CHECKLIST ENVIRONMENTAL ASSESSMENT

COMPANY NAME: Golden Sunlight Mines, Inc. PROJECT: Golden Sunlight Mine
LOCATION: 7 miles northeast of Whitehall, MT COUNTY: Jefferson
PROPERTY OWNERSHIP: [x] Federal [x] State [x] Private OPERATING PERMIT No.: 00065
PERMIT AMENDMENT: 13-2010
Amendment 13 to Operating Permit No. 00065, Golden Sunlight Mine, Montana

TYPE AND PURPOSE OF ACTION: On April 13, 2010, Golden Sunlight Mines, Inc (GSM) submitted a request to the Montana Department of Environmental Quality (DEQ) and the Bureau of Land Management (BLM) for a flotation mill. This type of mill has not been previously analyzed in an environmental assessment. This assessment will determine if the proposed plan is a minor or major amendment to the permit. The flotation mill would reprocess about 5,000 dry tons per day (tpd) of tailings leaving the existing cyanide vat leach mill, and produce about 400 dry tpd of fine ore product for shipment. The fine ore product is expected to retain about 12 percent moisture by weight, which would result in a final volume of approximately 455 tpd.

DEQ must review the proposed amendment, evaluate the potential impacts, and decide if it complies with the Montana Metal Mine Reclamation Act (MMRA) requirements for minor or major amendments in sections 82-4-337 and 342 (MCA), and in the Administrative Rules of Montana 17.24.119. The BLM must review the amendment to see if it complies with 43 Code of Federal Regulations 3809.

PROPOSED ACTION: The permit boundary would not increase beyond the already permitted 6,125 acres. The GSM permitted disturbance boundary increased to 3,101 acres with approval of Amendment 12. Amendment 13 would increase the permitted disturbance boundary by 0.97 acres. An additional 0.6 acres would be disturbed within the existing disturbance boundary and 6.5 acres would be redisturbed.

The proposed increases to the permitted disturbance boundary and within the existing disturbance boundary would be as follows:

- Access/shipping road (south portion from permitted disturbance boundary to the Sunlight Business Industrial Park boundary – outside of the permitted disturbance boundary) (0.97 acres);
- Access/shipping road (north portion from flotation plant yard to the existing disturbance boundary – within the permitted disturbance boundary) (0.6 acres);
- Flotation plant/yard (previously disturbed – within the permitted disturbance boundary) (6.5 acres).

The total area added to the permitted disturbance boundary would be 0.97 acres, all within the approved permit boundary. Approximately 2,236 of the 3,101 acres permitted for disturbance have been disturbed to date.

The flotation plant would be about 250 feet by 100 feet and about 80 feet tall. An access road would need to be constructed to link the plant with the Jefferson Local Development Corporation's Sunlight Business Industrial Park and then to the frontage road. A lined catch basin would be constructed downstream of the plant to contain any possible spillage. The catch basin would be designed to contain six times the expected runoff from a 100-year/24-hour precipitation event over the area that would drain to the basin, including the basin itself.

Residual gold values remain in the sulfide fraction of the tailings after leaving the cyanide vat leach mill and the tailings can be reprocessed in a flotation plant to remove most of the sulfide fraction. The tailings currently

contain about 4 percent sulfides. The flotation plant would remove approximately 83 percent of the sulfides. An 83 percent removal rate would reduce the sulfides to about 0.7 percent. The extracted sulfide component (the fine ore) would be prepared for shipment out of state where it would be used in an off-site roaster oven to remove most of the remaining gold values. The fine ore would be loaded onto over-the-highway semi-trucks for transportation. If 20-ton capacity trucks are used to haul the fine ore, an average of 23 loads per day would be shipped. If 40-ton trucks are used an average of 12 loads per day would be shipped. Since the contract for haulage has not been awarded the size of the trucks and the haul route have not been determined.

Feed for the flotation plant would come from two sources; the tailings generated by the existing mill and recovery circuit before being discharged to Tailings Impoundment 2 (TI2), and tailings generated from dredging of TI2. The dredge could remove the upper 20 feet of tailings in TI2. The dredge operation would be guided through use of a global positioning system (GPS) and as-built engineering design to ensure that the dredging operation remained a minimum of two feet above the liner surface.

The reprocessed tailings would be discharged to TI2 as is the current practice. While 5,000 tpd of tailings would be diverted to the flotation plant for reprocessing approximately 3,000 tpd of tailings would not be reprocessed and would report directly to TI2. There is also the possibility of reprocessing ore from off-site sources.

Mine operations would not change, including operation of the existing mill facility; delivery, storage, consumption and disposal of materials associated with the current mine and mill operations; operation of air emissions controls on mine equipment, fugitive dust sources, and milling equipment; and maintenance and monitoring functions. Additional reagents would be required for the flotation plant including standard flotation chemicals used in other Montana mines, such as at Montana Resources, Genesis Troy, Stillwater Mining Corporation, and Montana Tunnels. There would be additional requirements for trucking as the fine ore product would need to be transported off-site.

