NEWMONT
NORTH AMERICA

March 22, 2011

Mr. Bryan Fuell
Field Manager
Wells Field Office - Elko District
Bureau of Land Management
3900 East Idaho Street
Elko, Nevada 89801

Re: Plan of Operation for Surface Mining and Ore Processing
Long Canyon Project - Elko County, Nevada

Dear Mr. Fuell:

As discussed with the Bureau of Land Management (BLM) over the past several months, Newmont Mining Corporation (Newmont) plans to conduct surface mining and ore processing operations at our Long Canyon property located in Elko County approximately four miles south of the Oasis/Montello exit (Exit 378) off Interstate 80. This exit is approximately 28 miles east-southeast of the town of Wells and 32 miles west-northwest of the town of West Wendover.

The attached plan of operations describes our proposed mining and ore processing plans, along with environmental management and reclamation measures. This plan has been kindled by the favorable findings of our exploration drilling activities, engineering and economic studies, and the continued robust nature of the gold market.

We greatly appreciate your and your staff's time and coordination with us over the past months as we finalized our plans, and we look forward to the initiation of the National Environmental Policy Act (NEPA) activities on this proposed project. As you can appreciate, Newmont management is highly motivated to bring this exciting project into production as soon as possible.

If you have any questions regarding our proposed plans, please contact me at 775-778-2138 (Daniel.Anderson@newmont.com).

Respectfully submitted,

Newmont Mining Company

Dan Anderson
Regional Manager, Environmental Affairs

EXECUTIVE SUMMARY

Newmont Mining Corporation (Newmont) plans to develop the Long Canyon Project into an operating surface gold mine, with associated ore processing facilities that include a heap leach operation and a conventional mill with tailings storage facilities.

Newmont has prepared this plan of operations for the Bureau of Land Management (BLM) and the Nevada Division of Environmental Protection (NDEP), Bureau of Mining Regulation and Reclamation (BMRR). This plan complies with 43 CFR 3809 regulations and discusses development, operations, environmental management, environmental mitigation, and closure and reclamation. Newmont also developed the plan to be in compliance with its internal Environmental and Social Responsibility (ESR) standards that establish management requirements applicable throughout the mine life cycle including feasibility, design, construction, operation, closure and reclamation, and post closure and reclamation management.

A. Project Location and Site Access

The Long Canyon Project is located in Elko County, Nevada. See ***Figure 1, General Location Map***.

Direct access to the project site is about four miles south on Elko County Road 790, which is accessed from Interstate 80 (I-80) at the Oasis/Montello Exit 378. This exit is approximately 28 miles east-southeast of the town of Wells and 32 miles west-northwest of the town of West Wendover, Nevada.

The actual project site is located on the eastern flank of the Pequop Mountains and Goshute Valley, where topography varies from steep to relatively flat. Elevations range from 5,600 to 7,700 feet above mean sea level (AMSL). Vegetation ranges piñon-juniper woodlands to sagebrush/grass plant communities. Big Springs and the Johnson Spring System originates from the project area and discharges groundwater to the surface resulting in localized perennial surface flows of water and riparian areas. See ***Figure 2, Existing Site Topography, Figure 3, Aerial Photograph,*** and ***Figure 4, Site Photographs***.

B. Project Background

Precious metal exploration activities were sporadic in the Pequop Mountains east of Wells until the mid-1990s when the Pittston Nevada Gold Corporation (Pittston), using geochemical data, discovered several geologic alteration anomalies on the east side of the Pequop Range. Field geologic investigations were initiated, and, in 1999, Pittston discovered gold-bearing jasperoids in Long Canyon. This discovery led to drilling activity in 2000, during which gold mineralization was found. Pittston continued limited exploration work in the Pequop Mountains over the next five years.

In 2005, AuEx Ventures Inc. (AuEx) acquired Pittston. The next year, 2006, AuEx entered into a joint venture with NewWest Gold USA Inc. (NewWest), and the decision was made to expand exploration activities in the area that would become known as the Long Canyon Project. In 2007, NewWest submitted an exploration plan of operations to the BLM and NDEP-BMRR, and those agencies approved that plan in 2008. The BLM issued an environmental assessment (EA) in July 2008, along with a Finding of No Significant Impact (FONSI) regarding the proposed exploration work.

During 2007, as the EA was being prepared, NewWest was acquired by Fronteer Development (USA), Inc. (Fronteer), and the joint venture with AuEx continued exploration on the Long Canyon Project.

After the EA and FONSI were issued and other applicable approvals and permits were received in summer of 2008, Fronteer implemented expanded exploration activities.

In March 2010, with continuing favorable results from drilling, Fronteer submitted a plan of operations amendment to the BLM and NDEP-BMRR to further expand the exploration program to target zones outside the 2007-8 area of interest. This plan submittal triggered the BLM to initiate the preparation of an EA for this expanded exploration work. In August 2010, Fronteer acquired a 100% interest in the Long Canyon Project from AuEx.

In April 2011, Newmont acquired Fronteer and continued the ongoing exploration activities, and continued to interface with the BLM on the Fronteer exploration plan of operations amendment. The BLM issued the EA for this plan amendment in June 2011; after a public comment period, the BLM approved the exploration program in early September 2011 with another FONSI.

The area within and surrounding the Long Canyon Project has been subject to exploration activity that has been undertaken on the site for over a decade.

In mid-September 2011, Newmont notified the BLM Elko Office - Wells Field Office of plans to develop a surface mine with supporting ore processing facilities at the Long Canyon Project. During the rest of 2011 and the first quarter of 2012, Newmont met numerous times with BLM, the Environmental Protection Agency (EPA), and State of Nevada (NDEP and the Nevada Department of Wildlife (NDOW)) resource specialists to discuss operational, environmental and reclamation aspects of the project. These discussions, as well as discussions with various local and community stakeholders, were instrumental in the development of this plan of operations.

Early in the discussions about mining, the BLM determined that the requirements of the National Environmental Policy Act (NEPA) will be best served by preparing an environmental impact statement (EIS) for the project. The BLM plans to serve as the lead agency to prepare the EIS, which will be designed to inform its decision makers of the environmental consequences of the project, possible alternatives, and environmental management and mitigation measures that would avoid, minimize, and/or mitigate environmental impacts.

C. Purpose and Need for Project

The purpose and need for the Long Canyon Project is to conduct surface mining and ore processing activities that will allow for safe, technically feasible, economically viable, and environmentally and socially responsible operations, while complying with regulatory requirements. Mining has and continues to be a vital and vibrant part of the economy of northern Nevada.

D. Land Ownership

The Long Canyon Project Area includes both private Newmont ownership and public lands administered by the BLM. Newmont owns or controls private mineral interests and unpatented mineral claims throughout the entire project area; the BLM manages the mineral activities (exploration and mining) on these unpatented mining claims within the project area. See ***Figure 5, Surface and Mineral Ownership***.

Table 1, Summary of Long Canyon Project

GENERAL COMPONENTS		
	Production	5,000 to 10,000 tons of ore per day
	Mining	Surface mining (open pit)
	Waste Rock	Disposal east of pit with concurrent reclamation
	Milling	Conventional – tank cyanidation (gold recovery off-site)
	Tailings Disposal	Lined - closed-circuit for process water, zero discharge facility
	Heap Leaching	Lined – closed circuit for process water, zero discharge facility
	Employee Transportation	Busing from Elko, Wells and West Wendover
	Supply Transportation	Interstate 80 from Elko, Reno and Salt Lake City
	Reclamation	Concurrent reclamation on waste rock storage facility. No pit backfilling.

EMPLOYMENT PROJECTIONS		
	Construction and Development (18 to 30 months)	300 – 400 (peak)
	Operations (7 to 8 years)	300 – 500
	Closure and Reclamation (up to 3 years)	50 - 80

LAND OWNERSHIP AND ADMINISTRATION (within project boundary)			
	Public Ownership (BLM administered)	11,200 acres	47%
	Private Ownership (Newmont)	12,800 acres	53%
	TOTAL	**24,000 acres**	**100%**

SURFACE AREA DISTURBANCE – LIFE OF MINE (acres)		Public	Private	Total
	Mine Pit Area	511	225	736
	Haul Roads[(1)]	144	168	312
	Waste Rock Storage Facility	384	720	1,104
	Mine Office, Shop and Mill Facilities	0	66	66
	Tailings Storage Facility	172	474	646
	Heap Leach Facility	118	148	266
	Construction Borrow Sites	25	299	324
	Growth Medium Stockpiles	209	76	285
	Relocated County Road 790 and Main Site Access Road[(2)]	21	44	65
	Relocated light use road (south of turn off to mine site from CR 790)[(3)]	9	3	12
	Miscellaneous site access and service roads[(4)]	9	11	20
	Bulk ANFO storage area	1	2	3
	Explosive magazines	1	0	1
	Water supply well, storage tanks and pipelines	2	1	3
	Miscellaneous[(5)]	25	45	70
	TOTAL	**1,631**	**2,282**	**3,913**

NOTES:

(1) Assume average disturbance width for haul roads is 225 feet; this includes cuts, fills, safety berms and ditching.
(2) Assume average disturbance width for County Road 790 and main access road is 60 feet; this includes cuts, fills and ditching.
(3) Assume average disturbance width for light-use, two-track road is 20 feet
(4) Assume average disturbance width for site access and service roads is 44 feet; this includes cuts, fills, safety berms and ditching
(5) This includes the landfill area, timber (firewood) storage area, power line right-of-way and service roads for power line within the project boundary, and stormwater control structures, such as diversion ditches and stormwater basins.

E. Geology and Mineral Resources

The Long Canyon Project is located in northern Pequop Mountains, which are an uplifted block of regionally east-dipping carbonate and siliclastic (silica-bearing) rocks. See ***Figure 6, Site Geology***.

The Long Canyon Project mineralization is hosted within the carbonate rocks of Cambrian-Ordovician age (400 – 570 million years ago), specifically the limestone of the Ordovician Pogonip group and the limestone and dolomite of the upper Cambrian Notch Peak Formation. The limestone of the Pogonip group is light to dark gray, while the limestone and dolomite of the Notch Peak Formation are predominantly light gray. There has been weak metamorphism in the project area, and both high angle and low angle structures control the mineralization.

Gold mineralization occurs mainly within the limestone along dolomite margins. Significant karsting is localized in these areas. Much of the higher grade mineralization is hosted in hematitic matrix of collapse breccias, as well as in adjacent zones of strata-bound mineralization characterized by strong decalcification. All of the mineralized zones discovered to date are oxidized.

F. Mine Design and Operation

The Long Canyon Project will include an open pit with a series of benches from which waste rock and ore will be extracted. The final cut of the pit floor will be excavated to the approximate 5700-foot AMSL elevation, which is above the local water table and Big Springs. Newmont will use conventional open-pit, surface mining techniques and equipment including blast-hole drills, hydraulic shovels, front-end loaders, and off-highway trucks. Other related mining equipment includes dozers, rubber-tired loaders, motor graders, water trucks and other mobile support equipment.

Newmont will move 125,000 to 175,000 tons of waste rock per day during operations. Waste rock will be transported from the mine via off-highway trucks and placed in a permanent disposal facility located east of the mine pit.

As possible and where practicable, Newmont plans to initiate concurrent reclamation work on the waste rock storage facility (WRSF) early in the life of the project. The goal for this concurrent reclamation is to create a landscape that accommodates resident and migrating deer populations, to reduce the overall amount of disturbance, and to minimize the long-term financial liability for the project. Grading will create slopes that blend with the surrounding undisturbed topography; these slopes will range from 2.5 H (horizontal) to 1 V (vertical) to 3H to 1V, or flatter where practicable.

At full operation, targeted daily ore production from the Long Canyon operations will range from 5,000 to 10,000 tons per day. Ore from the mine will be transported in off-highway trucks to either an on-site mill or a heap leach facility. Until the on-site mill is constructed, Newmont may either stockpile ore material on site or haul early ore production westward on I- 80 to one of Newmont's existing ore processing facilities at Gold Quarry near Carlin, Nevada; however, if utilized, this activity will likely be short-lived, 18 to 30 months until the on-site mill is commissioned.

G. Ore Processing

Once facilities are complete, ore from the mine will be processed either through an on-site mill or a heap leach facility. The proposed locations of these facilities are shown on ***Figure 7, General Site Plan Layout.***

(a) Conventional Milling and Tailings Placement

At the mill, Newmont will feed higher grade ore either directly from haul trucks or surface stockpile into a crushing facility. After crushing, the ore will be conveyed to the mill for grinding, processing and gold recovery. Metals recovery will involve carbon-in-column (CIC) and tank cyanidation and carbon-in-pulp (CIP) recovery. Loaded carbon will be transported to an existing Newmont carbon stripping and refining facility at Carlin (Nevada) for final processing. The finished product from Newmont's refining operations will be bars, comprised of mostly gold with some other metals and materials, known as doré.

Tailings are the finely ground rock materials that remain after precious metals have been extracted at the mill. Tailings will be pumped via a dual-containment pipeline to a synthetically-lined tailings storage facility (TSF). Water used in the processing and transport of the tailings will be collected and recycled to the mill for reuse in the milling process. The TSF will be designed and operated as a closed circuit (zero discharge) facility with respect to water. Newmont will operate a cyanide destruction facility as part of the tailings disposal circuit. See ***Figure 8, Mill and Heap Leach Flow Sheet***.

(b) Heap Leaching

Newmont will process lower-grade "run-of-mine" oxide ore at a fully lined heap leach facility. En route to the facility, haul trucks carrying this ore material will pass beneath a silo where lime will be added to maintain elevated pH for the cyanide solution used in the heap leach process.

Ore material will be placed in lifts on the fully-lined heap leach facility; lifts will range from 15 to 50 feet in height depending on topography and processing needs. A dozer with a ripper attachment will rip the surface of each lift to facilitate percolation of the process solution. A weak cyanide solution will be applied to the surface of the stacked ore using drip tubes, emitters or sprinklers.

The cyanide solution will migrate downward through the stacked ore, dissolve gold contained in the ore, and flow to a central collection tank (called the "pregnant solution tank") that will be located at the downgrade edge of the heap leach pad. The solution containing dissolved gold, known as a "pregnant solution", will be pumped from the pregnant solution tank to a carbon-in-column (CIC) recovery system at the mill, where the precious metals will be adsorbed onto the carbon.

The solution (referred to as "barren solution") exiting the CIC columns will be recycled to the heap leach pile. The heap leach facility, like the mill, will be operated as a closed circuit (zero discharge) facility. The loaded carbon (carbon containing gold) will be consolidated and transported offsite to one of Newmont's existing northern Nevada refineries for final processing into doré. See ***Figure 8, Mill and Heap Leach Flow Sheet***.

H. Power Supply

Newmont will require electricity for the Long Canyon Project. The primary consumer of power at the site will be the mill facility, but electric power will also be needed for the heap leach facility and the day to day operations in offices and shops for lights, computers, power tools, and other applications.

The initial power demand at the Long Canyon Project is estimated to be approximately 10 megawatts (MW) to support mine and mill start-up. Energy demand is projected to reach 15-20 MW demand as the operation reaches full production.

An on-site transformer/substation will reduce the transmission voltage for distribution to the mill, heap leach facility, tailings storage facility, maintenance shop, administrative and other surface facilities.

Newmont is considering three power supply options for the Long Canyon Project:

- Purchase of electricity from Wells Rural Electric Company (WREC);
- On-Site Self-Generation of electricity; or,
- Off-Site Generation of Electricity.

(a) Purchase of Electricity from Wells Rural Electric Company

The first option is for WREC to supply electric service to the Long Canyon Project site from a new 138 kilovolt (kV) transmission line that will be constructed from Wells paralleling the existing power line located north of I-80 to Oasis then turning south to the mine and mill facility location. See ***Figure 7, General Site Plan Layout***.

Newmont will initially use the existing electric distribution line that currently services the Big Springs Ranch to supply electricity for construction activities. Once the new 138 kV transmission line, and substation are constructed, the existing power line to the ranch will be removed.

(b) On-Site Self-Generation of Electricity

The second option will involve self-generation of electricity by Newmont with on-site natural gas-fired generators or turbines. This option requires delivery of natural gas to the site. Newmont is investigating the possibility of constructing a spur natural gas pipeline from the existing Ruby Natural Gas Pipeline located approximately 40 miles north of the Long Canyon Project.

(c) Off-Site Generation of Electricity

This third option will involve Newmont generating electricity at a site remote from the Long Canyon Project, then constructing a new 138 kV transmission line to the site as described in (a) above to supply electric service to the project site.

I. Water Use and Supply

Water management is an important component of the Long Canyon Project. Given the remote location of the operation, Newmont will develop a water well supply system that furnishes potable water, along with water for mining (dust control), ore processing activities (milling and heap leach activities), tailings disposal, and fire protection.

J. Ancillary and Support Facilities

Newmont will construct and maintain surface support facilities that include an administrative office, a shop, a warehouse and storage area, fuel storage and dispensing facilities, explosive storage, sewage disposal facilities, and other facilities necessary for operations. See ***Figure 7, General Site Plan Layout***.

K. Employee and Supply Transportation

Employees will commute from various locations throughout the region, but Newmont plans to provide and encourage busing as the primary transportation to the site. This busing will be made available from sites in Elko, Wells, and West Wendover. Given management responsibilities and individual employee preference, a limited number of parking spaces will be provided at the site for those employees who choose to drive to the site.

Operational materials, including diesel fuel, chemical reagents and explosives, will be delivered to the Long Canyon Project site on a regular basis. These materials will be shipped by truck from places such as Wells, West Wendover, Wendover, Elko, Salt Lake City, and Reno.

L. Project Schedule and Duration

Newmont plans to initiate construction of the surface facilities and implement surface mine development for the Long Canyon Project upon completion of the permitting process, expected to be early 2015.

Newmont envisions that the proposed Long Canyon Project will have a project life of approximately 8 to 14 years. The initial site construction and surface facility installation work will take approximately 18 to 30 months. Full scale mining and ore processing activities will occur for 7 to 8 years following construction. Final project closure and actual reclamation work will require up to 3 years, followed by several years of reclamation management and monitoring.

The eventual operation and longevity of the Long Canyon Project will involve various factors, including the estimates of mineable reserves, mining rates, market conditions, revenues, costs, expected returns to shareholders and investors, and the associated economic, technical, regulatory and political risks that face the mining business.

It should be noted that Newmont will continue district-wide exploration at the site and in adjacent areas in hopes of identifying additional ore reserves that will extend the life of the Long Canyon Project.

M. Workforce

During the construction phase, peak employment will reach approximately 300-400 people; this will be the workforce for facility construction and early mine development. Newmont will manage the construction work, but the work will be completed under a contracted construction firm specializing in mine and mill-related construction.

Once the mine becomes fully operational, Newmont will employ an average annual workforce of approximately 300 - 500 people.

During reclamation, Newmont will retain 50 to 80 people for facility decommissioning, mine closure and reclamation.

N. Project Disturbance

See ***Table 1, Summary of Long Canyon Project***. This disturbance will be both on private lands owned by Newmont and on unpatented mining claims located on public lands administered by the BLM.

O. Environmental Protection and Management

Newmont will implement numerous environmental protection and management practices based on current technology, best management practices, Newmont's ESR standards, the International Cyanide Management Code, the International Organization for Standardization (ISO) 14001 Environmental Management System, and federal, state and local laws and regulations. The purpose of these practices will be to ensure responsible mining operations, to reduce adverse impacts, to avoid undue and unnecessary effects to the human health and the environment, and to reclaim disturbed areas.

P. Environmental Monitoring and Reporting

Newmont will design and implement environmental monitoring programs developed for the various components of the mining life cycle to evaluate and quantify environmental conditions. These programs will meet Newmont's ESR standards, the International Cyanide Management Code, the ISO 14001 Environmental Management System, and the requirements of federal, state and local regulations and permits.

Q. Closure and Reclamation

Closure and reclamation are an integral and important component of the Long Canyon Project. The overall purpose of reclamation is to return disturbed areas to a stabilized and productive landscape that can support post-mining land uses of livestock production, wildlife habitat, dispersed recreation, and mineral exploration. These land uses are compatible with surrounding uses, and they will assure long-term protection of land, water and air resources in the area.

Closure and reclamation practices, such as those to be used at the Long Canyon Project, have been developed and successfully utilized by Newmont and other mining projects and operations in Nevada, as well as throughout the western United States.

Newmont understands that closure and reclamation practices and technology are ever evolving and improving. Although reclamation practices have become an integral component of mineral development and mining activities, and existing reclamation measures have proved to be successful at other mineral operations, Newmont will take advantage of future opportunities to explore new closure and reclamation technologies or implement such improved measures.

The current land use at and surrounding the Long Canyon Project is domestic livestock production, wildlife habitat, dispersed recreation, and mineral exploration. The emphasis of this reclamation plan will be to close and remove unnecessary surface facilities and infrastructure (some facilities will be retained on Newmont land for future ranching activity), blend the WRSF, heap leach facility, and TSF to create stable landforms and to conform to the surrounding landscape, and establish stable, self-sustaining plant communities on disturbed areas. See ***Figure 9, Post-Project Topography***.

Concurrent reclamation will be applied where practical, particularly as part of the construction of the WRSF. At the time of final and permanent cessation of project activities, Newmont will implement and undertake a number of closure and reclamation actions:

- Decommission, demolish and remove on-site structures and facilities not needed for future ranching activity;
- Contour and grade disturbed surface area (mine pit will remain open);
- Replace growth medium material (topsoil);
- Mulch (as required);
- Plant seed, and, in some cases, seedlings; and,
- Implement closure and reclamation management and monitoring.

R. Permitting and Regulatory Compliance

The proposed Long Canyon Project conforms to the Mineral and Energy provisions of the 1985 Wells Resource Management Plan (RMP) Record of Decision (ROD). The BLM acknowledges that their administered lands within and surrounding the Long Canyon Project are available to locatable mineral exploration and development under the 1872 Mining Law and that the public lands would be managed in a manner which recognizes the Nation's needs for domestic sources of minerals

A number of federal, state and county permits and approvals may be required for the Long Canyon Project. See ***Table 2, List of Potential Permits and Approvals***.

Table 2, List of Potential Permits and Approvals

FEDERAL GOVERNMENT	
Bureau of Land Management	• Plan of Operations • Reclamation Financial Assurance • Rights-of-Way, etc.
Environmental Protection Agency	• Notification of Hazardous Waste Activity
U.S. Fish & Wildlife Service	• Threatened & Endangered Species Consultation
Federal Communications Commission	• Radio Authorizations
Treasury Department (Department of Alcohol, Tobacco, Firearms and Explosives)	• Explosives User Permit
Mine Safety and Health Administration	• Mine Identification Number • Legal Identity Report • Ground Control Plan • Miner Training Plan
STATE OF NEVADA	
Commission on Mineral Resources Division of Minerals	• Mine Registry • Annual Status and Production Report
Department of Business and Industry Division of Industrial Relations	• Notice of Mine Opening (and Closing)
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Air Quality	• Surface Disturbance Permit • Air Quality Operating Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Mining Regulation and Reclamation	• Water Pollution Control Permit • Mining Reclamation Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Waste Management	• Class III Waiver Landfill • Hazardous Waste Management Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Water Pollution Control	• Stormwater NPDES General Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Safe Drinking Water	• Drinking Water Supply Facilities
Department of Conservation & Natural Resources Division of Water Resources	• Permit to Appropriate Public Waters • Permit to Construct Dam • Mineral Exploration Hole Plugging
Department of Wildlife Habitat Division	• Wildlife Consultation • Industrial Artificial Pond Permit
Department of Human Resources State Health Division	• Radioactive Material License
Department of Motor Vehicles and Public Safety State Fire Marshal	• Hazardous Materials Permit • Fire and Life Safety
Department of Museums, Libraries and Arts State Historic Preservation Office	• Cultural Clearance
ELKO COUNTY	
Building Department	• Building Permits • Septic System Approval
Roads Department	• County Road Maintenance & Upgrade

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Acronyms and Abbreviations

AADT	annual average daily traffic
AAQS	ambient air quality standards
ABA	acid base accounting
AMSL	above mean sea level
ANFO	ammonium nitrate and fuel oil
APLIC	Avian Power Line Interaction Committee
ARDML	acid rock drainage and metal leaching
ASTM	American Society for Testing and Materials
ATFE	Alcohol, Tobacco, Firearms and Explosives Department (U.S. Department of Justice)
ATS	Advanced Telemetry Systems, Inc.
AuEx	AuEx Ventures Inc.
AUM	animal unit month
BACT	best available control technology
BAPC	Bureau of Air Pollution Control (Nevada)
BLM	Bureau of Land Management (U. S. Department of the Interior)
BMRR	Bureau of Mining Regulation and Reclamation (State of Nevada)
CCD	counter-current decantation
CFR	Code of Federal Regulations
CERT	Community Emergency Response Team
CFS	cubic feet per second
CIC	carbon in column
CIL	carbon in leach
CIP	carbon in pulp
dB	decibel
dBA	a-weighted decibel
EA	environmental assessment
EIS	environmental impact statement
EMT	emergency medical technician
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
ESR	Environment and Social Responsibility (Newmont department)
ET	evapotranspiration
^{o} F	degrees Fahrenheit
FLPMA	Federal Land Policy and Management Act
FONSI	Finding of No Significant Impact
FPCP	Final Permanent Closure Plan
Fronteer	Fronteer Development (USA), Inc.
gal	gallons

GBC	Great Basin College
gpd	gallons per day
gpm	gallons per minute
GPS	global positioning system
HCT	humidity cell testing
HDEP	high density polyethylene
hr	hour
HSLP	Health, Safety and Loss Prevention (Newmont department)
ISO	International Organization for Standardization
IT	information technology
I-80	Interstate 80
kV	kilovolt
m/sec	meters per section
mg/l	milligrams per liter
MACT	maximum achievable control technology
mi	miles
min	minute
mph	miles per hour
MSHA	Mine Safety and Health Administration (U.S. Department of Labor)
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NAG	net acid generating
NAC	Nevada Administrative Code
NAGPRA	Native American Graves Protection and Repatriation Act
NDEP	Nevada Department of Environmental Protection
NDF	Nevada Department of Forestry
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NDWR	Nevada Department of Water Resources
Newmont	Newmont Mining Corporation
NewWest	NewWest Gold USA Inc.
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMWMP	Nevada meteoric water mobility procedure
NNHP	Nevada Natural Heritage Program
NNRH	Northeastern Nevada Regional Hospital
NOAA	National Oceanic and Atmospheric Administration (U.S. Department of Commerce)
NRCS	Natural Resource Conservation Service (U.S. Department of Agriculture)
OHV	off-highway vehicle

OSHA	U.S. Occupational Safety and Health Administration
Pittston	Pittston Nevada Gold Corporation
PMP	probable maximum precipitation
ppm	parts per million
PSD	prevention of significant deterioration
PVC	polyvinyl chloride
RBC	rotating biological contractor
RCRA	Resource Conservation and Recovery Act
RMP	Resource Management Plan
ROD	record of decision
ROW	right of way
RUS	Rural Utility Service (U.S. Department of Agriculture)
SAG	semi-autogenous grinding
SHPO	State Historic Preservation Office
SOP	standard operating procedure
SWPPP	Stormwater Pollution Prevention Plan
TDS	total dissolved solids
TSS	total suspended solids
TRI	Toxic Release Inventory
TSF	tailings storage facility
U.S.	United States
USDOT	U.S. Department of Transportation
USFWS	United States Fish and Wildlife Service (U.S. Department of the Interior)
USGS	United States Geological Survey (U.S. Department of the Interior)
VRM	visual resource management
WAD	weak acid dissociable
WREC	Wells Rural Electric Company
WRSF	waste rock storage facility
WSA	wilderness study area

1.0 OPERATOR/CLAIMANT INFORMATION [43 CFR §3809.401(b)(1)]

1.1 Operator Information

1.1.1 Name

Newmont USA Limited, doing business in Nevada as Newmont Mining Corporation (Newmont), will be the operator of the Long Canyon Project located in Elko County, Nevada.

1.1.2 Mailing Address

The Newmont mailing address is 1655 Mountain City Highway, Elko, Nevada 89801.

1.1.3 Phone Number

Newmont's main phone number is 775-778-2525 and its fax number is 775-778-2513.

1.1.4 Taxpayer Identification Number

The Newmont taxpayer identification number is EIN 13-2526632.

1.1.5 Point of Contact (Individual Completing Application)

John Cole is the Newmont Study Director, who is responsible for the development of the Long Canyon Project, and Dan Anderson is the Newmont Long Canyon Project Environmental Manager, who is responsible for the completion of this plan of operations.

1.1.6 Authorized Field Representative

Newmont personnel, or their agents, will be on site during all project related activities and will be responsible for implementing and ensuring that all activities are completed in accordance with this Plan.

Dan Anderson is the Newmont authorized field representative for the Long Canyon Project, and he is the point of contact for the BLM and NDEP on this plan of operations. His contact information is as follows:

Dan Anderson - Long Canyon Project Environmental Manager
Newmont Mining Corporation
1655 Mountain City Highway
Elko, Nevada 89801-2800
Phone: (775) 778-2138
Fax: (775) 778-4360

1.2 Corporate Information

The Newmont corporate office address and phone number are as follows:

North American Regional Offices
1655 Mountain City Highway
Elko, Nevada 89801-2800 Phone: (775) 778-2525

Newmont corporate officers are listed below:

Senior Vice President of North American Operations:
Thomas Kerr
North American Regional Office
1655 Mountain City Highway
Elko, Nevada 89801-2800 Phone: (775) 778-2525

Regional Vice President, Operations:
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Assistant Secretary:
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The Nevada resident agent for Newmont is:

CSC Services of Nevada, Inc.
502 East John Street
Carson City, Nevada 89706

1.3 Claimant/Claim Information

1.3.1 Claimant(s) Name

Same as Section 1.1.1.

1.3.2 Mailing Address

Same as Section 1.1.2.

1.3.3 Phone Number

Same as Section 1.1.3.

1.3.4 BLM Serial Numbers of Unpatented Mining Claims

The Long Canyon Project claims (with BLM serial numbers) are listed in ***Appendix A, Claims and Rights of Way***.

1.3.5 Claim Name(s)

See ***Appendix A, Claim and Rights of Way***.

1.3.6 Claim Type

Newmont controls lode claims at the Long Canyon Project.

2.0 DESCRIPTION OF PROJECT [43 CFR §3809.401(b)(2)]

2.1 Legal Description (County, plus Township, Range, Sections)

The Long Canyon Project is located in Elko County, Nevada.

The Long Canyon Project Boundary includes Sections 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36 of Township 36 North, Range 66 East; and Sections 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, and 17 of Township 35 North, Range 66 East.

Long Canyon Project components and activities will be located in parts of Sections 11, 13, 14, 15, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33, 34, 35, and 36 of Township 36 North, Range 66 East, and in parts of Sections 3, 4, 5, 9, 10, 12, 14, and 15 of Township 35 North, Range 66 East.

The project area consists of a combination of public and private lands, with some split estate lands (see Section 6.10, Land Use). Public land is managed by the Wells Field Office of the Bureau of Land Management (BLM).

Disturbance projections for the Long Canyon Project are set forth in ***Table 1, Summary of Long Canyon Project***.

A number of federal, state and county permits and approvals may be required for the Long Canyon Project. See ***Table 2, List of Potential Permits and Approvals.***

Table 1, Summary of Long Canyon Project

GENERAL COMPONENTS		
	Production	5,000 to 10,000 tons of ore per day
	Mining	Surface mining (open pit)
	Waste Rock	Disposal east of pit with concurrent reclamation
	Milling	Conventional – tank cyanidation (gold recovery off-site)
	Tailings Disposal	Lined - closed-circuit for process water, zero discharge facility
	Heap Leaching	Lined – closed circuit for process water, zero discharge facility
	Employee Transportation	Busing from Elko, Wells and West Wendover
	Supply Transportation	Interstate 80 from Elko, Reno and Salt Lake City
	Reclamation	Concurrent reclamation on waste rock storage facility. No pit backfilling.

EMPLOYMENT PROJECTIONS		
	Construction and Development (18 to 30 months)	300 – 400 (peak)
	Operations (7 to 8 years)	300 – 500
	Closure and Reclamation (up to 3 years)	50 - 80

LAND OWNERSHIP AND ADMINISTRATION (within project boundary)			
	Public Ownership (BLM administered)	11,200 acres	47%
	Private Ownership (Newmont)	12,800 acres	53%
	TOTAL	**24,000 acres**	**100%**

SURFACE AREA DISTURBANCE – LIFE OF MINE (acres)		Public	Private	Total
	Mine Pit Area	511	225	736
	Haul Roads[(1)]	144	168	312
	Waste Rock Storage Facility	384	720	1,104
	Mine Office, Shop and Mill Facilities	0	66	66
	Tailings Storage Facility	172	474	646
	Heap Leach Facility	118	148	266
	Construction Borrow Sites	25	299	324
	Growth Medium Stockpiles	209	76	285
	Relocated County Road 790 and Main Site Access Road[(2)]	21	44	65
	Relocated light use road (south of turn off to mine site from CR 790)[(3)]	9	3	12
	Miscellaneous site access and service roads[(4)]	9	11	20
	Bulk ANFO storage area	1	2	3
	Explosive magazines	1	0	1
	Water supply well, storage tanks and pipelines	2	1	3
	Miscellaneous[(5)]	25	45	70
	TOTAL	**1,631**	**2,282**	**3,913**

NOTES:

(1) Assume average disturbance width for haul roads is 225 feet; this includes cuts, fills, safety berms and ditching.
(2) Assume average disturbance width for County Road 790 and main access road is 60 feet; this includes cuts, fills and ditching.
(3) Assume average disturbance width for light-use, two-track road is 20 feet
(4) Assume average disturbance width for site access and service roads is 44 feet; this includes cuts, fills, safety berms and ditching
(5) This includes the landfill area, timber (firewood) storage area, power line right-of-way and service roads for power line within the project boundary, and stormwater control structures, such as diversion ditches and stormwater basins.

Table 2, List of Potential Permits and Approvals

FEDERAL GOVERNMENT	
Bureau of Land Management	• Plan of Operations • Reclamation Financial Assurance • Rights-of-Way, etc.
Environmental Protection Agency	• Notification of Hazardous Waste Activity
U.S. Fish & Wildlife Service	• Threatened & Endangered Species Consultation
Federal Communications Commission	• Radio Authorizations
Treasury Department (Department of Alcohol, Tobacco, Firearms and Explosives)	• Explosives User Permit
Mine Safety and Health Administration	• Mine Identification Number • Legal Identity Report • Ground Control Plan • Miner Training Plan
STATE OF NEVADA	
Commission on Mineral Resources Division of Minerals	• Mine Registry • Annual Status and Production Report
Department of Business and Industry Division of Industrial Relations	• Notice of Mine Opening (and Closing)
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Air Quality	• Surface Disturbance Permit • Air Quality Operating Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Mining Regulation and Reclamation	• Water Pollution Control Permit • Mining Reclamation Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Waste Management	• Class III Waiver Landfill • Hazardous Waste Management Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Water Pollution Control	• Stormwater NPDES General Permit
Department of Conservation & Natural Resources Division of Environmental Protection Bureau of Safe Drinking Water	• Drinking Water Supply Facilities
Department of Conservation & Natural Resources Division of Water Resources	• Permit to Appropriate Public Waters • Permit to Construct Dam • Mineral Exploration Hole Plugging
Department of Wildlife Habitat Division	• Wildlife Consultation • Industrial Artificial Pond Permit
Department of Human Resources State Health Division	• Radioactive Material License
Department of Motor Vehicles and Public Safety State Fire Marshal	• Hazardous Materials Permit • Fire and Life Safety
Department of Museums, Libraries and Arts State Historic Preservation Office	• Cultural Clearance
ELKO COUNTY	
Building Department	• Building Permits • Septic System Approval
Roads Department	• County Road Maintenance & Upgrade

2.2 Geographic Status and Prior Disturbance Information

2.2.1 Areas Disturbed by Previous Operator and Inactive

This section is not applicable to the Long Canyon Project. Newmont has assumed responsibility for ongoing exploration work, and the BLM and NDEP-BMRR has authorized this exploration work.

