, and if groundwater levels further away than the immediate vicinity of the mine pits were to be lowered, streams, private wells or other groundwater-dependent resources and uses may be affected. This potential will receive considerable attention in the environmental analysis for the EIS, as it could affect groundwater quantity and quality. Specifically, the EIS will also consider potential effects on and changes to water quality in groundwater and the potential impacts on well water quality in the area.

Q: Will there be air and dust impacts outside of the project site that could affect the public?

A: Activities at the Haile Gold Mine - blasting, excavation, hauling, processing, smelting - would generate dust, particulates, and other emissions that have the potential to result in impacts to air quality and settling of particulates on the ground within and outside the boundaries of the project site. Several methods and technologies are proposed to control dust and air impacts at the mine, such as dust suppression on roads by regular watering, facility ventilation control, and stack controls. Haile has prepared a draft air quality evaluation to estimate the air quality effects of the proposed mining operations, and a final evaluation report is expected. Haile must obtain an air permit from the SCDHEC, Bureau of Air Quality (BAQ), which develops and issues permits for permissible air emissions. The BAQ regulates air pollutant emissions through its permitting process that is administered by the Engineering Services Division. An air permit is a legal document that prescribes the construction and operation of sources of air pollutants in a manner that would limit the quantity, rate, or concentration of emissions on a continuous basis at a facility in compliance with state and federal regulations and regulatory requirements. Although the state issues the air permit, the environmental analysis for the EIS will include a review and assessment of proposed air emissions and potential air quality impacts.

Q: Will wildlife impacts be considered as part of the permitting process?

A: Yes, the environmental analysis for the EIS will consider potential effects on wildlife and plant communities in and around the proposed project area. Studies and surveys of wildlife and their habitats have been conducted by Haile. Some have been submitted as part of the application and others are currently underway. Haile has submitted survey results addressing the potential habitat and presence for state and federally listed species - bald eagle, sandhills chub (a fish), and the Carolina heelsplitter (a mollusk). Additional habitat, vegetation, and wildlife surveys or evaluations are still being performed, during appropriate seasons when it is most likely to find the wildlife species, nests, burrows, habitats, etc. As the results of these surveys are developed and provided, they will be independently and collectively evaluated as part of the environmental analysis for the EIS.

Q: Lots of people here do not understand the gold mining process. Will there be future public involvement meetings to provide more project-specific information to the public?

A: Yes. The USACE is actively seeking and gaining input from the public, most recently during the August 20, 2013 community meeting held at the Andrew Jackson Recreation Center in Kershaw, South Carolina. Approximately 300 people were present to hear the USACE provide an update on the EIS and field questions from the audience. The purpose of the meeting was to receive input and provide project-specific information about the proposed mining process and potential impacts of the project, so that the public could better understand the proposed Haile Gold Mine. Topics discussed included: the draft

Alternatives Development and Evaluation Report, the Mine Interactive Experience website (MInE), Haile Gold Mine Inc.'s August 2012 project revisions and July 2013 revised mitigation plan. (A link to the MinE is provided on the home tab of this website and the documents are available on the documents tab.) The next planned public meeting is the Draft EIS public hearing scheduled for April 2014.

Q: Are you considering all of the landowners adjacent to the mine and potentially affected by mining activities? How are you contacting them so that they are of aware of the proposed Haile Gold Mine and their opportunity to be heard as part of the EIS process?

A: Yes, the USACE is actively seeking to contact all members of the affected public in the vicinity of the Haile Gold Mine, particularly landowners immediately adjacent to or abutting the proposed Haile Gold Mine project boundary. As part of the DA permit application, the Applicant was required to provide the names and mailing addresses of all adjacent property owners who share a boundary with the proposed project. Additionally, the USACE has obtained tax maps and parcel ownership data, utility customer lists, and other sources of information to establish a mailing list for notices about the proposed mine and request for a DA permit. Individual letters were sent to make residents and landowners aware of the proposed mine, public meetings and opportunities for public involvement during the EIS process. The USACE has taken this further by extending its mailing lists for notices to areas beyond of the area of immediately adjacent property ownership. In addition, the USACE has used other methods to build awareness and seek public input, including announcements and notices in local papers, conversing with members of the local public, and establishing a project website (<http://www.hailegoldmineeis.com>).