Current employment levels would increase by about 14. The new employees would help in the operation of the flotation plant.

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Environmental Assessment (EA) Legend:
N = Not present or No Impact will occur.
Y = Impacts may occur (explain under Potential Impacts).
NA = Not Applicable

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND	[N] Disturbance would consist of 6.5 acres of previously disturbed land associated with the flotation plant and yard area, and 1.57 acres of land

IMPACTS ON THE PHYSICAL ENVIRONMENT	
MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	associated with the access road and haulage roadway. About 0.97 acres of the 1.57 acres would be new disturbance located outside of the currently permitted disturbance boundary. Soil in the new disturbance area would be salvaged and stockpiled for reclamation. All other activities associated with this project would occur on currently disturbed areas, or on land controlled by the Sunlight Business Industrial Park. Soils in the area have been characterized in previous environmental documents. There would be no special reclamation characteristics since all contamination resulting from plant operations would be contained in the plant or routed to the lined containment basin. Removal of 83 percent of the sulfides from the reprocessed tailings would reduce the volume of potentially acid generating material. This would be an overall benefit to long term reclamation.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[N] A catch basin would be constructed downgradient of the flotation plant yard area. The catch basin would be double lined with a geosynthetic liner system with leak detection. The basin would contain tailings slurry in case of a break in pipelines and contain overflow from sumps within the plant. The basin would also be used to capture and store tailings in case of a power outage, or sump pump failures. The basin is designed to contain runoff from a 100-year/24-hour precipitation event as well as spills that may occur. The catch basin can contain about six times the volume of a 100-yr/24-hour precipitation event. If tailings are deposited in the catch basin due to a power outage or leak in the tailings pipeline they would be pumped back to the flotation plant for reprocessing or to TI2. Five sumps would be constructed within the plant to contain any spills or leaks. The sumps would be sized to contain the volume of fluids or tailings that could result from a spill. An overflow drain would collect any spillage from the sumps and direct the discharge to the catch basin. The flotation reagents proposed are standard flotation reagents used at other Montana mines and have been analyzed in other environmental documents. No major impacts have occurred at other mines in Montana during the many years of flotation reagent usage. Storm water would be routed around the flotation plant and directed to existing drainages. Approximately 550 gpm of potable water would be used at the flotation plant, generating the same amount of waste water. The potable water

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	and makeup water would be drawn from the existing fresh water source, the Jefferson River Slough. Once a potable water supply and sewage treatment system is established at the Sunlight Business Industrial Park complex, GSM would arrange for the flotation plant to be linked to those services. The necessary infrastructure would be in place by the end of the summer of 2010. If there are delays in the development of the Sunlight Business Industrial Park infrastructure, potable water for the flotation plant (550 gpm originating from the Jefferson slough) would be hauled by a dedicated tanker truck to the plant, after first being treated at the existing mill, and contained in a potable water supply cistern. The cistern would be plumbed to meet all potable water supply demands within the plant. Waste water would be contained in temporary vault systems and trucked from the flotation plant to GSM's existing waste water management system. The current waste water treatment system at GSM is designed for 350 employees plus contractors. The current employment level is 150 employees. The amendment would not impact water resources beyond those previously noted. GSM has more than ample water rights from the Jefferson Slough.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] GSM operates the Golden Sunlight Mine under Air Quality Permit No. 1689-06. Production limits contained in the air quality permit would not change in response to this amendment. Operation of the flotation plant meets the exemption for emitting less than 15 tons per year of particulate matter. No modifications to the air quality permit are necessary. Fugitive dust control best management practices would reduce emissions associated with traffic on roads in the project area.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[Y] Minimal impacts to vegetation and soils would occur where new roads and pipelines are constructed. The flotation plant would be located in an area previously disturbed for use as a stockpile for the tailings impoundments. There would be 1.57 acres (access, shipping, and roads) of new disturbance. Similar types of impacts within the permit area have been reviewed and approved. There are no rare or sensitive plant species in the proposed disturbance area.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds, or fish?	[N] The amendment would not impact any terrestrial, avian, and aquatic life and habitats outside of those previously analyzed and approved.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N] The amendment would not impact any threatened, endangered, or sensitive species or habitats outside of those previously analyzed and approved.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological, or paleontological resources present?	[N] All land within the GSM permit boundary has been surveyed for cultural resources. The amendment would not impact any historical, archaeological, or paleontological resources.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[Y] The proposed change would increase the visibility of facilities at the mine and would be visible from portions of Interstate 90, Montana State Highway 69, and the frontage road. The location of the flotation plant would be south of, and between, Tailings Impoundments 1 and 2. While the flotation plant building would add to the existing facility complex, including additional light and noise, the additional impacts would be minimal.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?	[N] An additional 50 gpm of potable water, as well as 500 gpm of make-up water, would be used at the proposed flotation mill. The water would be drawn from the Jefferson River Sough for which GSM has more than ample water rights.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N] There are no other activities in the area that would affect this project. When completed, the Sunlight Business Industrial Park would provide waste water treatment for the flotation plant.