2.2.2 Areas Disturbed by Current Operator Prior to 1/1/81 and Inactive

This section is not applicable to the Long Canyon Project; there were no inactive areas disturbed at the site prior to 1/1/81.

2.2.3 Areas Disturbed by Current Operator Prior to 1/1/81 and Still Active

This section is not applicable to the Long Canyon Project; there are no active areas of disturbance that were created prior to 1/1/81.

2.2.4 Areas Disturbed by Current and Previous Operators after 1/1/81 but Prior to 10/1/90 and Inactive

This section is not applicable to the Long Canyon Project; there were no inactive areas disturbed after 1/1/81 but prior to 10/1//90.

2.2.5 Areas Disturbed by Current and Previous Operators after 1/1/81 but Prior to 10/1/90 and Active

This section is not applicable to the Long Canyon Project; there were no active areas of disturbance that were created after 1/1/81 but prior to 10/1//90.

2.2.6 Location of Access Roads Existing Prior to 1/1/81

County Road 790 is the main access road that traverses the Long Canyon Project Area (north to south) and provides access to the Big Springs Ranch. See ***Figure 2, Existing Site Topography, and Figure 3, Aerial Photograph***.

2.2.7 Surface Water Bodies within One-Half Mile Down-Gradient of Disturbance

See Section 6.5, Surface Water.

2.3 Exploration

Because the limits of the ore body are not fully defined, Newmont will continue surface exploration and development work on the Long Canyon Project claims to further delineate known ore zones and to target potential mineralized resource areas. Surface exploration will be conducted on the previously-approved areas. Surface Exploration Plans and Notices for the project area are filed at the Elko BLM Wells Field Office under NVN-82445 and Reclamation Permits No. 0256, and No. 0284 authorized by NDEP.

Newmont will continue to conduct exploration and development drilling throughout the active mine life. Newmont will use the same or similar drilling methods, as well as the same or similar types of equipment that are presently employed. New drill sites will be established with other selected drill sites being reclaimed concurrently as drill targets are evaluated.

New drill pad disturbance will be kept to the minimum necessary for safe access and working area for equipment and crews. Drill pads typically require a working area of approximately 70 feet long by 30 feet wide (about 0.1 acres). The drill pad surface disturbance includes the steepness of the topography at each drill pad.

Sediment basins or traps (sumps) are and will be constructed at each drill site to collect drill cuttings and to manage and circulate drilling fluids. Typical dimensions for a sump are approximately 15 feet-long by 10 feet-wide by 8-feet deep. Larger and/or additional sumps will be installed as needed to appropriately manage excess water. At least one side of the sump is constructed at a shallow grade to create a ramp for wildlife egress in the event wildlife enters into the sump. The other sides of the sump are constructed at the material angle of repose, but such that the banks are safe and stable. In some cases, sumps may be fenced during exploration to prevent wildlife or livestock from entering the sump. At the end of each field season, drilling fluids will be pumped from the sumps and the sumps backfilled and reclaimed.

Newmont currently utilizes truck-mounted, track-mounted, or articulated buggy-mounted reverse circulation and core drill rigs and support equipment. These types of rigs will continue to be used in the future. Some drill holes reach 1,500 feet or more, but the average drill hole depth typically ranges from 300 to 1,200 feet. Drill holes will be both vertical and angled.

Reverse-circulation rotary drilling equipment is and will continue to be used to drill pre-collars for some of the core holes that will be drilled to test deeper targets. A maximum of six pre-collared rotary holes may be left open at any time prior to resuming drilling with core-drilling equipment.

Water and non-toxic approved drilling fluids are and will continue to be utilized during drilling. Newmont obtains water for drilling from existing sources in the project area including the Johnson Spring system, Big Springs Ranch wells, the cities of Wendover and West Wendover's water system at Big Springs Ranch, and from a private well at Oasis.

Standard drilling procedures typically require a geologist to be involved with all drilling activities. The duties of the geologist normally include monitoring the progress of the drilling activities, logging each hole according to the geologic features encountered, determining the maximum depth of each hole, and advising the drill operator as needed. The geologist travels to and from the drill site in a separate four-wheel drive pickup truck.

Standard drill rig crews consist of a drill operator and one or two helpers. The helpers remove and box the recovered core or rotary samples, mix drilling fluids, operate the water truck assist with drilling operations, and conduct maintenance as necessary. A separate crew will construct access roads and drill pads. Drilling activities occur on a 24-hour per day schedule.

Drilling support equipment includes water trucks, crew trucks, portable mud tanks, pipe trucks or skids, portable toilets, light plants, portable generators, motor graders, excavators, dozers, and product storage pallets.

2.4 Mine Development and Operations

Newmont plans to develop and operate a conventional open pit mining operation. During the prefeasibility stage of the Long Canyon Project planning, Newmont considered several alternative mining techniques, including underground mining, but Newmont chose open pit mining techniques given the near-surface location of the deposit.

2.4.1 Mining Procedures and Techniques

Open pit mining methods include drilling, blasting, loading and hauling. Ore and waste rock will be extracted from 20 to 40 foot high benches. The mining sequence will include the following:

- Site preparation;
- Blast-hole drilling;
- Loading blast holes;
- Blasting;
- Ore Control;
- Ore and waste rock loading and haulage; and
- Clean-up and bench preparation.

2.4.1.1 Site Preparation

Piñon and juniper trees will be removed on a year-to year basis ahead of mining operations – enough to allow for efficient mining. The trees will be cut by a chain-saw crew and then skidded (butt-end of the tree up) to temporary landing sites. Here, the trees will be de-limbed and loaded on trucks for transport to an area near the junction of County Road 790 and the Six Mile Canyon road for firewood availability. See ***Figure 7, General Site Plan Layout***.

Once the trees are removed, any remaining vegetation will be grubbed using a brush rake on a bulldozer to push such material onto the above-mentioned temporary landings. The grubbed material can be combined with the tree slash, and the resulting material can then either be chipped or pushed into piles to be burned. Chipped material may be used as mulch for reclamation or mixed with the growth medium material as it is removed.

Once logging and vegetative grubbing activities are complete, available growth medium material (topsoil), suitable for reclamation, will be removed. Typically, a bulldozer will be used to windrow the growth medium material. The windrowed material will be loaded onto trucks by a front end loader and hauled to a stockpile (early in the mining process) or, later during the life of the mine, to an available graded area on the WRSF facility where it can be spread as part of concurrent reclamation activities. Stockpiled growth medium material will be used for future reclamation activities. See Section 3.0, Reclamation Plan.

2.4.1.2 Blast-Hole Drilling

Most of the rock to be extracted at the Long Canyon Project will be hard, so drilling and blasting (use of explosives) will be required to break the rock into loose fragments suitable for hydraulic mining shovels and/or front end loaders to dig and remove rock material. The purpose of blasting is to break the rock in place, with minimum "fly rock" and displacement of the material, as this minimal displacement is important for ore control. See *Section 2.4.1.5, Ore Control.*

Before blasting, holes will be drilled into the rock by mining equipment known as blast-hole drills. The holes will be drilled in a "pattern" in the area of the mine bench designated for blasting. The pattern will be comprised of evenly-spaced holes about 10 to 20 feet apart and to the bottom of the bench (20 to 40 feet deep). The actual holes will typically be from 4 to 8 inches in diameter, depending on the type of blast-hole drill.

2.4.1.3 Loading Blast Holes

Once the blast-hole pattern has been drilled, the holes will be checked for depth to ensure that the holes have been drilled to the proper depth. This "quality-control" task will ensure that the blasts are effective, and the rock is not under-blasted, resulting in poor digging conditions because the rock material has not been effectively broken.

The holes are then loaded with blasting agents. A cast primer, tied to detonating cord, will be lowered down each hole to hang about 2 to 3 feet from the bottom of the hole. It is planned that ANFO (ammonium nitrate and fuel oil) will be used, and this bulk explosive will be placed down the hole around the cast primer and detonating cord.

The hole will be filled with ANFO to a predetermined depth below the surface (typically about 3 to 4 feet), and the last part of the hole will be filled with stemming materials, which are rock cuttings from the drilling. This stemming acts as a "plug" and forces the explosive energy to go into the surrounding rock, rather than back out the top of the hole.

After the blast holes have been loaded, the detonating cords coming out of the holes will be tied together using delay devices so that the charges will detonate in a pre-determined sequence. The blast pattern is now ready for firing.

2.4.1.4 Blasting

Blasting will be limited to certain times during the day, depending on production requirements, and generally blasts are initiated either near midday or early afternoon. This schedule will minimize disruption to the mining and production cycles.

The blast is initiated at a safe location, remote from the blast site. Whenever a blast is scheduled, a designated safe "blast zone" must be cleared of personnel and equipment. Access into a blast zone is strictly controlled prior to and during detonation. Newmont will comply with the blasting requirements of the Mine Safety and Health Administration (MSHA).

After the pattern has been detonated, qualified Newmont blast personnel will inspect the blast site to ensure that all explosives have detonated. If any undetonated explosives are found, they will be dealt with before work will be initiated at the site. When the blast supervisor is satisfied that the blast site is safe, the area will be released for continued production work.

2.4.1.5 Ore Control

Resource modeling provides the basic geometry of ore and waste. However, drilling for development is generally somewhat widely-spaced. The resolution necessary for ore/grade control is provided by assays from blast holes. Assays include gold grade and metallurgical characteristics necessary for proper processing and waste designation.

Blast patterns are determined prior to drilling the blast holes, and the hole location/depths are uploaded to a GPS system on each blast hole drill. The actual drilled blast hole locations are recorded by the GPS units mounted on the blasthole drills. After the holes are drilled, the cuttings at the top of each hole are manually sampled. The assays from blast hole cutting samples provide a good indication of the grade distribution of the material in the blast area, and this information can be used to validate the results of the mine plans. All assaying will be performed at Newmont's existing lab at the Gold Quarry mine, north of Carlin, after initial sample preparation at Long Canyon.

The results from the blast hole sampling are used by site geologists and engineers to delineate each blast pattern into ore and waste zones utilizing geostatistics and observed geology. The ore zones are further delineated according to grade and metallurgical properties, and waste rock is characterized for proper placement in the WRSF. Newmont surveyors stake the ore and waste zones using coded placards attached to survey lath. In addition, the ore/waste blocks are uploaded to the on-board navigation system on the hydraulic mining shovels or front-end loaders to aid the operators in distinguishing the type of material that is being removed.

2.4.1.6 Ore and Waste Rock Loading and Haulage

With blasting and ore control work completed, the area with the blasted material is ready for excavation. Newmont will utilize hydraulic shovels and/or front end loaders to load broken (blasted) ore and waste rock material into off-highway end dump trucks that will transport this material from the pit on haul roads. Waste rock will be hauled and disposed of at the WRSF east of the mine pit area, while ore will be hauled to the on-site mill stockpiles or the on-site heap leach facility.

In addition to the loading and haulage equipment, other equipment will also be working at the site. This includes bulldozers (rubber-tired and/or tracked) and graders that will keep the bench floor level, clean up any spillage from the loading operation, and provide a safe driving surface. In addition, water trucks will spray the pit floor and haulage roads to minimize dust for safe, efficient operations.

As the shovel digs, a display in the cab of the loading unit (in combination with the staked placards) informs the loading unit operator what material (ore for mill, ore for heap leach or waste rock) is being excavated. Material routing is normally controlled through the fleet dispatching computer, with occasional confirmation made by verbal communication between the truck driver and loading unit or dispatch operator. Each haul truck is equipped with a Global Positioning System (GPS) and a display screen; these tools provide the truck driver with the information necessary to deliver the loaded material to the proper destination.

Once the truck is full, it leaves the loading unit (hydraulic shovel or front end loader) and takes its load to the specified destination. This may be the primary crusher, a stockpile adjacent to the crusher, the heap leach facility or the WRSF. The truck will dump its load and return to the mine pit to collect another load.

This cycle will continue 24 hours a day, 365 days a year.

2.4.1.7 Clean-Up and Bench Preparation.

As mining progresses, other equipment, such as dozers and motor graders, will be used to clean up the bench and prepare the next area for blast-hole drilling.

2.4.2 Production

To facilitate a process throughput of 5,000 to 10,000 tons of ore material per day, Newmont will remove approximately 125,000 to 175,000 tons of waste rock per day.

2.4.3 Waste Rock Handling and Storage

Waste rock at the Long Canyon Project will consist of rock material removed during mining that contains no gold values or at such low concentrations as to be uneconomic to process. Waste rock removal and disposal will be an integral and necessary part of the mining operation, and waste rock will be moved throughout the life of the mine.

Based on detailed geochemical analyses (see Section 6.3 Geology and Geochemistry), the waste rock at the Long Canyon Project is net neutralizing and does not have acid-generating potential; therefore, no special handling or disposal procedures are necessary.

Newmont estimates that 60 million tons of waste rock per year will be generated at the Long Canyon Project, which amounts to a total of approximately 600 million tons over the planned mine life. The WRSF shown on ***Figure 7, General Site Plan Layout***, has been designed to contain this material.

The principal objectives for siting the WRSF are multifold:

(1) Maintain a corridor between the mine pit and the WRSF to allow for deer migration;

(2) Locate the facility as close as possible to the mine pit and make sure the site is easily accessible via haulage roads and ramps;

(3) Ensure the facility is capable of storing the projected total amount of waste rock to be generated by the operation;

(4) Minimize uphill haulage (once waste rock is removed from the mine pit);

(5) Confirm that the waste rock storage site and the resulting facility are stable;

(6) Ensure that geochemical properties of the waste rock will not degrade the waters of the state of Nevada;

(7) Avoid placement of waste rock over areas that could later be deemed necessary for open pit mining; and,

(8) Provide sufficient area for shaping and grading to meet post-mining land use objectives.

Newmont will construct the WRSF in a series of levels where the haul trucks will “end-dump” the material horizontally across the disposal area. The individual lifts will be maintained at an overall angle of repose, which is defined as the steepest slope to which waste rock will naturally conform. For the Long Canyon Project, the angle of repose will average approximately 35°.

As explained in Section 3.0, Reclamation, Newmont will reclaim portions of the WRSF while still mining; this process is known as concurrent reclamation. Performing concurrent reclamation on the west side of the WRSF will help widen the available wildlife corridor. The graded WRSF slope can be traveled by wildlife moving between the mine pit and the active portion of the WRSF. In addition, concurrent

reclamation will help minimize fugitive dust impacts, allow time to test and optimize revegetation procedures, take advantage of equipment and personnel already on site, and reduce the time and bonding expenditures required for post-closure and reclamation.

As part of concurrent and permanent reclamation work, flatter slopes will be obtained by grading with a bulldozer. At mine closure, overall out-slopes of the waste rock disposal facility will be 2.5-3 (horizontal) to 1 (vertical), although slopes at the toe of the waste rock facility may be shallower to produce concave features to mimic natural topography. One of the most important goals for waste rock grading and contouring will be to produce a final topography of the waste rock facility that will conform to and blend with the surrounding terrain, as well as produce a permanent and stable landform. See ***Figure 9, Post-Project Topography***.

2.4.4 Mine Support Facilities

The Long Canyon Project will require surface infrastructure and miscellaneous support facilities to support the mine and ore processing operations. Such surface facilities are shown on ***Figure 7, General Site Plan Layout***.

This section describes and provides information on the following support infrastructure.

- Site access road;
- Haul roads;
- Internal service and access roads;
- Temporary ore storage;
- Truck scale;
- Mine administration office;
- First aid and safety related facilities;
- Employee and visitor parking;
- Maintenance shop and warehouse facility;
- Fuel storage;
- Explosives storage;
- Power supply;
- Communications facilities;
- Landfill;
- Contractor/construction laydown and office area; and
- Sample preparation facility.

Specifics on these support infrastructure and facilities follow.

2.4.4.1 Site Access Road

Access to the Long Canyon Project will be from Interstate 80 (I-80) at Exit 378 (Oasis/Montello Exit). As part of construction and development activities, Newmont will upgrade and reroute a portion of County Road 790 to ensure that this road can safely handle worker and supply traffic for the operation. See ***Figure 7, General Site Plan Layout***.

Where the relocated road intersects the existing two-track road that parallels the Wendover water supply pipeline, Newmont will also upgrade this section of existing road to provide the direct access into

the Long Canyon Project surface facilities. There will be no impact to the existing water supply pipeline with the upgrade of this road.

Newmont will upgrade and relocate County Road 790 from Exit 378 on I-80 into the Long Canyon surface facilities as follows:

- Widen to a 32-foot road surface width;
- Place sub-base material and gravel as required to ensure a stable long-term roadway;
- Install side ditching and culverts, where necessary; and,
- Install cattle guards and fencing.

Newmont will work with the Elko County Roads Department to procure a right-of-way for the relocated road, reclamation of the existing road, and an agreement for ongoing road maintenance during the life of the mine. The maintenance responsibilities will include routine maintenance, dust control, and snow removal, to ensure safe and efficient year-round public access to the Long Canyon Project surface facilities area. This road will remain as a permanent feature into the project area.

2.4.4.2 Haul Roads

A network of haul roads will be required for mining. Many of these roads will be internal to the open pit, but these roads will also connect to the WRSF, the mill, the maintenance shop, the TSF, and the heap leach facility.

The projected locations of haul roads are shown on ***Figure 7, General Site Plan Layout***, and a typical haul road cross-section is illustrated on ***Figure 10, Typical Haul Road Section.***

Mine haul roads will comply with MSHA regulations. Newmont will maintain haul roads to ensure safe, efficient haulage operations and to minimize fugitive dust emissions in accordance with the air quality operating permit requirements of the NDEP Bureau of Air Pollution Control (BAPC) and ***Appendix F, Fugitive Dust Control Plan***.

Haul road grades will generally be limited to overall gradients of 10% or less.

Drainage channels will be incorporated with roadway construction to direct drainage along the inside edge of the roadway. These channels will route precipitation and stormwater runoff to sediment control structures. Newmont will use stormwater best management practices (BMPs) for sediment control. See ***Appendix D, Stormwater Pollution Prevention Plan***.

Culverts will be installed where roads cross drainages. Culvert inlets will be protected with rock riprap to prevent erosion. Culverts will be placed at a grade of approximately 1% to facilitate drainage. Each culvert will be sized and installation will be designed to convey design stormwater flows in accordance with NDEP requirements. The combination of rock riprap and channels will lessen sediment transport during runoff associated with high precipitation events. See ***Figure 11, Typical Access Road Sections***, for an illustration of the typical culvert installation.

2.4.4.3 Internal Service and Access Roads

Internal service and access roads will be constructed and maintained at the Long Canyon Project to facilitate access to miscellaneous sites and facilities.

The projected locations of internal service roads are shown on ***Figure 7, General Site Plan Layout***, and a typical service road cross-section is illustrated on ***Figure 11, Typical Access Road Sections*.**

These roads will typically be narrow (12-15 feet wide). Some will be graveled or covered with rock aggregate to provide all weather access, while others will simply be dirt two track roads. These internal service roads will be used by Newmont employees and contractors, BLM or other government personnel, and local ranch operation and management personnel. There will be no public use on these internal roads.

2.4.4.4 Temporary Ore Storage

During construction of the Long Canyon Project ore processing facilities (mill, TSF, and heap leach facility), Newmont may temporarily store ore material adjacent to the primary crusher (at the mill site) or haul ore material from the site to one of Newmont's existing mills near Carlin, Nevada.

The ore material stockpile area will have sufficient capacity to store approximately 250,000 tons of ore with ample maneuvering and loading room for a front-end loader and the transport trucks. No special containment will be necessary because the ore material will not generate acid.

2.4.4.5 Truck Scale

Trucks hauling ore material from the Long Canyon Project for off-site processing will be weighed. Similarly, supply trucks bringing consumables to the site will also be weighed. The truck scale will be located adjacent to the guard house at the main entrance to the project site.

2.4.4.6 Mine Administrative Office

The administration building will either be of modular or steel construction and be placed on a concrete foundation. The building will have offices for management, administration, engineering, geology, information-technology (IT), supply chain, environmental, and health, safety and loss prevention (HSLP) personnel, along with a reception area, conference and training rooms, utility room, men's and women's wash rooms, and miscellaneous storage space.

2.4.4.7 First Aid and Safety Related Facilities

The construction and operation of a surface mine and related facilities require health and safety programs and facilities. Newmont will operate under the company's HSLP standards and systems, including standard operating procedures (SOPs), and MSHA requirements and regulations. First aid supplies will be strategically located at various facilities around the mine site, including the main administrative offices and the mill facility. Newmont will maintain a mine emergency vehicle at the site, which will be parked in the warehouse/shop building, and will be available for mine emergency situations. Newmont will also establish a mine rescue team that will include certified Emergency Medical Technicians (EMT) on site on any given shift.

2.4.4.8 Employee and Visitor Parking

During construction work, there will be a parking lot at the Long Canyon Project Area for worker buses and 30 to 50 personal vehicles expected to transport workers to the site. Some additional parking spaces (10 to 15) will be provided for vendor and other visitors to the project. The parking area will be located at the main entrance near the administrative offices, but it will be fenced to prevent unauthorized vehicular access to the mine and mill area.

As the project transitions from construction to full scale mining and ore processing operations, this parking area will be maintained for buses and miscellaneous vehicles for employees, contractors, vendors and visitors.

2.4.4.9 Maintenance Shop and Warehouse Facility

Mobile mine equipment will require regular maintenance. Therefore, Newmont will construct a maintenance shop with numerous bays for equipment maintenance and repair, along with areas for electrical maintenance and a wash bay. A warehouse will be part of the overall maintenance facility, with the warehouse portion of the building configured for ease of delivery with a loading dock and an outdoor, fenced, partially covered storage area.

A concrete pad will serve as a floor for the shop and warehouse facility. Sufficient space surrounding the maintenance and warehouse facility will be left for equipment parking (mainly mine haul truck parking) and supply storage.

The maintenance shop and warehouse facility will have offices for supervisors and maintenance staff, along with a conference room, utility room, men's and women's wash rooms, and miscellaneous storage space.

2.4.4.10 Fuel Storage

Newmont plans to use above-ground tanks for storage of gasoline, diesel fuel, lubricants, coolants, hydraulic fluids and propane at the Long Canyon Project. The bulk fueling tanks will be located within a concrete lined secondary containment facility that is capable of holding 110% of the largest tank volume located at the fueling station and/or will utilize self-contained tanks with built-in secondary containment.

The storage tank facility for gasoline, diesel fuel and propane will be located near the maintenance shop. See ***Figure 7, General Site Plan Layout***. Newmont will contract with local or regional suppliers to deliver the required fuel. See Section 10.0, Materials and Supplies, for the projected usage at the site.

The estimated volumes to be stored at the Long Canyon Project follow:

- Gasoline near maintenance shop 10,000 gallons;
- Diesel Fuel near maintenance 120,000 gallons; and
- Propane near maintenance shop 5,000 gallons.

Diesel fuel and gasoline will be delivered to the site on a routine basis.

Mobile off-highway mining and support equipment will use diesel fuel, while certain mobile (primarily non-highway licensed) vehicles used solely at the operation site will use gasoline.

Newmont light vehicles will be fueled at the site. These vehicles include the vans and buses used to transport employees to the mine.

Propane will be used to provide building heat and hot water for the site's facilities.

2.4.4.11 Explosives Storage

Blasting agents will be used in the mining process, with ammonium nitrate and fuel oil (ANFO) being the primary material used.

Prilled ammonium nitrate will be stored in silos within a remote and fenced (locked) site away from the main surface facility site, but adjacent to the main haul road that connects the office, shop and mill facility area with the mine pit. Similarly, explosive magazines for detonating cord, cast primers and blasting caps will also be located in a separate, remote and fenced (locked) site away from the ANFO area and other mine surface facilities. See ***Figure 7, General Site Plan Layout***.

ANFO storage facilities and explosive magazines will be sized and designed to meet the regulations of MSHA and the U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives (ATFE). Explosives will be handled and used in accordance with MSHA regulations by trained and certified personnel.

The fuel oil (diesel) that will be mixed with ammonium nitrate to create ANFO will be stored in the mine's primary fuel storage area, and then delivered by fuel truck when required for mixing.

MSHA and ATFE regulate explosives storage, transport and use at surface metal mines. Explosives will be transported to the site by contract transporters approved by the U.S. Department of Transportation.

2.4.4.12 Power Supply

See Section 2.8, Power Supply and Distribution.

2.4.4.13 Communications Facilities

Newmont will contract with the local service to install telephone and internet communications. Newmont will also maintain two-way radio communications in mobile equipment at the operation.

2.4.4.14 Landfill

Newmont will maintain a landfill on private ground at the Long Canyon Project for non-hazardous wastes (such as scrap metals, untreated wood wastes, paper products, empty bags, thoroughly drained containers, office and lunch room wastes). The landfill will be a Class III waivered facility as regulated by the NDEP Bureau of Waste Management.

The Class III landfill will initially be located on private land in southeast quarter of Section 34, Township 36 North, and Range 66 East. See ***Figure 7, General Site Plan Layout***. Another permitted landfill will be established on the WRSF in year two or three of operations, when sufficient room is available in the WRSF for the landfill.

2.4.4.15 Contractor/Construction Laydown and Office Area

Newmont will contract for the construction of the office, shop, warehouse, ore processing, and other miscellaneous mine support facilities. An area will be made available for temporary contractor office trailers, with adjacent lay-down areas. The contractor trailers and storage area will be located adjacent to the area for administration facilities.

Newmont expects that 15 to 20 temporary trailers will be placed on temporary wood-cribbed foundations (or equivalent) and skirted with sheeting. Electricity will be supplied by existing service to the Big Springs Ranch or small portable generators. A propane tank may also be placed central to the

trailers to facilitate the heating systems of these temporary facilities. In addition, temporary portable sanitary facilities will be located throughout the area.

The contractor trailers will be phased out and removed as construction is completed and the permanent facilities are commissioned, which is estimated to be approximately 12 to 18 months. Upon removal, the area on which the temporary contractor trailers were placed will be used for permanent mine supply storage.

2.4.4.16 Sample Preparation Facility

Newmont will construct a sample preparation facility adjacent to the shop/warehouse and mill buildings. This facility will prepare blast-hole samples for assay and analysis. The prepared samples will be transported to Newmont's Gold Quarry laboratory at Carlin for assay and analysis. Samples from milling and heap leach operations will similarly be prepared at the on-site facility for off-site analysis.

The sample preparation facility will consist of a building with sample receiving capabilities, equipment to dry, crush and pulverize the samples, separate the samples into smaller aliquots, ship samples and store sample residues. Equipment to prepare milling samples includes filters to separate slurry samples into solid and liquid components, drying and pulverizing equipment.

2.4.5 Mine Mobile Equipment

The major mobile equipment to be used at the mine is set forth in ***Table 3, Projected Mine Mobile Equipment List***. This equipment list may be modified during the project depending on site-specific conditions and needs.

Table 3, Projected Mine Mobile Equipment List

Equipment Type	Estimated Number of Units
Blast-Hole Drills (Atlas Copco Pit Viper 271 or equivalent)	2-5
Hydraulic Shovels (Hitachi EX 5500 or equivalent with 30-35 yd^3 bucket)	1-3
Front-End Loader (Cat 994 or equivalent with 20-25 yd^3 bucket)	2
Haul Trucks (Cat 793F with 250 ton capacity)	13-29
Dozers (Cat D10 or equivalent)	5-6
Rubber-Tired Dozers (Cat 854 or equivalent)	2-3
Water Trucks (Cat 785 D chassis or equivalent)	2-3
Motor Graders (Cat 160M or equivalent)	2-3
Excavator (Cat 365 or equivalent)	1
LowBoy Tractor (Cat 777 chassis or equivalent)	1
Vibratory Compactor (Cat CS76 or equivalent)	1
Mobile Light Plants	6-10
Fuel Service Truck	1
ANFO Explosive Truck	1-2
Mechanics Service Truck	2
Lube Service Truck	1
Welding Service Truck	2
Boom Truck	1
Skid Steer Truck	1
Tire Handler Truck	1-2
Crew Vans and Buses	4-8
Pickups	15-25

Note:

(1) The range in the number of equipment units is due to the gradual build-up of operations over the first three years of operations. Haul trucks will continually be added throughout the life of the project as haul distances increase.

(2) Newmont will utilize miscellaneous earthmoving contractors and their equipment on an as-needed basis to handle small or short (time duration) projects.

(3) Also see ***Table 4, Projected Mill Mobile Equipment List***.

2.5 Milling

Milling is an ore processing technique that involves the separation of gold from undesired or non-economic matter. The milling process must be tied to the mineralogy and the economics of the deposit. At the Long Canyon Project, higher grade ore material will be milled, as this allows for higher recoveries. Lower grade ore material will be processed using heap leach processes. See Section 2.7, Heap Leach Processing.

2.5.1 Process Overview

Newmont plans to use the conventional carbon adsorption process for gold recovery at the Long Canyon Project. See ***Figure 8, Mill and Heap Leach Flow Sheet***.

This process will involve the following steps:

- Crushing;
- Grinding;
- Leaching and Carbon Adsorption (carbon-in-pulp and carbon-in-column);
- Gold Recovery (off-site);

- Counter-Current Decantation; and
- Cyanide Destruction.

2.5.1.1 Crushing

The crusher will reduce run-of-mine ore from the mine pit to a consistent size of six inches or less. The run-of-mine ore will be hauled from the mine pit and either dumped directly into a crusher pocket, where the ore will be fed into the crusher via an apron feeder, or stockpiled adjacent to the crusher.

The ore stockpile adjacent to the crusher will have the capacity for approximately 250,000 tons of ore material, with sufficient area available for separate stockpiles to account for differing ore grades. Having separate stockpiles will allow Newmont to blend different ore grades from the stockpiled ore when a front-end loader is used to feed the crusher.

Feed rates to the crushing unit will typically range from 5,000 to 10,000 tons per day. Water sprays and a baghouse-type dust collection system will be provided to control dust at the crusher unit.

Crushing operations will be scheduled for 24 hours per day, 365 days per year. The crushed ore will be conveyed to a crushed ore stockpile and then to the grinding circuit for further size reduction.

Crushed ore material will be stockpiled, with draw points under the stockpile from which ore material can be reclaimed and fed into the grinding circuit. The crushed ore stockpile will be capable of storing approximately 50,000 tons.

2.5.1.2 Grinding

Crushed ore will be conveyed to the grinding circuit, where ore will be ground until reaching its desired product size (80% passing 200 mesh – similar to very fine sand).

Grinding is required so that the ore material is amenable for gold leaching in the carbon adsorption circuit. Lime will be added to the feed conveyor to control circuit alkalinity. Dry lime will be supplied from a silo adjacent to the feed conveyor.

Grinding will be conducted in an enclosed steel frame building to reduce noise levels and to eliminate weather impacts (freezing, wind, etc.).

Initial grinding will be conducted in a semi-autogenous grinding (SAG) mill. Ore, water, and steel grinding balls will be tumbled in this large-diameter, rotating, and cylindrical mill to reduce the ore to a finer size. The term semi-autogenous means that larger ore material assists the grinding media in combination with steel balls.

The SAG mill will discharge to a vibratory screen. The undersize material passing through the screen will report to a sump common with the ball mill discharge. Screen over-sized material will be returned to the SAG mill via a belt conveyor.

Secondary grinding will be performed in a ball mill that also uses water and steel balls in a rotating cylindrical mill. Hydro-cyclones are used to classify the ground ore, with coarser material from the hydro-cyclones returned to the ball mill for further grinding. The ore that is ground fine enough for subsequent beneficiation will be routed from the hydro-cyclones to a pre-leach thickener tank, where solids will settle to the bottom of the thickener tank to be pumped as a slurry with approximately 45-

65% solids by weight to the carbon leach and absorption circuit for the actual gold recovery process. Decanted water from the pre-leach thickener will be pumped to a CIC circuit for gold recovery and then reused in the grinding circuit.

2.5.1.3 Leaching and Carbon Adsorption

The gold recovery process will involve closed-circuit leaching operations involving tank cyanidation and CIP recovery. This operation will be conducted in facilities that will provide primary and secondary containment to capture, retain and return any leaching solutions in the circuit.

Leaching will be conducted in a series of steel tanks located within concrete secondary containment. Sodium cyanide solution will be added to the tanks to dissolve the gold from the ore. The leach tanks will be agitated with compressed air to provide oxygen for the leaching reaction. Slurry lime will be added to the leach circuit, as required, to control alkalinity in the circuit.

Several tanks at the end of the series will contain granular activated carbon. As gold is dissolved from the ore, the gold will be adsorbed on the activated carbon.

In-tank screens will allow the slurry to pass from tank to tank, but the carbon will remain in each tank. The carbon will be periodically transferred from tank to tank, counter current to the slurry flow. Fresh or regenerated carbon will be added to the final (or down-gradient) tank while the carbon from the first (up-gradient) tank, loaded with gold, will be pumped to a carbon load-out circuit.

As the carbon particles are moved through the tanks, they become progressively "loaded" with gold. Moving the carbon counter-current to the slurry flow will allow carbon with the lowest gold loading to contact slurry with the lowest gold concentration, and conversely, carbon with the highest gold loading to contact slurry with the highest gold concentration. This counter-current arrangement maximizes adsorption efficiency.

After the last tank in the circuit, the slurry will pass over a safety screen and report to the counter-current decantation (CCD) circuit. The safety screen openings will be sized slightly smaller than the in-tank screens to capture any carbon that has migrated through the in-tank screens. These carbon particles will be shipped to an existing Newmont facility at Carlin, Nevada to recover gold.

2.5.1.4 Gold Recovery

Actual gold recovery (casting of gold doré buttons or bars) and carbon reactivation will be conducted off-site at Newmont's Gold Quarry processing facility in northern Nevada.

Loaded carbon from the CIP circuit will be loaded onto trucks and hauled from the Long Canyon Project mill to Newmont's Gold Quarry mill near Carlin for carbon stripping, electrowinning and refining. Reactivated carbon will be returned to the Long Canyon Project.

Carbon Stripping. In the stripping process, the loaded carbon is washed with acid to remove impurities, rinsed with fresh water, and stripped under controlled temperature (290 ^{o}F) and pressure conditions using a hot alkaline caustic stripping solution. The resulting gold-bearing solution, or electrolyte, is transferred to the refinery. Boilers provide temperature control for the stripping process. Combustion pollutants for natural gas or propane boilers are controlled by using best operational practices.

