APPENDIX 4B
STORM WATER POLLUTION PREVENTION PLAN

NEWMONT MINING CORPORATION

APPENDIX D
STORMWATER POLLUTION PREVENTION PLAN

LONG CANYON PROJECT
Elko County, Nevada

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Prepared by:
Newmont Mining Corporation
1655 Mountain City Highway
Elko, Nevada 89801
(775) 778-4429

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1.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) was written in compliance with Newmont Mining Corporation's (Newmont), Long Canyon Project.

The purpose of this plan is to identify potential sources of pollution, develop and describe practices to reduce pollutants in stormwater discharges, and not cause a violation of water quality standards of the State of Nevada. This plan will identify areas contributing sediment to stormwater, implement effective Best Management Practices (BMP's), and use new technology when it becomes available.

The SWPPP will be revised whenever there is a change in design, construction, operation, or maintenance, which may have a significant effect for the potential to discharge pollutants into surface water, or if the SWPPP is found to be insufficient.

The SWPPP shall be readily available upon request by NDEP for review at the time of an on-site inspection. The SWPPP is managed by and located in the Environmental Department.

2.0 GENERAL DESCRIPTIONS

Newmont will commence mining construction operations at the Long Canyon Project area in 2015. The mining operations consists of an operations area which will include an open gold mine pit, haul roads, access roads, tailing storage facilities, waste rock storage facilities, stockpiles, mill and leach facilities, a non-hazardous solid waste landfill, and office and shop complexes. A Site Map showing the mining areas, buildings, facilities, etc. is set forth as **Figure 1**.

2.1 Location

Newmont's Long Canyon Project is located on the eastern flank of the Pequop Mountains, approximately 28 miles east-southeast of the town of Wells and 32 miles west-northwest of the town of West Wendover, Nevada. Topography around the project area varies from steep to relatively flat. Elevation ranges from 5,600 to 7,700 feet above mean sea level (amsl). The Long Canyon Project will encompass both private and public lands in Elko County Nevada, Mount Diablo Baseline and Meridian (MDB&M):

Township 35 North, Range 66 East, Sections 3, 4, 9, 10, 13, 15, 16;
Township 36 North, Range 66 East, Sections 15, 16, 20, 21, 22, 27, 28, 29, 32, 33, 34, 35.

2.2 Process Description

Processing of gold-bearing ore begins with crushing and grinding. Ore is leached with a dilute sodium cyanide solution; the leaching is performed by one of two methods: heap leaching or milling. In both processes, a weak solution of sodium cyanide is employed to dissolve gold from the ore, creating a gold-bearing or pregnant solution. The dissolved gold is then removed from the pregnant solution by preferential adsorption of the gold to activated carbon. The gold bearing carbon is then pumped or trucked to the carbon stripping and refining facilities for further processing. Once the gold has been absorbed to the activated carbon, the spent ore pulp, or tailing, is deposited in an engineered tailing storage facility.

2.3 Reclamation Description

Reclamation is designed to achieve post-mining land uses similar to those prior to mining. These uses include domestic livestock production, wildlife habitat, dispersed recreation and mineral exploration, and development. Newmont's primary objectives for post-mining reclamation of disturbances are to:

- Ensure public safety;
- Reduce or eliminate potential environmental impacts;
- Return the site to a condition which will support land uses similar to those which existed prior to the onset of mining activities;
- Control infiltration, erosion, sedimentation, and related degradation of existing drainages in an effort to minimize off-site impacts; and,
- Employ reclamation practices using proven methods which do not require ongoing maintenance.

With these objectives in mind, reclamation activities are designed to:

- Stabilize the disturbed areas to a safe condition; and,
- Protect both disturbed and undisturbed areas from unnecessary and undue degradation.

When feasible and appropriate to the type of disturbance, disturbed areas will be contoured or shaped to blend with surrounding topography. Growth medium will be recovered from the surface of some areas prior to their disturbance, and will be stockpiled for use as growth medium on specific disturbed areas such as waste rock storage facilities and heap leach pads. Newmont will stockpile and continue to stockpile sufficient quantities of growth medium at the Long Canyon Project to cover all reclaimed areas described herein. Experience at similar areas has demonstrated that waste rock and alluvium successfully support establishment of vegetation. Revegetation will be accomplished with a seed mixture that has been reviewed and approved by the BLM.