IMPACTS ON THE HUMAN POPULATION	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] A Material Safety Data Sheet (MSDS) would be developed and provided for the fine ore concentrate. Additional safety precautions may need to be implemented. The MDOT will require a MSDS prior to fine ore being shipped.
12. INDUSTRIAL, COMMERCIAL	[Y] The amendment would not change the projected life of the mine.

IMPACTS ON THE HUMAN POPULATION	
AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	However, the project could outlast actual mining by reprocessing tailings contained in Tailings Impoundments 1 and 2.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[Y] The project would add about 14 new jobs at GSM. Indirectly, the contract hauler may need to employ additional truck drivers.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] The flotation plant would likely extend the length of time operations at GSM continue, as the flotation plant could reprocess tailings from Tailings Impoundments 1 and 2 after actual mining ceases, as well as from other sources.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] The Proposed Action would not impact government services.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] The Proposed Action is consistent with the BLM's Headwaters Resource Management Plan and the Jefferson County Weed Management Plan.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] The Proposed Action would not impact any wilderness or recreational areas outside of those previously analyzed and approved.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] The Proposed Action would not impact the density and distribution of population and housing outside of those previously analyzed and approved. There would be about 14 additional employees hired to operate the flotation plant, who would likely be hired within the region.

IMPACTS ON THE HUMAN POPULATION	
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] The amendment would not impact social structures and mores outside of those previously analyzed and approved.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] The amendment would not impact cultural uniqueness and diversity outside of those previously analyzed and approved.
21. PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N] The Proposed Action would not impact private property use.
22. PRIVATE PROPERTY IMPACTS: Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.	[N] The Proposed Action and Type and Purpose sections above identify the objectives of this environmental assessment. GSM would be able to implement its proposed use for the property.
23. PRIVATE PROPERTY IMPACTS: Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.	[Y] The Proposed Action and Type and Purpose sections above identify the objectives of this environmental assessment. See item 22 above.
24. OTHER APPROPRIATE	[N]

IMPACTS ON THE HUMAN POPULATION	
SOCIAL AND ECONOMIC CIRCUMSTANCES:	
25. SPECIAL BLM CONCERNS: Areas of Critical Environmental Concern (ACEC), Floodplains, Native American Religious Concerns, Hazardous waste, Wetlands, Wild and Scenic Rivers, Environmental Justice and Invasive Non-native Species.	[N] The amendment would not impact areas of critical environmental concern, floodplains, Native American religious concerns, hazardous waste, wetlands, wild and scenic rivers, environmental justice, and invasive non-native species outside of those previously analyzed and approved.

26. ALTERNATIVES CONSIDERED: NO-ACTION ALTERNATIVE (DENY THE APPLICANT'S PROPOSED ACTION): The No-Action Alternative would not allow implementation of the proposed amendment. This would mean that the flotation plant would not be constructed. There would be no change to current operations.

27. APPROVE THE APPLICANT'S PROPOSED ACTION: The Proposed Action would allow construction of the flotation plant and ancillary facilities as proposed.

28. APPROVE THE AGENCY MODIFIED PLAN: The Agency Modified Plan would allow construction of the flotation plant and ancillary facilities as proposed with modifications. A MSDS will need to be provided for the fine ore concentrate before the flotation plant is put into operation. Additional safety precautions may need to be implemented based on the MSDS and MDOT requirements.

29. PUBLIC INVOLVEMENT: A public news release will be issued on the results of this EA if it is determined to be a minor amendment to the permit. If the decision is made that the proposal is a major amendment to the permit, then legal notices concerning the application and availability of this EA will be published, and a public comment period provided. A major amendment to the permit must conform to MMRA notification and review timelines.

30. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION: BLM

31. MAGNITUDE AND SIGNIFICANCE OF POTENTIAL IMPACTS: There would be no significant impacts associated with this proposal. As noted, there would be minimal impacts to soil and vegetation. There would be increased traffic in and out of the site as the fine ore would be shipped by truck.

32. CUMULATIVE EFFECTS: There are no other proposals in the area that would add to the cumulative effects from this proposal.

RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS: The agencies have concluded that impacts from the proposed action would be minimal.

[ ] EIS [ ] More Detailed EA [X] No Further Analysis.

The revision is a: [X] Minor Amendment [ ] Major Amendment

The DEQ has selected the Agency Modified Plan as the preferred alternative.

EA Checklist Prepared By:
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Patrick Plantenberg, DEQ Reclamation Specialist

This EA was reviewed by:
Warren McCullough, DEQ, Environmental Management Bureau, Chief

Approved By:

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Signature Date
Warren D. McCullough, Chief, Environmental Management Bureau, DEQ

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