Stripped carbon is regenerated by heating it to 1300 ^{o}F in a rotating kiln. Emissions (primarily particulate matter and CO) volatized from the process are controlled by a wet scrubber and carbon filter pack. Boiler combustion pollutants are controlled by using best operational practices.

Refining. The electrolyte, or gold-bearing solution, is passed through the electro-winning cells where the gold is precipitated onto steel wool. The gold-plated steel wool is digested with acid and filtered, then dried into a precious-metal laden precipitate. The precipitate is retorted in furnaces to volatize any remaining impurities, such as mercury, which is collected in the retort condensers. Emissions from the retort furnaces are controlled by carbon canisters and a carbon filter pack.

The retorted precipitate is mixed with flux and reheated to higher temperatures in induction furnaces. The molten material is casted (poured) into doré bars. Emissions from the induction furnaces are controlled by a baghouse and a carbon filter pack.

2.5.1.5 Counter-Current Decantation (CCD)

Tailings from the CIP circuit will report to a CCD circuit to wash cyanide and residual gold values in solution from the slurry. The CCD circuit consists of two thickeners in series. The 'wash water' is introduced to the second thickener and the subsequent overflow is pumped counter current to the slurry thickener underflow. Over-flow solution from the second thickener is fed to the first thickener, over-flow solution from the first thickener is recycled to grinding to reuse the contained cyanide and enhance gold recovery. Thickened slurry under flow from the second thickener is pumped to the cyanide destruction circuit.

2.5.1.6 Cyanide Destruction

Slurry from the CCD circuit reports to the cyanide destruction circuit. The residual cyanide will be neutralized using Caros Acid (H_2SO_5), a mixture of sulfuric acid and hydrogen peroxide. The Caros Acid oxidizes the residual cyanide rendering it inert. A cyanide concentration, as measured by weak acid dissociable (WAD), will be targeted to protect wildlife.

Once neutralized, the tailings slurry will be piped to the lined TSF, which is discussed in Section 2.6, Tailings Storage Facilities.

2.5.2 Mill Operation and Support Infrastructure

The proposed physical plan-view arrangement of the mill and associated support infrastructure is shown on ***Figure 12, Office, Shop and Mill Site Plan Layout***. This will include a construction and operational laydown area.

2.5.3 Mill Mobile Equipment

The mobile equipment to be used at the mill is set forth in ***Table 4, Projected Mill Mobile Equipment List***. This equipment list may be modified during the project depending on site-specific conditions and needs.

Table 4, Projected Mill Mobile Equipment List

Equipment Type	Estimated Number of Units
Front-End Loader (Cat 992 or equivalent with 15-20 yd^3 bucket)	1
Small Wheel Loader with integrated tool attachments (Cat 930 or equivalent)	1-2
Off-Road Extended Boom Forklift	2
Standard Forklifts	2 - 3
Skid Steer Loader (S160 Bobcat or equivalent)	2 - 3
Boom Truck	1
Mobile Crane	1
Flatbed Supply and Stake Trucks	2 - 3
Service trucks with compressors and welders	2-4
Trash truck	1
Crew Vans	3 - 5
Pickups	10 - 15
Note: (1) Newmont will utilize miscellaneous contractors and their equipment on an as-needed basis to handle small or short (time duration) projects. (2) Also see ***Table 3, Projected Mine Mobile Equipment List***.	

2.5.4 Water Management

See Section 2.9, Water Supply and Management.

2.5.5 Reagent Storage and Handling

Some reagents used in the milling process will require handling and mixing. Trained mill reagent technicians will be responsible for the mixing and handling of mill reagents. These handling activities will occur within the confines of the reagent storage structure at the mill.

Typical mill reagents and their respective delivery and storage methods are discussed in Section 2.11, Materials and Supplies.

2.5.6 Emergency and Upset Procedures and Contingencies

See ***Appendix B, Emergency Response Plan***, and ***Appendix C, Spill Prevention, Control and Countermeasure Plan***.

2.6 Tailings Storage Facility

Tailings are the finely-ground rock material remaining after gold has been extracted through the milling process. See Section 2.5, Milling.

Newmont plans to mine and process approximately 5,000 to 10,000 tons of ore per day at its Long Canyon Project mill. As a result, over the projected life of the operation, approximately 20-30 million tons of tailings will be generated. This material must be transported from the mill to a tailings disposal facility. See ***Figure 7, General Site Plan Layout***.

Although built in stages, the tailings storage facility (TSF) (like the proposed heap leach facility) is designed to independently accommodate the maximum amount of total gold resource identified. Since processing economics (ore cut-off grades, operational understanding of the ore body, and process recovery) largely dictate the method of processing, the TSF was designed to allow for greater operational flexibility and management. The TSF will be constructed in incremental stages to minimize the disturbance footprint and capital expenditures.

2.6.1 Tailings Delivery to Tailings Storage Facility

Neutralized mill tailings will be conveyed to the TSF though a contained overland slurry pipeline. See ***Figure 13, Tailings Storage Facility.***

The tailings slurry and water return pipelines will be high-strength steel or HDPE, with welded joints to ensure long-term operational integrity, and the pipeline will be contained in a lined channel that will parallel the upper haul road.

At road crossings, the pipelines will be sleeved within a larger diameter pipe and culverts (pipe-in-pipe) will be installed for continuous conveyance through the lined channel in the event of a process pipe break. The gradient on the channel will be such that low points are avoided and positive drainage is maintained to an outlet point at the tailings storage facility or at a containment pond at the mill.

The tailings slurry will contain approximately 50-70% solids by weight. After solids settle out in the TSF and supernatant water ponds on the surface, Newmont will reclaim this water by pumping it back to the mill for reuse.

2.6.2 Tailings Characteristics

The geochemical characteristics of tailings are benign. There is no potential for the tailings to become acidic because the Long Canyon Project ore is oxide. Newmont will install and operate a cyanide destruction system at the mill to treat the tailings before they are pumped to the TSF.

2.6.3 Tailings Embankment and Liner Design

The TSF facility will consist of an earth/rock embankment that will create a basin for tailings storage. The basin will be fully synthetically lined.

The location of the tailings disposal facility is shown on ***Figure 7, General Site Plan Layout***, and the construction details, including the liner system, are set forth on ***Figure 13, Tailings Storage Facility.***

Prior to the construction of the initial embankment (and the subsequent expansions of the embankment), growth medium material will be removed from beneath the footprint of the tailings embankment and the basin area where tailings will be placed. This material will be stockpiled for use in final closure and reclamation work. See Section 3.0, Reclamation Plan.

Waste rock from the mine pit will be used to construct the embankment. Newmont will construct an initial embankment adequate to retain the tailings produced during the first few years of operation and will continue to expand the embankment using downstream construction techniques, thereby increasing the capacity of the facility. This means that, during subsequent expansions of the embankment, new fill material will be placed on the downhill side away from the tailings. Newmont will continue to use waste rock from the mine pit for future expansions of the embankment.

After vegetation and growth medium material has been removed, the basin area will be prepared for the liner system, either by using native alluvial material or using fine-grained material from one of the borrow sources shown on ***Figure 7, General Site Plan Layout***.

When the native alluvial material in the basin is suitable (void of coarse gravels and rock), these materials will be scarified to a depth of approximately 12 inches, moisture conditioned, and then compacted with a vibratory roller compactor to produce a prepared subgrade foundation surface.

After the subgrade transition zone is completed, a seal zone will be constructed by placing a 12 inch deep low-permeability compacted clay seal that will serve as both a secondary containment and a sub-base for the synthetic liner material.

Once the transition and seal zones are prepared, an 80-mil High Density Polyethylene (HDPE) geomembrane (or equivalent) will be carefully installed over the prepared surface. The synthetic geomembrane is shipped in rolls that are deployed over the TSF area and welded together to form water-tight joints. The synthetic geomembrane will be anchored around the perimeter of the facility in trenches excavated in natural ground or at the top of the embankment.

A tailings under-drain system will be installed over this protective bedding layer. This will consist of a 24 to 30-inch layer of crushed gravel material produced from an on-site borrow source or from mine pit-run waste rock. Contained within this gravel layer will be a herringbone configuration of perforated HDPE piping to collect and transport water that infiltrates through the tailings to a central collection tank on the down-drainage side of the TSF. The pipeline will traverse beneath the embankment in a concrete-encased trench to a collection tank. See ***Figure 13, Tailings Storage Facility***.

There are multiple reasons for the under-drain system:

- Minimize water pressure and hydraulic head on the liner system;
- Facilitate drainage of water from the tailings slurry;
- Assist in consolidating the tailings to maximize the facility's storage space; and,
- Drain and convey water for recycle and re-use in the mill.

Any water from the collection tank located on the outside toe of the tailings embankment will be pumped back to the mill and recycled. In the event of a power loss or other upset condition, back-up collection tanks or a lined pond will be installed to contain overflow. Any water entering these back-up facilities will also be pumped back to the tailings supernatant pool or to the mill.

A host of instrumentation will be installed as part of the tailings liner system installation to monitor the operation and functionality of the system. These will include piezometers, lysimeters, and water sampling points.

All foundation preparation, embankment construction and liner installation will be completed under a quality control and quality assurance program.

2.6.4 Tailings Storage Facility Operation

The TSF will be designed and operated as a zero-discharge facility.

Tailings will be discharged from spigots that surround the perimeter of the active tailings areas to form a "beach" using thin-layer, sub-aerial deposition techniques. The tailings discharge operations will focus on directing the reclaim water pool toward a pump reclaim system. The reclaim water pool will be managed to maintain a small operating pond.

As tailings beaches are formed, spigot discharges will progress around the perimeter. Slurry will be deposited in thin layers along the perimeter of the facility by rotating deposition zones periodically to promote drying and increased density of the tailings. This will allow for thin deposition and time for tailings consolidation between discharge times. The tailings distribution pipeline and deposition drop bars will be located around the embankment and the supernatant pond will be directed back toward the existing ground slope.

The dam safety regulations of the Nevada Division of Water Resources (NDWR) require that at least three feet of freeboard be maintained at tailings facilities. In addition, these NDWR regulations require containment of precipitation and run-on from the probable maximum precipitation event (PMP), as projected by the National Oceanic and Atmospheric Administration (NOAA). The estimated PMP for the Long Canyon Project Area is 13.35 inches in a six hour time period.

2.6.5 Tailings Expansion Phases

Newmont plans to construct the embankment in three separate stages during the course of operations. The initial embankment will have a capacity to hold approximately 10 million tons of tailings or about 3 to 5 years of activity, depending on the production rate. Two subsequent embankment raises proposed during the remaining life of the operation will add another 10 to 15 million tons of tailings capacity. The ultimate TSF will be capable of holding approximately 20 to 30 million tons of tailings.

2.6.6 Tailings Storage Facility Support Facilities

A haul road will parallel the tailings and reclaim water delivery pipelines between the mill and the TSF. This haul road will allow access from the mine and the mill to the TSF. Another haul road will connect the TSF with the on-site borrow sources. See ***Figure 7, General Site Plan Layout***. These haul roads will be used to haul material for embankment construction, and they can be used should any pipeline maintenance be required.

Similarly, an all-weather access service road will be constructed and maintained around the perimeter of the TSF, including across the top of the tailings embankment. The tailings dispersion pipeline will be located adjacent to this access road along the tailings embankment.

A wildlife exclusion fence will encircle the TSF.

2.6.7 Tailings Storage Facility Water Management

See Section 2.9, Water Supply and Management.

A stormwater diversion channel will be installed on the upstream (west) side of the haul road to the tailing disposal facility. This diversion channel will be designed to direct the stormwater runoff from the PMP event to the south and away from the facility. See ***Appendix D, Stormwater Pollution Prevention Plan***.

2.7 Heap Leach Processing

Newmont plans to heap leach low-grade ore at the Long Canyon Project. The heap leach facility will be constructed in an area south of the mill facilities. See ***Figure 7, General Site Plan Layout***.

The heap leach facility (like the TSF) is designed and will be built to accommodate the maximum amount of total gold resource identified. Since processing economics (ore cut-off grades, operational understanding of the ore body, and process recovery) largely dictate the method of processing, the heap leach facility was designed to allow for greater operational flexibility and management. The heap leach facility will be constructed in incremental stages to minimize the disturbance footprint and capital expenditures.

2.7.1 Heap Leach Foundation and Liner Design

Newmont will install an engineered liner system for the heap leach facility. See ***Figure 14, Heap Leach Facility Layout***.

Newmont will develop the heap leach pad using the following construction steps:

(1) Remove and stockpile growth medium material.

(2) Develop a final foundation configuration. The excavated surfaces will be graded and rolled (compacted) with a vibratory roller to produce a final foundation surface with a maximum slope of 5H:1V and a minimum slope of approximately 2%. The graded subsurface material will be configured to drain to a central collection point on the east side of the facility.

(3) Place 12 inches of selected borrow materials and compact this material to attain a low-permeability ($\leq 1 \times 10^{-6}$ centimeters per second [cm/sec]) subgrade. This layer will provide a low permeability barrier and protect the synthetic liner system from possible puncture from underlying sub-base. This material will be obtained from an on-site borrow source.

(4) Install a leak detection system beneath the heap leach pad under areas of concentrated flow, such as the solution collection headers, to monitor potential seepage through the liner system. Perforated pipe will be installed in 80-mil HDPE-lined trenches that will be cut into the subgrade material beneath key areas in the leach pad liner system. The leak detection system piping will flow to a collection tank or sump, which Newmont will monitor.

(5) Install an 80-mil, double-textured, HDPE liner. This synthetic liner will be anchored at the perimeter in a trench excavated in natural ground or in a constructed anchor berm. A containment berm will be constructed around the facility to contain any precipitation runoff or solution not captured in collection piping. This berm will also be lined with the 80-mil HDPE liner.

(6) Place 12-inches of a fine-grained protective layer over the geomembrane surface. The protective layer typically consists of sand or fines generated from the crushing and screening operation.

(7) Install lateral collector and header pipes typically consisting of a network of 4-inch diameter perforated pipes spaced at regular intervals, where the interval spacing is based on minimizing

the hydrostatic head on the geomembrane liner. The smaller diameter pipes will feed into larger diameter header pipes that will direct flow to the outer limits of the leach pad and ultimately to the pregnant solution tank.

The pipework will be designed to accommodate the maximum flow rate as determined from the layout area and the application rate. They will serve as the primary collection system for solution percolating through the heap leach pile. This solution will be routed to a pregnant solution tank, from which the solution can be routed into the mill or overflow into an events pond in the case of a power failure or other emergency situation.

(8) Install a 24 to 30-inch thick coarse rock layer over the lateral collector and header pipes to enhance drainage through the pad and to minimize hydraulic head on the liner system; and,

(9) Place ore material in successive lifts over the composite liner and drainage system.

Three types of material will be used during the construction of the heap leach facility:

- Prepared subgrade;
- Protective layer; and
- Drainage layer.

These materials will be produced either from the on-site borrow source or from a crushing and screening operation using waste rock from the mine pit. Such rock material will be crushed and screened to produce a fine-grained material for the over-liner bedding protective layer and a coarse fraction for the drainage layer.

A portable crusher will be sited near the mill and raw ore stockpile area to produce crushed rock for both the heap leach and tailing protective overliner and drainage layers.

The final design for the heap leach facility will require NDEP approval, and all foundation preparation and liner installation work will be completed under a quality control and quality assurance program.

The heap leach pad location will be sited at an elevation such that fluid draindown can be routed via gravity to the tailing facility pumpback system during closure activities. This will provide permanent heap leach closure and process fluid management options.

2.7.2 Heap Leach Operation

No crushing or agglomeration will be used or required for the heap leach operation; however, en route to the facility, haul trucks carrying the low-grade ore material will pass beneath a silo where lime will be added for pH control of the cyanide solution used in the heap leach operation.

The ore material will be placed in lifts on the heap leach pad (lifts ranging from 15 to 50 feet depending on topography and processing needs). Benches will be developed between each lift to produce an overall minimum slope of 3H:1V. The side slopes may be graded to eliminate benches after initial ore placement.

A bulldozer with a ripper attachment will rip the surface of each lift to facilitate percolation of the process solution, which will be a weak cyanide solution applied to the surface using drip tubes, emitters, or sprinklers.

Solution flow rates for the heap leach facility will be designed for 1,000 gallons per minute (gpm) to allow for surge capacity, but will operate from 200 to 1,000 gpm during the first 6 months of initial start-up. The long term application rate will be reduced to approximately 250 gpm as the amount of ore delivered to the heap is reduced. Makeup water required for the heap leach facility will range up to 500 gpm, depending on seasonal variations and on-site conditions. Leach system water losses are primarily attributable to evaporation and moisture retention of the ore. Makeup water will be supplied from the Long Canyon Project water supply system. See Section 2.9, Water Supply and Management.

The cyanide solution will migrate downward through the piled ore, dissolve gold, and drain to a tank at the downgradient edge of the heap leach pad. The solution containing the gold, known as a "pregnant" solution, will be pumped from this tank to the mill, *via* a dual-containment pipeline, where the precious metals will be adsorbed onto the carbon. As the solution exits the recovery system (referred to as "barren" solution), sodium cyanide will be added and the solution will be recycled to the heap leach pad, again *via* a dual-containment pipeline, which, like the mill, will be operated as a closed circuit (zero discharge) facility.

Loaded carbon (carbon containing gold) will be loaded into trucks and transported off-site on a routine basis to an existing Newmont facility at Carlin, Nevada for processing and refining the loaded carbon into doré.

2.7.3 Heap Leach Support Facilities

A haul road will connect the mine pit with the heap leach facility. See ***Figure 7, General Site Plan Layout***. Haulage of ore destined for the heap leach facility will be on this road, and the run-of-mine ore material will be end-dumped onto the lined facility.

An all-weather service road will encircle the perimeter of the heap leach facility. This road will provide access for Newmont personnel to the drain piping used to collect pregnant solution and will serve as the access to the perimeter ditching that will surround the heap leach facility.

A wildlife exclusion fence will encircle the heap leach facility.

2.7.4 Heap Leach Water Management and Balance

See Section 2.9, Water Supply and Management.

2.8 Power Supply and Distribution

Newmont will use electricity at the Long Canyon Project. The primary consumer of power at the site will be the mill facility, but electric power will also be needed for the heap leach facility and the day to day operations in offices and shops for lights, computers, power tools and other applications.

The initial power demand at the Long Canyon Project is estimated to be approximately 10 megawatts (MW) to support mine and mill start-up. Energy demand is projected to reach 15 to 20 MW as the operation reaches full production.

Newmont is considering three distinct power supply options for the Long Canyon Project:

- Purchase of Electricity from Wells Rural Electric Company (WREC);
- On-Site Self-Generation of Electricity; or
- Off-Site Self-Generation of Electricity.

2.8.1 Purchase of Electricity from Wells Rural Electric Company

The first option is for the WREC to supply electric service to the Long Canyon Project site from a new 138 kilovolt (kV) transmission line that would be constructed from Wells paralleling the existing power line located north of I-80 to Oasis then turning south into the mine and mill facility location.

Newmont will initially use the existing distribution line that serves the Big Springs Ranch to supply electricity for construction activities. Once the new 138 kV transmission line is constructed, the existing power line to the ranch will be removed as it will no longer be necessary.

The new 138 kV transmission line will be constructed to the east around the proposed WRSF. See ***Figure 7, General Site Plan Layout.*** This new 138 kV electric transmission line will transmit electric power to a new substation located next to the mine support facilities (office, shop, mill), where the voltage will be transformed and routed to various surface facilities.

Transmission line structures will be single pole structures constructed to Rural Utilities Service (RUS) standards. Newmont will use Avian Power Line Interaction Committee (APLIC) raptor-deterring design measures and/or grounded hardware, as well as insulating or cover up materials, for perch management. See ***Figure 15, Power Pole Structure Design***.

New power line construction will disturb an approximate 10 by 10-foot area for each pole on the right-of-way, with an estimated 15 to 20 poles per mile. New temporary roads, along with existing roads, will be used to gain access for transmission line construction and maintenance.

The transmission line and substation designs will be based on RUS electrical standards for material and construction. The ultimate power line design will be dependent on the final route selection and approval by WREC, who will be responsible for the maintenance of the power line and substation/switchgear. Newmont will assume responsibility for the electric power from WREC at the mine facility substation (near the mill), which will be the WREC metering location for electric power provided to Newmont.

2.8.2 On-Site Self-Generation of Electricity

An alternative to installation of a new 138 kV power line and purchase of electric power from WREC is self-generation of electricity by Newmont with on-site natural gas-fired generators or turbines. This option would include the construction of a spur natural gas pipeline from the Ruby Natural Gas Pipeline located approximately 40 miles north of the Long Canyon Project.

Natural gas-fired turbines are modular, with variable capacities. Newmont could use turbines of 5 to 10 MW capacity. Up two of these units would be required for initial operations. As future load increases, Newmont would add more turbines of similar size to meet the power demand.

2.8.3 Off-Site Generation of Electricity

The third alternative will be the self-generation of electricity by Newmont at an on-site location, external from the Long Canyon Project, coupled with the construction of a 138 kV transmission line as contemplated in Section 2.8.1, Purchase of Electricity from Wells Rural Electric Company. Newmont could use natural gas-fired generators or turbines at the off-site location to provide the electricity for the Long Canyon Project.

2.9 Water Supply and Management

The majority of the water use at the Long Canyon Project will be for ore processing (milling and heap leaching) and dust control/suppression. Other uses will be potable use and fire protection. Water will be needed for every phase of the project, starting with construction and development, continuing through mine and ore processing operations, and concluding with closure and reclamation activities.

2.9.1 Water Use

Water use for the Long Canyon Project is set forth in ***Table 5, Estimated Water Usage***.

Table 5, Estimated Water Usage

Project Component	Construction and Start-Up (gallons per minute)	Operations (gallons per minute)	Closure and Reclamation (gallons per minute)
Milling	1,000	400	-
Heap Leach	500	100	-
Surface Dust Control	800	800	300
Potable or Domestic Use	5	5	2
Sub-Total Use	**2,305**	**1,305**	**302**
Contingency (10%)	231	131	30
Total Estimated Use (gallons per minute)	**2,536**	**1,436**	**332**
Estimated Annual Use (acre-feet)	4,083	2,312	535

NOTES:

(1) 1 gallon per minute (gpm) = 1.61 acre-feet per year.

(2) Potable water demands are estimated at 35 gallons per day (gpd) per person.

- For construction: $\frac{(200 \text{ people})(35 \text{ gpd})}{(24 \text{ hr/day})(60 \text{ min/hr})} = 4.9$ (assume 5 gpm)
- For operations: $\frac{(200 \text{ people})(35 \text{ gpd})}{(24 \text{ hr/day})(60 \text{ min/hr})} = 4.9$ (assume 5 gpm)
- For closure and reclamation: $\frac{(80 \text{ people})(35 \text{ gpd})}{(24 \text{ hr/day})(60 \text{ min/hr})} = 1.9$ (assume 2 gpm)

2.9.1.1 Milling

One of the major water uses at the Long Canyon Project will be for mill operations.

The mill will be operated as a closed-circuit, zero-discharge facility. Process water will be recycled within the process system rather than allowed to be discharged into the environment.

Initially, water will be added to the ore in the grinding process. Following grinding and thickening, the ore will be pumped as slurry through a series of leaching tanks. Once the gold is extracted from the ore,

tailings will be pumped as slurry (approximately 50-70% solids) to the TSF, where the decanted water will be returned to the mill. Some process water will naturally evaporate.

The Long Canyon Project ore processing facility will be operated in three stages:

- Mill start-up (charging the system);
- Normal operation; and
- Mill closure.

When the mill is started up, there will be little water in the circuit; therefore, the greatest amount of fresh water will be used during the first year of mill operation. During this time period, there will be little water in the tailings impoundment as the supernatant pool forms.

Approximately a year after mill start-up, the Long Canyon Project mill will attain full operational status, and mill fresh water makeup needs will stabilize. About half of the total water used in the process will be recycled from uses within the mill and from the tailings impoundment. However, due to the evaporation and retention of residual water within the tailings (approximately 10 to 15%), fresh water makeup will continue to be required in the milling process throughout the life of the project.

When sufficient operational water volume is attained in the TSF, water will be returned from this facility back to the mill. The amount will depend on water losses in the system, such as residual water retention within the tailings themselves and evaporation; however, fresh water makeup demand for the mill will stabilize to an annually consistent cycle. Seasonal precipitation and temperature will play a role in determining the amount of water recycled to the mill from the tailings storage facility.

As the mill approaches the final cessation of operations, as much water as practical will be drawn from the TSF and less fresh water will be added to the system to reduce the size of the supernatant pool at the TSF.

At the conclusion of milling operations, any remaining ponded water in the TSF will be evaporated naturally or enhanced through the use of evaporators as part of final closure and reclamation.

Water will also be used for fugitive dust control at ore stockpiles, crushers, and conveyor transfer points.

2.9.1.2 Heap Leach Operations

Another major use of water at the Long Canyon Project will be for heap leach purposes. Similar to the mill, the heap leach facility will be operated as a closed-circuit, zero-discharge facility, and process water will be recycled within the process system with no discharge to the environment.

A weak cyanide solution (known as a “barren solution”) will be applied to the surface of the ore heap using drip tubes, emitters, and/or sprinklers from which the barren solution will trickle through the ore to dissolve gold.

A system of perforated pipes on top of the liner will capture the solution, which contains the dissolved gold, and will convey it to a pregnant solution tank. The solution is then pumped to the mill to recover gold. After gold removal, the barren solution will be routed into a barren solution tank, where cyanide will be added, as needed, and this solution will be pumped (re-cycled) to the heap leach pad.

2.9.1.3 Surface Dust Control

Another major use of water at the Long Canyon Project will be for dust suppression (mainly on haul roads and at excavation and ore handling sites.)

In some areas, water volumes used for road dust suppression will be reduced with the use of dust control chemicals. When applied properly and maintained, these products will be capable of providing dust control and lessening the amount of water to be used at the site.

2.9.1.4 Potable Water

Water will be necessary for potable and sanitary use at the site. Potable water will be used at the mine office, maintenance facility, mill complex, and heap leach facility. See ***Table 5, Estimated Water Usage***.

Based on the chemistry for the water supply, it is expected that only chlorination will be required to provide potable water for the site. Newmont will establish a non-transient, non-community drinking water system that complies with the regulations of the NDEP Bureau of Safe Drinking Water.

2.9.1.5 Fire Protection

Capacity will be made available in the total system for adequate water storage in the case of a fire. Newmont plans to construct and maintain a 400,000-gallon storage tank on-site to provide for fresh water and the required fire water demand for use at the mine office complex, truck shop, the mill, and other facilities. This storage tank will be located uphill from the office, shop and mill complex.

Nevada has strict requirements for fire protection of commercial and industrial facilities (including mining). The Long Canyon Project must meet the regulations of the Nevada Department of Public Safety, State Fire Marshall.

The Long Canyon Project fire water system will be able to supply approximately 3,000 gpm for 12 minutes or about 600 gpm for one hour. As a check, NAC 477.920(3)(a) requires that, for rural commercial buildings, an organized fire department must be capable of producing a fire flow of not less than 500 gpm for 30 minutes using pumper tanker operations.

2.9.2 Water Supply and Storage Facilities

Because of the remote location of the Long Canyon Project, Newmont will develop and maintain a water supply system dedicated to the project. Water rights permits will be required for the industrial and potable uses at the site.

Water for the Long Canyon Project will be obtained from a well field in Section 3, Township 35 North, Range 66 East, on Newmont property (See ***Figure 7, General Site Plan Layout***). Useable quantities of groundwater are found in this area, and pump tests show that the well field is capable of producing 2,000 gpm on a sustained basis.

Water will be pumped from the wells into a 15,000 to 20,000 gallon water tank adjacent to the well field. Water from the wells or this tank facility will be delivered *via* a buried or surface pipeline parallel to a mine service access road to the main 400,000-gallon capacity fresh/fire water storage tank facility located at the office, shop and mill complex. Both tank facilities will have the potential to supply water trucks used for exploration drilling, development drilling, and road dust control.

2.9.3 Water Management

Water demand will vary during the year, with peak demand during the summer months when dust suppression and evaporation are greatest. Newmont will employ water conservation and use efficiencies as part of operations.

2.10 Workforce Requirements

Newmont and construction contractors will employ 300-400 people for the construction and initial mine development activities. This will include workers to construct mine office, maintenance shop and mill facilities, along with the construction of the tailings embankment and liner systems, and heap leach liner facilities.

At full production, which would occur approximately 9 to 12 months after construction is complete, project employment will be approximately 300 to 500 people. This will include miners, mechanics, electricians, process operators, engineers, geologists, environmental specialists, and management and administration personnel.

At the curtailment of operations, an estimated workforce of approximately 50 to 80 people will be utilized to salvage equipment and complete final reclamation activities.

2.11 Materials and Supplies

During operations at the Long Canyon Project, Newmont will use a number of operational materials, supplies and chemical reagents, including fuel, explosives and ore processing reagents. Listed in ***Table 6, Materials, Supplies and Reagents***, are the major consumables to be used. This information is updated on an annual basis as required by the Fire Marshal Hazardous Materials Permit. It should be noted that Homeland Security regulations prohibit public disclosure of the quantity and explosives used or shipped.

Table 6, Materials, Supplies and Reagents

Common Name	Annual Use	Delivery Form	Shipment Quantity	Location Stored	Max Amount Stored	Storage Method	Area Used
Diesel Fuel	9,000,000 gal.	Bulk Liquid	20,000 gal.	Truck Shop	120,000 gal.	Tank	Project Site
Gasoline	200,000 gal.	Bulk Liquid	5,000 gal.	Truck Shop Area	10,000 gal.	Tank	Project Site
Sodium Hypochlorite	5,000 lbs.	50# bags	1000 lbs.	Water treatment building	1000 lbs.	Dry stacked	Water Treatment
Ammonium Nitrate(1)	N/A	Bulk Solid	N/A	ANFO Silos	N/A	Silo	Pit
Explosives(1)	N/A	Box	N/A	Powder Magazine	N/A	Secured Magazine	Pit
Propane	300,000 gal.	Bulk Liquid	20,000 gal.	Truck Shop Area	10,000 gal.	Tank	Buildings
Sodium cyanide	1,500,000 lbs.	Bulk Liquid	20,000 gal.	Process Plant	30,000 gal.	Tank	Mill/Heap Leach
Lime	4,000 tons	Bulk Solid	40 tons	Process Plant/Heap Leach	200 tons.	Silo	Mill/Heap Leach
Activated Carbon	900,000 lbs.	Super Sack Solid	40,000 lbs.	Process Plant	60,000 lbs.	Warehouse	Mill
Scale control reagents	45,000 lbs.	Bulk Liquid	2,000 gal.	Process Plant/Heap Leach	3,000 gal.	Tank	Mill/Heap Leach
Sulfuric Acid	1,000,000 lbs.	Bulk Liquid	3,000 gal.	Process Plant	150,000 lbs.	Tank	Mill
Hydrogen Peroxide	375,000 lbs.	Bulk Liquid	4,000 gal.	Process Plant	90,000 lbs.	Tank	Mill
Flocculent	90,000 lbs.	Dry Super Sacks	40,000 lbs.	Process Plant	40,000 lbs.	Warehouse	Mill
Grease	50,000 lbs.	Bulk liquid/solid	5,000 lbs.	Truck Shop Area	10,000 lbs.	Totes, drums	Truck Shop
Hydraulic fluid - motor oil	200,000 gal.	Bulk Liquid	5,000 gal.	Truck Shop Area	5,000 gal.	Tanks, totes, drums	Truck Shop
Solvents	1,000 gal.	Bulk Liquid	200 gal.	Truck Shop Area	1,000 gal.	Totes, drums	Truck Shop
Antifreeze	40,000	Bulk Liquid	4,000 gal.	Truck Shop Area	4,200 gal.	Tanks, totes, drums	Truck Shop

Note:
(1) U.S. Office of Homeland Security regulations do not allow mine operators to report explosive quantities.

The transport, handling and storage for these consumables are discussed below.

- Diesel Fuel – Tanker trucks will deliver diesel fuel to the site where the fuel will be transferred to aboveground storage tanks, which will be placed in secondary containment. Most mobile surface equipment will be powered by diesel fuel.
- Gasoline – Tanker trucks will deliver gasoline to the site where the fuel will be transferred to above ground storage tanks. These tanks will be placed in secondary containment. Light vehicles at the project site will use gasoline.
- Propane – Propane will be delivered by vendor and stored in certified tanks located near the surface facilities. Propane will be used for heat and to heat water.

- Oils/Lubricants – Various oils and lubricants will be required for equipment maintenance. These products will be delivered by vendor and stored in approved containers located within or directly adjacent to the maintenance shop. All used petroleum products and solvents will be collected in approved containers, transported off site, and disposed or recycled through qualified vendors.
- Antifreeze – Antifreeze (50/50 premix) will be required for use in the equipment. Antifreeze will be delivered by vendor in approved containers that will be stored within or directly adjacent to the maintenance shop. Used antifreeze will be collected in approved containers, transported off site and disposed ore recycled through qualified vendors.
- Solvents – Various types of non-hazardous solvents will be needed for parts cleaning in the maintenance shop. The solvents will be delivered by vendors and stored in approved storage containers within or directly adjacent to the maintenance shop.
- Explosives – Explosives will be delivered to the site by vendors and stored in secured and approved magazines. Newmont plans to use bulk ANFO as the principal blasting agent, along with detonating cord, cast primers and blasting caps). Transportation, handling, storage and use of explosives are regulated by the ATFE and MSHA.
- Lime – Lime will be delivered to the site by vendors using tank trucks and stored in silos in the process area. Silos will be equipped with air emission controls such as bag houses that minimize releases during the truck off-loading. It is estimated that two trucks a week will be delivered to the site.

Newmont will report chemical use volumes under the Environmental Protection Agency (EPA) Toxic Release Inventory (TRI) program, as required by Section 313 of the Emergency Planning and Community Right to Know Act (EPCRA).

In addition, Newmont will be responsible for clean-up of releases of hazardous substances and or oil associated with the Long Canyon Project in accordance with the National Oil and Hazardous Substances Contingency Plan (40 CFR 300). Newmont will notify the BLM Authorized Officer, the NDEP, and the National Response Center of reportable quantities of hazardous substances and/or oil released on public land as required. Spills will be cleaned up in accordance with local, state and federal regulations.

2.12 Ancillary Support Facilities

2.12.1 Guard Gate and Security

Newmont will install a guard gate and station at the main entrance to the Long Canyon Project, and all project traffic will enter the project site at this entrance. See ***Figure 7, General Site Plan Layout***.

The bus, employee vehicle, vendor and visitor parking area will be located adjacent to the guard gate. Space for approximately 50 vehicles plus 5 to 10 buses will be available at this area, which will be fenced so that only authorized vehicles can enter the active mine and mill property.

2.12.2 Perimeter Fencing

A fence will be installed around the perimeter of the project area. This fence will meet BLM range fence standards, which typically require a 4-strand barbed wire arrangement. A wildlife exclusion fence will be installed around both the TSF and the heap leach facility.