2.4 Contacts

Responsible contact persons, with addresses and telephone numbers for activities located within the Long Canyon Project area are listed in **Exhibit A**.

In addition, contacts of a stormwater management team are included, with members' addresses and telephone numbers. These members have integral responsibilities for developing, maintaining, and assisting in stormwater management at Long Canyon. The members will conduct periodic inspections of stormwater controls and report the findings accordingly. The members are also responsible for remediation of the findings requiring attention, as applicable, such as implementation of new or modify inadequate controls in accordance to the Permit, and provide support during the engineering process, and maintenance of stormwater controls.

3.0 BEST MANAGEMENT PRACTICES

The following Best Management Practices (BMP's) are part of Newmont's Long Canyon Project and are a key component for maintaining good water quality of stormwater discharged at this project.

- Good housekeeping is vital at this facility to ensure a discharge is immediately identified, contained, and remediated;
- Employees receive annual stormwater management training, which includes proper handling, proper storage, proper labeling, and spill response;
- Bulk storage tanks are installed within secondary containment areas. Containment areas are sufficiently impenetrable for containment of spilled products and are designed to accommodate at least 110% of the volume of the largest tank.
- Above ground piping is guarded from vehicular traffic by physical barriers, and posted with appropriate warning signs.
- Petroleum storage and fueling areas are graded to prevent run-on of stormwater and runoff of meteoric water falling directly in the area.
- Petroleum-contaminated soil is placed on hydrocarbon bioremediation facilities in accordance with the Petroleum- Contaminated Soil Management Plan (*To Be Completed*) issued and regulated by the NDEP.
- Mobile or portable oil and fuel storage tanks are isolated to prevent any spilled hydrocarbons from reaching surface water.
- Standard operating procedures require that drums and tanks have proper labeling with regard to its contents.
- Drums and tanks are inspected to ensure the structure is sound and has not been compromised by rust, dings, etc.
- Above ground tanks, their supports, and foundations are visually inspected by the area supervisor and operating personnel on a regular basis.
- Above ground pipelines are subject to regular examinations by operating personnel.
- Buried piping installations are inspected if exposed for any reason and are carefully examined for deterioration.
- Buried petroleum pipelines are pressure tested annually to ensure they are free of leaks.
- Maintenance facilities are equipped with spill response materials (absorbents, large equipment for constructing dikes, etc.).

3.1 General BMPs

The use of BMPs adjacent to haul roads, waste rock dumps, and associated mining disturbance ensures good water quality of stormwater and surrounding surface waters.

Disturbed areas are reclaimed to reduce the ground surface area that could potentially contribute sediment to stormwater. Vegetated areas promote infiltration and evapotranspiration resulting in a lower runoff rate.

- Basins of various sizes are used to capture stormwater runoff for the purpose of removing sediment and/or infiltrating the water. These sediment basins are generally located at the edges of disturbed areas to capture sediment prior to any discharge of stormwater.
- Slope breaks are used in the reclamation of large areas where runoff can concentrate

and cause erosion. Periodic flattening of the slope slows runoff and prevents sheet and rill erosion. Grading of the slope to discharge water from the slope at frequent intervals prevents the concentration of water and subsequent erosion.

- Certified weed-free straw bales are used to filter potential flow from sediment collection basins, along roads, drainages, and reclamation areas as necessary.
- Rip-rap is used for stream bank stabilization, outfall protection on sediment basins, reclamation, diversions, and any other relevant applications.
- Operating personnel receive annual stormwater pollution prevention training and are aware of proper spill prevention and response procedures.
- Inspections are conducted throughout the year, normally after major storm events.

