



HAZARDOUS MATERIALS

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When the DEIS was released by the U.S. Forest Service in August of 2020, our company was called Midas Gold. Since then, we have changed our name to better reflect our values and our project. Today, we are proud to be Perpetua Resources.

BEST PRACTICES

- From the very beginning, Midas Gold put worker and environmental safety as a top priority (*Midas Gold Idaho, Plan of Restoration and Operation (PRO); Chapter 2*). By implementing best practices for material transportation, storage and use, Midas Gold has a stellar track record of safely managing hazardous materials.
 - Since 2011, Midas Gold has safely conducted over 143 successful fuel hauls involving 279 fuel trucks.
 - Midas Gold recently passed 100 months without a reportable spill.
- Given the nature of the mining industry, the Stibnite Gold Project worksite will contain several types of naturally occurring and manufactured hazardous materials (HAZMAT). However, the project design presented to the U.S. Forest Service by Midas Gold Idaho prioritizes the safe transportation and handling of these materials.
- To safely manage materials, including everything from fuel to explosives, Midas Gold Idaho will construct the necessary support infrastructure to transport and store these materials in ways that prioritize safety and environmental protection while allowing for efficient operations.
- Midas Gold will develop an updated hazardous materials transport plan, based off its successfully implemented fuel transportation protocols, for loads of consumables (things like fuel, cyanide, reagents and acids), to (1) ensure safe delivery and (2) for immediate, appropriate response to an incident for loads traveling between the Stibnite logistics facility and the Mine site, if needed.
- Midas Gold has now, and will continue to have, an on-site hazardous materials response team and equipment.
- Midas Gold has, and will continue to, cooperate and coordinate with other local emergency response organizations for training purposes and in the event of a response pertinent to the level of activity onsite. Examples today include co-emergency rescue training with the village of Yellow Pine & loan out of our spill response trailer and sea-boom to McCall fire department



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for a petroleum spill response in Payette Lake.

MATERIALS TYPES

- Diesel fuel will be the primary fuel source for the haul trucks and other mobile equipment at the Project.
 - Diesel fuel – available from local suppliers – will be delivered in tanker trucks to the site in accordance with fuel transportation protocols (weekdays and during daylight hours), where it will ultimately be transferred to aboveground storage tanks. These tanks, housed in secondary containments, will be designed so as to prevent fuel spills into the environment.
- Propane will also be used on site to heat air and water, and for emergency backup power generation.
 - Like diesel fuel, propane will be transported in tanker trucks and stored in certified tanks located near the appropriate surface facilities.
- Various oils, lubricants, antifreeze and solvents will be transported and stored in approved containers located within or directly adjacent to the maintenance shop and contained within secondary containments to prevent spills into the environment.
- Used products will be stored in approved containers, transported off site and disposed of or recycled through qualified vendors.
- Ammonium nitrate will be used for blasting in the surface mines. Ammonium nitrate will be transported by certified contractors in specialized trucks and pneumatically transferred – using air to move powdered or granulated solids – into on-site storage. Additionally, the sale and transfer of ammonium nitrate in the United States is regulated by the Cybersecurity and Infrastructure Security Agency (<https://www.cisa.gov/ammonium-nitrate-security-program>). The Bureau of Alcohol Tobacco and Firearms (ATF) has requirements that must be followed for the proper storage of blasting material. Midas staff (specifically the blasting team) will have the appropriate explosives licenses and permits for the type and amount of blasting media stored onsite.
- Other explosive-related products used for mine blasting operations will be delivered by vendors in boxes or other approved containers to the site in specialized trucks, and they will be stored onsite in secured and approved magazines.



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- While lime (CaO) is not a hazardous material, it is a necessary substance used for pH control in the gold recovery processes and represents the single largest consumable product used at the Project. In Midas Gold's modified proposal for the project, which is reflected as Alternative 2 of the Draft Environmental Impact Statement, Midas Gold plans to mine limestone on site, use limestone to replace some of the lime and convert additional limestone to lime in an on-site kiln. (See: U.S. Forest Service Draft Environmental Impact Statement (DEIS); Section 2.4.5.3)
- Lime storage silos will be equipped with air emission controls, such as bag houses, that minimize releases during material transfer. These silos directly feed lime into the process plant. Midas Gold will use a weak sodium cyanide solution to extract gold from the ore we mine. To make sure the company is doing things in the safest way possible, all gold ore processing will happen inside a facility designed with secondary containment in order to protect the environment.
 - Lime and limestone are essential to maintaining pH control for the safe use of cyanide.
- Leaching using sodium cyanide is a proven technology that has been used for over a century in the mining industry and is still considered the most efficient extraction method for gold and silver. However, advances in technology have allowed companies to use less and less cyanide to achieve similar results.
 - In contrast to the heap leach process, the Stibnite Gold Project will utilize a vat-leach method where cyanide is applied to ore in double-lined vats held within the processing facility.
- At the project, Midas Gold will meet or exceed all the standards developed by the International Cyanide Management Institute (ICMI). For more information on the ICMI standards visit: <https://www.cyanidecode.org/about-cyanide-code/cyanide-code> or, read more about our plan in chapter 3, section 7 of the U.S. Forest Service's.
 - Notably, Midas Gold's suppliers will transport sodium cyanide in its solid, dry form called briquettes. This solid form eliminates the risk of fluid leaks or spills during transportation.
 - The containers used for transportation will be heavy duty steel containers that are air- and water-tight and are ruggedly designed to withstand rollovers and other accidents. Any release of the solid form could be easily recovered.
 - On arrival at site, these containers are connected to the process plant, water is run



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through the tankers to dissolve the cyanide and the empty tankers are transported back to the supplier for reuse. This eliminates the risks of spills during a transfer.

- The Project will use a proven cyanide destruction process to break down the cyanide before it leaves the process building. This process reduces the levels of cyanide in the tailings, in accordance with ICMI, to below regulatory thresholds before the material is transported to a lined tailings storage facility.
- Nitric and sulfuric acid are reagents used in ore processing and will be received in special acid tank trucks that are designed to prevent spills even in the event of rollovers.
- Incompatible materials and reagents will be stored in separate storage areas to limit the potential for chemical interaction. For example:
 - Cyanide storage areas will be distinct and separate from acid storage areas, consistent with the standards of the ICMI.
 - Nitric and sulfuric acids will be stored in specialized non-corrosive, polyethylene-lined tanks.
- There are a number of other miscellaneous substances that will be used at the site to support activities such as potable and mine-impacted water treatment and for dust suppression. All will be handled appropriately during transportation and storage on site.