2.12.3 Communications

Newmont will contract with the local telecommunications company for telephone and internet services. A two-way radio system will also be installed at the operations to allow for field communications.

2.12.4 Training, Safety and Medical

The construction and operation of a surface gold mine with associated surface facilities require that health and safety aspects, including miner training, must be an integral part of the operations. Newmont will comply with MSHA requirements and regulations.

2.13 Sanitary Waste Handling Facilities

Newmont will dispose of sewage through a rotating biological contactor (RBC) and tailings discharge. The RBC consists of a cylindrical tank with a series of closely spaced, parallel discs mounted on a rotating shaft which is supported just above the surface of the waste water. Microorganisms grow on the surface of the discs where biological degradation of the wastewater pollutants takes place. The RBC process removes the "grit" and other solids through a screening process followed by a period of settlement. Upon completion of treatment and settlement, the waste water will be pumped to the TSF for sub-aerial disposal.

The waste disposal system will be connected to the office, shop and mill complex facilities. See ***Figure 7, General Site Plan Layout,*** and ***Figure 12, Office, Shop and Mill Site Layout***.

Newmont will obtain NDEP approval for the engineering designs and specifications prior to construction of this system. Throughout construction, mining, and reclamation work, Newmont or its construction contractors will place portable chemical toilets at work sites around the operation. These toilets will be periodically cleaned and emptied by a contractor. Such sanitary waste will be transported off site for disposal by the contractor.

2.14 Solid and Hazardous Waste Handling

2.14.1 Trash

Newmont will use on-site trash receptacles during mining and ore processing operations and install an on-site Class III waivered landfill to handle inert waste pursuant to NAC 444.731. The landfill areas will be located on private property controlled by Newmont and not on BLM-administered land.

Newmont will only place inert wastes in the on-site landfill. In no case will Newmont put materials in this landfill that meet the definition of a hazardous waste or waste that could produce pollutants or contaminants that may degrade the waters of the state.

Acceptable waste under a Class III waivered landfill includes scrap metals, untreated wood wastes, paper products, empty bags, properly managed (thoroughly drained) empty containers, office and lunch

room wastes, aerosol cans that have been pierced, oil filters that have been pierced, dismantled, or punctured and hot drained for twelve hours, or the excess oil removed by crushing or another equivalent method that substantially eliminates most of the oil from the filter, whole tires, and uncontaminated piping and liner material.

Newmont will conduct maintenance for the on-site landfill that includes the following activities:

- Restrict public access (landfill solely for Newmont use).
- Erect signs identifying the site and indicating acceptable and unacceptable wastes.
- Employee training with respect to what material can and cannot be placed in the landfill.
- Apply a soil cover weekly and compact to a minimum of 6 inches to control litter and odors.
- Control litter with portable fencing and periodic cleanup.
- Prohibit and prevent any burning of solid waste.
- Implement stormwater run-off and erosion controls.
- Protect any surface water from pollutants.

Upon permanent closure of the landfill, Newmont will place and compact a suitable cover material to a minimum uniform depth of 24 inches over the top of the facility. This cover will be graded to allow for proper surface runoff drainage.

2.14.2 Hazardous Wastes including Petroleum Wastes

Resource Conservation and Recovery Act (RCRA) identified wastes anticipated to be generated at the Long Canyon Project include florescent bulbs and batteries which are considered “universal wastes”. Empty aerosol product containers and are considered hazardous and will managed as such under a Small Quantity Generator status. Management of hazardous wastes including storage, disposal and reporting will be in accordance with RCRA requirements.

The majority of the hazardous materials used on site will be spent or consumed during operations. Materials that are not spent or consumed (e.g., oils, antifreeze, etc.) will be recycled, to the extent possible, or disposed off-site in an approved depository in accordance with applicable federal and state regulations.

Petroleum waste products will be stored on site in approved containers that will be separate from other trash and garbage products, and these petroleum waste products will be transported off site for recycling or disposal in an approved waste facility. Newmont has prepared a Spill Prevention Control and countermeasure plan that established procedures for responding to accidental spills and releases of petroleum products. See ***Appendix C, Spill Prevention Control and Countermeasure Plan***..

The Long Canyon Project has prepared an Emergency Response plan that establishes procedures for responding to accidental spills or releases of hazardous materials to minimize health risks and environmental effects. See ***Appendix B, Emergency Response Plan***.

2.15 Transportation

Newmont will maintain or establish parking areas in Wells, West Wendover and Elko for employees and contractors using bus or van pooling to the Long Canyon Project site. As with its other northern Nevada operations, Newmont will make busing and vans available for employee and contractor transportation to the Long Canyon Project.

Newmont encourages, but does not mandate its employees and contractors to use the buses and vans; however, Newmont's experience in northern Nevada is that most people choose this option for its convenience and cost savings from driving private vehicles to the mine site. Some limited parking (around 50 spaces) will be provided at the Long Canyon Project for individual private vehicles. These could be employees, contractors, vendors or visitors.

Due to management responsibilities, a certain number of Newmont and contractor personnel will use individual vehicles for transportation to the project. These vehicles will generally be authorized to be used on the mine site. Parking for these company vehicles will be available adjacent to the mine office. See ***Figure 12, Office, Shop and Mill Site Project Layout***.

2.16 General Schedule of Operations

The Long Canyon Project has an expected current life ranging from 8 to 14 years (including construction, mining and ore processing, and final closure and reclamation).

Construction activities for the mining, ore processing and miscellaneous ancillary facilities will take place over a period of 18 to 30 months. This includes startup and commissioning of the mill.

Newmont plans to begin construction and pre-production mine development of the Long Canyon Project in the spring or early summer of 2015. This work will consist of site preparation for laydown areas, clearing of tree vegetation from the mine area, removal of growth medium material from areas to be disturbed during construction, and tailings dam construction, installation of the foundations for the mill and other buildings, construction of the mill and other buildings, and liner placements for both the TSF and heap leach facility.

Pre-production mine development will occur with construction of haul roads, removal of waste rock, and removal of initial ore material, which may be transported to an existing Newmont mill until the on-site Long Canyon Project mill is commissioned.

After initial mill start- up testing full mine production will begin. Mining and ore processing activities are projected to continue at least 6 to 8 years thereafter.

At the conclusion of mining and ore processing, closure and reclamation activities are expected to take up to 3 years, followed by several years of reclamation success and hydrology monitoring.

2.17 Environmental Protection and Management Plans

Newmont will implement and maintain numerous environmental management and mitigation measures to minimize environmental effects and to ensure productive multiple uses both during and following mining and reclamation. Some of these measures are standard practices or the result of BLM or other government agencies regulations and policies.

2.17.1 Air Quality

Goal: *Manage point and non-point source air emissions to protect human health and the environment during construction, operation, and closure and reclamation.*

(1) Identify point source and non-point source forms of air emissions for construction, operations, and closure and reclamation. Develop an emission inventory to quantify pollutants.

(2) Design, construct and operate Long Canyon Project facilities in compliance with appropriate air pollution controls to comply with applicable regulations and any air quality permits issued by the NDEP, Bureau of Air Pollution Control, and the EPA national ambient air quality standards as applied at the facility boundary using relevant air quality dispersion modeling.

(3) Process carbon at the Gold Quarry facility that utilizes maximum achievable control technology (MACT) to control mercury emissions, although there only negligible amounts of mercury are present in the Long Canyon Project ore.

(4) Use best management practices to control fugitive dust generation. This will include dust control for site access and haul roads that will involve periodic watering and/or chemical treatment. A water truck will run periodically in the drier months, wetting the roads to minimize dust. The mine haul roads will be maintained regularly by a motor grader to remove any rock, silt or other debris. Smooth and clean road surfaces are essential for not only minimizing dust but also for allowing efficient, safe and economical use of the road.

(5) Enclose the main mill building and use water for ore processing. Install water sprays and/or bag house dust collectors at the ore crushing system and at ore reclaim feeders that deliver ore to the grinding circuit.

(6) Utilize electric line power to the extent possible at the Long Canyon Project. Maintain internal combustion engines (diesel or gasoline powered) for efficient operation and to minimize emissions. Operate any on-site stationary diesel generators under air quality limitations required by NDEP air quality rules and regulations.

(7) Provide busing and/or van pooling for Newmont employees at the Long Canyon Project to minimize traffic and emissions.

2.17.2 Chemicals and Hazardous Materials

Goal: *Protect worker health and safety. Manage the use of chemicals and hazardous materials to prevent spills, fires or explosions and to protect the existing biological and hydrologic resources of the area during construction, operation, and closure and reclamation.*

(1) Hazardous chemicals will be transported to the mine site in U.S. Department of Transportation (USDOT) certified containers and transporters, who will comply with USDOT, Occupational,

Safety and Health Administration (OSHA), and Mine Safety and Health Administration (MSHA) regulations.

(2) Personnel transporting, handling or using any hazardous chemicals (including sodium cyanide) will be trained to ensure the safe use of such materials.

(3) Hazardous chemicals will be stored in designated areas for safety and to prevent environmental releases.

(4) Fuel and other petroleum products at the site will be stored in above ground containment structures, with appropriate containment measures. Newmont will maintain a Spill Prevention Control and Countermeasure (SPCC) Plan for the operation as required by 40 CFR 112 regulations.

2.17.3 Cultural and Historic Resources

Goal: *Prevent impacts to cultural resources, especially to properties or sites listed or eligible for listing on the National Register of Historic Places.*

(1) Cultural surveys have been (and will continue to be) conducted prior to disturbance by Newmont's contract archaeologists under guidance from the BLM and the Nevada State Historic Preservation Office (SHPO). Newmont will avoid identified cultural resource sites (historic or pre-historic) or, if disturbance is unavoidable, mitigate to meet BLM and Nevada SHPO requirements.

(2) Newmont employees and contractors will be informed about relevant governmental regulations intended to protect cultural and historic resources.

(3) If any cultural resources are unearthed or otherwise encountered during the construction and mining operations at the Long Canyon Project, such activities will cease in the area of discovery, and the BLM will be notified that such cultural resources can be identified and appropriate resource protection measures can be developed and implemented.

2.17.4 Health and Safety

Goal: *Protect worker health and safety. Eliminate health and safety risks from project activities and prevent accidents, especially those necessitating emergency responses.*

(1) Any activity associated with mining and milling requires that the health and safety aspects be considered as an integral part of the planning aspects and operation at the site. Newmont considers safety to have the highest priority in the operation of the Long Canyon Project.

(2) The project will conform to health and safety rules and regulations of MSHA. Such MSHA regulations require worker safety training and the maintenance of a ground control plan for mining operations.

(3) Newmont will maintain an on-site mine rescue vehicle for use in case of emergencies. This vehicle will be stocked with first aid gear and material. First aid supplies and kits will also be located strategically around the Long Canyon Project site.

(4) Newmont has trained emergency medical technicians and mine rescue teams in northeastern Nevada. Many of these personnel will be employed at the Long Canyon Project, and they will be available in case of emergency.

(5) Newmont will maintain a training room in the administrative office building. Newmont has new miner and refresher training as part of its Nevada operations.

(6) Newmont will manage public access on project site to restrict unauthorized entry.

2.17.5 Land Use including Livestock and Grazing Management

Goal: *Minimize disturbance and the effects to future land use, including impacts to livestock grazing.*

(1) Newmont will minimize disturbance by maintaining as compact an operation as practicable.

(2) Newmont will install and/or maintain fences around the project area perimeter and cattle guards on access roads to preclude livestock access to the site, while allowing wildlife passage in either direction.

(3) Reclamation will return disturbed sites to a productive condition following operations.

2.17.6 Noise

Goal: *Minimize noise impacts to ensure worker safety and to limit effects to area wildlife.*

The Long Canyon Project is located in a relatively unpopulated, remote area. The closest (non-Newmont) occupied residence is located nearly four miles northwest of the proposed mine pit area.

(1) The Mine Safety and Health Administration (MSHA) governs worker health and safety, which includes requiring hearing protection for workers in high noise areas.

(2) The mill building will be enclosed.

(3) Internal combustion engines associated with the Long Canyon Project will be maintained to minimize noise.

2.17.7 Recreation

Goal: *Minimize impacts to dispersed recreation activities.*

(1) Only authorized travel will be allowed into the project area. No unauthorized vehicles, personnel, alcohol, illegal drugs, or firearms will be permitted on site. The Long Canyon road will be closed for public safety.

(2) Plans will be implemented to control public access into the mine area using fencing, gate locking, security personnel, and/or notice postings to prohibit unauthorized entry.

(3) There will be no hunting within areas posted or fenced during the mine operation, but hunting will continue on public lands outside of fenced or posted project area.

(4) Newmont will prohibit the possession of unauthorized firearms and the discharge of firearms within the project area.

(5) Newmont will inform employees, contractors and subcontractors that long-term camping (greater than 14 days) is prohibited on federally-administered lands.

2.17.8 Trash and Other Waste Material

Goal: *Manage and properly dispose any project-generated trash and hazardous chemicals.*

(1) Waste bins, dumpsters or trash cages will be provided on site for trash and refuse. This trash material will be regularly picked up and hauled to the on-site landfill for disposal.

(2) There will be no open burning of garbage and refuse at the site.

(3) Petroleum waste products, spent solvents, and aerosol can residues will be stored in approved containers separate from other trash products and transported off site for recycling or disposal in an approved waste facility.

2.17.9 Socioeconomics

Goal: *Encourage the hiring of qualified local people and work with nearby communities to lessen social, lifestyle and economic impacts on local residents.*

(1) Newmont will implement hiring practices that encourage the use of local contractors and workers, and will go outside the region to hire if a qualified contractors and adequate local pool of candidates cannot be found.

(2) Newmont will maintain a comprehensive program of health and safety training for employees. This program will include environmental considerations.

2.17.10 Soils

Goal: *Minimize project-related impact to soils and salvage soils for reclamation purposes.*

(1) Growth medium material (topsoil) will be removed from areas that will be affected by the project operations and surface facilities.

(2) Salvaged growth medium material will either be stockpiled or will be directly reapplied on concurrent reclamation areas. If stockpiled, growth medium will be kept out of drainage areas and seeded to prevent water and wind erosion.

(3) Salvaged and stockpiled growth medium material will be used in final reclamation activities upon permanent closure of the Long Canyon Project.

(4) A noxious weed program will be implemented, if necessary, to prevent noxious weeds from colonizing growth medium stockpiles.

2.17.11 Stormwater – Erosion and Sediment Control Measures

Goal: *Manage stormwater runoff and control erosion during construction, operation, and closure and reclamation.*

(1) Newmont will maintain a stormwater permit for the Long Canyon Project site. Stormwater features and facilities will include diversion ditches, culverts, stormwater basins, etc.

(2) Surface water diversion ditches will route runoff around the WRSF, theTSF, the heap leach facility, the mine administration, shop and mill facility area, and as practical, the mine pit area.

(3) Runoff generated from precipitation on disturbed areas will be routed in ditches or through culverts toward stormwater basins, where sediment can collect and water can evaporate or percolate into the ground.

2.17.12 Vegetation

Goal: *Minimize project-related impacts to vegetation and riparian zones.*

(1) Removal or disturbance of vegetation will be kept to a minimum by limiting the area of disturbance to the extent practicable to maintain safe and efficient operations.

(2) Vegetation and soil removal will occur in a manner that minimizes erosion and sedimentation. Riparian vegetation will be avoided to the extent practicable.

(3) Disturbed areas will be stabilized and seeded in accordance with BLM and NDEP approved guidelines and standards. See Section 3.0, Reclamation.

(4) Certified noxious weed-free seed mixtures will be used as part of interim, concurrent or final reclamation.

(5) Newmont will be responsible for noxious weed control within areas disturbed by project activities. The list of noxious weeds requiring control will be obtained from the BLM and Elko County Extension Office. Weed control will be accomplished using a number of appropriate tactics, including cultural, mechanical, biological, and chemical controls. Only BLM approved herbicides will be used on lands administered by the BLM.

2.17.13 Visual Resources/Aesthetics

Goal: *Minimize project-related impacts on viewsheds and conform to BLM visual resource management requirements.*

(1) The Long Canyon Project will conform to applicable BLM visual management requirements for this area. Newmont will use early planning and design features to minimize contrast with the surrounding landscape to meet the Visual Resource Management objectives of the area.

(2) To the extent practicable, interim and concurrent reclamation practices will be implemented.

(3) External lighting will be kept to the minimum required for safety and security purposes. Lights will be directed down toward the interior of the project site.

(4) Non-reflective, earth tone paints will be used on mine site buildings and other structures.

(5) Final reclamation will restore disturbed areas to blend with the surrounding landscape.

2.17.14 Water Resources

Goal: *Minimize impacts to surface and groundwater quality and the hydrology of the area.*

(1) Newmont will implement "best-management" practices for erosion and sediment control. These measures include:

(2) Vegetation will be removed only from those areas to be directly affected by project operations and only from areas directly ahead of operations.

(3) Soil removal activities will be scheduled for dry months to reduce the potential for erosion and soil losses.

(4) Cut and fill slopes for access and haul roads will be designed to prevent soil erosion. Drainage ditches, with cross drains and/or culverts will be constructed as necessary.

(5) Runoff from roads, building sites and parking lots will be handled through sediment traps, settling ponds, berms, wattles, sediment filter fabric, etc. Design of these features will be based on NDEP requirements and analysis of local hydrologic conditions.

(6) Off-road vehicle traffic will be avoided.

(7) Diversions will be constructed and maintained around disturbed areas to minimize erosion. When appropriate, sediment will be removed from these diversions and deposited in the waste rock disposal facility.

(8) Reclamation and revegetation will be implemented as soon as practical for long term stability and erosion control.

(9) Newmont will continue to engage with the Cities of Wendover, Utah and West Wendover, NV (Cities), sharing local and regional hydrologic information generated associated with the development of the Long Canyon mining project to the extent permitted by disclosure laws applicable to publicly-held companies.

(10) In coordination with the Cities' hydrologic consultants and supplementing existing hydrogeologic testing, Newmont will conduct additional bedrock and alluvial aquifer tests to quantify potential effects of pumping on local and regional aquifers.

(11) Newmont has coordinated with the Cities' hydrologic consultants in developing a general hydrologic study of the northern part of the Goshute valley with a goal of assessing the adequacy of the valley aquifer to supply water to the Cities' Shafter well field and potential effects from continual mine production pumping. Newmont will continue to work with the Cities to expand and refine this study and to develop contingency plans for assuring that adequate water is available to the Cities.

(12) Newmont will continue to support the Cities monitoring the Big Spring and Johnson Spring system. Newmont will continue to implement agreed upon distance and depth buffer zones as the basis for the Long Canyon Notification and Response Protocol included in the 2011 Environmental Assessment.

2.17.15 Wildlife

Goal: *Minimize disruption to wildlife species and wildlife habitats.*

(1) Newmont will minimize disturbance to wildlife habitat by maintaining a compact operation.

(2) Vegetation will be cleared only in those areas necessary for project activities.

(3) During construction, development and mining activities, trash and other miscellaneous inert (non-hazardous) garbage will be contained in on-site containers, and then hauled to an on-site landfill for disposal.

(4) Special care will be taken with used oils, solvents, grease and antifreeze; these chemicals will be handled separately from normal trash and garbage.

(5) Newmont will establish a 45 mph speed limit for the main access road. This should reduce the potential for vehicle/wildlife collisions.

(6) There will be no hunting or discharge of firearms during construction, development or mining operations within the fenced boundary of the Long Canyon Project.

(7) Electric power structures to serve the proposed Long Canyon Project facilities will be designed and constructed to avoid raptor perching on structures for predation purposes or being electrocuted.

(8) Newmont will install a wildlife exclusion fence around the TSF and the heap leach facility.

(9) Newmont will comply with NDOW Artificial Industrial Pond Permit requirements.

2.17.16 Environmental Management Systems

Newmont will voluntarily comply with ISO 14001 “Environmental Management Systems” and the International Cyanide Management Code. These programs add value through the formalization of plans and use of tools to prevent pollution, continuously improve environmental controls, and comply with environmental laws and regulations. In satisfying the criteria for obtaining these certifications, Newmont will use a variety of tools for tracking its environmental performance and instituting preventative and corrective actions to meet its organizational objectives pertaining to the environmental impacts of the operations. Certification to these standards will demonstrate a high level of environmental and social responsibility to the communities and stakeholders involved in Newmont’s operations at the Long Canyon Project. Newmont will pursue certification at the Long Canyon Project to ISO 14001 and the International Cyanide Management Code through the use of regular external audits as provided by the registered certifying organization.

3.0 RECLAMATION PLAN [43 CFR §3809.401(b)(3)]

3.1 Reclamation Goals and Objectives

Newmont considers reclamation to be an integral and important component of the Long Canyon Project. The overall purpose of reclamation is to restore the site to a beneficial post-mining land use, prevent undue or unnecessary degradation of the environment, and reclaim disturbed areas so they will be compatible with surrounding landscape.

Newmont will implement reclamation practices and procedures consistent with the requirements of the Nevada Administrative Code (NAC 519A regulations), BLM's surface management regulations at 43 CFR 3809, and the Final Version of the Revised Guidelines for Successful Mining and Exploration Revegetation (Memorandum No. NV-99-013). Newmont will prepare and submit the reclamation cost estimate for the facilities and disturbances at the Long Canyon Project upon approval of the Plan of Operations and the Reclamation Plan.

The current land uses at and surrounding the Long Canyon Project site are rangeland for livestock (cattle) grazing, wildlife habitat, dispersed recreation and mineral exploration. Newmont's reclamation plan includes closing and decommissioning the mill and ore processing facilities, removing surface facilities and infrastructure (except where selected facilities will benefit future ranching activities), re-contouring disturbed sites, replacing growth medium material, and establishing a vegetative community on the surface areas disturbed by the mining and milling operations.

The final grading plan for the project is designed, in part, to minimize the visual impacts of unnatural lines and landforms. Slopes will be graded to blend with surrounding topography and to facilitate vegetation. With the assistance of specialized software, the final WRSF design will apply fluvial geomorphic principles to create a landscape design that mimics the functions of a natural landform in a stable hydrologic equilibrium. The conceptual post-mining topography is shown on ***Figure 9, Post-Project Topography***

Revegetation of disturbed areas would be conducted as soon as practicable to reduce the potential for wind and water erosion. Following construction activities, areas such as cut and fill embankments and growth media stockpiles will be seeded. Concurrent reclamation will be conducted to the extent practicable to accelerate revegetation of disturbed areas. All sediment and erosion control measures and revegetated areas will be inspected periodically (such as after high precipitation events) to ensure long-term erosion control and successful reclamation

Reclamation practices proposed for the Long Canyon Project have been developed and successfully utilized at other mining and exploration operations in northern Nevada, as well as throughout the western United States. However, because reclamation practices and technology are continually evolving and improving, Newmont will take advantage of future opportunities to explore new closure and reclamation techniques or implement such improved measures.

3.2 General Reclamation Procedures

Newmont will implement various types of reclamation, including:

- Construction or early development reclamation;
- Interim reclamation;
- Concurrent reclamation;
- Reclamation during temporary cessation; and,
- Final closure and reclamation.

3.2.1 Construction or Early Development Practices

Construction reclamation refers to reclamation efforts on lands disturbed during the mine and mill facility installation, mine development, power line construction, and access and haul road construction.

Vegetation clearing (timber removal) and growth medium material removal and stockpiling will be conducted as part of these activities. Logged timber will be stockpiled outside of the disturbed areas and will be available as firewood. Remaining slash material will be either windrowed (stockpiled) outside of the disturbed areas, chipped and removed with the growth medium material that is removed ahead of operations, or this remaining slash material will be piled and burned. See Section 2.4.1.1, Site Preparation.

In addition, as part of initial site construction work, stormwater and sediment control structures (such as ditches, water bars, wattles, silt fences, sediment traps, etc.) will be installed for erosion and sediment control.

3.2.2 Interim Reclamation

Newmont plans for interim reclamation throughout operational life of the Long Canyon Project. Newmont believes that interim reclamation will allow temporary stabilization during operations, and then allow the best technology available at the time of final closure to be implemented.

Interim reclamation action taken to stabilize disturbed areas during site operations includes seeding, construction of berms, slope drains, slope armoring, rock check dams, silt fences, water bars, detention basins, and stormwater ponds.

The focus of interim reclamation is as follows:

- Reduce erosion and sedimentation of waterways;
- Protect water quality;
- Minimize invasive plant and weed establishment; and,
- Reduce fugitive dust generation.

3.2.3 Concurrent Reclamation

Reclamation completed during active operations is termed "concurrent" reclamation. Concurrent reclamation differs from interim reclamation in that this reclamation is designed to provide permanent, low-maintenance achievement of reclamation goals.

Newmont plans for concurrent reclamation work on the early construction of the WRSF, particularly on the west side of the facility (in Section 28, Township 36 North, and Range 66 East). See ***Figure 7, General Site Plan Layout***.

Newmont will establish the western edge or toe of the WRSF initially so that construction, grading, contouring, topsoil replacement and reclamation work can be completed concurrently with initial pit development. This concurrent construction will augment a deer migration corridor that is being preserved between the mine pit and the WRSF.

As the outer toe of the WRSF is set, Newmont will dump waste rock material in a lift such that the slope of this lift can be graded to its final configuration. As subsequent waste rock "lifts" are placed, the final slopes of the WRSF can be created in a concurrent fashion and with the desired final landform.

Once grading is completed, growth medium material will be replaced when practicable, using direct haulage from areas where such material is removed ahead of operations, and the area will be seeded with an approved seed mixture and/or cover crop.

Along the initial bottom lifts of the waste rock storage unit in Section 28, Township 36 North, Range 66 East, Newmont will plant tree and shrub species to begin the reclamation goal of enhancing the deer migration corridor and wildlife habitat ecotone along the reclaimed slopes.

3.2.4 Temporary Cessation

Although a temporary cessation of the Long Canyon Project operations is not planned, circumstances beyond Newmont's control could require temporary cessation of operations. Cyclical production trends or slow-downs are unpredictable due to circumstances that included fluctuation in precious metals prices, labor disputes or costs, production costs, taxes, company profitability, and effects of political, regulatory and economic events.

In the event of temporary cessation of mining activities, Newmont would notify the BLM, the NDEP-BMRR, and Elko County of the temporary curtailment of mining activities. This notification would include reasons for the shutdown and estimated time frame for resuming production, as well as ongoing maintenance and monitoring measures to be employed during the temporary cessation of operations.

During any temporary shutdown, Newmont would continue to implement operational and environmental maintenance activities to ensure the site meets permit stipulations and requirements for environmental protection. Environmental monitoring requirements would continue on defined schedules, as outlined in the appropriate permit approvals. Environmental reports would be submitted in a timely manner. Regardless of the operating status of the mining, appropriate monitoring would be continued until compliance with permanent closure requirements is attained, unless modified by the appropriate regulatory authorities.

3.2.5 Final General Reclamation Practices

At the time of permanent cessation of mining and ore processing activities, Newmont will implement final reclamation activities consistent with the approved Reclamation Plan and a Final Permanent Closure Plan to be filed with NDEP-BMRR. The Reclamation Plan and the Final Permanent Closure Plan will involve a number of steps including:

- Decommissioning, demolition or disposition of facilities;
- Contouring and grading;
- Growth medium replacement;
- Growth medium sampling for nutrient analyses;
- Seeding, planting and mulching; and
- Maintenance and monitoring

3.2.5.1 Decommissioning, Demolition or Disposition of Facilities.

Because of its ranching operations, Newmont foresees a post-project beneficial use for several Long Canyon Project structures and facilities that are located on its property, including:

- Truck shop;
- Office;
- Fuel storage and dispensing facility;
- Water supply wells and storage facility;
- Main mine access road and mine service roads; and
- Power lines.

Unless there is an ongoing post-mining beneficial use for other site structures and facilities, Newmont will dismantle or demolish these structures (e.g., mill, conveyors, etc.), and the materials from the dismantling or demolition work will be salvaged or disposed in permitted on-site and/or off-site landfills.

Salvageable equipment, instrumentation and furniture will be removed from the site. This activity will occur prior to actual removal of structures and facilities

Unsalvageable portions of any facilities, such as the concrete pads used at the office and mill, will be broken up and buried on site, at the on-site landfill and/or within the final lifts of the WRSF. The burial would occur prior to final contouring and would be at a depth suitable to ensure that the materials are not exposed in the future. A minimum of 5 feet of cover will be placed over the concrete. Should the concrete be subjected to a hazardous substance or oil during the operations, a cleaner or polymer will be applied to neutralize any deleterious residue. Newmont will utilize a NDEP Class III waivered landfill waiver for disposal of these non-hazardous materials.

3.2.5.2 Contouring and Grading

Disturbed areas will be contoured and graded to blend into the surrounding topography and terrain. See ***Figure 9, Post-Project Topography***.

Final slopes of the WRSF and the heap leach facility will be graded to an average slope of approximately 3H:1V (or less), although slopes will be varied to achieve a more natural appearance and to blend with the surrounding landscape. The mine pit area will not be backfilled or graded.

Compacted areas such as roads, ore stockpile areas, parking lots, etc. will be ripped, disked or otherwise left in a roughened condition prior to growth medium material replacement. Haulage and access roads will be re-contoured to establish natural drainage patterns. Roadway cuts, berms and loose, unconsolidated material below the road cuts would be reconfigured to blend the road surface with adjacent topography.

Results of waste rock geochemical analyses show that the rock materials to be removed from the mining operations do not represent any potential for acid rock drainage. This coupled with the relatively low precipitation of the area and proposed storm water diversions around the WRSF, the heap leach facility and the TSF will minimize the potential for a release of pollutants.

3.2.5.3 Growth Medium Replacement

Salvage depths for growth medium materials (near surface and subsurface soil) in the project area range from about 6 to 20 inches. Where suitable for reclamation, grown medium material will be salvaged for reclamation and either stockpiled or replaced directly on graded areas. Growth medium material will be salvaged from the mine pit area, but will not be replaced there as the mine pit will remain open after mining. This material will be replaced on other areas that are graded for reclamation.

3.2.5.4 Growth Medium Sampling for Nutrient Analyses.

Chemical and physical changes can occur in stockpiled growth medium material. Following its replacement, growth medium samples will be analyzed for pH, nitrogen, phosphorus and potassium to determine its fertility in nutrient status.

3.2.5.5 Seeding, Planting, and Mulching

Graded and contoured areas will be seeded using broadcast, drill or hydro-seeding methods applicable to the specific conditions. Seed mixtures will be adjusted to fit elevation and aspect ranges of the Long Canyon Project but the general reclamation seed mixture is set forth in ***Table 7, Seed Mixture***. The ultimate species selection will be based on BLM listing of reclamation plants, seed availability, and cost.

Selected shrub and tree seedlings will be planted in certain selected locations to establish desired post-mining plant communities. Mountain Mahogany bare root stock will be planted at a rate of approximately 1,500 stems per acre in areas where it occurs in pre-mining inventories. Piñon pine bare root stock will be planted along the toe and lower slopes of the WRSF at the rate of 700 stems per 2 -3 acre patches or strips. These trees will serve to sustain a deer migration corridor along the new landscape. In alternate patches, forage species will be planted to encourage deer to utilize the reclaimed WRSF.

Other shrub species including Wyoming big sagebrush, antelope bitter-brush, winterfat, and forage kochia, along with native grass seed species will be seeded or planted to establish post-mining plant communities supporting the area's wildlife populations that include sage grouse and pygmy rabbit.

Mulch may be applied to the growth medium material to reduce erosion, promote stabilization, and enhance seed germination. Mulching activities may include the application of certified weed-free straw or hay, wood chips, or a cover crop application. For present planning purposes, approximately 2 tons per acre or equivalent of a mulch product will be applied.

Planting, seeding, and mulching will be conducted in the fall and early winter to take advantage of snowpack and springtime moisture. Where cover crops are used in lieu of mulch, seeding will occur in the spring with the cover crop, followed by a fall seeding of the permanent mixture.

Table 7, Seed Mixture

Species Common Name	Scientific Name	Drill Application Rate (PLS[(1)]/acre)	Seeds/PLS[(1)]	Seeds/ft^2
Sandberg bluegrass	*Poa secunda* ssp. *sandbergii*	0.1	1,047,000	2
Indian ricegrass	*Achnatherum hymenoides*	2.0	141,000	6
Needleandthread	*Hesperostipa comata* ssp. *comata*	2.0	115,000	6
Bluebunch wheatgrass	*Pseudoroegneria spicata*	2.0	140,000	6
Arrowleaf balsamroot	*Balsamorhiza sagitata*	0.5	55,000	1
Western yarrow	*Achillea millefolium* var. *occidentalis*	0.01	2,770,000	1
Black sagebrush	*Artemisia nova*	0.1	907,200	2
Wyoming big sagebrush	*Artemisia tridentata* ssp. *wyomingensis*	0.01	2,500,000	1
Total		**6.72**		**25**

Note:
(1) PLS = pounds of live seed.

3.2.5.6 Maintenance and Monitoring.

See Section 4.5, Reclamation Success.

3.2.6 Heap Leach Facility Closure Plan

When satisfied that economic gold values have been extracted from the heap leach facility, Newmont will close and reclaim the Long Canyon Project heap leach facility. The primary objectives for this facility closure are:

(1) Implement closing procedures that will prevent potential adverse impacts to human health or the environment;

(2) Execute a cost-effective and reliable closure strategy that will minimize future maintenance requirements and provide for a "walk-away" process; and,

(3) Prevent impacts to the surface and groundwater hydrology of the site, particularly with respect to the Johnson Spring System.

At present, there are many discussions and opinions amongst government and industry experts on the best way to close a heap leach facility, and closure technology and practices are rapidly evolving and improving. Most of these experts agree that there is no "one size fits all" closure approach for heap leach pads. Newmont will take advantage of future opportunities to explore new closure and reclamation techniques and implement such improved measures.

The NDEP recognizes that heap leach closure technology is changing. As a result, NDEP requires mine operators in Nevada who have heap leach facilities to prepare and submit a Final Permanent Closure

Plan (FPCP) for approval at least one year prior to the start of permanent heap leach closure. Such plans must consider:

- **Design Aspects**
  - ✓ Estimation and management of long-term drain-down fluid flow
  - ✓ Heap drainage chemistry
  - ✓ Geochemical characterization and assessment
  - ✓ Final landform design and slope stability
  - ✓ Surface runoff control and erosion stabilization
  - ✓ Cover design - evapotranspiration (ET) soil cover
  - ✓ Stormwater and meteoric inputs to the cover
  - ✓ Cover system modeling
  - ✓ Cover stability analysis
  - ✓ Cover infiltration analysis
  - ✓ Cover material specifications and sources
  - ✓ Cover erosion control

- **Actual Closure Work**
  - ✓ Manage and facilitate heap facility drain-down of fluid through active evaporation
  - ✓ Divert up-gradient stormwater flow away from final heap leach facility surface
  - ✓ Contour for positive stormwater drainage from the heap leach facility
  - ✓ Create a stable permanent landform on heap leach facility and slopes
  - ✓ Install a soil ET cover
  - ✓ Implement reclamation and revegetation procedures

- **Post-Closure monitoring and maintenance**
  - ✓ Ground and surface water monitoring
  - ✓ Drain-down fluid management
  - ✓ Surface water management system
  - ✓ Closure cover monitoring (with repair as necessary)
  - ✓ Reclamation monitoring

Newmont will comply with NDEP requirements and will pursue a systematic approach for closure of the heap leach facility that will include the following:

- A piping system will be investigated that will allow heap drain-down solution to gravity flow to the tailing facility pump back system where the solution will be managed in conjunction with the tailings solution by evaporation, infiltration, and/or potential agricultural irrigation on the Big Springs Ranch.