3.2 Mine Waste Rock Facilities and Stockpiles

The Long Canyon Project contains two waste rock storage facilities. Both which are non-PAG (potentially acid generating) facilities. The Long Canyon waste rock storage facilities are managed to minimize their contribution of pollutants to stormwater. The following BMP's are utilized at these facilities:

- All precipitation falling within the base perimeter of the waste rock storage facilities reports to the lowest elevation area on the low permeability base. For newly constructed facilities, precipitation reports to a collection sump designed to contain the 25 year, 24 hour storm event.
- Diversion channels will be constructed around the waste rock storage facilities and the pit to divert stormwater runoff away from these areas. See **Figure 1**.
- Surface water is intercepted up gradient and diverted around waste rock facilities. This prevents the degradation of stormwater quality due to sediment or other adverse water quality constituents.
- Waste rock is closely characterized and segregated to allow the routing of potentially acid generating material to the appropriate storage facility.
- Waste rock storage facilities are reclaimed as soon as possible when their use has been fulfilled. The final reclamation configuration includes appropriate grading, and revegetation to minimize the effects of erosion.
- Periodic visual inspections are conducted on reclaimed areas of inactive waste rock facilities for effectiveness of sediment and erosion controls.

3.3 Haul Roads

The following BMP's are utilized to minimize sediment loss that might occur during storm events or snow melt run-off.

- The most effective method of controlling sediment from haul roads is by diverting stormwater to areas that don't discharge offsite. The waste rock facilities and tailings impoundment are a few examples.
- Sediment collection ponds are installed where stormwater has the potential to be released. Where-ever possible, these ponds are constructed large enough so that stormwater evaporates or infiltrates and is not discharged.
- Annually and after major storm events, haul roads and sedimentation ponds are visually inspected to evaluate the effectiveness of the stormwater controls.

3.4 BMP Implementation Schedule

BMP's will be implemented throughout the Long Canyon Project area, starting during the construction of the project and lasting through final reclamation. The stormwater control system is evaluated for effectiveness, with controls being added or improved as necessary.

3.5 Minimum BMPs Installation and Implementation

Refer to Best Management Practices, Section 3.0

4.0 DISCHARGE

4.1 Discharge Points

Currently, discharge points of any addition of a pollutant or pollutants to water are not applicable. BMPs will be implemented to avert stormwater discharges.

4.2 Discharge Rates

Long Canyon Project is not expected to have any discharges from the site.

4.3 Sources of Potential Stormwater Pollution

Potential stormwater pollution sources located at the Long Canyon Project area that may discharge as a result of a stormwater event may include: waste rock storage facilities, heap leach facility, haul roads, access roads, and the pit. The identified sources are illustrated in the Long Canyon Project site map (see **Figure 1**).

However, Newmont's Long Canyon Project area will operate under the zero discharge water pollution control permits, issued by NDEP-BMRR. Therefore, no discharges from stormwater or process will escape the project area.

5.0 LAND DISTURBANCE

Mining operations within the Long Canyon Project shall consist of open-pit and gold mining, waste rock storage facilities, heap leach facilities, power distribution systems, and ancillary and support facilities. Newmont anticipates the Long Canyon Project to commence during 2015.

5.1 Estimate of Total Area

An estimate of the total area of the Long Canyon Project area is approximately 24,000 acres; and the total site area expected to be disturbed by operations is approximately 3,913 acres.

5.2 Drainage Patterns and Slopes after Major Grading

Existing drainage patterns and approximate slopes are illustrated on **Figure 2**.

5.3 Activities; Areas of Soil Disturbance

Illustrated on **Figure 1** is the Long Canyon Project projected surface disturbance.

5.4 Areas Not Disturbed

Areas not disturbed by on-going mining operations are illustrated on **Figure 1**.

5.5 Locations of Structural and Non-Structural Controls

Locations of structural controls and nonstructural controls are illustrated on **Figure 1**. The controls are periodically inspected and maintained accordingly.

5.6 Anticipated Locations of Stabilization Practices

No stabilization practices are anticipated to occur within the Long Canyon Project.

5.7 Borrow or Equipment Storage Areas

Borrow or equipment storage areas are illustrated on **Figure 1**.

6.0 WATER

6.1 Waters of the U.S.

Although there are no waters of the U.S. at the Long Canyon Project, Newmont will implement BMP's that will prevent stormwater discharge from effecting surface water.