- Heap leach slopes will be contoured to approximate 3H:1V slopes with pad material contained within the lined facility footprint.

- A cover system will be designed and constructed to minimize or eliminate meteoric input to the facility. The design will incorporate current technologies including ET soil cover. It is anticipated that the ultimate discharge of the heap leach drain-down will be a minimal flow and will be managed through evaporation, infiltration, and/or agricultural applications.

- As available, growth medium material will be placed over the cover system and will become part of the cover thickness. The area will be vegetated.

- Conduct post-closure monitoring to measure the performance and effectiveness of the cover system. Post-closure monitoring will be conducted until the expected closure performance standards have been achieved and vegetation has been deemed to be successful.

A general description of the heap leach facility closure procedures is set forth in the following.

3.2.6.1 Drain-Down Solution Management

To initiate final heap leach closure, Newmont will cease the delivery and introduction of barren solution to the facility and begin the phase of closure that involves the drain-down of solution within the heap leach pile. The solution will continue to drain from the facility through the piping network beneath the pile and will be routed to the pregnant solution tank. At the same time, Newmont will begin work on final heap leach pile grading and placement of the cover system. See Section 3.2.6.3, Grading of the Heap Leach Surface, and Section 3.2.6.4, Heap Leach Cover System.

Water samples will be collected from the drain-down solution to determine the heap leach water quality. Based on the water chemistry analysis, the solution will be treated, and evaluation of potential alternative disposal methods such as land and agricultural application will be investigated and implemented. As part of closure, depending on the water chemistry, water from the heap leach draindown will also be routed to the TSF underdrain pumpback system to be included with the tailing water management system.

Over time, the volume of drain-down solution will diminish as the in-situ water within the heap leach facility decreases. This will be facilitated with the grading to shed runoff, the placement of the cover system and the re-establishment of vegetation to promote water use and evapotranspiration.

3.2.6.2 Water Diversion

Permanent diversion ditches will remain around the heap leach facility. The purpose of these structures is to prevent run-on onto the heap leach facility area. These ditches will be installed as part of the original construction to route flows from the 100-year, 24-hour precipitation event.

3.2.6.3 Grading of Heap Leach Surface

The heap leach surface will be graded to eliminate any potential for ponding and to provide positive stormwater drainage off the graded slopes of the facility. At this point, the final soil cover system will be placed onto the contoured heap leach surface. Grading will allow stormwater run-off away from the pad. Any designed stormwater channels on the heap leach facility will be designed to handle a 100-year, 24- hour precipitation event and will be armored with rock rip-rap to prevent erosion.

3.2.6.4 Heap Leach Cover System

Newmont plans to install a cover system over the heap leach facility at closure. This system will be an ET soil cover to minimize infiltration into the heap leach.

A typical ET soil cover for the heap leach facility at the Long Canyon Project will have a lower and an upper layer, described as follows:

- The lower layer (general fill) will be placed directly on the contoured surface of the heap leach pile. This layer will consist of waste rock or other material at a thickness of about 24 to 36 inches; the actual design thickness will be determined at closure and be based on the infiltration, evapotranspiration and runoff calculations completed with final design.

- The upper layer will consist of approximately 12 inches of soil (growth medium material) that has a sufficient percentage of fine-grained material to limit infiltration and support vegetation. The re-established vegetation will increase evapotranspiration, reduce erosion potential, and enhance the aesthetics of the reclaimed area.

Newmont will obtain cover soil material from on-site borrow sources, such as the WRSF, the borrow pits adjacent to the heap leach and tailings facilities, and the growth medium stockpiles located south of the heap leach facility. See ***Figure 7, General Site Plan Layout***.

3.2.6.5 Inspections and Maintenance

Soil cover maintenance will be performed on an as needed basis when the results of the inspections indicate that repairs are necessary. In general, maintenance activities will restore the feature to at least its original condition and function. If necessary to prevent similar damage in the future, the feature may be modified, for example, increasing the riprap size in stormwater channels that has been eroded.

3.2.7 Tailing Storage Facility Closure Plan

At the permanent cessation of milling operations, Newmont will dewater, close and reclaim the Long Canyon Project TSF. The primary objectives for this facility closure are:

(1) Implement closure procedures that will prevent potential adverse impacts to human health or the environment;

(2) Execute a cost-effective and reliable closure strategy that will minimize future maintenance requirements and provide for a "walk-away" process; and,

(3) Prevent impacts to the surface and groundwater hydrology of the site, particularly with respect to the Johnson Spring System.

At present, there are many discussions and opinions amongst government and industry experts on the best way to close a TSF, and tailings closure technology and practices are rapidly evolving and improving, Newmont will take advantage of future opportunities to explore new closure and reclamation techniques and implement such improved reclamation.

The NDEP recognizes this situation. As a result, NDEP requires mine operators in Nevada who have tailings facilities to prepare and submit a FPCP to them for approval at least one year prior to the start of permanent tailings closure. Such plans must consider:

- **Design Aspects**
  - ✓ Potential stormwater and meteoric inputs to the cover design.
  - ✓ Surface drainage design
  - ✓ Process fluid drain-down calculation.
  - ✓ Process fluid chemistry and management.
  - ✓ Tailings consolidation and settlement.

- ✓ Tailings material characteristics.
- ✓ Cover infiltration and stability analysis.
- ✓ Cover design alternatives including ET soil cover.
- ✓ Cover and borrow material specifications and sources
- ✓ Cover erosion control

- **Actual Closure Work**
  - ✓ Eliminate excess solution from the TSF surface through active evaporation
  - ✓ Manage and facilitate drain-down of tailings fluid through active evaporation
  - ✓ Divert up-gradient stormwater flow away from final tailings surface
  - ✓ Establish positive stormwater drainage from the tailings surface
  - ✓ Create a stable permanent landform on tailing surface and embankment slopes
  - ✓ Install soil and/or synthetic cover
  - ✓ Implement reclamation and vegetation procedures

- **Post-Closure Monitoring and Maintenance**
  - ✓ Ground and surface water monitoring
  - ✓ Draindown fluid management (as needed)
  - ✓ Surface water management system
  - ✓ Closure cover and embankment monitoring (with repair as necessary)
  - ✓ Reclamation monitoring

Newmont will comply with the NDEP requirements and will pursue a systematic approach for closure of the TSF that will include the following:

- Design and construction of a cover system that will minimize or eliminate meteoric input to the facility. The design will incorporate current technologies such as an ET soil cover. The cover design will be based on results from hydro-geochemical conceptual modeling of potential source contaminants to groundwater. It is anticipated that the ultimate discharge of the tailings draindown will be a minimal flow and will be managed through evaporation, infiltration, and/or agricultural applications.

- Schedule the placement of the cover system so the closure work will be accomplished over a period of several seasons to allow for drying of the tailings surface and placement of an operations layer. Concurrent placement may also be coordinated as the tailing surface is completed and dry during active operations.

- Conduct post-closure monitoring to measure the performance and effectiveness of the cover system. Post-closure monitoring will be conducted until the expected closure performance standards have been achieved and vegetation has been deemed to be successful.

A general description of the TSF closure procedures is set forth in the following.

3.2.7.1 Elimination of Water from Tailing Storage Facility Supernatant Pool

Near the time of permanent closure, Newmont will minimize the amount of excess water within the supernatant pool at the TSF. Upon closure, Newmont will begin the process to remove water from the TSF; this will allow the surficial layers of the tailings to dry and gain strength, which will in turn allow equipment to operate on the tailings surface for construction of a soil cover. Spray evaporators (snow-makers) will be used to enhance evaporation of the existing pool.

A consolidation analysis of the tailings will be estimated based on laboratory test results of tailings material collected at or near the end of active placement. Cover design and placement will be adjusted to account for expected and or observed settlement as the facility is dewatered and the tailings consolidate.

Drainage layer water will be pumped to the pond surface for inclusion in the enhanced evaporation circuit. At closure, water from the heap leach draindown will also be routed to the tailings underdrain pumpback system to be included with the tailing water management system.

Water samples will be collected to determine the tailings water quality. Based on the water chemistry analysis, evaluation of potential alternative disposal methods such as land and agricultural application will be investigated and implemented.

3.2.7.2 Water Diversion

Permanent diversion ditches will remain immediately to the west of the TSF. The purpose of these structures is to prevent drainage from slopes to the west from encroaching onto the tailings disposal area. These ditches will be installed as part of the original construction to route flows from the PMP event.

3.2.7.3 Grading of Tailings Surface

The tailings surface and/or the ET soil cover will be graded to eliminate any potential for ponding and to provide positive stormwater drainage to in the southwest corner of the tailings embankment. At this point, once the final soil cover is placed onto the tailings surface (see Section 3.2.7.4, Cover System); Newmont will establish an engineered spillway over the embankment, which will direct any runoff from the tailings surface eastward toward Hardy Creek. This spillway will be designed to handle a 100-year, 24- hour precipitation event and will be armored with rock rip-rap to prevent erosion.

3.2.7.4 Cover System

Newmont plans to install an ET soil cover system over the TSF at closure. Such a cover will minimize infiltration into the tailings and prevent wind and/or water erosion of the tailings material.

A typical ET soil cover for tailings such as those expected at the Long Canyon Project will have a lower and an upper layer, described as follows:

- The lower layer (general fill) will be placed directly on the surface of the tailings. This layer will consist of waste rock or other material that can support the weight of earthmoving equipment. The thickness of this lower layer is expected to be about 24 to 48 inches; the actual design thickness will be determined at closure and will be based on the ability of the tailing surface to support heavy equipment.

- The upper layer will consist of approximately 12 inches of soil (growth medium material) that has a sufficient percentage of fine-grained material to limit infiltration and support vegetation. The re-established vegetation will increase evapotranspiration, reduce erosion potential, and enhance the aesthetics of the reclaimed area.

Newmont will obtain cover soil material from on-site borrow sources, such as the WRSF, the borrow pits adjacent to the heap leach and tailings facilities, and the growth medium stockpiles located south of the heap leach facility. See ***Figure 7, General Site Plan Layout***.

3.2.7.5 Inspections and Maintenance

Soil cover maintenance will be performed on an as needed basis when the results of inspections indicate that repairs are necessary. The nature of the maintenance will depend on the type of problem. In general, maintenance activities will restore the feature to at least its original condition and function. If necessary to prevent similar damage in the future, the feature may be modified, for example, increasing the riprap size in a discharge apron that has been eroded.

3.3 Drill Hole Plugging

As part of the abandonment routine for exploration drilling operations, Newmont will plug drill holes according to Nevada Division of Water Resources (NDWR) regulations, using concrete, cement grout or bentonite grout to prevent any vertical movement of groundwater within the drill hole, as well as to eliminate a post-exploration danger to people, wildlife and/or livestock that might be traversing the area. The concrete or grout will be placed "bottom upward" in the drill hole prior to the drill rig being moved off the drill pad.

Starting about 10 feet below the ground surface, the drill holes will be plugged with a cement cap. Topsoil material and/or dirt/rock material will be spread over the top of the cap and reseeded.

The drill-hole abandonment and plugging procedures to be used by Newmont for exploration drill holes, water wells, and water monitoring wells will meet NAC 534 regulations.

3.4 Grading and Shaping

With the exception of the mine pit, which will remain open, Newmont will contour and grade disturbed areas to blend into surrounding terrain. Compacted areas, such as roads and facility areas, will be loosened as necessary by ripping or disking, and left in a "roughened" condition prior to growth medium replacement and seeding. Contouring and grading work will involve the retention of water-bars and/or restoration of ephemeral surface water channels to handle flows through the area.

3.5 Mine Reclamation

Upon permanent cessation of activities, Newmont will undertake reclamation activities as described in Section 3.2.5, Final Reclamation Practices.

During final reclamation, a physical barrier (e.g. berms, fencing or other appropriate barriers) will be installed along the mine pit crest area to control access by people, livestock, and large wildlife. Post-mining open pit wall modifications to decrease slope angles are not proposed.

Structures and facilities will be removed and reclaimed unless there are continuing beneficial uses for future ranching activities. The relocated county road will remain in place following mining and reclamation.

3.6 Riparian Mitigation

No direct physical disturbance of riparian habitat is expected.

Newmont will preserve the Big Springs and Johnson Spring system and associated wetlands. Wetland enhancement opportunities will be identified and implemented as practicable.

By developing construction material borrow sources, in the alluvium material in Sections 3, 10 and, 15, Township 35 North, Range 66 East; Newmont will evaluate the potential for creating a wetland complex within the source excavation areas.

3.7 Wildlife Mitigation

Early concurrent reclamation of the WRSF will enable the sustained use by wildlife species in the area. Newmont will preserve the migration corridor along the east side of the pit and west side of the WRSF slopes. The corridor will be enhanced by planting reclamation species that compliment and promote deer usage and provide cover.

Additional wildlife enhancement opportunities will be identified and implemented throughout the mine life. The Big Springs Ranch property will provide opportunities for wildlife habitat enhancement.

3.8 Topsoil (Growth Medium) Handling and Application

Topsoil (growth medium material) that is suitable for reclamation will be salvaged ahead of project disturbance and either stockpiled for later use or reapplied directly on areas that have been contoured and graded.

3.9 Revegetation

See Section 3.2.5, Final General Reclamation Practices. Graded areas will be seeded using the species approved by the BLM as set forth in ***Table 7, Seed Mixture***. The ultimate species selection will be based on BLM listing of reclamation plants, seed availability, and cost.

3.10 Invasive Plant and Noxious Weed Control (Weed Management Plan)

Newmont will maintain a noxious weed monitoring and control program for the Long Canyon Project. See ***Appendix E, Weed Management Plan***.

Newmont will actively monitor and manage weed populations at the site using prevention, training, documentation, monitoring and eradication techniques. Disturbed ground will be kept to minimum practicable for safe and efficient operations to discourage weeds from establishing.

3.11 Isolation and Control of Acid-Forming, Toxic or Deleterious Materials

There are no acid-forming or toxic materials associated with the ore and waste rock at the Long Canyon Project Area. See Section 6.3, Geology and Geochemistry.

Newmont will undertake design, construction and operational techniques for the tailings and heap leach facilities to prevent impacts to the environment. See Section 2.6, Tailings Storage Facility, and Section 2.7, Heap Leach Processing.

In addition, Newmont has developed and will maintain an emergency response plan (see ***Appendix B***) and a spill prevention control and countermeasure (SPCC) plan (see ***Appendix C***) for the Long Canyon Project site.

3.12 Building and Structure Removal or Stabilization

See Section 3.2.5.1, Decommissioning, Demolition or Disposition of Facilities.

3.13 Post-Closure Management

See Section 4.5, Reclamation Success.

3.14 Effects of Reclamation on Future Mining

Newmont does not plan any special effort to accommodate possible future mining. Upon permanent project closure, the site will be reclaimed.

3.15 Effects of Reclamation on Public Safety

Newmont will restrict public access into the Long Canyon Project site and will adhere to MSHA safety regulations. Given such access restrictions, compliance with MSHA regulations and the remoteness of the site, the effect on public safety is expected to be negligible.

3.16 Statement of Operator Responsibility for Reclamation

Newmont agrees to accept full responsibility for reclamation of mined lands and supporting on-site infrastructure and facilities as described and submitted within this plan of operation and in conformance with current applicable federal, state and local requirements, and the conditions of approvals and permits to be issued for the Long Canyon Project.

4.0 MONITORING PLAN [43 CFR §3809.401(b)(4)]

Newmont will design and implement environmental monitoring programs at the Long Canyon Project to meet the requirements of the BLM and Nevada agencies with regulatory oversight of the project. These programs will be implemented and maintained as part of the construction, mining, ore processing, and closure and reclamation activities.

4.1 Objectives and Protocol

Monitoring will determine the effects of project activities and the efficiency of environmental management and mitigation measures. Monitoring will provide input to Newmont and governmental regulatory agencies regarding project performance. The information gained during monitoring will be used as the basis for designing additional or altering existing mitigation measures, if necessary.

The general objectives for site environmental monitoring are as follows:

(1) Confirm compliance with approved plan of operations, as well as with other federal and state laws, regulations, and permit conditions;

(2) Provide data and information to calibrate and validate baseline modeling applications.

(3) Provide data and information that can provide for early detection of potential problems;

(4) Provide data and information that can be used to formulate direct corrective actions should they become necessary; and,

(5) Establish response protocols to solve or prevent problems.

Newmont will employ environmental monitoring measures that will be part of approvals and permits to be issued by the BLM, NDEP and other appropriate agencies. The Long Canyon Project will operate under federal and state permit approvals that will require practices and procedures that reduce or avoid environmental impacts and to reclaim disturbed areas.

The monitoring measures and practices addressed in the following subsections have been used by Newmont and its predecessors at the Long Canyon Project site for many years, and many of these measures have been used successfully at other Newmont northern Nevada mining operations.

As mining and ore processing approvals and permits are approved and obtained, Newmont will incorporate appropriate new or revised environmental mitigation and monitoring measures into its future operations at the site. Newmont anticipates that environmental monitoring measures will be part of the following environmental permits and approvals that are expected for mining and ore processing at the Long Canyon Project:

- Water Pollution Control Permit;
- Air Pollution Control Permit;
- Reclamation Permit;

- Stormwater Pollution Prevention Plan;
- Spill Prevention Control and Countermeasure Plan;
- Industrial Artificial Pond Permit;
- Hazardous Materials Storage Permit; and
- Public Water System Permit.

Newmont recognizes that environmental and reclamation measures used at mining operations are ever evolving and improving. Newmont will take advantage of future opportunities to explore new environmental mitigation and reclamation techniques or to implement improved mitigation and reclamation measures. Any such new or improved environmental and reclamation measures will receive approval from the BLM and NDEP prior to implementation by Newmont.

4.2 Climate and Air Quality

Newmont will continue to collect and maintain climate data (precipitation, temperature, pan evaporation, and wind) from its on-site meteorological stations. See ***Figure 16, Monitoring Locations***.

Precipitation and pan evaporation information will be useful to analyze the overall water balances for the milling/TSF and the heap leach process facility and to determine the effectiveness of diversion ditches and other drainage control facilities in the event of a major storm event.

4.3 Hydrology

Newmont will maintain and expand its existing surface water and groundwater monitoring program at the Long Canyon Project. This program will include the following components:

- Monitoring locations;
- Monitoring frequency;
- Water level and flow measurements;
- Field measurements and parameters;
- Water sample collection and sampling procedures;
- Laboratory analyses;
- Verification of data records and transmittal of samples; and,
- Data management and reporting.

Details of the Newmont hydrologic monitoring program for the Long Canyon Project follow.

4.3.1 Monitoring Locations and Timing for Installation

As part of its baseline and background hydrologic study work, Newmont has both surface water (spring) sample points and groundwater monitoring wells at the Long Canyon Project. These sites have been monitored for several years and helped in evaluating the background groundwater chemistry conditions of the site. Monitoring of these sample points and wells will continue as part of mine development and operations. See ***Figure 16, Monitoring Locations***.

As part of construction and development work, Newmont will install additional groundwater wells down-gradient of the WRSF, the heap leach facility, and the TSF to further characterize and monitor groundwater conditions around these sites. See ***Figure 16, Monitoring Locations***.

These new groundwater wells will be installed to a depth of approximately 50 feet or until they penetrate the water bearing zone. On the surface, the PVC pipe will be enclosed in steel casing with a locking cap or lid to prevent damage or the accidental contamination of the well; the steel casing will be set in concrete pad (approximately three square feet, per NDWR regulations. Mine workers and contactors will be instructed to not disturb these wells.

4.3.2 Monitoring Frequency

Monitoring of groundwater wells will be conducted as follows:

- Quarterly during project development and operations for water levels and field parameters (temperature, pH and electrical conductivity). If wells are dry at the time of sampling, that condition will be noted on the observation log sheets. Wells will be monitored for 3 to 5 years after reclamation activities are completed for the heap leach facility and the TSF.

- Quarterly during project development and operations for parameters set forth in ***Table 8, Groundwater Monitoring NDEP Profile I Parameters***. Wells will be monitored for 3 years after reclamation activities are completed on the heap leach pad and the tailings disposal facility.

Table 8, Groundwater Monitoring NDEP Profile I Parameters

Parameter	Laboratory Method
PH	SM4500 H+B, Meter
Total Dissolved Solids	SM 2540C Gravimetric (180C)
WAD Cyanide	SM 4500-CNI
Alkalinity (Total/$CaCO_3$)	SM 2320B
Bicarbonate as HCO_3	SM 2302B
Sulfate	SM300.0
Calcium	EPA 200.7, ICP
Magnesium	EPA 200.7, ICP
Potassium	EPA 200.7, ICP
Sodium	EPA 200.7, ICP
Chloride	SM300.0
Fluoride	SM300.0
Nitrate as Nitrogen	EPA 353.2
Aluminum	EPA 200.7, ICP
Antimony	EPA 200.8, ICP-MS
Arsenic	EPA 200.8, ICP-MS
Barium	EPA 200.7, ICP
Beryllium	EPA 200.7, ICP
Cadmium	EPA 200.7, ICP
Calcium	EPA 200.7, ICP
Chloride	EPA 300.0
Chromium	EPA 200.7, ICP
Copper	EPA 200.7, ICP
Iron	EPA 200.7, ICP
Lead	EPA 200.8, ICP-MS
Manganese	EPA 200.7, ICP
Mercury	EPA 200.7, ICP
Nickel	EPA 200.7, ICP
Nitrite Nitrate, Total N	EPA 351.2 (TKN)
Nitrogen	Calculated from TKN and NO2+NO3-N
Phosphorus	EPA 200.7, ICP
Potassium	EPA 200.7, ICP
Selenium	EPA 200.8, ICP-MS
Sodium	EPA 200.7, ICP
Thallium	EPA 200.8, ICP-MS
Silver	EPA 200.7, ICP
Zinc	EPA 200.7, ICP

4.3.3 Water Level Measurements

Groundwater wells will be measured quarterly for water level elevations. Water level readings will be taken with an electronic well probe or a transducer, and measurements will be recorded from the top of the PVC casing. Water level elevation measurements will continue to be taken during each sampling trip during the operational phase of the project. Readings will be recorded on field log sheets and on an electronic database. The height of each monitoring well casing will be measured to adjust for the actual water surface elevation. Monitor wells equipped with transducers will use electronic data-loggers for data collection. Data loggers will be downloaded by technicians on a routine, scheduled basis.

4.3.4 Field Measurements and Parameters

During groundwater monitoring activities, field water quality parameters will include temperature, pH, and electrical conductivity. In addition, environmental conditions including air temperature, wind speed, and weather conditions will be noted.

4.3.5 Water Sample Collection and Sampling Procedures

Water quality samples will be collected from the groundwater wells (if water is present). Log sheets for sampling groundwater will be used in the field for recording sampling data.

Quarterly water samples will be collected from the groundwater wells by using low-flow micropurge sampling techniques (US EPA, EQASOP-GW 001, revised 1/19/10). The depth to static water level will be measured using previously described techniques, before the well is sampled. For sampling, the protocol and specifications for the micropurge system will be followed.

Micropurge sampling has become an increasingly approved method for obtaining high quality groundwater samples. Low flow purging and sampling involves extracting groundwater at rates comparable to ambient groundwater flow (typically less than 500 ml/min), so that the drawdown of the water level is minimized, and the mixing of stagnant water with water from the screened intake area in a well is reduced. Stabilization of parameters (pH, conductivity, temperature, etc.) of the purged water are monitored before a sample is taken, thus low flow methods facilitate equilibrium with the surrounding formation and produce samples that are truly representative of the formation water.

4.3.6 Laboratory Analyses

Samples will be analyzed at an EPA certified laboratory for the parameters set forth in ***Table 8, Groundwater Monitoring NDEP Profile I Parameters***.

4.3.7 Verification of Data Records and Transmittal of Samples

At the conclusion of each monitoring and/or sampling event, the Newmont field technician will review the data sheet to ensure completion of appropriate data. Upon determination that the data sheet is complete, the technician will initial or sign the sheet to verify completion.

Samples will be delivered to an EPA certified off-site laboratory within appropriate holding times. A record of the delivery and data collection will be provided to the laboratory and a copy of a “chain of custody” form will be retained by Newmont. Upon receipt of the analytical data from the off-site laboratory, Newmont will examine the data to determine if they are complete and conduct quality control and quality assurance procedures. These records will be appropriately filed on-site.

4.3.8 Data Management and Reporting

On a quarterly basis, the operational monitoring results will be reported to NDEP. Newmont will retain all records and results of operational monitoring on-site. An electronic database will be established to manage the analytical data and prepare reports.

Post-mining groundwater quality will be monitored according to the requirements established by NDEP-BMRR. Monitoring will consist of quarterly groundwater sampling, analysis, and reporting to NDEP-BMRR. After the post-reclamation monitoring period is complete and approved by NDEP and BLM, Newmont will close and abandon monitoring wells in accordance with NDWR regulations.

4.4 Wildlife

Newmont, BLM, and NDOW are working cooperatively to determine mule deer use and migration behavior in the Long Canyon Project area southwest of Oasis in the Pequop Mountains with a goal to better delineate critical habitats.

In cooperation with Newmont, NDOW initiated a deer collaring program in January 2011 with plans to augment existing knowledge of mule deer use of the area by fitting GPS/satellite collars on approximately 30 mule deer. The collars used in this project are Advanced Telemetry System (ATS) Iridium satellite collars programmed so that mule deer daily and seasonal use of the proposed mine site are collected for a period of approximately 3 years per collar. Data will be shared jointly amongst NDOW, BLM, University of Nevada Reno, and Newmont.

Newmont will internally monitor the TSF weekly for the presence and mortality of birds, mammals, reptiles, and amphibians. Sightings of aforementioned wildlife, along with any wildlife mortalities, will be recorded in a log while walking or driving the perimeter of the TSF. Internal weekly results will be summarized in a quarterly report to NDOW. Maintaining a routine record will assist the Newmont ESR Department and management in evaluating wildlife use of the TSF and any resulting mortalities. Monitoring will begin with the introduction of tailings slurry into the TSF. After a year of monitoring, Newmont, in conjunction with BLM and NDOW, will evaluate the monitoring program, specifically the frequency of such monitoring.

The heap leach pad area will be monitored weekly to determine the presence of any substantial solution "ponding" on the heap pad, as well as for the presence and mortality of birds, mammals, reptiles, and amphibians. Sightings of aforementioned wildlife, along with any wildlife mortalities, will be recorded in a weekly log. Monitoring results will be summarized in a quarterly report to NDOW. Maintaining a record will assist the Newmont ESR Department and management in evaluating wildlife use of the heap leach area and any resulting mortality. Monitoring will begin with the application of barren solution on the ore heap and continue for one year. At that point, Newmont, in BLM and NDOW, will evaluate the monitoring program, particularly the frequency of such monitoring.

If wildlife mortalities are found in or around the TSF or the heap leach facility, an effort will be made to determine the apparent cause of death. If there are mortalities recorded in a month that are attributable to cyanide or metals poisoning, additional measures will be taken to discourage wildlife use or incursion into the area.

4.5 Reclamation Success

Newmont will monitor for reclamation success. Newmont will also monitor disturbed sites for undesirable and noxious weeds as set forth in Section 3.10, Invasive Plant and Noxious Weed Control, and in ***Appendix E, Weed Management Plan***.

Following site closure, Newmont will conduct site maintenance, site inspections, and any other necessary monitoring for the period of reclamation responsibility.

Newmont will monitor reclamation success annually for a minimum of three years following implementation and the completion of revegetation activities or until reclamation success has been achieved.

Newmont will evaluate vegetation cover and species composition. Adjacent undisturbed vegetation communities and vegetation reference areas may be established to serve as a means of comparing project revegetation with natural vegetation. The reference area will be selected from representative undisturbed plant communities adjacent to the disturbed areas.

Vegetation cover will be estimated using a canopy cover measured by the point or line intercept method. In addition, as part of the determination for successful revegetation of disturbed areas, the following guidelines will be considered:

- Successful establishment of the desired species;
- Evidence of vegetative reproduction processes;
- Evidence of overall site stability;
- Indication that revegetation cover of reclaimed sites is trending toward and/or matching the vegetation cover found in the adjacent reference area; and,
- Rangeland health indicators/mine reclamation standards and guidelines.

4.6 Geochemistry

Based on current geochemical analytical work, Newmont does not anticipate that acid generation will develop during or following mining at the Long Canyon Project site. No monitoring measures are proposed with regard to acid rock drainage (ARD).

4.7 Soils

As part of final reclamation, depths of any replaced growth medium will be checked for thickness prior to planting or seeding. This will be conducted by employing a grid pattern (approximately 200 feet by 200 feet) over the areas where growth medium has been replaced.

4.8 Tailings and Heap Leach Facility Closure

4.8.1 Closure Cover and Embankment

The primary concern related to the soil cover is loss of integrity that could expose tailings or the ore material in the heap leach, to the environment or increase the amount of infiltration into the facility. Loss of integrity could result from erosion, settlement, or slope instability. Inspection activities will therefore focus on identifying the signs of these types of problems.

The cover area will be visually inspected by personnel traversing the perimeter and across the cover in several locations. The inspector will look for the following types of indicators:

- Evidence of excessive erosion including rills, gullies, or bare spots;
- Ponding or damp areas, including the presence of riparian vegetation, indicating significant settlement;
- Cracks, slumps, or scarps, indicating localized differential settlement or slope failure;
- Areas of sparse vegetation that may need re-seeding for continued erosion control; and,
- Holes or burrows that could disrupt the integrity of the cover or allow transport of tailings or the ore material in the heap leach, to the cover surface.

Quantitative measurement of settlement (i.e., tailings or heap leach stockpile consolidation) will be performed by periodic surveying of monuments located on a regular grid on the cover surface. The settlement surveys will be tied into permanent benchmarks or other control points established at the site.

4.8.2 Surface Water Management System

The purpose of the surface water management system is to divert runoff away from the cover and to drain the cover surface. Inspection activities will therefore focus on identifying conditions that reduce the flow capacity of the system or disrupt its integrity.

The surface water management system will be inspected visually by personnel walking along all ditches, culvert entrances, and culvert discharge locations. The inspector will look for the following types of features:

- Loss of gravel or rock in lined channels and discharge aprons
- Localized settlement and ponding
- Excessive sediment accumulation
- Blockage by debris
- Bank sloughing
- Excessive debris at culvert entrances
- Culvert cross section significantly deformed
- Corrosion of culvert pipes
- Culvert pipe exposed at ground surface

4.8.3 Surface and Groundwater Monitoring

See Section 4.3, Hydrology.

4.9 Other

4.9.1 Landfill

Newmont will monitor the on-site landfill weekly to verify that no deleterious material has been disposed and that the cover requirements have been met.

4.9.2 Stormwater Pollution Prevention Plan

Newmont will monitor stormwater controls and best management practices on a semi-annual basis and after significant storm events. An inspection checklist will be developed to aid the inspection team during monitoring periods.

4.9.3 Material Storage and Disposal Areas

Newmont will monitor areas designated to store hazardous materials weekly to verify compliance with regulatory requirements and area design criteria. Newmont will develop a monitoring checklist to assist the inspection team to identify and mitigate potential concerns.

5.0 INTERIM MANAGEMENT PLAN [43 CFR §3809.401(b)(5)]

Although Newmont does not plan for a temporary or seasonal cessation of operations, circumstances beyond Newmont's control may require temporary cessation. If unforeseen circumstances impose a temporary shutdown, Newmont will continue operational and environmental maintenance and security activities (as well as maintaining the appropriate financial guarantee) to assure the site meets permit stipulations and requirements for environmental protection.

5.1 Measures to Stabilize Excavations and Workings

During any temporary cessation of operations, Newmont will maintain facilities in compliance with MSHA health and safety standards.

5.2 Measures to Isolate or Control Toxic or Deleterious Materials

The presence of toxic or deleterious materials at the Long Canyon Project site will be limited to ore processing reagents, diesel fuel, gasoline, and miscellaneous items such as lubricating oil, antifreeze, and maintenance solvents. During any periods of temporary cessation, the use of these materials will be eliminated or minimal, but Newmont will continue to employ the same handling and environmental protection safeguards that are used during operations.

5.3 Storage and Removal of Equipment, Supplies and Structures

Whether equipment or supplies will be removed from the Long Canyon Project site will depend on the duration of the temporary cessation. At a minimum, Newmont will maintain the necessary equipment and supplies necessarily to maintain safe conditions and the site in an environmentally-sound condition. Newmont will not plan to remove any permanent structures from the site during periods of temporary cessation.

5.4 Housekeeping Measures

Newmont will maintain the Long Canyon Project site in safe and clean conditions according to Newmont SOPs and MSHA requirements and standards.

5.5 Monitoring during Non-Operation Periods

During any temporary cessation or period of non-operation, Newmont will continue environmental monitoring on defined schedules, as outlined in appropriate approvals and permits. Environmental reports will be submitted in a timely manner. Regardless of the operating status of the operation, appropriate monitoring will be continued until compliance with permanent closure requirements is attained, unless modified by the appropriate regulatory authorities.

5.6 Temporary Closure

See Section 3.2.4, Temporary Cessation.

No periods of temporary or seasonal closure are planned; however, in the event of a temporary cessation of activities, Newmont will notify the BLM, NDEP and Elko County of the temporary curtailment. This notification will include reasons for the shutdown and the estimated time frame for resuming operations, as well as ongoing maintenance and monitoring measures to be employed during the temporary cessation of operations.

6.0 BASELINE ENVIRONMENTAL INFORMATION [43 CFR §3809.401(C)(1)]

This section describes the existing environmental conditions of the Long Canyon Project and surrounding areas. The BLM has a solid and substantial knowledge of these conditions as a result of the 2008 and 2011 environmental assessments (EAs) completed for mineral exploration activities at the site.

Newmont and its environmental contractors continue to gather and collect baseline and background environmental information, which will become a part of the BLM National Environmental Policy Act (NEPA) analyses for the mining, ore processing and reclamation aspects of the Long Canyon Project. Understanding the existing conditions is valuable to assess potential environmental effects.

6.1 Climate/Air Quality

6.1.1 Climate

The project area is located in an arid to semi-arid, steppe (dry and cold), mid-latitude climate regime, typified by large daily temperature fluctuations, limited rainfall, and bright sunshine.

The mean annual precipitation at Oasis (Nevada), located approximately 4 miles north of the project area is 8.63 inches and the mean annual snowfall is 23.9 inches. The average annual low and high temperatures are 29.1 and 60.8°F, respectively.

Wind directions vary in this region, but the predominant wind direction is southwest to northeast as illustrated on ***Figure 17, Wind Rose***. Wind roses depict the joint frequency of occurrence, in percentage, of wind speed and direction categories for a particular location and time period. The radials of the wind rose indicate the direction from which the wind is blowing. The length of the radials indicates the frequency of occurrence for that direction for certain wind speed classes.

6.1.2 Air Quality

The Long Canyon Project Area is located in an attainment area that is federally designated as Prevention of Significant Deterioration (PSD) Class II, indicating that air quality in the region is acceptable based on Environmental Protection Agency (EPA) standards for the protection of human health.

Site-specific air quality monitoring data are not available for the project area; however, the background concentrations for the regulated criteria pollutants are expected to be consistent with a rural area having low levels of industrial development below the National Ambient Air Quality Standards (NAAQS). For the Long Canyon air quality effects model, numeric values for these background concentrations will be developed from regional air pollutant monitoring stations.

There are no designated PSD Class I areas within or in the immediate vicinity of the project area. The closest PSD Class I area to the Long Canyon Project is the Jarbidge Wilderness Area, which is located approximately 90 miles northwest of the project area.

The Long Canyon Project is located within the NDEP Basin (187). This basin is designated by EPA as “unclassified" per National Ambient Air Quality standards as set forth in 40 CFR 81.329. An unclassified area is one for which no ambient air quality data are available, and the ambient concentrations should

be below the ambient air quality standards due to the low number and size of emission sources within the area. Unclassified areas are managed as attainment.

6.2 Topography and Physiography

The Long Canyon Project is located on the eastern slopes of the Pequop Mountains in north-east Nevada. This region is part of the Basin and Range Province of the western U.S within the hydrologic Great Basin. The project area is situated between elevations of approximately 5,600 and 7,000 feet, and the unnamed ephemeral drainages on the east facing slopes of the project area drain into Hardy Creek.

6.3 Geology and Geochemistry

6.3.1 Geologic Setting

The Pequop Mountains comprise an uplifted block of regionally east-dipping Paleozoic carbonate and siliciclastic rocks. Rocks of particular interest to the Project include limestone and dolomite of the Cambrian Notch Peak Formation and limestone of the overlying Ordovician Pogonip Group.

In the Long Canyon Project Area, the dolomite horizon at the top of the Notch Peak Formation has been subject to both low and high angle normal faulting. The margins of the dolomite strongly control the distribution of gold at the Project. There is evidence of weak metamorphism in the area.

6.3.2 Stratigraphy and Structure

The general stratigraphy of the Long Canyon Project Area begins with the Upper Cambrian Notch Peak Formation, which consists of several hundred feet of massive to thinly-bedded limestone. Overlying this limestone is a massive gray to dark gray dolomite with local chert ribbons and nodules. There is an erosional unconformity between the Upper Cambrian Notch Peak Formation dolomite and the overlying Ordovician Pogonip Group, which is comprised of thin to medium bedded dolomite. The Upper Ordovician Eureka Quartzite overlies the Pogonip Group. The Late Ordovician to Silurian Fish Haven Dolomite and Permian Pequop formations are units presently mapped on the northern boundary of the Project Area that overlay the Eureka Quartzite. Mafic sills and dikes are present in the Project Area with varying degrees of alteration. Initial studies suggest the igneous units are Jurassic in age. See ***Figure 6, Site Geology***.

The structural geology of the Long Canyon Project Area includes at least four deformational events, evidenced by:

- A penetrative fabric at low angles to bedding;
- Local areas of tight to isoclinal folds;
- Intrafolial folds;
- Development of a southeast-plunging, stretching lineation; and
- Northeast-trending folds on a regional scale.

There are reverse and normal faults present at the site, as well as brittle and ductile deformation.

6.3.3 Mineralization

Gold mineralization at the Long Canyon Project occurs mainly within limestone along dolomite margins, both in the Notch Peak along the lower margin and in the Pogonip along the upper margin. Significant karsting, likely of both meteoric and hydrothermal origin, is localized along the dolomite margins, resulting in large, solution-collapse cavities. Much of the higher grade mineralization is hosted within the hematitic matrix of these collapse breccias, as well as in stratiform zones characterized by strong decalcification. The alteration, mineralization, and geochemistry of the Long Canyon Project deposit are similar in nature to Carlin-type sediment-hosted gold deposits. The gold is present as micron-size to sub-micron-size disseminated grains, and all mineralization discovered to date is oxidized.

6.3.4 Geochemistry

The BLM has recently issued guidance (Instruction Memorandum No. NV-2010-014) which clarifies the rock and water resources data information that needs to be collected under 43 CFR 3809.401(b)(2) and 3809.401(c)(1). Additional guidance is provided by the Nevada Division of Environmental Protection (NDEP) pursuant to the Water Pollution Control Permit program and associated NAC445A regulations. In accordance with the BLM and NDEP guidelines, Newmont has completed a characterization program to investigate the potential for development of Acid Rock Drainage and Metal Leaching (ARDML) from the waste rock and heap leach facilities associated with the proposed action.

Samples used in the Long Canyon waste rock characterization program consist of fresh drill core from drilling activities completed for the exploration program. A total of 58 sample intervals were selected from within the proposed pit boundaries to represent the waste rock material types that will be encountered during mining. The resulting sample dataset is spatially representative of the main waste rock material types identified for the Long Canyon Project deposit from the current mine plan.

The static test methods used for the Long Canyon Project characterization program include multi-element analysis using four-acid digest and ICP-MS analysis, modified Sobek Acid Base Accounting (ABA), Net Acid Generation (NAG) test and the Nevada Meteoric Water Mobility Procedure (MWMP). These static tests were selected to address total acid generation or neutralization potential of the samples and concentration of constituents in leachates derived from the material. However, these static tests do not consider the temporal variations that may occur in leachate chemistry as a result of long-term changes in oxidation, dissolution and desorption reaction rates. To address these factors, kinetic testing has also been initiated as part of this program that consisted of a humidity cell test program conducted according to the ASTM D-5744-96 methodology.

According to the Nevada BLM 2208 Water Resource Data and Analysis Guide for Mining Activities, samples with neutralizing potential less than 3 times the acidification potential and/or a difference between neutralizing and acid generating potential less than 20 have an uncertain potential for acid generation and require further evaluation (e.g., kinetic test methods). The ABA data indicate the carbonate-rich sedimentary host rocks of the Long Canyon Project deposit contain significant neutralization capacity and very limited sulfide minerals with all waste rock and ore samples classified as non-acid generating according to the BLM criteria. None of the samples showed an uncertain potential for acid generation. The NAG results support the ABA prediction and confirm that no acid generation is predicted for the Long Canyon Project deposit with alkaline NAG pH values for all samples. The spent ore samples included in this study were also found to contain significant neutralizing capacity and are predicted to be non-acid generating from both the ABA and NAG results. No measurable sulfide sulfur was detected in either the waste rock or ore samples.

MWMP results are consistent with the ABA and NAG results that indicate the waste rock material types associated with the Long Canyon Project deposit demonstrate a low potential to generate acid or leach metals. Leachate chemistry data from the MWMP tests were compared to reference standards provided by the NDEP to determine which constituents could potentially be leached at concentrations above these values. From this comparison, all constituents were below reference values with the exception of arsenic and mercury, which are consistently leached at concentrations above the reference values under circum-neutral to alkaline conditions. The potential for metal leaching from spent ore material is also low with the exception of antimony, arsenic and mercury that were consistently above the NDEP values in the pregnant leach solution from the metallurgical columns. Therefore, these constituents are predicted to be elevated in the heap leach process solution. After rinsing the metallurgical columns with de-ionized water, mercury values dropped below the NDEP reference value and antimony and arsenic concentrations decreased but generally remained above the NDEP values. From these results, antimony and arsenic are predicted to be elevated in the heap leach facility drain down solution at closure as well as during operations.

Humidity cell testing (HCT) was conducted on 8 samples of waste rock and 4 samples of spent ore. Approval to terminate the cells was received by the BLM and NDEP in a letter dated August 18, 2011 and the waste rock cells were terminated after 53 weeks of testing and the spent ore cells were terminated after 45 weeks of testing. The HCT results confirm the predictions for acid generation and metal leaching from the static test results and indicate the material associated with the Long Canyon Project deposit (ore and waste) is not acid generating but that there is potential to leach antimony and arsenic under high pH conditions. Mercury and thallium are also sporadically elevated above NDEP reference values at the beginning of the test for some of the cells. However, mercury and thallium were quickly removed by progressive rinsing indicating the controlling mechanism of solute release for these constituents is mass limited. Although antimony release rates did not decrease as rapidly as mercury and thallium, the constant release of antimony from the HCTs also indicates mass driven release. Arsenic release rates showed little change in the HCTs over the course of the test, suggesting arsenic release is driven by mineral dissolution or desorption of adsorbed arsenic species on solid mineral phases in the cell under the relatively constant pH conditions.

The results of the static and kinetic geochemical testwork demonstrate that the Long Canyon Project material (waste and ore) will be net neutralizing and presents a very low risk for ARDML. The carbonate nature of the sedimentary host rocks coupled with a very low sulfide content result in a significant excess of neutralizing (buffering) capacity. Therefore, segregated waste rock management will not be required for the proposed project. Although the excess of neutralizing capacity means that net acid conditions will not develop at Long Canyon Project, several metal(loid)s are likely to be mobile under the circum-neutral to moderately alkaline conditions, in particular antimony, arsenic, mercury and to a lesser extent thallium. These elements were leached at concentrations above the NDEP reference values in both the MWMP test and the humidity cell tests. However, in most cases, concentrations of these constituents are less than an order of magnitude higher than the reference value, indicating a low probability to impact groundwater or surface water resources.

Numerical predictive calculations are currently being carried out in order to assess the bulk metal leaching characteristics of the waste rock and ore material and to confirm this material does not have the potential to cause an environmental impact or degrade groundwater. This will predict, in quantitative terms, the possible concentrations of solutes emanating from the waste rock dump facilities and determine their potential concentrations upon mixing with groundwater and taking into account attenuation. Similar numerical predictions will also be completed for the heap leach pad in

order to develop a source term for the spent heap ore that would assist in planning permanent closure and reclamation activities for the heap leach facility.

6.4 Soils

The U.S. Natural Resources Conservation Service (NRCS) has completed Order Three Soils Surveys in southeastern Elko County that included the Long Canyon Project Area. The soils associations within the project area are illustrated on ***Figure 18, Soils***.

In general, the soils of the project area can be grouped by landscape position:

- Valley floor;
- Foothill; and,
- Mountain.

See ***Table 9, Soil Series Descriptions***.

6.4.1 Valley Floor Soils

The valley floor soils are generally deep, well-drained soils that formed in the mixed alluvium, mixed alluvium and lacustrine sediments, lacustrine sediments, or reworked mixed alluvium. These soils were generally found on beach plains, flood plains, lake plains, beach bars, offshore bars, barrier bars, beach terraces, fan shirts, inset fans, alluvial flats, and lagoons. Most valley floor soils are coarse-loamy or sandy, but some are fine or fine-silty.

6.4.2 Foothill Soils

The soils of the foothills (piedmont) are shallow to deep, well-drained soils that formed alluvium, mixed alluvium, residuum and colluvium materials. Limestone and dolomite are the parent materials for most of these soils, and many have an ash or loess component. These soils are predominantly found on the alluvial fan remnants and hills. Most soils are loamy or loamy-skeletal.

6.4.3 Mountain Soils

The soils on the mountains are primarily shallow, but some deep soils also occur and most are well-drained. These soils formed in residuum and colluvium from limestone, dolomite, rhyolite or mixed alluvium. Most of these mountain soils are loamy-skeletal.

Table 9, Soil Series Descriptions

Name	Depth	% Slope	Description	Potential as Source of Topsoil	Comments
VALLEY FLOOR SOILS SERIES					
Blimo	Very deep, well drained	0-8	Coarse-loamy, mixed (calcareous), mesic *Durothidic Xeric Torriorthents*	Poor	Rock fragments and moderate sodium content
Duffer	Very deep, poorly drained	0-2	Fine-silty, carbonatic, mesic *Aquic Calciorthids*	Poor	High salinity, sodium content and carbonate content
Heist	Very deep, well drained	0-4	Coarse-loamy, mixed (calcareous), mesic *Xeric Torriorthents*	Fair	Moderate sodium content, some rock fragments
Idway	Very deep, well drained	0-8	Coarse-loamy over sandy, mixed, mesic *Durixerollic Camborthids*	Fair	Rock fragments
Kolda	Very deep, well drained	0-2	Fine,montmorillonitic (calcareous), mesic *Typic Endoaquolls*	Poor	High clay and wetness depth, moderate salinity
Kunzler	Very deep, well drained, moderately slowly permeable	0-4	Coarse-loamy, mixed, mesic *Durixerollic Calciorthids*	Poor	High clay and wetness depth, moderate salinity
Mazuma	Very deep, well drained	0-4	Coarse-loamy, mixed (calcareous), mesic *Typic Torriorthents*	Poor	High salinity and sodium content
Sheffit	Very deep, moderately well drained	0-4	Coarse-loamy, mixed (calcareous), mesic *Typic Torriorthents*	Poor	High salinity, sodium content and clayey. Moderate carbonate content
Sycomat	Very deep, moderately well drained	0-2	Fine, montmorillonitic, mesic *Xeric Torriorthents*	Poor	High salinity and sodium content
Threesee	Very deep, well drained	0-8	Sandy-skeletal, mixed, mesic *Xerollic Calciorthids*	Poor	Sandy, rock fragments, moderate sodium content
Tosser	Very deep, well drained	2-8	Sandy-skeletal, mixed, mesic *Xerollic Calciorthids*	Poor	Sandy, rock fragments, moderate sodium content
Umberland	Very deep, poorly drained	0-2	Fine, montmorillonitic (calcareous), mesic *Aeric Halaquepts*	Poor	High sodium content and salinity, clayey
FOOTHILLS SOILS SERIES					
Automal	Very deep, well drained	2-50	Loamy-skeletal, mixed, mesic *Durixerollic Calciorthids*	Poor	Rock fragments, moderate carbonate content, some steep slopes
Chiara	Shallow to duripan, well drained	2-50	Loamy, mixed, mesic, shallow *Xerollic Durothids*	Poor	Shallow with cemented pan, high sodium content
Dewar	Well drained	2-8	Loamy, mixed, mesic *Xerollic Duragraphs*	Poor	Shallow with cemented pan, rock fragments, clayey, some sodium content
Hunnton	Moderately deep over duripan, well drained	2-8	Fine, montmorillonitic, mesic *Xerollic Durargids*	Poor	High clay, shallow with cemented pan, rock fragments
Palinor	Shallow over duripan, well drained	2-15	Loamy-skeletal, carbonatic, mesic, shallow *Xerolic Durorthids*	Poor	Shallow with cemented pan, rock fragments, moderate carbonate content

Name	Depth	% Slope	Description	Potential as Source of Topsoil	Comments
Pyrat	Very deep, well drained	2-30	Loamy-skeletal, mixed, mesic *Durixerollic Calciorthids*	Poor	Rock fragment
Shabliss	Shallow over duripan, well drained	2-8	Loamy, mixed, mesic, shallow *Haploxerollic Duroorthids*	Poor	Shallow with cemented pan, moderate sodium content
Tecomar	Shallow, well drained	8-50	Loamy-skeletal, carbonatic, mesic *Lithic Xerollic Calciorthids*	Poor	Steep slopes, rock fragments, shallow, moderate carbonate content
Zimbob	Very shallow to shallow, well drained	8-50	Loamy-skeletal, carbonatic, mesic *Lithic Xerollic Torriorthents*	Poor	Steep slopes, rock fragments, shallow, high carbonate content
MOUNTAIN SOILS SERIES					
Cavehill	Moderately deep, well drained	15-50	Loamy-skeletal, carbonatic, frigid *Typic Calcixerolls*	Poor	Steep slopes, rock fragments, moderate carbonate content, fairly shallow
Halacan	Shallow, well drained	8-30	Loamy-skeletal, carbonatic *Cryic Lithis Rendolls*	Poor	Steep slopes, shallow, rock fragments, moderate carbonate content
Haunchee	Shallow, well drained	15-75	Loamy-skeletal, carbonatic *Cryic Lithic Rendolls*	Poor	Steep slopes, shallow, rock fragments. Moderate carbonate and sodium content
Hutchley	Shallow, moderately well drained, slowly permeable	8-50	Loamy-skeletal, mixed, frigid *Lithic Argixerolls*	Poor	Shallow, high rock fragments, steep slopes
Pookaloo	Shallow, well drained	8-50	Loamy-skeletal, carbonatic, mesic *Xerollic Calciorthids*	Poor	Shallow, rock fragments, steep slopes, high carbonate content
Simon	Very deep, well drained	15-50	Fine-loamy, mixed, frigid *Aridic Argixerolls*	Poor	Shallow, high rock fragments, steep slopes
Wardbay	Deep, well drained	15-75	Loamy-skeleal, carbonatic, frigid *Pachic Calcixerolls*	Poor	Steep slopes, shallow, rock fragments, high carbonate content
Source: Natural Resources Conservation Service (NRCS) Soil Survey of Elko County, Nevada, Southeast Part					

6.4.4 Soil Salvage Depths

Estimates for soils salvage depths for various soil associations found at the Long Canyon Project Area are set forth in ***Table 10, Soils Salvage Depth Recommendations***.

Table 10, Soil Salvage Depth Recommendations

Soil Association	Salvage Depths (inches)	General Comments
Palinor-Pyrat-Shabliss	10-18 (assume 14 inches)	Near I-80. Minor disturbance by relocated County Road 790.
Haunchee-Halacan-Wardbay	10-14 (assume 10 inches)	Rocky soils. May need to broadcast seed rather than drill.
Blimo-Threesee	14-16 (assume 14 inches)	Some alkalinity issues but generally a droughty soil.
Pookaloo-Cavehill-Rock Outcrop	14 – 20 (assume 14 inches)	Slopes will make salvage difficult; some losses will occur.
Pyrat-Automal, Very-Stony Automal	8-14 (assume 10 inches)	Some soil on flatter slopes may not be best for reclamation.
Blimo-Idway-Mazuma	12	Mostly out of disturbance area. Salvage as road berm for relocated County Road 790
Duffer-Kunzler	20	Mostly associated with riparian zone. Mostly out of disturbance area.
Heist-Blimo	20	Mostly out of disturbance area. Salvage as road berm for relocated County Road 790.
Threesee-Tosser	10-14 (assume 10 inches)	Mostly out of disturbance area, except for borrow pits.
Palinor-Automal-Shabliss	8-14 (assume 10 inches)	Located in areas proposed for heap leach and tailings.
Sycomat-Mazuma	-	Not in area of disturbance, except for relocated two-track County Road 790 east of site.
Hutchley-Simon	10 (assume 5 inches)	Only minor disturbance. Steep slopes problematic for removal.
Dewar-Chiara-Hunnton	10-20 (assume 12 inches)	Clayey at depth. Mostly out of disturbance area.
Sheffit-Umberland	-	Outside of disturbance area.
Tecomar-Zimbob	-	Outside of disturbance area.

Source: February 27, 2012 communication from Gary Back, Great Basin Ecology, Inc.

6.5 Surface Water

The Long Canyon Project Area is located in the Goshute Valley Hydrographic Basin No. 187 within the Central Hydrographic Region. The drainages within the area are formed from ephemeral runoff from rains and winter snowpack. Drainage flows generally to the east from the Pequop Range toward Hardy Creek and Big Springs. The ephemeral drainages typically infiltrate into the ground prior to reaching Hardy Creek and Big Springs, and there are no channels (beds and banks) connecting these ephemeral drainages to Hardy Creek. In addition, these ephemeral drainages do not exhibit a vegetation response that differs from vegetation in the adjacent upland areas. Long Canyon spring is an ephemeral water feature in the area.

The nearest known source of permanent surface water is the Johnson Spring system, which discharges groundwater to the surface, producing localized perennial surface flows of Hardy Creek. The principal discharge of the Johnson Spring system is known as Big Springs. Big Springs is located on the Big Springs Ranch in the southwest corner of the southeast quarter of Section 28, Township 36 North, and Range 66 East.

A portion of the flow from Big Springs is diverted into a pipeline and used as a source of municipal water for West Wendover, Nevada, and Wendover, Utah. The Wendover Pipeline Company rehabilitated Big Springs in the fall of 2003, and a new pump station was installed.

Much of the flow from the smaller springs in the Johnson Spring system, as well as some of the flow from Big Springs, is used by Big Springs Ranch for irrigation. The remaining surface flows from the Johnson Spring system converge to form Hardy Creek, which flows for as much as three miles south before water is consumed by vegetation, lost to evaporation, or infiltrates into the ground.

Flow of Big Springs varies naturally due to changes in the distribution and quantity of precipitation in the recharge areas up gradient from the spring. The cities of West Wendover, Nevada, and Wendover, Utah, have collected flow data at Big Springs from a continuous flow meter since November 2006. Test data show that the flow of Big Springs has varied from a high of over 2000 gallons per minute (gpm) in (November 2006) to a low of approximately 800 gpm in (February 2010). This 800 gpm flow was short-term and resulted during Newmont's bedrock aquifer testing work.

Water quality from Big Springs meets Nevada drinking water standards for all parameters. As expected for any natural water source, individual chemical parameters vary slightly over the period of measurement, but there are no discernible trends in the water chemistry over the period of record. The total dissolved solids (TDS), which is a good proxy indicator of overall water quality, averages around 200 mg/L; the Nevada drinking water standard for TDS is 1000 mg/L. Water-quality sampling results show no significant change in the water quality or trace element chemistry since exploration drilling activities began in 2000.

6.6 Groundwater

The two primary aquifer units within the Long Canyon Project Area include the basin-fill aquifer and the carbonate-bedrock aquifer. Recharge to the groundwater system occurs from infiltration of precipitation in the form of rainfall or winter snowpack melt. There is also a deep circulation component to the system, as evidenced by the relatively high (70^{o} F) temperature of water discharged at Big Springs.

Groundwater in the carbonate bedrock aquifer at the Long Canyon Project occurs as a fracture flow system in both shallow and deep bedrock. Overall average permeability in the fracture system is high. It is probable that some groundwater exits the bedrock aquifer across range-front faults and fracture systems to recharge the basin-fill aquifer. Other groundwater from the bedrock aquifer discharges to the surface as springs and seeps in an area known as the Johnson Spring system. See Section 6.5, Surface Water.

The basin fill within the northern Goshute Valley reaches a maximum thickness of approximately 6,560 feet with a fair amount of complexity, particularly along the east side of the valley adjacent to the Toano Range. The west side of the basin is less complex with a gradual thickening of the basin fill for approximately 4,900 feet from the Pequop mountain front, at which point rapid deepening of the basin fill occurs.

Groundwater in the basin fill generally flows from the mountain fronts at the margins of Goshute Valley towards the center of the valley and then southward toward the lower portions of the Goshute Valley. Overall groundwater gradients within the basin fill of the northern Goshute Valley appear to be

relatively gentle, with steepening gradients present near the mountain fronts on both sides of the valley associated with zones of mountain-front recharge and range front faulting.

6.7 Vegetation

Seven upland vegetation communities were mapped within the Long Canyon Project Area, which is located within the Calcareous Mountains Floristic Section, Great Basin Division, of the Intermountain Region of the U.S. See ***Figure 19, Vegetation***.

6.7.1 Big Sagebrush

The Big Sagebrush Community is located primarily on valley floor sites and intermixes with the Salt Desert Shrub Community. This community also occurs on alluvial fans associated with drainages in the piedmont zone and, on higher level slopes, comingles with the Piñon-Juniper community.

Wyoming sagebrush (*Artemisia tridentata ssp. Wyomingensis*) dominates this community with varying amounts of Basin big sagebrush (*Artemisia tridentata ssp. Tridentala*), rubber rabbitbrush (*Ericameria nauseosus*), and Douglas rabbitbrush (*Chrysothamnus vicidiflorus*).

Where soils are moderately sodic, black greasewood (*Sarobatus vermiculatus*) and fourwing saltbrush (*Artiplex canescens*) are also present.

A number of perennial grasses are found in this community, including Basin wildrye (*Leymus cinereus*), bottlebrush squirreltail (*Elymus elymoides*), Alkali sacaton (*Sporobolus airoides*), thickspike wheatgrass (*Elymus lanceolatus var. lanceolatus*), and Sanberg bluegrass (*Poa secunda*).

Cheatgrass (*Bromus tectorum*), a non-native invasive annual grass, is also present in this community in certain areas. Where the soils have been disturbed, cheatgrass tends to occur in dense patches. Where mixed with shrubs and perennial grasses, cheatgrass is less abundant.

6.7.2 Black Sagebrush

Black sagebrush (*Artemisia nova*) is low growing sagebrush, which is found on calcareous soils with a shallow duripan. This community also supports scattered piñon pine (*Pinus monphylla*) and Utah juniper (*Juniperus osteosperma*), which will increase and dominate the site over time with the lack of disturbance.

Where soils are deeper in this community, Mountain big sagebrush (*Artemisia tridentata ssp. vaseyana*) and Antelope bitterbrush (*Purshia tridentata*) are common.

Common perennial grasses found in this community include Indian ricegrass (*Achnatherum hymenoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), needle-and-thread grass (*Hesperostipa comate*), Western wheatgrass (*Achnatherum occidentale*), bottlebrush squirreltail, and Sanberg bluegrass. Cheatgrass has also invaded portions of this community.

6.7.3 Black and Big Sagebrush Mix

Black and Big sagebrush comingle in the Long Canyon drainage area. See ***Figure 19, Vegetation***.

This community also mixes with the Piñon-Juniper community, and contains many of the perennial grasses common to both the Black and Big sagebrush communities.

6.7.4 Low Sagebrush

Similar to black sagebrush, low sagebrush (*Artemisia arbuscula*) is low growing sagebrush, which is found on claypan soil on mountain ridges. This community intermixes with the Black sagebrush community and contains many of the same perennial grasses as the black sagebrush community.

6.7.5 Piñon-Juniper

Piñon pine and Utah juniper dominate this woodland community, which occurs on rock outcrops, in steep areas with shallow soils, and on calcareous slopes where these trees have replaced sagebrush communities.

In true woodland sites, the understory is lacking shrubs, grasses and most forbs. Where the Piñon pine and Utah juniper have encroached on other communities, there is diverse vegetation in the understory.

Although much of this woodland community is located within a Christmas tree cutting area (as designated by the BLM), no commercial timber harvest areas are located within the project area.

6.7.6 Salt Desert Shrub

This community is located primarily in the flat valley floor and is dominated by black greasewood or shadscale (*Atriplex confertifolia*), intermixed with Wyoming big sagebrush, Basin big sagebrush, rubber rabbitbrush, bud sagebrush (*Picrothamnus desertorum*) and Douglas rabbitbrush (*Chrysothamnus viscidiflorus*).

Perennial grasses included Basin wild rye, alkali cordgrass (*Spartina gracilis*), alkali sacaton, bottlebrush squirreltail and Indian ricegrass. Cheatgrass is present in this community.

6.7.7 Meadow

A meadow complex is associated with the Johnson Spring system. It includes springs intermingled with open wetlands, open water, wet meadow, saline meadow, dry meadow, and dry floodplain sites that form the headwaters of Hardy Creek and supports the riparian vegetation associated with Hardy Creek.

Both alkali and freshwater emergent marshes are present in this community. These types of these meadows differ primarily in the level and duration of saturated soil conditions. The alkali marshes are remnant stream channels or terraces associated with the Hardy Creek floodplain, whereas the freshwater marshes are areas or channels fed by spring water.

As site conditions become drier, the freshwater meadow marsh areas integrate with the alkali marsh areas, which in turn integrate with the salt desert shrub and sagebrush upland areas.

Common species observed in the meadow community include a majority of obligate and wet (FACW) species such as bulrush (*Scirpus actus*), cattail (*Typha latifolia*), mares-tail (*Hippurus vulgaris*) and water hemlock (*Sium suave*).

The alkali marsh areas support a predominance of facultative (FAC) or wetter, alkaline tolerant perennial grasses, sedges and forbes. Grass species include fowl bluegrass (*Poa palustris*), Foxtail barley (*Hordeum jubatus*), saltgrass (*Distichlis spicata*), Alkali cordgrass (*Puccinella lemmonii*), and scratchgrass (*Muhlenbergia asperifolia*). Common sedges and rushes include clustered field sedge (*Carex praegracilis*) and Baltic rush (*Juncus balticus*). Forbs include seaside arrowgrass (*Triglochin maritime*), willowherb (*Epilobium ciliatum ssp.ciliatum*) and rayless alkali daisy (*Aster brachyactis*).

Portions of the Big Sagebrush and Salt Desert Shrub communities near the Big Springs Ranch were converted to irrigated meadows and crested wheatgrass (*Agropyron cristatum*) seedings, but they have not been maintained.

6.7.8 Noxious Weeds and Non-Native Invasive Species

The BLM defines "noxious weed" as "a plant that interferes with management objectives for a given area of land at a given point in time". The BLM Nevada strategy for noxious weed management is to "prevent and control the spread of noxious weeds through local and regional cooperative efforts to ensure maintenance and restoration of healthy ecosystems on BLM-managed lands. Noxious weed control is based on prevention, education, detection, and quick control of small infestations". The Nevada Department of Agriculture, Plant Industry Division maintains a "Nevada Noxious Weed List," which currently has 52 weed species listed as noxious in Nevada Administrative Code (NAC) 555.010.

Several noxious weed species have been observed at the Long Canyon Project Area, primarily within the meadow community. These include bull thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), hairy white-top (*Cardaria pubescens*), Hoary cress (*Cardaria draba*), Russian knapweed (*Acroptilon repens*), Scotch thistle (*Onopordum acanthium*), yellow toadflax (*Linaria vulgaris*) and saltcedar (*Tamarix ssp*.)

Non-native invasive species are defined as species that are not native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112). These species are highly competitive and aggressive, and spread easily into areas where native plants are stressed. All noxious weeds are non-native invasive species, but not all non-native invasive species are noxious weeds.

Non-native invasive species have been observed at multiple sites within the Long Canyon Project Area and include cheatgrass, Russian thistle (*Salsola iberica*), halogeton (*Halogeton glomeratus*), bur buttercup (*Ranunculus testiculatus*), Tansymustard (*Descurainia pinnata*), tumble mustard (*Sisymbrium altissium*) and birdsrape mustard (*Brassica rapa*).

Cheatgrass, halogeton, Russian thistle, and bur buttercup are frequently found where disturbance has occurred, but all four of these species are also scattered to varying degree through undisturbed vegetation.

6.7.9 Threatened, Endangered, Candidate and BLM Sensitive Plant Species

No federally listed or BLM sensitive plant species are known to occur within or adjacent to the Long Canyon Project Area.

6.8 Wildlife

A variety of wildlife species occur in the Project Area and are typical of the species found in the arid/ semi-arid environment in the central Great Basin. Wildlife species detected in the Project Area include insects, reptiles, birds, raptors and mammals. Migratory birds use the vegetation in the project area for nesting, and the wetlands complex attracts a variety of waterfowl and shorebird species. Although no species listed as Threatened or Endangered under the Endangered Species Act were present in the Project Area, three species of special concern were encountered in the Project Area during the 2007-2010 field surveys.

Information regarding wildlife species and current habitat conditions within and near the Long Canyon Project was obtained from field surveys and reports completed for the project, along with information and discussions with the BLM, the Nevada Department of Wildlife, and the USFWS.

6.8.1 Habitat

The Project Area occurs on the eastern flank of the Pequop Range and contains ridges, cliffs, canyons, rock outcrops, riparian areas, and ephemeral drainages. Long Canyon, a major geographical feature within the Project area, traverses the Project area from northwest to southeast. Cliff walls, small rock outcrops, and talus slopes are scattered throughout the Project Area. The only permanent source of water within the Project Area is Long Canyon Spring, which consists of a series of three man-made troughs. The Johnson Spring system occurs immediately east of the Project Area and provide a dependable year-round water source for wildlife. The ephemeral drainages within the Project Area only carry water during snowmelt or rain events.

The Project Area contains six habitats for wildlife as defined in NDOW's 2006 Wildlife Action Plan including sagebrush, lower montane woodlands, intermountain conifer forests and woodlands, springs and springbrooks, meadows, cliffs and canyons, and barren landscapes. Sagebrush provides nesting cover and structure, protection from predators, thermal cover, and forage for wildlife. Lower montane woodlands provide nesting cover, structure, and cavities, protection from predators, thermal cover and forage for wildlife. Intermountain conifer forests and woodlands provide nesting cover, structure, and cavities, roosting, protection from predators, protection from the summer sun, and areas for foraging. Barren landscapes such as rocky slopes and talus are frequently found under cliffs and provide forage, protection from predators, thermal cover, and food storage.

6.8.2 Insects

The only insect with special status (BLM sensitive species) that is potentially found in the Project Area is the Mattoni's blue butterfly, (*Euphilates pallescens* var. *mattonii).* The butterfly is highly associated with slender buckwheat, and has been observed in areas of dense buckwheat in the southwest portion of the Project Area.

6.8.3 Reptiles

There are no special status species of reptiles in the Project Area. Several reptiles were observed during field surveys including common side-blotch lizard *(Uta stansburiana)*, western fence lizard *(Sceloporus occidentalis),* Great Basin skink *(Emueces skiltonianus itahensis),* Great Basin whiptail *(Cnemidophorus tigris),* mountain short-horned lizard *(Phrynosoma hernandesi),* and sagebrush lizard *(Sceloporus graciosus).*

6.8.4 Birds

6.8.4.1 Migratory Birds

"Migratory bird" means any bird listed in 50 CFR 10.13. All native birds found commonly in the United States, with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act (MBTA). The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings. Executive Order 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

Additional direction comes from the Memorandum of Understanding (MOU) between the BLM and the United States Fish and Wildlife Service (USFWS), signed January 17, 2001. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the BLM and USFWS, in coordination with state, tribal, and local governments. The MOU identifies management practices that impact populations of high priority migratory bird species, including nesting, migration, or over-wintering habitats, on public lands, and develops management objectives or recommendations that avoid or minimize these impacts. ***Table 11, Migratory Bird Species Located in or Near the Project Area,*** provides a compilation of the migratory bird species detected within the Project Area and vicinity during biological surveys conducted between 2006 and 2010.

There are five, BLM special status bird species that occur within the Project Area which are noted in the table below with a highlight on the common name.