6.2 Discharge Associated with Mining or Site Activity

Sediment collection basins, diversion channels, etc. will capture potential stormwater flow from leaving the project area and not allow flow into surface water. Periodic inspections throughout the year will identify potential areas of concern, which would require attention and resolution.

6.3 Receiving Waters

Hardy Creek and the Johnson Spring system are bodies of water located in and near the Long Canyon Project area. No receiving waters will be disturbed or which will receive discharges from disturbed areas of the project. Refer to **Figure 1**.

7.0 NON-STORMWATER DISCHARGES

Miscellaneous non-stormwater discharges not associated with process solutions are listed below. These discharges are not significant contributors of pollutants and are not subject to effluent limitations under 40 CFR Part 440. BMP's will be implemented if needed to minimize any impacts of these discharges.

7.1 Dust Control

Newmont facilities are required to comply with air quality permits issued by the NDEP, Bureau of Air Quality. The restrictions on Newmont's Class II Air Quality Operating Permit require that Newmont must control fugitive dust from disturbed areas. The permit further specifies that an ongoing fugitive dust control program will include the use of best practical methods such as watering, chemical stabilization or other controls approved by the Bureau of Air Pollution Control.

To control fugitive dust emissions from the haul roads, water is applied and a chemical surfactant is used to seal the road surface. Road water is applied in such a manner to limit ponding and runoff. Water stands are utilized to fill the water trucks. Water stand overflow may occur while filling the water trucks. Where necessary, ponds are constructed to collect this water and remove sediment prior to its discharge.

7.2 Water Line Maintenance and Repair

Flushing, draining, and testing of potable, fresh, dewatering, and fire hydrant water lines is done periodically to repair or maintain the operability of these systems.

7.3 Well Testing

Water discharge occurs occasionally from well construction, testing, maintenance, & sampling.

Freshwater Gland Seal Pumps

Pumps of various size and flow rate will be used throughout the operation. The pumps are used in applications such as the transferring of freshwater from production water wells to water tanks, fire suppression systems, and other areas. In order for the pumps to operate correctly, it is necessary for the pumps to maintain a seal where the shaft enters the pump. A packing material made from Teflon or cotton is used to create the seal. Freshwater, otherwise known as "gland seal water", is required to lubricate the seal material and prevent pump failure due to excessive frictional heat. Freshwater dripping from the pumps is a normal operational process of these pumps.

7.4 Irrigation

Areas with trees, shrubs, lawns and other vegetation require periodic watering.

7.5 General Housekeeping

It is necessary to occasionally clean dirt and mud from paved or concrete areas and buildings to allow for clean and orderly work areas.

7.6 Additional Discharges

Additional discharges may include discharges associated with compressor condensate, foundation drains, firefighting drainage, occasional fresh or potable water system upsets, condensate from climate control units, and minor leaks from fresh water line valves.

EXHIBIT A- RESPONSIBLE CONTACTS AND STORMWATER MANAGEMENT TEAM

Dan Anderson
Environmental Compliance Manager Phone: 775-778-3268
1655 Mountain City Highway
Elko, NV 89801

John Stefka
Environmental Coordinator Phone: 775-778-2152
1655 Mountain City Highway
Elko, NV 89801

Senior Manager - Surface Mining Phone: *To Be Determined*
1655 Mountain City Highway
Elko, NV 89801

Senior Manager - Process Phone: *To Be Determined*
1655 Mountain City Highway
Elko, NV 89801

Emergency Response Coordinator Phone: *To Be Determined*
Loss Control Representative
1655 Mountain City Highway
Elko, NV 89801

Security Command Center Phone: *To Be Determined*
1655 Mountain City Highway
Elko, NV 89801

Stormwater Management Team:

Environmental Department Phone: *To Be Determined*
1655 Mountain City Highway
Elko, NV 89801

Surface Mine Operations Phone: *To Be Determined*
Special Projects Foreman
1655 Mountain City Highway
Elko, NV 89801

Surface Mine Engineering Phone: *To Be Determined*
Chief Mine Engineer
1655 Mountain City Highway
Elko, NV 89801