Table 11, Migratory Bird Species Located in or Near the Project Area

Common Name	Scientific Name	Partners in Flight "Long term Planning and Responsibility Species"	Nevada Partners in Flight "Priority Species"	Habitat Associations*
American kestrel	*Falco sparverius*	No	No	Found in various open and semi-open habitats. Nest in natural holes in trees and abandoned bird nests.
American Robin	*Turdus migratorius*	No	No	Found in mixed, coniferous, and hardwood forests, grasslands, shrublands, and orchards.
Black-throated gray warbler	*Dendroica nigrescens*	Yes	Yes	Found mostly in piñon-juniper woodlands, and less frequently in mountain mahogany and montane riparian woodlands.
Black-throated sparrow	*Amphispiza bilineata*	No	No	Found in desert and shrubland/chaparral. Nests are well-concealed at the base of a bush or cactus, on or near the ground.
Blue-gray gnatcatcher	*Polioptila caerulea*	No	No	Found in deciduous forest, open woodland, second growth, scrub, brushy areas, chaparral, and in open piñon-juniper woodland. Nests where tracts of brush, scrub, or chaparral are intermixed with taller vegetation
Brewer's blackbird	*Euphagus cyanocephalus*	No	No	Found in agricultural fields that have brushy edges, open areas including parks, campgrounds, parking lots, wetlands, and suburban and urban settings.
Brown-headed Cowbird	*Molothrus ater*	No	No	Breeding habitat includes woodland, forest (primarily deciduous), forest edge, city parks, suburban gardens, farms, and ranches.
Burrowing owl	*Athene cunicularia*	No	Yes	Found in valley bottoms. Nest primarily in abandoned burrows of ground squirrels, badgers, and coyotes.
Bushtit	*Psaltriparus minimus*	No	No	Found in woodlands and scrub habitat with scattered trees and shrubs, in brushy streamsides, piñon-juniper, chaparral and pine-oak associations.
Chipping sparrow	*Spizella passerina*	No	No	Found in woodlands edges, dry open woodlands, in pine-oak forests, along river and lakes shores, on lawns, grassy fields, orchards and parks.
Clark's nutcracker	*Nucifraga columbiana*	Yes	No	Found in piñon-juniper woodlands, and in higher elevation coniferous forests including ponderosa/Jeffrey pine forest, red fir forest, and spruce-fir forests.
Cliff swallow	*Petrochelidon pyrrhonota*	No	No	Found in open canyons and river valleys with rocky cliffs for nesting, under bridges and freeways, farmland, wetlands, prairies, residential areas, road cuts and over open water. Require a source of mud for their nests.
Common nighthawk	*Chordeiles minor*	No	No	Found in open habitats, from shrub-steppe, grassland, and agricultural fields to cities, clear-cuts, and burns, as long as there are abundant flying insects and open gravel surfaces for nesting.
Common raven	*Corvus corax*	No	No	Found in dense forests, open sagebrush country, and alpine parklands.
Common poorwill	*Phalaenoptilus nuttallii*	No	No	Found in valleys and foothills, mixed chaparral-grassland, and piñon-juniper habitat. Nests in open areas on a bare site.
Cooper's hawk	*Accipiter cooperii*	No	Yes	Nest in old, tall deciduous tree groves, such as cottonwood stands.
Dark-eyed junco	*Junco hyemalis*	No	No	Habitats include various sorts of coniferous, mixed, and deciduous forest, forest edge; forest clearings, open woodland. Nests are in scrapes on the ground and usually are concealed by logs, rocks, tree roots, leaves, or ground vegetation.
Gray flycatcher	*Empidonax wrightii*	Yes	Yes	Found in tall sagebrush and bitterbrush stands and the sagebrush shrubland/piñon juniper transitional zone. Nest in tall sagebrush or conifers.

Common Name	Scientific Name	Partners in Flight "Long term Planning and Responsibility Species"	Nevada Partners in Flight "Priority Species"	Habitat Associations*
Gray vireo	*Vireo vicinior*	Yes	No	Found in open piñon-juniper woodlands. Nest in west or north facing trees in forked, lateral branches.
Great horned owl	*Bubo virginianus*	No	No	Found in forested habitats, moist or arid, deciduous or evergreen lowland forest to open temperate woodland, including second-growth forest, swamps, orchards, riverine forest, brushy hillsides, and desert.
Green-tailed towhee	*Pipilo chlorurus*	Yes	No	Found in mixed-species shrublands of intermediate and higher elevations, including piñon-juniper woodlands, montane sage steppe, and aspen. Nest on or near the ground under dense shrub cover.
Hairy woodpecker	*Picoides villosus*	No	No	Found in forest, open woodland, swamps, well-wooded towns and parks, open situations with scattered trees. Nests in hole dug mostly by male in live or dead tree or stub.
House finch	*Carpodacus mexicanus*	No	No	Found in arid scrub and brush, thornbush, oak-juniper, pine-oak associations, chaparral, open woodlands, towns, cultivated lands, and savanna. Nest on ledge, tree branches, shrub, and cacti.
House wren	*Troglodytes aedon*	No	No	Inhabits thickets, shrubbery, and brushy areas in partly open situations, open woodland, farmlands, chaparral, and areas around human habitations. Nests in cavities.
Juniper titmouse	*Baeolophus ridgwayi*	No	Yes	Found in piñon-juniper woodlands. Nest constructed in natural tree cavity, in old woodpecker hole
Lark sparrow	*Chondestes grammacus*	No	No	Found in shortgrass, mixed-grass, and tallgrass prairie; parkland; sandhills; barrens; old fields; cultivated fields; shrub thickets; woodland edges; shelterbelts; parks; riparian areas; brushy pastures; and overgrazed pastures. Nest on ground near plant or bush or in low tree or bush. May use old nest of mockingbird or thrasher.
Loggerhead shrike	*Lanius ludovicianus*	No	Yes	Found in open shrublands, including Mojave scrub, Joshua tree, salt desert scrub, sagebrush, lowland riparian, and montane riparian.
MacGillivary's warbler	*Oporornis tolmei*	No	Yes	Nests in dense riparian willow and alder at the edges of meadows, coniferous or mixed woods.
Mountain bluebird	*Sialia currucoides*	Yes	No	Found in coniferous forest edges, open woodlands, and in the transitional area between piñon-juniper woodlands and sagebrush.
Mountain chickadee	*Poecile gambeli*	No	No	Found in dry coniferous forests, especially ponderosa and lodgepole pines. During the summer they can also be found in high-elevation aspen forests. In winter, they sometimes inhabit juniper stands and river bottoms.
Mourning dove	*Zenaida macroura*	No	No	Found in open woodlands, forest edges, cultivated lands with scattered trees and bushes, parks and suburban areas, arid and desert country. Nest in trees or shrubs, sometimes on a stump or rock or on a ledge of a building, or on ground. May nest in an old nest of another species or build its own platform of twigs.
Northern flicker	*Colaptes auratus*	No	No	Found in open forest, both deciduous and coniferous, open woodland, open situations with scattered trees and snags, riparian woodland, pine-oak association, parks. Nests in dead tree trunk, or stump, or dead top of live tree; sometimes nests in wooden pole, building or earth bank.
Northern harrier	*Circus cyaneus*	No	No	Hunts over open land or marshes; usually flies low when hunting, captures prey on ground. Nests on the ground, commonly near low shrubs, in tall weeds or reeds, sometimes in bog; or on top of low bush above water, or on knoll of dry ground, or on higher shrubby ground near water, or on dry marsh vegetation.

Common Name	Scientific Name	Partners in Flight "Long term Planning and Responsibility Species"	Nevada Partners in Flight "Priority Species"	Habitat Associations*
Northern saw-whet owl	*Aegolius acadicus*	No	No	Found in dense coniferous or mixed forest, cedar groves, alder thickets, swamps, and tamarack bogs. Nests usually in old woodpecker hole or other tree cavity.
Piñon jay	*Gymnorhinus cyanocephalus*	No (Management)	Yes	Found almost exclusively in piñon-juniper and occasionally wander into sagebrush and Joshua tree.
Prairie falcon	*Falco mexicanus*	No	Yes	Forage in sagebrush, salt desert, wet meadows, and some agricultural areas; nest in cliff ledges with overhead cover.
Red-tailed hawk	*Buteo jamaicensis*	No	No	Found in wide variety of open woodland and open country with scattered trees, rarely in dense forest
Red-winged blackbird	*Agelaius phoeniceus*	No	No	Habitat includes freshwater and brackish marshes, bushes and small trees along watercourses, and upland cultivated fields. Nests usually are near water, in cattails, rushes, or sedges, occasionally in shrubs or trees.
Rock wren	*Salpinctes obsoletus*	No	No	Found in bare rock, talus, scree, on cliffs, and in the desert and shrubland/chaparral. Nest in gopher burrows, rock crevices, cavities under rocks, adobe buildings, etc.
Rough-legged hawk	*Buteo lagopus*	Yes	No	Found in grasslands, field, marshes, sagebrush flats, and open cultivated areas. Nests on cliffs.
Sage sparrow	*Amphispiza belli*	Yes	Yes	Found in big sagebrush and associated shrub species. Nest close to and on the ground under shrubs or in grass tufts.
Sage thrasher	*Oreoscoptes montanus*	Yes	Yes	Found in big sagebrush stands, in greasewood flats, and montane sagebrush steppe. Nest on the ground or in the shrub canopy, depending on greatest overhead cover.
Turkey vulture	*Cathartes aura*	No	No	Found in forested and open situations, from lowlands to mountains.
Vesper sparrow	*Pooecetes gramineus*	No	Yes	Found in sagebrush steppe and dry-grassland associated species during breeding. Nest on the ground under vegetative cover.
Western meadowlark	*Sturnella neglecta*	No	No	Found in grasslands, savanna, cultivated fields, and pastures. Summers in grasslands and valleys; ranges up to higher elevations in foothills and open mountain areas. Female builds nest on dry ground.
Western scrub jay	*Aphelocoma californica*	No	No	Found in scrub (especially oak, piñon and juniper), brush, chaparral, and pine-oak associations. Nest in low trees or shrubs.
	BLM Special Status bird species (5) in the Project Area			
*References: NatureServe 2010 and Great Basin Bird Observatory 2005.				

6.8.4.2 Upland Game Birds

Upland game bird species that are expected to occur within and surrounding the Long Canyon Project area include dusky grouse (*Dendragapus obscurus*), California quail (*Callipepla californica*), chukar (*Alectoris chukar*), mourning dove (*Zenaida macroura*), and grey partridge (*Perdix perdix*).

One Federal Candidate species occurs in the Project Area, Greater Sage grouse *(Centrocercus urophasianus).* The nearest Greater Sage grouse lek is located in the southwest portion of the Project Area and seasonal habitats occur in the Sagebrush Community type and the Wetland / Irrigated Meadow types. Winter and nesting habitat is located within the Project Area.

6.8.5 Raptors

BLM sensitive raptor species observed in the Project Area during the 2011 surveys included: golden eagle *(Aquila chrysaetos),* prairie falcon *(Falco mexicanus)*, and burrowing owl (*Athene cunicularia)*.

The golden eagle is primarily a cliff nesting species and the nearest suitable habitat is approximately one-half mile west of the Project Area.

The prairie falcon is also a cliff nesting species, but could use the Project Area for hunting.

Burrowing owls were observed in the 2011 field surveys, but no nest burrows were observed. The sagebrush, salt desert shrub, and wetland meadow complex all have suitable nesting habitat for the burrowing owls.

Other BLM sensitive species that have been observed in the project area include ferruginous hawk *(Buteo regalis)*, northern goshawk *(Accipeter gentilis), and* bald eagle *(Haliaetus leucocephalus).*

The ferruginous hawks typically nest in Piñon – juniper habitat types, which are present in the Project Area.

The Northern goshawk generally nests in aspen stands proximate to perennial streams; this environment is not present in the Project Area. Aspen does occur in the Pequop Mountains, west of the Project Area.

Bald eagles are rare breeders in Nevada, especially in eastern Elko County; however, this species may winter in the region.

6.8.6 Mammals

6.8.6.1 Mule Deer

Mule deer (*Odocoileus hemionus*), occur throughout the BLM Elko District. In 2010, NDOW conducted post-hunting season survey flights of the northeastern Elko County area, Units 071 through 079, and Unit 091. A total of 1563 Mule deer were classified during the survey with a resulting ratio of 18 bucks to 100 does to 50 fawns. Spring 2010 surveys were flown in late March and early April, with a total of 1643 deer being classified and yielding a ratio of 36 fawns to 100 adults. Although over winter fawn survival was good in 2010, the fawn ratios going into the winter were below the previous five-year average of 38 fawns to 100 adults.

The population model for Units 071 through 079 (the Long Canyon Project is located in Unit 078), and Unit 091, predicts a pre-hunt adult mule deer population slightly lower than 2010. The deer in these unit groups have been reduced as a result of wildland fires that have occurred in the area since 1999. Invasive weeds have invaded some of the burned areas and in areas where perennial grasses and forbes are found; however, in time, shrubs are expected to recover to pre-burn levels, as will deer populations.

The Long Canyon Project area is located within known mule deer winter range for the Area 7 deer herd. See ***Figure 20, Mule Deer Distribution***.

Mule deer scat, tracks, and disarticulated skeletal remains were observed throughout the project area during wildlife surveys. Historic studies and current satellite telemetry studies have documented that

mule deer wintering in the Pequop Mountains have summer ranges to the north and west in the Jarbidge Mountains. Deer from the Jarbidge Mountains, located in NDOW Management Unit 072, and the Snake Range, located in NDOW Management Unit 075, migrate to the south and east in the fall, through NDOW Management Unit 077 and on to their winter ranges located in NDOW Management Unit 078.

Unlike other deer migrations in northeastern Nevada, this migration begins before winter weather forces the deer to migrate. Typically, the migration southward begins in early October. The deer arrive on the winter ranges sometime before the end of October or the early part of November. The deer then remain on the winter ranges until early April when they begin their return migration to the summer ranges in and around the Jarbridge Mountains.

During the annual migration, a number of deer are struck by vehicles on Highway 93 and Interstate 80. NDOW and the Nevada Department of Transportation (NDOT) are working on projects to reduce deer mortality due to vehicle collisions, including construction of two big game overpasses on Highway 93.

6.8.6.2 Elk

The elk in this area are included within hunt Units 078, 104, 105, 106, and 107. Post season 2010 surveys resulted in the classification of 336 elk yielding age and gender ratios of 10 bulls to 100 cows to 21 calves. The 2010 calf ratio was down from 2009 observed ratio of 100 cows to 28 calves. The 2010 ratio is consistent with historic trends of weak calf ratios for this unit group.

Although elk production remains low, several mature bulls have been observed and harvested. Despite the low levels of calf recruitment observed in this unit, the 2010 population estimate shows an 11% increase over 2009 and may be attributed in part, to ingress from adjacent Unit 121. Harvest management has been designed to promote herd growth toward the population objective of 340 elk.

Elk (*Cervus canadensis*) are known to inhabit areas within and surrounding the Long Canyon Project, typically within higher elevations of the project area. See ***Figure 21, Elk Distribution***.

6.8.6.3 Pronghorn

Pronghorn (*Antilocarpra americana*), have been observed and occur year-round in the lower elevations of the eastern portion of the Long Canyon Project area. See ***Figure 22, Pronghorn Distribution***. Scat and tracks have been detected throughout the lower elevations of the project area during wildlife surveys.

Post-hunting season surveys in August and September 2010 resulted in 2004 pronghorn being classified. The resulting gender and age ratios for the sample were 46 bucks to 100 does to 27 fawns. The buck ratio was the same as the previous year; however, the fawn ratio increased for the first time in three years (up 42% from last year's ratios of 19 fawns to 100 does).

The pronghorn herd within and surrounding the Long Canyon Project appears to be stable and slightly increasing.

6.8.6.4 Predators, Furbearers and Small Mammals

Due to the secretive nature and nocturnal habits of many predators, furbearers and other small mammals, the specific distribution and population densities within the project and surrounding areas are unknown. Furbearers and predators known or likely to occur in the area include mountain lion

(Puma concolor), bobcat *(Lynx rufus)*, coyote *(Canis latrans)*, badger *(Taxidea taxus)*, desert cottontail *(Sylviagus audubonii)*, black-tailed jack rabbit *(Lepus californicus)*, woodrat *(Neotoma sp.)*, cliff chipmunk *(Eutamius dorsalis)*, long-tailed weasel *(Mustela frenata)*, golden-mantled ground squirrel *(Spermophilus lateralis)*, deer mouse *(Peromyscus maniculatus)*, kangaroo rat *(Dipodomys* spp*)*, and least chipmunk *(Tamias minimus)*.

6.8.6.5 Bats

Six species of special status bats were positively identified during the 2007 and 2009 field surveys: little brown myotis *(Myotis lucifugus),* silver-haired bat *(Lasionycteris noctivagans)*, long- eared myotis *(Myotis evotis)*, big brown bat *(Eptesicus fuscus,* small footed myotis *(Myotis ciliolabrum)* and Brazilian free-tailed bat *(Tadarida brasiliensis).* Potentially two additional species were identified, with less confidence: fringed myotis *(Myotis thysanodes),* and hoary bat *(Lasiurus cinereus).*

Numerous large extensive rock outcrops, which could provide roosting habitat for bats, are present in the Project Area. Long eared myotis were recorded in 10 of 16 sites, and should be considered the most common bat species at the site.

6.8.7 Wild Horses and Burros

The Long Canyon Project is not located within a BLM wild horse herd management area; however, wild horses are expected to use the area on a seasonal basis. As result of the elevation and winter conditions, the primary use of the area by wild horses would be during the summer months. The limited perennial water sources would restrict wild horse use to periods when ephemeral sources are available. There are no known burros in the area.

6.8.8 Threatened, Endangered, Candidate and Sensitive Wildlife and Fish Species

No federally listed threatened or endangered wildlife species occur within or immediately adjacent to the Long Canyon Project Area.

One federal candidate wildlife species occurs in the area, the Greater Sage grouse (*Centrocercus urophasians*). The project area lies between lower elevation and upper elevation summer Greater Sage Grouse habitat and is located in the BLM and the Nevada Department of Wildlife designated crucial winter habitat. Winter nesting habitat for Greater Sage Grouse is located within the project area.

The BLM provided a listing of their sensitive species for the Wells Field Office area. See ***Table 12, BLM Sensitive Wildlife and Fish Species Potentially Occurring Within Project Area***.

Table 12, BLM Sensitive Wildlife and Fish Species Potentially Occurring Within Project Area

Species Common Name	Scientific Name	Potential Habitat	Exclusion from Analysis (yes or no)	Reasons for Exclusion from or Inclusion in Analysis
MAMMALS				
Pygmy rabbit	*Brachylagus idahoensis*	Dense stands of sagebrush; identified in Project Area	No	Positive identification in 2011 survey.
Little brown myotis	*Myotis lucifugus*	No roosting habitat; foraging opportunity	No	Positive identification in field survey; Foraging use potential.
Silver-haired bat	*Lasionycteris noctivagan*	No roosting habitat; foraging opportunity	No	Positive identification in field survey; Foraging use potential.
Long-eared myotis	*Myotis evotis*	No roosting habitat; foraging opportunity	No	Positive identification in field survey; Foraging use potential.
Brazilian free-tailed bat	*Tadarida Brasiliensis*	No roosting habitat; foraging opportunity	No	Positive identification in field survey; Foraging use potential.
Fringed myotis	*Myotis thysanodes*	No roosting habitat; foraging opportunity	No	Foraging use potential.
Hoary bat	*Lasiurus cincereus*	No roosting habitat; foraging opportunity	No	Foraging use potential.
Small-footed myotis	*Myotis ciliolabrum*	No roosting habitat; foraging opportunity	No	Positive identification in field survey; Foraging use potential.
Big brown bat	*Eptesicus fuscus*	No roosting habitat; foraging opportunity	No	Positive identification in field survey; Foraging use potential.
BIRDS				
Gray vireo	*Vireo vicinior*	Nesting and foraging habitat exist in the Project Area	No	Potential for nesting and foraging.
Juniper titmouse	*Baeolophus griseus*	Nesting and foraging habitat exist in the Project Area	No	Potential for nesting and foraging.
Loggerhead shrike	*Lanius Ludovicianus*	Nesting and foraging habitat exist in the Project Area	No	Potential for nesting and foraging.
Piñon jay	*Gymnorhinus cyanocephalus*	Nesting and foraging habitat exist in the Project Area	No	Potential for nesting and foraging.
Vesper sparrow	*Pooecetes gramineus*	Nesting and foraging habitat exist in the Project Area	No	Potential for nesting and foraging.
Burrowing owl	*Athene cunicularia*	Sagebrush, salt desert shrub and wetland complex good	No	Potential nesting habitat in Project Area.
Prairie falcon	*Falco mexicanus*	Ledges, rock outcrops; Project Area contains suitable hunting	No	No large rock outcrops or cliffs in Project Area; potential hunting.
Bald eagle	*Haliaeetus leucocephalus*	No nesting habitat in project area; no perennial water	No	Carrion feeder; could use area.

Species Common Name	Scientific Name	Potential Habitat	Exclusion from Analysis (yes or no)	Reasons for Exclusion from or Inclusion in Analysis
Ferruginous hawk	*Buteo regalis*	Nesting habitat present; Piñon juniper	No	Known to occur in Project Area (BLM).
Golden eagle	*Aquila chrysaetos*	Cliff nesting;	No	No large rock outcrops or cliffs in Project Area.
Northern goshawk	*Accipiter gentilis*	Nests in apsen; none in Project Area	No	Observed in general vicinity.
INSECTS				
Mattoni's blue butterfly	*Euphilotes pallescens var. mattonii*	Slender buckwheat habitat in Project Area	No	Observed in Project Area.
FISH				
Relict dace	*Relistus solitarious*	Inhabits fresh water; lakes marshes	Yes	No habitat in Project Area.

6.9 Fisheries

According to the Nevada Natural Heritage Program (NNHP), the relict dace (*Relictus solitaries*), a BLM sensitive fish species, was observed in 2005 in the waters below Big Springs. Relict dace inhabits freshwater creeks, springs, and intermittent lakes and marshes with mud or stone bottoms. This species typically concentrates in well vegetated pools where banks are undercut. Relict dace is a mid-water swimmer and takes cover in soft bottom sediments or vegetation. This species feeds on amphipods, gastropods, arthropods, ostracodes and leeches.

6.10 Land Use and Range Resources

6.10.1 Land Use

Elko County contains 17,181 square miles, making it the second largest Nevada county in size (Nye County in Nevada is bigger) and the fourth largest county in the lower forty eight states. The majority of the land in the county is administered by agencies of the federal government. The BLM is the principal land manager of federal lands within Elko County. See ***Table 13, Elko County Land Status***.

Table 13, Elko County Land Status

Land Status[1]	Area (square miles)	Area (acres)	Percentage of Total (%)
Federal Government[2]	12,496	7,997,339	72.7
Tribal	251	160, 823	1.5
State	24	15,241	0.1
Local Government/Private	4,410	2,822,437	25.7
TOTAL	**17,181**	**10,995,840**	**100.0**

Notes:

(1) Source: Elko Public Lands Policy Plan (2008).

(2) Elko County lands administered by various federal agencies with percentage (%) of total land in county:

- 6,882,161 acres - Bureau of Land Management (62.6%)
- 1,073,143 acres - Forest Service (9.8%)
- 26,872 acres – U.S. Fish and Wildlife Service (0.2%)
- 15,163 acres – Department of Defense ((0.1%)

The Long Canyon Project Area has a mixture of federal and private land ownership. See ***Figure 5, Surface and Mineral Ownership***.

Public lands within the Long Canyon Project Area are administered by the BLM. The area is open space available for mineral exploration, mining, livestock grazing, wildlife habitat and recreation. There are several rights-of-way in the area, including the Wendover water pipeline, I-80, and the WREC electric transmission line north of I-80.

Private lands within and adjacent to the Long Canyon Project Area are owned by Elko Land and Livestock Company, a wholly owned Newmont subsidiary.

6.10.2 Range Resources

Agriculture and livestock production are important activities in Elko County. Most of the ranches and farms in Elko County are dependent upon federal lands for grazing. See ***Table 14, Elko County Agriculture and Livestock***.

Table 14, Elko County Agriculture and Livestock

	2002	2007	Percent (%) Change
Number of Farms and Ranches	397	456	+15
Total Farm/ Ranch Land (acres)	2,472,143	2,085,135	-16
Average Farm/Ranch Size (acres)	6,227	4,573	-27
Production Market Value	$45,311,000	$53,599,000	+18
Crop Sales	$1,680,000	$2,422,000	+44
Livestock Sales	$43,600,000	$51,177,000	+17
Farm/Ranch Average	$114,133	$117,541	+3
Government Payments to Farms/Ranches	$1,581,000	$460,000	-71
Average Government Payment to Ranches/Farms	$18,173	$12,118	-33
Forage Crops (acres)	130,361	119,735	-9
Cattle and Calves	135,554	129,276	-5
Sheep	19,627	15,217	-29

Source: 2007 Census of Agriculture, from U.S. Department of Agriculture, National Agricultural Statistics Service.

Elko Land and Livestock Company, a wholly owned Newmont subsidiary, owns and operates the Big Springs Ranch, which encompasses approximately 55,000 acres (private) and 350,000 acres (public) and whose current headquarters is located within the Long Canyon Project Area. The proposed mining and milling operations will be located within the East Pequop Bench and Payne Basin/Long Canyon/Six Mile pastures of the East Big Springs Allotment, which contains an estimated 305,736 acres.

The East Big Springs Allotment encompasses the Big Springs Ranch private lands, which are owned by Newmont. These lands are currently leased under short-term lease to a livestock owner/operator. Grazing use in the East Big Springs Allotment is governed by the "Final Grazing Management Decision and Record of Decision for the Sheep Complex, Big Springs, and Owyhee Allotments" dated October 30, 2006.

The East Pequop Bench Pasture has a carrying capacity of 3,069 Animal Unit Months (AUMs). Under the terms of the decision, this pasture is grazed on a four-year cycle. Two years out of four livestock use starts on March 1, with use starting on March 15 in the other two years. Livestock are removed from this pasture on June 15 in all four years. This pasture is divided by fences and water distribution into three use areas. The Long Canyon Project is located within an area that is used for livestock grazing at the end of each season (May through June) due to greater sage-grouse nesting and brood rearing habitat.

The Payne Basin/Long Canyon/Six Mile pasture has a current carrying capacity of 375 AUMs. Under the terms of the grazing decision, this would increase to 756 AUMs following completion of several range improvement projects and attainment of management objectives. The Long Canyon/Six Mile portion of this pasture is also grazed on a four year cycle, with livestock present from June 16 through August 30 in two years and June 16 through September 5 in the other two years.

Newmont will install a perimeter livestock fence around the Long Canyon Project Area to exclude livestock use of the area during mining and reclamation.

6.11 Noise

Noise is defined as unwanted, disturbing sound. The impact of a noise source depends on the levels and characteristics of the background noise, as well as the characteristics of the sound. Sound is transmitted through the atmosphere as low-intensity pressure waves. People can detect and respond to a wide range of sound intensities and frequencies.

The logarithmic decibel scale (dB) is used to indicate the intensity of sound. To measure a sound on a scale that approximates the way people hear, more emphasis must be placed on those sound frequencies (or pitch) that people hear. EPA recommends the use of the "A-weighted" sound pressure levels, expressed as A-weighted decibels or dBA, for analyzing community noise issues.

Table 15, Typical Range of Common Sounds, shows the range of dBA sound intensities that are produced by various noise sources. The threshold of human hearing is 0 dBA. Quiet whispers and birdcalls produce about 30 to 40 dBA. Diesel truck traffic on the highway can produce sounds around 90 dBA with ambulance sirens can reaching over 100 dBA. A military jet take-off with an after-burner can exceed 140 dBA.

Table 15, Typical Range of Common Sounds

Noise Sources (at a given distance)	A-Weighted Sound Level (dBA)
Military jet take-off with after burner (50 feet)	140
Commercial jet take-off (200 feet)	120
Ambulance siren (100 feet)	100-110
Leaf blower (3 feet)	95-105
Power lawn mower (3 feet)	85-95
Vacuum cleaner (3 feet)	85-90
Hairdryer (1 foot)	80-95
Motorcycle (25 feet)	90
Propeller plane flyover (1,000 feet)	90
Diesel truck, 40 mph (50 feet)	90
Garbage disposal (3 feet)	80
Passenger car, 65 mph (25 feet)	70
Normal conversation (5 feet)	55-65
Light traffic (2 miles)	50
Birdcalls (distant)	40
Soft whisper in quiet room (5 feet)	25-35
Recording studio	10-20
Threshold of hearing	0

Because decibels are measured on a logarithmic scale, a doubling of the sound pressure corresponds to a noise increase of around 3 dBA. For example, a single bulldozer typically produces about 85 dBA of noise at a distance of 50 feet from the bulldozer. Therefore, two identical bulldozers operating side by side (with each bulldozer producing 85 dBA) produce a theoretical noise level of 88 dBA.

Many factors determine whether an increase in the noise level above the existing background is "audible". The most important factor is the nature of the additional noise source as compared to the nature of the background noise. In the case of the proposed Long Canyon Project, the noise caused by mining activities will be different from the rural background sounds, so relatively small increases in noise levels caused by mechanical equipment will be noticeable.

The Long Canyon Project is located in an unpopulated and relatively remote area. There are no permanently (non-Newmont) occupied residences or human receptors within the designated project area. The closest residences to the Long Canyon Project are located in Section 2, Township 35 North, Range 66 East, approximately four miles north-northeast of the proposed WRSF. The Pequop Ranch (another non-Newmont private residence) is located in Section 32, Township 36 North, Range 66 East, also approximately four miles north-northwest of the proposed mine pit.

In general, the existing background noise in the Long Canyon Project Area is very quiet, with wind noise being a principal sound source. The existing exploration activities create some noise, as a result of drilling and traffic associated with the drilling. In addition, traffic along I-80 generates noise. There could be localized noise from recreational off highway vehicles (OHV) using the two-track roads in the area, as well as the occasional over-flight by jet aircraft.

6.12 Cultural Resources

To prevent vandalism, the BLM and the Nevada State Historic Preservation Office (SHPO) do not reveal the locations of cultural resource information to the general public.

Under the direction of the BLM and SHPO, Newmont has funded a qualified private archaeological consultant acceptable to both agencies to conduct Class III cultural resource inventories for the Long Canyon Project Area. Survey information is provided directly to the BLM and SHPO, who will determine if any inventoried sites are eligible for listing on the National Register of Historic Places (NRHP), per Section 106 of the National Historic Preservation Act (NHPA).

Newmont is working with the BLM and SHPO to prepare a programmatic agreement amongst the BLM, SHPO, Native American tribes, and Newmont that will accommodate the Section 106 process specifically to the Long Canyon Project. This agreement will memorialize survey and inventory protocol, mitigation procedures, reporting requirements, and schedules and timelines for survey, mitigation and reporting.

6.12.1 Native American Religious Concerns

In accordance with the NHPA, NEPA, the Federal Land Policy and Management Act (FLPMA), the American Indian Religious Freedom Act, the Native American Graves Protection and Repatriation Act (NAGPRA), and Executive Order 13007, the BLM must provide affected tribes an opportunity to comment and consult on the proposed project. This process will occur as part of the EIS work to be completed for the project.

It is expected that the BLM will consult with the Duck Valley Shoshone-Paiute Tribes, Te-Moak Tribal Council, Battle Mountain Band Council, Elko Band Council, South Fork Band Council, Wells Band Council, Western Shoshone Committee, the Confederated Tribes of the Goshute Reservation, and the Western Shoshone Defense Project.

6.13 Recreation

This region of Nevada offers extensive areas of open space, where visitors can participate in back country recreation activities in an undeveloped setting. The relative remoteness of this area and the unimproved roads leading into the area provide recreation opportunities, from backcountry camping and hunting to sightseeing and mountain biking. Although the remoteness and unimproved roads in some ways limit recreational use, those wanting a dispersed, backcounty recreational experience can be drawn to the area. The demand for dispersed recreation in Elko County has risen in recent years due to increasing population and a gradual shift in preference from recreation at developed sites to dispersed recreation.

The primary dispersed recreational use in the vicinity of the Long Canyon Project is hunting, principally for mule deer but also for antelope, elk, and small game. The Long Canyon Project Area is located within NDOW Hunt Unit 078.

Other dispersed recreational activities consist of Christmas tree gathering, OHV travel (including motorcycle use), mountain biking, shed antler hunting, and hiking. OHV travel is allowed on BLM-administered lands throughout the project area and is not restricted to existing roads. Much of the OHV

traffic is associated with hunting activities. In winter, when sufficient snow is present, the dispersed recreational opportunities can include Nordic (cross-country) skiing, snowshoeing, and snowmobiling.

No developed recreational facilities, such as campgrounds or formal trail systems operated by the BLM or other agencies, exist within the Long Canyon Project Area; however, some of the roads within and adjacent to the project area have been used in recent years for mountain bicycle and motorcycle races. Hunters, bicyclists and motorcyclists utilize the road accessing Big Springs Ranch (County Road 790) and the road through Long Canyon for recreation access and some dispersed camping, although most of the camping in this area is likely related to hunting activity.

6.14 Transportation

The transportation analysis for the Long Canyon Project includes I-80, State Route 233, and County Road 790, the access road to the project site from Exit 378 on I-80. The roads within the region are shown on ***Figure 23, Transportation Routes***.

Traffic loads/traffic counts are identified as annual average daily traffic (AADT). AADT is defined as the average annual measure of traffic over a 24-hour period and is determined by counting the number of vehicles passing a specific point on a particular road from either direction.

The NDOT estimates AADT based on actual traffic counts made at various locations along Interstate 80 and State Route 233. See ***Table 16, Traffic Counts for 2010***.

Table 16, Traffic Counts for 2010

Location[1]	Annual Average Daily Traffic (AADT)[2]			Average AADT (2008-2010)
	2008	2009	2010	
Interstate 80 at Elko (Exit 317) (2.6 miles east of interchange)	7100	6600	7300	7000
Interstate 80 at Wells (Exit 351) (0.25 miles east of interchange)	6500	6700	6600	6600
Interstate 80 at Wells (Exit 351) (0.15 miles west of interchange)	6200	6700	6600	6500
Interstate 80 at Oasis (Exit 378) (0.3 miles west of interchange)	5200	4900	5000	5030
Interstate 80 at West Wendover (Exit 398) (1.0 mile east of Pilot Peak interchange)	5300	5100	5100	5170
Interstate 80 at West Wendover (Exit 410) (0.2 mile east of West Wendover interchange)	6200	6100	5700	6000
State Route 233 at Oasis (0.1 mile north of Exit 378 off Interstate 80)	300	290	300	297

Notes:

1. See ***Figure 23, Transportation Routes***.
2. Traffic counts based on data obtained from the Nevada Department of Transportation. Annual Average Daily Traffic abbreviated as AADT, is the average annual measure of traffic over a 24-hour period and is determined by counting the number of vehicles passing a specific point on a particular road from either direction.

6.14.1 Interstate 80

I-80 is a major U.S. highway that traverses northern Nevada from east to west. It serves at the main commercial truck route between Reno, Nevada and Salt Lake City, Utah, with over 75 percent of the traffic loads between West Wendover and Wells being over-the-road tractor-trailer trucks.

I-80 is an all-weather, four-lane, limited access highway, with both asphalt and concrete paving. In Elko County, this highway is generally flat, with the exceptions of the Pequop Summit (summit elevation of 6,968 feet) between Wells and Oasis, and the Silver Zone Pass (summit elevation of 5,955 feet) between Oasis and West Wendover. This highway provides exit access to the communities of West Wendover, Wells, and Elko.

6.14.2 State Route 233

State Route 233 is an asphalt, all-weather, two-lane road. This road connects with Utah State Highway 30 (at the Nevada/Utah border), and Utah State Highway 30 connects to Interstate 84 in northern Utah. Route 233 and Highway 30 are principally used by local and commercial traffic.

6.14.3 Project Access and Other Roads within the Project Area

The Long Canyon Project site is accessed on County Road 790, south from I-80 at the Oasis / Montello Exit 378. Newmont has improved approximately four miles of this road from I-80 to the Big Springs Ranch to provide all-weather access for exploration. The county road ends at the Big Springs Ranch.

Numerous two-track (non-exploration) roads currently exist within the Long Canyon Project Area. Most of these light use, roads are unimproved and inaccessible during wet periods and often during winter months. Given the mixture of land ownership in this area, the public has limited access to portions of the area. Although roads on BLM-administered lands are open to the public, many of these roads can be closed to public access once they cross onto the privately-owned land surface.

Newmont has established light-duty roads on its mining claims for exploration drilling activities. Public access is restricted on these roads, which are scheduled for closure and reclamation following exploration activities unless there is some long-term beneficial need for future mining or agricultural purposes.

6.14.4 Public Safety

NDOT accident statistics for I-80 between Wells and West Wendover for 2009 through 2011 are shown on ***Table 17, Accident Data: Interstate 80 (Wells to West Wendover)***.

Table 17, Accident Data: Interstate 80 (Wells to West Wendover)

Year	Wells to Oasis[2] (Exit 351 to Exit 378)			Oasis to West Wendover (Exit 378 to Exit 407)		
	Reported Accidents	Injuries	Fatalities	Reported Accidents	Injuries	Fatalities
2009	47	16	0	32	21	1
2010	45	15	3	28	9	1
2011	44	9	0	21	15	1
Total [1] (2009-11)	**136**	**40**	**3**	**81**	**45**	**3**
Three-Year Average	45	13	1	27	15	1

Notes:

(1) Accident data obtained from the Nevada Department of Transportation.

(2) This includes accidents at Oasis interchange where there were 3 accidents in 2009, 2 accidents in 2010, and 2 accidents in 2011, although all but one of the seven accidents reported involved property damage only. In these seven accidents, there were no fatalities and only one injury was reported.

NDOT accident investigations for I-80 between Wells and West Wendover from 2009 through 2011 revealed that 84 percent of the reported accidents were single vehicle and 62 percent of the accidents occurred during daylight hours. NDOT reported one “head-on” and nine “rear-end” accidents during the 2009 through 2011 period, with only one accident during this timeframe where alcohol was a factor. In nearly 20 percent of the accidents, a tractor-trailer rig was involved, which should not be considered unusual given that the majority of traffic on I-80 involves large trucks.

Accident investigation details for I-80 between Wells and West Wendover for 2009 through 2011 are shown on ***Table 18, Accident Investigations: Interstate 80 (Wells to West Wendover)***.

Table 18, Accident Investigations: Interstate 80 (Wells to West Wendover)

Accident Factors	Wells to Oasis[2] (Exit 351 to Exit 378)		Oasis to West Wendover (Exit 378 to Exit 407)	
	Number of Accidents	Percentage of Total	Number of Accidents	Percentage of Total
Wet Conditions or Debris on Road	15	11%	10	12%
Snow and Icy Conditions	37	27%	12	15%
Wildlife Related Collisions	33	24%	10	12%
Other (e.g., Fatigue or Distracted Driver)	51	38%	49	61%
Total[1]	**136**	**100%**	**81**	**100%**

Notes:
(1) Accident data obtained from the Nevada Department of Transportation. The data in this table is for years 2009 through 2011.
(2) This includes accidents at Oasis interchange where there were 3 accidents in 2009, 2 accidents in 2010, and 2 accidents in 2011.

6.14.5 Union Pacific Railroad

The Union Pacific Railroad (UP) operates two rail lines in the vicinity of the Long Canyon Project. One line is north of the project site and I-80 and is known as the UP Overland Route; the other line is south of the project area and is identified by UP as the Central Corridor.

Both routes intersect near the town of Wells and generally follow the Humboldt River in northern Nevada toward Reno. East of Wells, the Overland Route traverses north of I-80 at Wells, heading into northern Utah and southern Wyoming. The Central Route shifts southward from Wells, before heading eastward toward Salt Lake City, generally paralleling I-80 east of Silver Zone Pass.

The UP hauls freight over both routes. Amtrak utilizes the Central Route and identifies this route as its California Zephyr, which runs from Chicago to San Francisco, with numerous stops, including Reno, Winnemucca, Elko and Salt Lake City.

6.15 Visual Resources

Scenic quality is a measure of the visual appeal of a parcel of land. This is the heightened visual experience that an individual derives from the view of natural and/or manmade elements of the viewshed.

The Long Canyon Project Area lies within the Basin and Range Physiographic Province of Nevada, that is characterized by broad valleys (basins) alternating with north-south-trending mountains. The mountains are dominated by piñon-juniper woodlands, interrupted by occasional open meadows and rock cliffs and outcrops. The valley floors in the Basin and Range Province tend to be flat and monotypic and dominated by grass and shrubs, mainly sagebrush and rabbitbrush, or playa communities.

The project site is located on the western edge of the Goshute Valley and the eastern slope of the Pequop Mountains, extending from approximately 5,600 feet AMSL to elevations over 8,000 feet ASML. The tallest peak in the vicinity of the proposed project is the South Pequop Peak that reaches an elevation of 9,249 feet ASML.

Goshute Valley, with its broad reaches of flat topography, has dominant colors ranging from light to moderate greens in the springtime, to pale yellows and browns in the summer and fall, although sagebrush remains grey-green year round. The Pequop Mountains create a gently undulating horizon line, with smooth and consistent shades of dark green and black coloring, intermixed with bands of light to dark gray cliffs and outcrops.

Human alterations include the community of Oasis, I-80 highway corridor, railroad corridors and facilities, State Route 233, County Road 790, smaller unpaved roads and trails, range improvements, and a network of mine exploration roads and exploration facilities visible in the immediate project vicinity.

The BLM has adopted a Visual Resource Management (VRM) system to guide management of visual resources; this management tool is described in the BLM VRM Manual 8400. Under the VRM system, an inventory of visual resources is conducted for each district, based on a scenic quality evaluation, sensitivity analysis, and delineation of distance zones. Based on these analyses, the BLM assigns VRM classes to the area during their resource management planning (RMP) process.

In the Long Canyon Project area, there are VRM Class III and IV areas. Class III represents an area of moderate visual value, whereas areas assigned a Class IV are considered to have the lowest visual value. The management objectives for these classes follow:

> **Class III Objective.** The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
>
> **Class IV Objective.** The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high, and these management activities may dominate the view and be the major focus of the viewer's attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

The upper portion of the proposed mine pit is located in a Class III VRM area, with the remaining project area being located within the Class IV VRM class. See ***Figure 24, Visual Resources***.

In its Record of Decision (ROD) for the 1983 Wells Resource Management Plan (RMP), the BLM identified a three-mile width "Low Visibility Corridor" along the I-80 corridor. The objectives for this Low Visibility Corridor are to minimize visual impacts along I-80 (1.5 miles on each side) using Class II VRM management criteria. The Long Canyon Project site is located outside this corridor; thus, the BLM VRM Classes III and IV will be the guiding policy for effects of the proposed mining and milling project on visual resources.

6.16 Socioeconomics

The geographic area considered for describing the socioeconomic environment for the Long Canyon Project encompasses portions of Elko County, Nevada, and Tooele County, Utah, specifically four municipalities: Elko (Nevada), Wells (Nevada), West Wendover (Nevada), and Wendover (Utah). See ***Figure 25, Socioeconomic Study Area.***

The small unincorporated portions of Elko County (specifically Montello and Oasis) and more distant locations such as Twin Falls, Idaho, and Salt Lake City, Utah, will experience negligible indirect effects from the Long Canyon Project, so these locations are too small or too distant to be considered in the socioeconomic analysis.

While the town of Wendover is located in Utah, it is more than 100 miles from the city of Tooele (the nearest significant population center in Tooele County) and is immediately adjacent to West Wendover, Nevada. As a result, the socioeconomic analysis compares Wendover's demographic and other social background data against Elko County, Nevada, and the state of Nevada as a whole.

6.16.1 Population and Demographics

As of 2010, Elko County had an estimated population of 48,818 persons, which was only approximately 2% of the 2010 Nevada population of 2,700,551 persons. The city of Elko, the county seat for Elko County, had a population of 18,297 persons. See ***Table 19, Population: 2010***.

Table 19, Population: 2010

	Elko	Wells	West Wendover	Wendover, Utah	Elko County	Nevada
Total	18,297	1,292	4,410	1,400	48,818	2,700,551
Male	51%	53%	53%	52%	52%	50%
Female	49%	47%	47%	48%	48%	50%
Source: U.S Department of Commerce, Bureau of Census: U.S. Census 2010.						

The median age in the study area communities is between 27 and 31, with the exception of Wells, which has a median age of 40. See ***Table 20, Age Distribution: 2010***. Wells also has the largest population of residents over the age of 65 (13%), which is double that of other communities. This may reflect the tendency for younger Wells residents to move away from Wells to purse employment opportunities.

Table 20, Age Distribution: 2010

	Elko	Wells	West Wendover	Wendover, Utah	Elko County	Nevada
Median Age	31	40	27	29	33	36
Under 18 years	28%	25%	38%	35%	29%	25%
Over 18 years	64%	62%	57%	59%	62%	63%
Over 65 years	8%	13%	4%	6%	8%	12%
Source: U.S Department of Commerce, Bureau of Census: U.S. Census 2010.						

The Nevada State Demographer's office projects Elko County's population to reach approximately 57,953 by 2020, projected to grow at approximately one percent each year until 2015, after which growth is expected to decrease to nearly zero by 2019. While these projections are helpful as

background, they may be somewhat conservative and do not account for potential increases that may occur due to mining projects (including the Long Canyon Project and other related activities), diversification in the local economy, or other factors.

Education levels for individuals age 25 or older varied in the study area, although residents of the city of Elko are more likely to have graduated high school and/or completed some college coursework or an Associates' degree. Wendover and West Wendover tend to have relatively lower graduation rates, but higher college graduation rates. See ***Table 21, Educational Status: 2009***.

Table 21, Educational Status: 2009

	Elko	Wells	West Wendover	Wendover, Utah	Elko County	Nevada
High School Graduate	36%	27%	14%	14%	34%	30%
Associate Degree	8%	11%	7%	3%	8%	7%
Bachelor Degree or Higher	7%	2%	11%	11%	12%	14%
Source: U.S Department of Commerce, Bureau of Census (2009).						

6.16.2 Employment and Income

Elko County "at-place" employment by major industry classification (the number of jobs that exist in a given location, regardless of where those job holders live) is set forth in ***Table 22, Elko County At-Place Employment by Sector for Major Industry Classification***.

Table 22, Elko County At-Place Employment by Sector for Major Industry Classification

Accommodation and food service	Mining, quarrying and oil/gas extraction	Retail trade	Industries with less than 3% of total employment	Health care and social assistance	Construction	Wholesale trade	Transportation and warehousing	Other services (except public administration)
30%	23%	13%	13%	7%	4%	4%	3%	3%

The major employment sectors in Elko County are:

- Accommodation and Food Services;
- Mining;
- Retail Trade Industries; and
- Small businesses (each with less than 3% of total employment).

The state of Nevada is one of the world's largest producers of gold. While many mine employees in the region (particularly those employed by Newmont) are statistically counted as being employed in Elko County (the location of Newmont regional headquarters), much of the region's actual mining occurs in Lander and Eureka Counties to the west.

The largest employers in Elko County are Elko County School District (1,000-1,500), Cactus Pete's Casino (600-700), Peppermill, Montego Bay and Rainbow casinos (600-699), and Wendover Casino (500-600).

Other companies with a large presence in Elko County include Newmont, Barrick, Caterpillar Services, Pepsi Bottling Group, and Cummins Rocky Mountain LLC.

The median annual household income in Elko County is $62,420, approximately 12% above the $55,585 median annual household income for Nevada. See ***Table 23, Income: 2009***

Table 23, Income: 2009

	Elko	Wells	West Wendover	Wendover, Utah	Elko County	Nevada
In-labor workforce (pop 16+ years)	48.75%	52.11%	56.00%	59.10%	47.97%	44.23%
Median household income ($)	62,420	58,007	36,488	38,973	63,327	55,585
Median family income ($)	73,458	63,527	42,117	41,625	72,981	63,912
Per capita income (age 16+) ($)	27,805	21,434	14,478	14,418	25,771	27,395
Source: U.S Department of Commerce, Bureau of Census: 2009.						

The percentage of families and individuals living under the poverty level is set forth in ***Table 24, Poverty Levels.***

Table 24, Poverty Levels

	Elko	Wells	West Wendover	Wendover, Utah	Elko County	Nevada
Families below the poverty level (%)	8.55	8.26	8.79	16.43	7.33	8.00
Individuals below the poverty level (%)	8.02	8.41	16.49	14.53	8.52	11.10
Source: U.S Department of Commerce, Bureau of Census: 2009.						

Over the past three years, unemployment rates in Elko County have hovered at nearly half of the state average for unemployment. See ***Table 25, Unemployment Rates***.

Table 25, Unemployment Rates

	2009	2010	2011
	Average (%)	Average (%)	Average (%)
Elko County	8.0%	7.8%	6.8%
Nevada	14.5%	14.9%	12.6%

6.16.3 Housing

Housing information for the region is set forth in **Table 26, Housing Characteristics**.

Table 26, Housing Characteristics

Occupation	Elko	Wells	West Wendover	Wendover, Utah	Elko County	Nevada
Housing Units	7,151	690	1,668	476	19,492	1,140,555
Occupied Housing Units	6,725	566	1,398	362	17, 324	979, 621
% of Total Housing Units Occupied	**94.0%**	**82.0%**	**83.8%**	**76.1%**	**88.9%**	**85.9%**
Owner-Occupied Units	4, 369	427	674	162	12, 313	589, 050
% Housing Units Owner-Occupied	**65.0%**	**75.4%**	**48.2%**	**44.8%**	**71.1%**	**60.1%**
Renter Occupied Housing Units	2,356	139	724	200	5,011	390, 571
% of Housing Units Renter-Occupied	**35.0%**	**24.6%**	**51.8%**	**55.2%**	**28.9%**	**39.9%**
Vacant Housing Units	426	124	270	114	2,168	160, 934
Vacancy Rate	**6.0%**	**18.0%**	**16.2%**	**23.9%**	**11.1%**	**14.1%**
Vacant Units: Seasonal & Migrant Workers	115	15	86	8	0	37, 697
Vacancy Rate, excluding Seasonal & Migrant	**4.4%**	**16.1%**	**11.6%**	**22.6%**	**6.9%**	**11.2%**
Average Household Size (Occupied Units)	2.62	2.55	3.16	3.52	2.73	2.65
Median Contract Rent	$ 692	$ 494	$ 542	$ 431	$ 628	$ 850
Median Value of Owner-Occupied Units	**$ 181,500**	**$ 124,800**	**$ 101,100**	**$ 110,100**	**$ 178,200**	**$ 254,200**
Source: U.S. Department of Commerce, Bureau of Census: 2012.						

In the region, the vacancy rate is highest in Wells, Nevada (nearly 23%) and lowest in the city of Elko, Nevada, where less than 5 % of housing units are unoccupied.

Elko County has a slightly higher share of owner-occupied housing units then the state of Nevada, but more than half of the housing units in West Wendover (Nevada) and Wendover (Utah) are renter-occupied, compared to less than 19% in Wells and 31% in Elko County. This reflects the presence of the casinos as the large employers in the Wendover area.

Average household sizes range from 2.53 persons per unit in the city of Elko to 3.15 persons per unit in Wendover (Utah). Elko County has similar average household sizes as the state of Nevada as a whole.

Contract rents in this region are highest in Elko ($611 per month) and lowest in Wells ($413 per month), but all rents in this area are lower than the Nevada state average.

Similarly, the median value of owner occupied housing is lower in this area then in Nevada. Median housing values are highest in Elko ($171,500) and lowest in Wells ($89,100), suggesting a higher demand for housing in the city of Elko than other towns and communities in this area.

The very low non-seasonal vacancy rates in the city of Elko and Elko County correspond largely to the strength of the mining industry in Northern Nevada. As the only large city in the region and because most operating gold mines are west of Elko, this city is a centralized location for workers in the mining and affiliated industries, as compared to Wells and the Wendover area that are removed from the mining activity at present.

6.16.4 Community and Public Services

Community and public services include the following:

- Education;
- Law Enforcement;
- Fire Protection;
- Hospital and Medical Services;
- Emergency Response Services;
- Social Services;
- Water Supply;
- Wastewater Treatment;
- Solid Waste; and
- Electric Utilities.

6.16.4.1 Education

County-run school systems serve the population of the study area. The cities of Elko, Wells and West Wendover are served by the Elko County School District. Wendover is served by the Tooele County School District.

The Elko County School District has 15 elementary schools, eight middle and junior high schools, and seven high schools. The Communities in Schools program operates the Fellows Academy, a community-based dropout prevention program at Spring Creek High School, and a similar program at Elko High School. Approximately 9,500 students were enrolled in Elko County public schools during the 2010-11 school years.

There are three private schools in Elko County: (1) Grace Christian Academy with 48 students in K-12, (2) Elko Institute for Academic Achievement hundred and 72 students in K-8, and (3) Ruby Mountain Christian School in Spring Creek with 57 students in K-12.

There are two adult learning centers in Elko County: (1) the Elko County School District Adult High School, which offers the adult high school diploma and a GED preparation program, and (2) The Adult Learning Center at the West Wendover High School.

Elko is also home to Great Basin College (GBC), which offers two-year and four-year degrees, along with satellite programs in many outlying communities. GBC is a member institution of the University and Community College System of Nevada and is accredited by the Northwest Association of Schools and Colleges. GBC currently offers bachelor degrees in elementary education, nursing, applied sciences, and integrative and professional studies, as well as a number of associate degree programs in fields relevant to the mining industry (e.g., diesel technology, industrial millwright technology, and electrical technology).

West Wendover and Wells each have an elementary school and combined junior/senior high school. West Wendover has extension offices for both GBC and Utah State University. Wells also has an extension office for GBC.

Wendover, Utah is served by an elementary school and the combined junior/senior high school, both in the Toole County School District.

6.16.4.2 Law Enforcement

Elko and West Wendover each have their own police departments. The Elko County Sheriff's Department provides services to the town of Wells, while the Toole County Sheriff Department provides services to Wendover, Utah. The towns of Wendover and West Wendover do not have mutual aid agreements and will only cross the state boundary if specifically requested.

Officers from the Nevada Highway Patrol monitor I-80 and other highways in Elko County on a daily basis. The Northern Command East of the Nevada Highway Patrol is located in the city of Elko. In addition to providing law enforcement for the Nevada interstate state highway system, the Nevada Highway Patrol also provides assistance to the Elko County Sheriff's Department and the police departments of Elko and West Wendover on an as needed basis.

In addition, the BLM, the Forest Service, and the Nevada Division of Wildlife (NDOW) employ enforcement officers who are responsible for enforcing their natural resource and wildlife regulations.

6.16.4.3 Fire Protection

Elko, Wells, West Wendover and Wendover each have their own fire department. With the exception of Wendover's fire department that is staffed entirely by volunteers, the other fire departments have full time staff, although these staffs are supported by volunteers.

The BLM provides fire protection coverage for their holdings, and seasonal fire crews and personnel are stationed in Elko. The BLM coordinates with local fire districts and the Nevada Department of Forestry (NDF) for initial response, mutual aid, and cooperative fire control. The NDF coordinates or supervises an organized statewide system for prevention, detection, and suppression of unwanted wildfire and supports risk emergency services within the NDF's protection districts including the Long Canyon Project Area.

6.16.4.4 Hospital and Medical Services

Most of the healthcare facilities and services in the study area are concentrated in Elko, including the Elko Clinic, Elko Family Medical and Dental Center, Elko Mental Health Clinic, Golden Health Medical Center (that serves employees from Newmont and Barrick and their family members), Great Basin Surgical, Elko Diagnostic Imaging, and numerous physical therapy clinics.

The Northeastern Nevada Regional Hospital (NNRH) is Elko County's only hospital and affiliated 24-hour emergency room. The NNRH is located in Elko approximately 50 miles (or a 45 minute drive) from Wells and 100 miles (or a 90 minute drive) from the West Wendover/Wendover area.

NNRH is a private hospital with 75 acute care beds and no long-term care beds. It provides extensive diagnostic, specialized medical services, and mental health services in addition to family practice. NNRH's primary service area is Elko, Spring Creek, and Carlin, but the hospital also receives patients from Wells and Battle Mountain. NNRH has a helipad located near the emergency room entrance.

Residents from the West Wendover/Wendover area typically go to hospitals or primary care providers in Salt Lake City, Utah.

The Wells Rural Health Clinic (located in Wells) is managed by NNRH and is open four days per week. This clinic is staffed by one advanced practice nurse and one nurse, with capacity for 25 to 30 patient visits per day. The clinic's services include family practice in women's health, post-accident care in urgent care drug screening and physicals. The clinic operates a small dispensary from which medications can be obtained.

The Wendover Community Health Center serves the West Wendover/Wendover area and is open Monday through Friday. Operated by Nevada Health Centers, Inc., it is a federally qualified health center. The center receives federal grants and can offer uninsured patients sliding scale fees, with no limit to the number of Medicaid and Medicare patients accepted. The West Wendover/Wendover area has one pharmacy at the Smith's grocery store and a small dispensary in the Wendover Community Health Center.

6.16.4.5 Emergency Response Services

Elko County ambulance services have advanced life support certified service with paramedics, EMTs and volunteers across the county. Ambulance units are stationed in towns of Elko, Wells and Jackpot. All ambulance service in Elko County is dispatched through the central 911 Dispatch Center.

NNRH works with Elko County ambulance services and the local air ambulance service (Summit Air Ambulance) for emergency events such as railroad related chemical spills, highway accidents, mine accidents, etc.

The Wells Clinic contacts the Elko County ambulance for emergency conditions that exceed their capabilities. In such cases, ambulances transfer patients to NNRH.

In cases where the Wendover Community Health Center must transfer patients to more advanced facilities, the clinic can either contact the local ambulance service and/or Life Flight or Air Med. These services typically transport patients to a hospital emergency room in Salt Lake City, a 45 minute flight. A helipad is located in front of the clinic for emergency transport. In adverse weather conditions, a fixed wing medevac aircraft can be summoned to the Wendover Airport.

The Northeast Nevada Community Emergency Response Team (CERT) program has been in operation since mid-2010. It was formed to help communities train for hazards (a need that was particularly highlighted by the 2008 earthquake Wells). The Elko County school district has been particularly involved in CERT.

6.16.4.6 Social Services

Elko County Social Services provides public assistance to low income families and the elderly. As with the other health resources, most of the regions mental health and social welfare services are located in Elko. Like most other rural counties in Nevada, Elko County has a shortage of social workers and alcohol, drug and gambling counselors. Elko County nonprofit organizations, such as churches, also provide a variety of social service programs.

6.16.4.7Water and Sewer

All of the individual cities and towns in the study area have public water and wastewater systems, with varying amounts of available capacity. Unincorporated areas of Elko and Tooele counties rely on private wells and septic systems.

Potable water for municipal systems comes from either groundwater or surface water (typically springs). All of the communities have sufficient water and sewer capacities at this time to serve the needs of their residents.
The Johnson Spring Transmission System, which is owned by the towns of Wendover and West Wendover (50 percent ownership for each town), manages the water from the Big Springs / Johnson Spring / Shafter Well Field system, including the water treatment facility.

The primary water supply for the town of Wendover comes from outside of the Goshute Valley; however, Wendover purchases additional water from the Johnson Spring Transmission System, as needed. As part of an effort to ensure continuity of water supplies in the event of unforeseen problems during advanced exploration at the Long Canyon Project site, Fronteer Gold (Newmont's predecessor) drilled a new production water well.

6.16.4.8 Solid Waste

There are two public landfills in the study area: Class I Landfill near the city of Elko and a Class II Landfill near the town of West Wendover. Both of these landfills have been approved by the NDEP Bureau of Waste Management.

6.16.4.10 Electric Utilities

NV Energy provides electric power for the city of Elko and surrounding area. Wells Rural Electric serves customers in Wells, West Wendover, and Wendover, Utah. Electricity in this part of Nevada is provided by a mix of coal, gas and hydroelectric sources.

Natural gas for Elko County, the city of Elko, and Wells is provided by Southwest Gas Corporation. The towns of Wendover and West Wendover are served by Wendover Gas Company.

6.16.5 Social Values

Elko County has a long history with agriculture, mineral exploration, mining, construction, transportation, and gaming. Many households in the county identify with making a living from the land, and many communities, specifically Elko, Spring Creek and Carlin, obtain economic benefits from the high-wage jobs associated with mineral exploration and mining. Most Elko County residents tend to value economic opportunity as represented by natural resource activities (agriculture, mineral exploration, and mining) but some also raise concerns about the impacts of such activities on land use, hydrologic resources, wildlife habitat, and recreation.

As explained in Section 6.16.1, Population and Demographics, Elko County has experienced an increase in population and employment over the past several decades. Most Elko County towns have not experienced the economic downturn that has gripped other parts of Nevada and the U.S., and most Elko County residents, including those that have recently relocated to the area, are supportive of traditional natural resource activities. The majority of residents of the region view mineral exploration and mining as having a positive effect on the quality of life because of economic stimulus and opportunities.

6.17 Fire Management

No fuel reduction or habitat enhancement projects have been conducted or are proposed within the Long Canyon Project Area; however, the BLM has ongoing hazardous fuels reduction and habitat enhancement projects, in the vicinity of the project area.

6.18 Paleontology

Fusulinid and crinoid columnals are present (with rare occurrence of gastropods) in the Pequop Formation in the Spruce Mountains. In the Pequop Mountains, Pequop Formation is noted to contain only some fusulinids. The Lehman Formation in the upper Pogonip Group is highly fossiliferous and contains planispiral gastropods and the ostracode *Leperditia*, which are characteristic. Based on the limited, literature review of the geologic setting of Long Canyon Project Area, significant vertebrate fossils are not abundant within the geological formations noted to be present. Additionally, there would appear to be limited potential for preserved paleonotological resources due to the extensive hydrothermal alteration, folding, and faulting evident in the project area.

6.19 Wilderness and Wilderness Study Areas

There are no Wilderness or Wilderness Study Areas (WSA) within or adjacent to the Long Canyon Project Area. The South Pequops WSA is approximately 20 miles to the south of the project area.

7.0 OTHER INFORMATION [43 CFR §3809.401(C)(2)]

The BLM has previously approved exploration activities at the Long Canyon Project site, and these activities are ongoing. The BLM has issued environmental assessments (EAs) in July 2008 and June 2011 for the site, giving this agency a solid working knowledge of the environmental conditions at the site.

8.0 RECLAMATION COST ESTIMATE [43 CFR §3809.401(d)]

Newmont will complete the reclamation cost estimate for the Long Canyon Project after the BLM has completed its NEPA review and settled on a preferred alternative for operations.

The statutory and regulatory authority of the BLM and NDEP will require that Newmont execute a reclamation financial assurance agreement as part of the plan approval and mining/reclamation permit from these agencies. This agreement will ensure that sufficient monies are available to properly reclaim disturbed areas and conduct monitoring and other measures to prevent or control long-term environmental impacts at the Long Canyon Project in the event that Newmont was unable to meet its reclamation and environmental protection obligations.

No construction, mining or milling operations can commence without approval of the plan of operations, appropriate permits from NDEP and the execution of financial assurance agreements for sufficient reclamation funds to the agencies responsible for the oversight of decommissioning and reclamation of the Long Canyon Project.

9.0 PERFORMANCE STANDARDS [43 CFR §3809.420]

Management and mitigation measures are based on government laws and regulations, current technology, and best management practices. The objectives of these measures are to reduce or avoid impacts to the environment and to reclaim disturbed areas.

9.1 General Performance Standards

Many of the general performance standards have been covered in other sections of this plan of operation. Where there is overlap of requirements, Newmont has referred the plan of operation reader to the appropriate sections to avoid duplication.

9.1.1 Technology and Practices

Newmont will undertake accepted standard surface mining practices, ore processing technology, and reclamation measures at the Long Canyon Project. See Section 2.0, Description of Project, and Section 3.0, Reclamation Plan.

9.1.2 Sequence of Operations

Newmont plans to follow a logical sequence of development, construction, and production activities for the Long Canyon Project, including ongoing exploration activities to further define the deposit. After operations have permanently ceased at the site, Newmont will undertake reclamation activities as set forth in Section 3.0, Reclamation Plan.

9.1.3 Land Use Plans

Newmont will restore post-mining land uses of rangeland, wildlife habitat, and dispersed recreation; mineral exploration is also likely to continue in this region. These are the current land uses at the site. See Section 6.10, Land Use, and Section 3.0, Reclamation Plan.

9.1.4 Mitigation

Newmont has developed environmental management guidelines to ensure that adverse environmental impacts are avoided, minimized or mitigated during construction and operation of the Long Canyon Project. See Section 2.17, Environmental Protection and Management Plans, Section 5.0 Interim Management Plan, and Section 9.2 Specific Performance Standards.

Activities are also designed such that the site will be reclaimed to allow productive land uses following final closure and reclamation. See Section 3.0, Reclamation Plan.

Certain refinements may be required in the overall environmental management mitigation programs, based on the alternative selected as a result of the NEPA process and associated operational needs. In addition to the management and mitigation measures described in this plan of operation, there will undoubtedly be other environmental attachment mitigation requirements associated with the various governmental permits, licenses, and approvals necessary for the project. Implementation of environmental protection measures will enhance the project's ability to operate in an environmentally sound manner.

9.1.5 Concurrent Reclamation

Where possible and practical, Newmont will implement concurrent reclamation. See Section 3.0, Reclamation Plan.

9.1.6 Compliance with Other Laws

Newmont will comply with other federal and state laws pertinent to the operations at the Long Canyon Project, including NDEP mining and reclamation requirements.

9.2 Specific Performance Standards [43 CFR §3809.420(b)]

Many of these specific performance standards have been covered in other sections of this plan of operation. Where there is overlap of requirements, Newmont has referred the plan of operation reader to the appropriate sections to avoid duplication.

9.2.1 Access Routes

The Long Canyon Project site is located approximately 28 miles east-southeast of the town of Wells and 32 miles west-northwest of the town of West Wendover. Direct access to the project will be from Interstate 80 at the Oasis/Montello exit (Exit 378). Newmont plans to relocate the existing Elko County Road 790 to the east of the project site and will upgrade this county road to a condition to support mine traffic. Newmont will provide road maintenance for this county road during mine operations.

9.2.2 Mining Wastes

Tailings and waste rock will be handled and disposed of as set forth in Section 2.0, Description of Project.

9.2.3 Reclamation

See Section 3.0, Reclamation Plan.

9.2.4 Air Quality

Newmont will implement air quality control procedures (***Appendix F, Fugitive Dust Control Plan***) and comply with applicable federal and Nevada air quality standards. Periodic watering and/or chemical treatment will be used as appropriate to control fugitive dust generation on mine haul and access roads, as well as on the site access road. Water trucks will be used in the drier months, wetting the roads to minimize dust. Haul and access roads will be periodically maintained by motor grader.

9.2.5 Water Quality

Although the mine is expected to be “dry" because operations will occur above the area's water table, Newmont will comply with applicable federal and Nevada water quality standards.

Diversions and other storm water facilities will be constructed as part of operations to route precipitation runoff away from the mine and support facilities. Diversions and sediment traps will be also used as appropriate to control sediment, along with wattles and sediment fencing.

Travel across drainages will be restricted to existing roads. Newmont will maintain as compact and operation as practical, and, upon permanent closure, the site will be reclaimed to allow for long-term surface runoff. Culverts will be used as appropriate on access roads.

9.2.6 Solid Wastes

Newmont will comply with applicable federal and Nevada standards for the disposal and treatment of solid wastes. Newmont will establish a Class III waivered landfills on private ground at the Long Canyon Project. See Section 2.4.4.14, Landfill, and ***Figure 7, General Site Plan Layout***.

Waste bins will be provided for trash and refuge. This material will be periodically transported to the on-site disposal sites. There will be no open burning garbage refuge at the site.

Petroleum waste products will be stored in approved containers separate from other trash products and transported off-site for recycling or disposal in an approved waste facility.

9.2.7 Fisheries

No fisheries will be disturbed as part of the plan of operations.

9.2.8 Wildlife

Newmont will minimize disturbance to wildlife habitat by maintaining as compact an operation as practical. Vegetation will be cleared only in those areas necessary for project activities. Trash and other miscellaneous inert (non-hazardous) garbage will be contained in on-site containers and then hauled to an on-site landfill for disposal. Special care will be taken with used oils, spent solvents, grease and antifreeze; these chemicals will be handled separately from normal trash and garbage.

9.2.9 Vegetation

Newmont will minimize disturbance by maintaining a compact operation to the extent practical. Vegetation will be cleared only in those areas necessary for project activities. At the permanent conclusion of activities at the site, disturbed areas will be stabilized and reclaimed in accordance with the reclamation plan set forth in this Section 3.0, Reclamation Plan.

9.2.10 Cultural and Paleontological Resources

Newmont has conducted a complete and comprehensive cultural resource survey of the project area. Identified sites will either be avoided or mitigated under a programmatic agreement with the BLM and the SHPO.

If any cultural or paleontological resources are unearthed or otherwise encountered during the construction, development, and mining work at the Long Canyon Project, such activities will cease in the area of the discovery, and the BLM will be notified so that cultural and paleontological resources can be identified and appropriate resource protection measures developed and implemented per the BLM and the Nevada SHPO.

9.2.11 Protection of Survey Monuments

Any USGS survey monuments disturbed by activities at the Long Canyon Project will be replaced.

9.2.12 Fire

Newmont will comply with applicable federal and Nevada fire law and regulations and will take all reasonable and practical measures to prevent and suppress fires in the area of operations.

9.2.13 Acid-Forming, Toxic or Other Deleterious Materials

There are no known natural acid forming, toxic or other deleterious materials at the site. Newmont will maintain a SPCC plan for any diesel fuel and other petroleum products used at the site. See **Appendix C, Spill Prevention, Control and Countermeasure Plan**.

9.2.14 Leaching Operations and Impoundments

Newmont plans for heap leaching at the Long Canyon Project. A complete discussion of these operations is set forth in Section 2.0, Description of Project.

9.2.15 Maintenance and Public Safety

Newmont will maintain structures, equipment and site facilities in a safe and orderly manner. See Section 2.0, Description of Project, particularly sections on fuel storage, explosives storage, and security and fencing.

10.0 USE AND OCCUPANCY [43 CFR §3715.3-2]

Newmont plans to undertake mining and ore processing activities at the Long Canyon Project site that are consistent with the U.S. and Nevada mining laws. The preceding sections of this document (Sections 1.0 – 9.0) are intended to show compliance with the BLM 43 CFR 3809 regulations. Figures are attached to this document that show the layout of facilities planned for the project. Unless there are beneficial uses for future ranching, facilities and structures to be installed and used at the Long Canyon Project will be removed as part of the reclamation work upon permanent cessation of operations.